

ISSN 1407-2157



**LATVIJAS UNIVERSITĀTES
ZINĀTNISKIE RAKSTI**

ACTA UNIVERSITATIS LATVIENSIS

644

FINANSES UN KREDĪTS:
problēmas, koncepcijas, vadība

FINANCES AND CREDIT:
problems, conceptions, management

**Latvijas Universitāte
Zinātniskie raksti**

**University of Latvia
Scientific Papers**

FINANCES AND CREDIT: problems, conceptions, management: Scientific papers / Dr.habil.oec., professor E.Zelgalvis (ed.).- Riga : University of Latvia, 2001. 800 pages.

ISSN 1407-2157

There are included all the reports that have been presented at the conference «Application of financial and management tools in the real sector development, May 2001, Riga» in the book. The Scientific Committee of the conference is as follows: Dr.habil.oec., prof.E.Vasermanis (Latvia); Dr.habil. oec., prof.E.Zelgalvis (Latvia); Dr.habil.oec., prof.V.Raudsepp (Estonia); Dr.habil.oec. prof.M.Sörg (Estonia); Dr. habil.oec., prof.Z.Lydeka (Lithuania); Dr.oec. assoc.prof. K.Levisauskaite (Lithuania); Dr.habil.oec., prof. V.Nadvornik (Austria); Dr.habil.oec. prof. J.Cimmerman (Germany); Dr.habil.oec., prof. E.Chrabonszczewska (Poland).

Economic situation in the Baltic States is investigated, in particular the development of economics in transition is analysed in Latvia, Lithuania, Estonia and Poland. There are studied the following details:

- Monetary and exchange rate policy;
- Crediting and bank management;
- Development of securities market;
- Management of taxes and finance;
- Development of accounting policy;
- Pension reform perspective etc.

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LATVIAN PENSION REFORM PROSPECTS

Savā publikācijā autors ir izanalizējis pensiju reformu Latvijā, tās nepieciešamību un risināmās problēmas. Izskatīti visi trīs pensiju sistēmas līmeņi. Pastiprināta uzmanība pievērsta jaunajam, 2. valsts fondēto pensiju līmenim, kurš paredz iemaksāto naudas līdzekļu kapitalizēšanu un pensiju kapitāla pieaugumu no šo līdzekļu ieguldīšanas tautsaimniecībā. Apskatītas problēmas un riski, kas saistīti ar līdzekļu ieguldīšanu pensiju fondos, to izlietošanu, kā arī līdzekļu sadalīšanu starp dažādiem pensiju līmeņiem. Autors izpētījis iespējamās sekas no šo līdzekļu neracionālas izmantošanas un prognozējis iespējamo pensijas kapitāla pieaugumu pirmajā un otrajā līmenī. Galvenā uzmanība pievērsta pensiju sistēmas attīstībai tuvākajos 10 gados, kaut gan kopējais analīzes periods ir 50 gadi.

There are two main values in up-to-date society – the freedom and social justice. The task of social justice's policy is to ensure for society the social security, social rights and social equality, because of the successful social policy – being the condition of inner insurance.

After renewal of independence in Latvia in 1991 the Government claimed that every person carries responsibility for improvement of own state. As conclusion the inhabitant of Latvia during their life have been met with various social risks, resulted in financial, moral and even physical losses.

Elderly persons are mostly exposed to influence of social risk, but in additional the common risk they also are subjects of another ones, which are typical only for the group of such ages. There is two kinds of risk, the most important for elderly people is as follows:

1. Risk to be unfitted elderly persons are not able to work productively as young men do by the reason of sickness and physical weakness;
2. Risk of longevity when financial means, have been saved during period of work should not be sufficient for period of old age.

A lot of states created the pension institutions. Provision of pensions system gives the protection from risk in the period of old age, when people are not able to create incomes. In another words, the person secures himself for the approaching ageing period.

Provision of pensions system executes the following general tasks:

- a) Accumulation- equalization of incoming level during period of life: during the time when a man is young and has a profit he saves up a part of his own expenses to make the more expenses than in case of the incomes should be decreased in old ages period;
- b) Redistribution transferring of incomes from one person to another one – it is not obligatory, that every person should be able to make sufficient means (persons with low salary spend all their necessary for the old age money constantly, they come into poverty yet in youth).
- c) Insurance – to ensure against cases when by the reason of risk or successful investments accumulation of money should have been lost, or inflation should depreciate real value of accumulation or when a person should "run through" all money.

At the beginning of 90-ies Latvia used the old provision of pensions system having been inherited from USSR, which was not coordinated with the principle of market economy, that is social taxes for employees had been paid by enterprises, whereas the subsidization of insufficient part of means took place from government budget. Such model was unacceptable primordially for independent Latvia by the reason of budget's shortage as well as irresponsibility of executive persons to pensions insurance. It was necessary to create the provision of pensions system reform. The concept of reform was accepted in the Saeima and government in 1995.

In accordance with that concept the system of pensions has been formed in 3 levels:

State compulsory un-funded pension scheme. This level is regulated by law accepted in 1995 "About State provision of pensions", which had been supplemented repeatedly.

State compulsory funded pension scheme. This pension level had been put in action in 2000, 1st of July.

Private free-will pension scheme. This pension level came into the force in 1998, 1st of July.

There is multitude of preconditions objectively indicating the necessity of pensions system's reform. Demographic and socio-economic preconditions are the main.

Analysis of demographic data shows the sharp demographic recession in Latvia. In the late eighties and in the early nineties the natural increase of population has been sharply decreased and became negative. At the same time the direction of migratory movement was changed. Emigration swiftly increased, the volume of it exceeded the immigration current in multitude. Due to the mentioned phenomenon the number of inhabitants since 1991 has been decreasing gradually, 2458.4 thsd. people lived in Latvia in early 1998, in early 1999 2441.4 thsd. of people, but in early 2000 – 2374.8 thsd. people. Taking in account the unfavorable demographic situation it is expected, that number of inhabitants should be decreased up to 2030 and only after this term it may be stabilized and negligibly be increased. In connection with the mentioned facts it's suggested that up to 2050 in Latvia should live a number of population not exceeding the same one in 1998, i.e. 5.7 thsd. only [2, 42].

In connection with unfavorable demographic trends there are observed consequences of demographic overloading. For example, in 1995 there were 420 inhabitants of pension age related to 1000 pupil with ability to work, in 1997 430 pensioners were correlated with 1000 persons capable to work, in 1999 the correlation was 390 to 1000. According to prognosis the demographic overloading should be fallen up to 2012, but by the reason of low birth rate in period 1990-2000 the mentioned demographic overloading should repeatedly be risen since 2012 and in 2030 the correlation between pensioners and people capable to work will be equal 430 to 1000, but up to 2050 it will be 470 to 1000.

Since amount of working inhabitants is reduced, social payments for the first level of pension's system will be reduced simultaneously. The volume of such payments will not be sufficient to ensure the proper living standard for elder generation. It means, that principle "generation solidarity " can't be in action than earlier. If it's beyond society's powers to change the demographic situation rapidly it is demanded to calculate social system, creating necessary social guaranties in conditions of formed demographic situation.

There may be observed the lowest level of incomes received by pensioners as one of most important economic preconditions. By analysis of pensions and indicator of subsistence minimum during the period

1995-1999 it may be ascertained, that an average pension hasn't be correlated with volume of subsistence minimum. It means, that average pensioner lives beyond the poverty limit.

As it is shown in table 1 the rate of pensions value is equal 2/3 as compared with subsistence minimum during the last years. There is doubt that the increasing tendency can be observed.

It must also be concluded, that state macroeconomic data are not as evidence of possibility to sharp increasing the pensions, whereas it is impossible to believe that living standards for pensioners would be better in case if the macroeconomic data is without changes.

Provision of old ages pensions and subsistence minimum
in Latvia during the period 1995-1999 [3,29]

	Average value of old ages pensions Ls	Subsistence minimum Ls	Pensions/subsistence minimum, % Ls
1995	30.17	63.82	42.27%
1996	37.82	73.78	51.26%
1997	42.24	73.78	57.25%
1998	51.26	82.15	62.40%
1999	58.18	83.18	69.94%

By the reasons mentioned above it was necessary to start the pension reform supplied with system of three levels to change social situation in Latvia.

Observe of the new pensions system concept is presented below.

The first level of pensions system is founded by the principle of solidarity of generations and belonging to a certain sex. Solidarity of generations means, that social payments of working people for age pensions are not the subject of long-term investments, but are intended for payment to the existing generation of age pensioners. Solidarity of belonging to sex is expressed by the statement, that as well for female as for male an equal period of pension payments is a forecast value of state's compulsory social payments in 2000 and it is fixed as 35.09% of calculated wage. 9% of rate are employee's charges, the rest 26.09% are employer's charges. In perspective is envisaged common rate as 33%, which should be distributed between the employee and employer in equal parts [1, 3].

The mentioned rates are carried out with every person, involved in a process of social payments. It is foreseen by the 1st level, that the

quantity of pension is directly depending on person's working term and term when social payments are made up. Every inhabitant should have personal account, and the appropriate social insurance department will inform him about the condition of account.

In accordance with law "About state's provision of pension" 20% of shares in fixed common rate which equal 35.09% is foreseen for pension capital. That is a rate founding the pension payments in future after transition to a new pension scheme. Transitional period covers the pensioners receiving the pensions in accordance with previous legislation. New legislation foresees the determined guarantees, when in certain cases should be greater value of pension, so the actual rate of age pension payments should be greater than 20%. To make greater payments to the present pensioners is one of the important aims of increasing rates of a social tax. The calculation evidence, that rate 20% will be sufficient for annual pension payments only until period 2008-2022. It was transferred for pensions 27.1% of insured wage in 2000 and 26.93% of the same in 2001. Starting with 2023 payments should become greater i.e. from 20.2% up to 24.7% in 2034 and onwards it should be decreased up to 21.4% in 2050 [5].

The main problem of unfunded pension scheme is as follows: the person, involved in the mentioned level is not interested in payment of social tax. Finances accumulated in the 1st level are expended for maintaining the elderly generation. Young generation should never be worry about that after 40 years working people will be able and they have to pay taxes to maintain future pensioners. It must be noted, that principle of solidarity of generation is not so popular in Latvia. In that connection it should be necessary to create another pension levels, which will make the working people to do social payments and worry about own future.

State's compulsory funded pension scheme is the second level of pension system.

This level foresees, that a part of social payments for age pensions is kept separately and invested in economic of the state.

A scheme of funded pension has different tasks:

1. To insure the stability of pension system and to guarantee the connection with payments in future;
2. Not to increase common rate of payment for age pensions, but to invest share of payments to augment pension capital;
3. To promote the economic development as additional source of investment of internal capital into market;

If the state's principle of generations' solidarity stipulates accumulation of relative capital for insured person, payments are registered, but actually finances are expended for existing pensioners needs; on the contrary, in case it states funded pension scheme capitals of every person is expended in reality. Volume of capital having been expended would depend on payments and profit received from the investments.

As mentioned above, common rate of payments for age pensions is not increased, but foresees share-out of it between un-funded and funded levels of pension scheme. As forecasted by Ministry of Finance, during the first years of scheme's action every working person should invest 2% of social payments in some kind of created funds. At the appointed time this rate would be increased and reached 10%. It had been noted by any regulation documents, that the rate 10% would be reached up to 2010, however there is a reason to suggest that it will be realized during a later period.

The main precondition for starting the funded pension scheme is the financial stability of the 1st level. It is necessary to settle all of relations to existing pensioners, when it will be done, it will be possible to direct for state's funded pension scheme the financial resources surplus created by special State's budget of social insurance. In that case execution of the pension budget since 2001 will considerably depend on pensions indexation value, as well as on the factor of state's economic stability.

The mentioned further 3-level scheme points out the main currents of finances and reveals the range of problems related to the action of pension system in a whole.

Consequently the second level with gradual absorption of a part of compulsory social deductions (from 2% up to 10%) would decrease incomes for 1st level of pension budget, so far the pensions are forming up 76% of social budget in present. Since the beginning of 2001 the debts of social budget have been forming up 71 million lats that is equal to 14%.

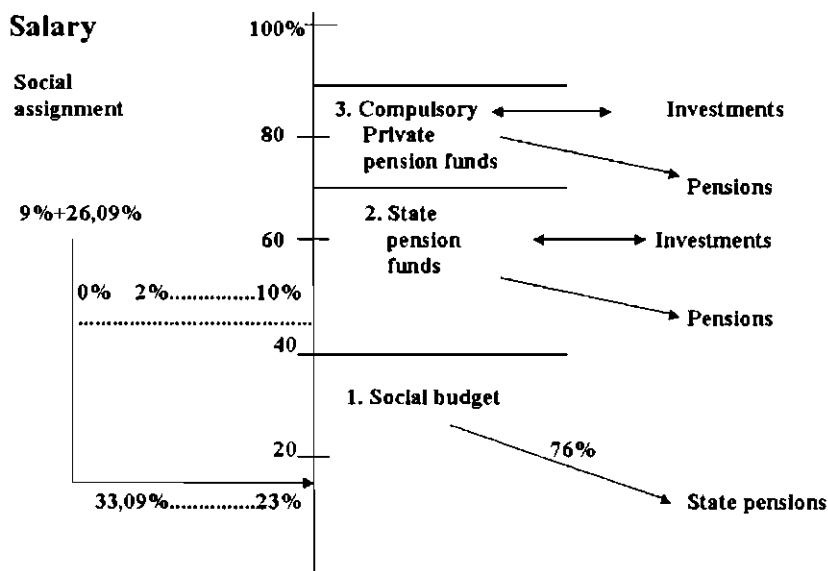
During 2001 the budget deficit in amount to 7.5% is also planned, in general by the reason of exceeding pension payments in relation to incomes. It will have to take a subsidy from state's budget.

For instance, the social payments, provided for the second level, would be invested into economy to wit in government securities, banking deposits and other assets. As follows, these means are not provided for present generation of pensioners. However such state is imaginary. At present, just before the second level would come into force, the government takes the decision to direct the main current of investments for the government securities until 2010. Then a missing part of finances

for the first level will be covered at the expense of state's budget, but the deficit of state's budget will be covered at the expense of financial means of the second pension level owing to government securities with low incoming rates. Instead to avoid superfluous turnover of social means, the second level would promote the greater circulation of it.

The matter of option investments portfolio for the second level is also the subject for wide discussions. As far as during the earliest period the state's pension fund would be managed by state treasury on behalf the state, the financial means would be directed to objects with minimum of risk, but simultaneously with minimum of profits (3%-5% annual return).

V. Adamsons-Scheme of 3 levels



The similar increase of pension capital would not satisfy the range of future pensioners, because the inflation speed as well as index of the 1st level of pensions would be brought nearer the increasing of capital (approximately 3% annually). It would be advisably to make investments into active economy, such as enterprises, branches of industry, banks. That circumstance might to obtain the considerable profitableness

(approximately up to 10 % annually). However the risk should be greater, being brought nearer the risk of private pension funds.

One of the decisions related to problem of risk is the following: to allow the working people to decide themselves, in which kind of investments to be exposed to risk to place the compulsory social payments. As follows, state's pension funds have to be with different degree of risk and insured person must have the right of option due to investment. However there is no a suitable solution to such a problem.

The following problem required resolving in the nearest time is coordination of the 2nd pension level with the 3rd one as the private pension funds. Principle of action the private funds are equal with action of the 2nd level. Financial means are invested and increase pension capital. The main difference between them is the position, that social payments made in these funds are not compulsory, but freewill. However at condition of legislation's improvement that concerns the state's pension funds the 2nd level may become as a powerful competition to private funds. What are the main ways of solution?

On the first hand, there must be worked up and introduced the high guarantees of insurance, that might decrease the degree of risk pension capital losses. It may be the special guarantee reserves and funds for insured persons, or even the state's re-insurance of funds.

On the other hand, the right of freewill investments into state's pension funds besides compulsory payments, which are made by the insured persons, should be introduced. In case if the high guarantees for funds of the 2nd level would be presented as sufficiently appreciable incomes, people would be able to choose the level in which their financial means will be directed, whether it will be the 2nd or the 3rd level. Just state's guarantees in contradiction to private ones may be as a determinant during the choice.

Taking in account all of shortcoming of the 2nd level and that is partly unwrought, many people rise in argued opposition to prompt introducing of 3 leveling model. At present only one objective existing reason why the 2nd level is required introduction just in 2001.

Until 2011 the amount of people having the pension age would be lowered. It is interpreted with the situation at present moment; in the provision of pension system are involved persons, who were born in the period of the II World War, such generation is quantitatively small. Persons, born in the early eighties are coming into the labor market, it was very high birth rate in that period. The pension age is increased up to

62, such circumstance means, that less of people are covered with provision of pension.

In case if during the forthcoming 10 years it should be able to liquidate the deficit of pension budget and if the 1st level would be started in the second decade without debts, it is probably to make the pension system in Latvia as stable at all. However after 2012 the quantity of pensioners will be increased, because numerous pensioners' generation of the fifties will get the pensions and generation of the nineties, when the birth rate was very low, would start to work. Then the social problems requiring financial solution will be arisen again.

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Summary

The executed research about perspectives of pension system's development in Latvia in the nearest future allows make the certain conclusions. Specifically, the 2nd level of pension model has not been worked up and valid insufficiently both on economic and legal points of view. The single argument in favor of its introduction into practice is the present-day demography situation, which is favorable for that level. However problems, such as balance between incomes and expenses related to the 1st level under conditions of lowering social investments into it, are not solved; the option of the most rational portfolio of financial investments envisaged for pension funds of 2nd level; activation of inhabitants aimed to enlist them for participation in creating of states pension funds, as well as caring for states guarantees concerning to retaining the pension capital within these funds.

The problems, offered by the present article have the relation to the nearest period in development of Latvian pension system, however the period has been observed is covering the term up to 50 years.

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MONETARY AND EXCHANGE RATE POLICIES IN LATVIA

Monetārā un valūtas kursa politika Latvijā ir orientēta uz ilgtermiņa stabilitāti. Tā kā valstis ar mazu un atvērtu ekonomiku, it īpaši pārejas posmā, valūtas kursa fiksēšana ir optimāla monetārās politikas stratēģija, Latvijas Bankas monetārās politikas mērķis ir saglabāt stabilu valūtas kursu. Valūtas kursa stabilitāte novērš ar konvertēšanu saistīto risku, mazina nenoteiktību, kā arī veicina starptautiskās tirdzniecības, investīciju un visas tautsaimniecības attīstību.

Darbā veiktā makroekonomiskā analīze uzskatāmi pierāda, ka izvēlētā monetārās politikas stratēģija bijusi veiksmīga, Latvijas tautsaimniecībā ir notikusi dinamiska attīstība un tajā ir uzkrājies potenciāls saglabāt strauju ekonomisko izaugsmi arī nākotnē.

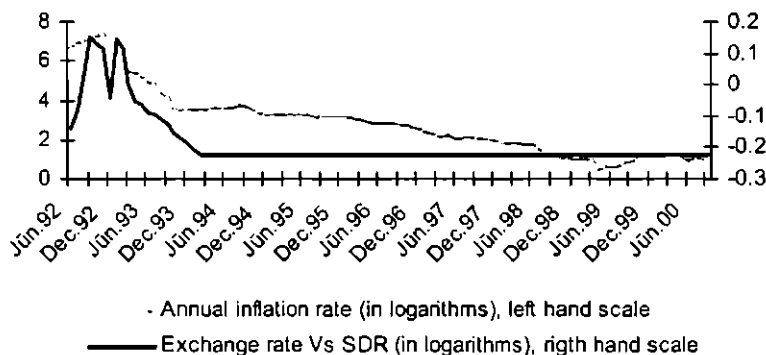
Latvian monetary and exchange rate policies are oriented towards long-term stability and they have earned credibility both at home and abroad. The most important task of the Bank of Latvia is to maintain price stability, thus contributing to the process of restructuring the national economy. The Bank of Latvia's monetary policy aims at maintaining exchange rate stability, thus implicitly 'importing' price stability, i.e. low inflation, from countries against which currencies Latvian lats is fixed.

Latvian economic policy makers believed in market mechanisms as the best way for establishing a stable, transparent and efficient economic environment, including the rights to hold, use and move foreign currency. Therefore, Latvia has established one of the most liberal foreign exchange regimes in the world. Both Latvian residents and foreigners are allowed to open accounts in lats and foreign currencies without any restrictions. They can buy and sell lats freely or exchange them for other currencies. To ensure free convertibility of the lats, the BoL buys and sells unlimited amounts of the SDR (Special Drawing Rights) basket currencies to banks at their request. There are no restrictions even on capital account transactions. Latvian legislation and the policy of the BoL ensure free

capital movements to and from Latvia. Both foreign, currency and the lats can freely enter and leave Latvia and foreign investors can repatriate their profits in any currency without restrictions.

It could be argued that in a liberalized Latvia's regime with full convertibility of current and capital accounts, the central bank cannot set both: the exchange rate and the monetary (money supply or interest rate) targets (Ball, 1998). Due to the huge structural changes in the economy, money demand in Latvia was and still is rather unstable and changing over time. Transmission mechanism of the monetary policy is not steady as well. Therefore, monetary targets do not possess the necessary qualities of intermediate targets (namely, stable and predictable influence on the final goal - price stability), and the exchange rate targeting could be considered as the optimum monetary policy strategy for Latvia during the transition period.

Inflation in Latvia: Exchange Rate-Based Stabilization Has Been Successful



Moreover, the fixed exchange rate policy is considered favourable for a small open economy like Latvia, which, to a great extent depends on international trade (imports and exports account for more than 100 percent of GDP). The fixing of the exchange rate, if it is durable and credible, reduces uncertainty, eliminates exchange rate risk and provides businesses with a solid basis for planning and pricing, thereby fostering investment and international trade. A stable exchange rate imposes a constraint on domestic monetary policy (nominal anchor), and can thus be regarded as a useful guard against unsound policies, which diverge significantly from

those in the anchor countries (Mishkin, 1998). In the long run, the BoL's exchange rate policy leads to reduced overall inflation through the convergence of price and inflation levels in the non-sheltered sector.

To ensure higher credibility of the monetary policy, the BoL takes advantage of implementing some of the features of the currency board arrangement (full backing of the monetary base, free convertibility of the national currency, automatic interventions). While the monetary base is backed by gold and foreign currency reserves, the BoL, as a full-fledged central bank, manages liquidity of the banking system using open-market operations and standing facilities.

Ensuring price stability will remain the main objective of the BoL monetary policy. However, it should be taken into account that the monetary policy measures alone will have a rather limited impact on further reduction of inflation, as it is caused to a large extent by the ongoing liberalization of prices in the utilities sector, largely controlled by state monopolies. Further privatisation of these state monopolies will accelerate the liberalization, and increase in prices only in a medium term should fully meet the Maastricht inflation target.

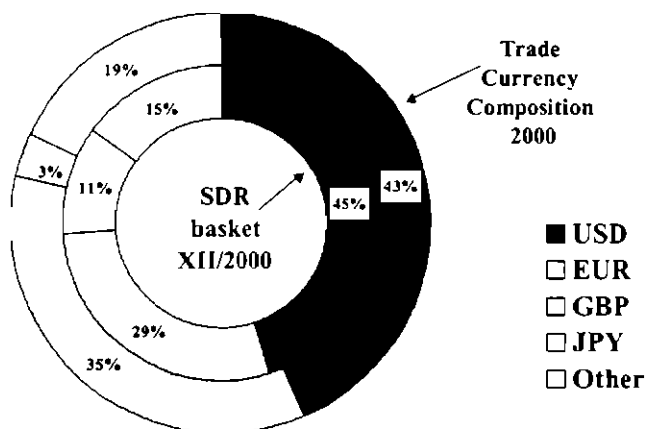
The SDR peg has significantly enhanced the credibility of anti-inflation policies, and the Latvian authorities have no intention to alter it in the near future. The BoL remains strongly committed to exchange rate stability and intends to pursue this policy in order to achieve long-term macroeconomic stability. In the medium term, exchange rate stability has been set as the operational and intermediate target of the monetary policy, with the view of accessing to full membership of the EU and subsequent participation in the European Monetary Union (EMU). The BoL is fully aware of the Maastricht criteria for the introduction of a single currency, and, even though these criteria are not directly applicable to the accession countries, considers them to be useful indicators of sound economic policies.

Despite recognizing benefits of the euro peg, a shift in the lats peg from the SDR to the euro should take place at the time of Latvia's accession to the EU. This decision was based on the following reasons.

First, the BoL has chosen to peg its currency to the SDR basket partly due to the fact that US dollar forms major part of this basket – currently 45 percent, with euro following with 24 percent, Japanese yen forms 19 percent and British pound 12 percent. Would BoL decide to peg lats to euro, fluctuations of euro exchange rate vis-a-vis US dollar would translate into fluctuations of the same magnitude of the lats vis-a-vis us dollar. Taking into account substantial share of the US dollar in the Latvian foreign trade

payments, increasing volatility of the exchange rate could have quite negative impact on Latvian foreign trade. Therefore, keeping peg vis-à-vis SDR basket seems to be more beneficial in this situation and it will remain the policy of the BoL up to the point of joining EU.

SDR basket and Latvian trade composition



Second, Latvian foreign trade is growing rapidly, and it experiences significant structural changes. The share of EU countries has increased significantly. One could expect that the share of EU currencies in the structure of the clearing currencies also would increase. Indeed, as statistical data show, the share of EU currencies has increased from 30.4 percent in 1994 to 46.1 percent in 1999. However, the US dollar still remains the dominant currency in Latvian foreign trade even though the share of this currency has slightly decreased (from 46.3 percent in 1994 to 44.3 percent in 1999). The importance of the US dollar can be explained by the large size of dollar market (which allows to reduce transaction costs), and by the fact that about 64 percent of Latvian foreign trade involves the countries outside euro area.

Third, after Russian crisis Latvian exporters have largely managed to switch the activities from eastern to western markets, and, most likely will continue reorientation of their exports towards the EU. Therefore, undoubtedly for Latvia the importance of euro, as an international clearing currency will increase. Still, one must take into account the inertia, which prevents immediate switch to the euro, as settlement currency, as well as

the existence of significant share of the non-EMU countries in the structure of Latvian foreign trade. It is expected that while the share of the euro will gradually increase, the US dollar will remain an important clearing currency in Latvian foreign trade over the medium term.

Monetary Policy Instruments

The BoL is using a wide range of indirect market-based monetary policy instruments that are compatible with the set of monetary policy tools used by the European Central Bank (ECB). To be more efficient in fulfilling its main task, maintaining price stability, the BoL regularly evaluates and improves existing instruments and operations, in order to achieve full operational compatibility with the practices of the Euro-system by the time of entering EMU.

In general, bank liquidity is mostly influenced by foreign exchange operations. The BoL intervenes in the foreign exchange market at the Bank's own exchange rates, and these interventions have a strong stabilizing impact on the markets. The participation in the foreign exchange market is aimed at stabilizing the exchange rate against SDR, and not controlling reserve money. Most of the trading takes place with the US dollars and the euro. BoL is not setting any specific interest rate level targets -financial flows and the interplay of demand and supply in financial markets are the real determinants of the money market interest rates. The BoL has, however, an important role to play in managing bank liquidity so as to avoid excessive volatility in interest rates.

In order to manage the liquidity of the banking system, the BoL uses open market operations, primarily foreign currency swaps, repo and reverse repo auctions, outright purchases and sales of Government securities in the secondary market, attracting time deposits from banks as well as Lombard credits. Open market operations are run almost daily, but the volume of these transactions typically is rather small.

Short-term (up to 6 months) foreign currency swaps were introduced in 1997 and in 2000 followed by long-term swaps when BoL auctioned for the first time foreign exchange swaps with a maturity of two years to foster long-term lending in lats by commercial banks. Like other repurchase operations, foreign exchange swaps do not directly influence prices of the underlying assets, in this case, the exchange rate of the lats. Therefore, swap operations enable the BoL to use its foreign exchange reserves to regulate the domestic money market without interfering with

its exchange rate policy. The auctioned amounts are moderate and the overall amount of auctioned swaps is strictly limited.

The BoL has been holding repo auctions since 1995. Banks licensed in Latvia are entitled to participate in these auctions. Since 1997, auctions are carried out daily, with the one week, one month and three months maturity.

In early 1994 BoL started outright purchases and sales of Government T-bills and bonds in the secondary market. Since April 1997 these operations were put on a tender basis.

With the help of Lombard credits the BoL provides liquidity at penalty rates. The BoL grants two types of Lombard credits: automatic and those on a commercial bank's initiative. They are granted to 80 percent of collateral. In order to discourage wide use of this type of credit, a stepwise structure of interest rate is applied depending on the number of days during which the credit is used and cost of borrowing increases over time.

The BoL uses a deposit facility (bank time deposits with the BoL) to put a floor for money market rates as well as to drain liquidity from the banking system.

All non-bank deposits in domestic and foreign currencies independent of maturity are subject to reserve requirements to be met in lats. The reserve requirements are not differentiated by deposit categories and currencies, and they are not remunerated. The reserve requirements have not been actively used for managing liquidity in the domestic financial sector. Averaging of reserve requirements over the holding period relieves the payments among the banks and help to smooth money market interest rates.

Up to December 1999 the reserve requirement for credit institutions in Latvia was 8 percent. At the end of 1999 and 2000 reserve requirement was lowered by one percentage point each year, and currently is 6 percent. Over the next 4-5 years the BoL intends to gradually lower the reserve requirement ratio to the 2 percent level set by the ECB. This move, on the one hand, is fully consistent with Latvia's integration strategy into the EU and, ultimately, the EMU. On the other hand, it will remove the burden placed on the banking system by reserve requirements, which are not remunerated, thus facilitating the financial intermediation and enhancing the stability of the monetary policy pursued by the BoL. After the reserve requirement is brought in line with the ECB requirements it is not envisaged that it will be used as an active monetary policy instrument.

The BoL sets its refinancing rate as the reference rate to the banking system. This rate serves as a strong signal from the BoL to the money

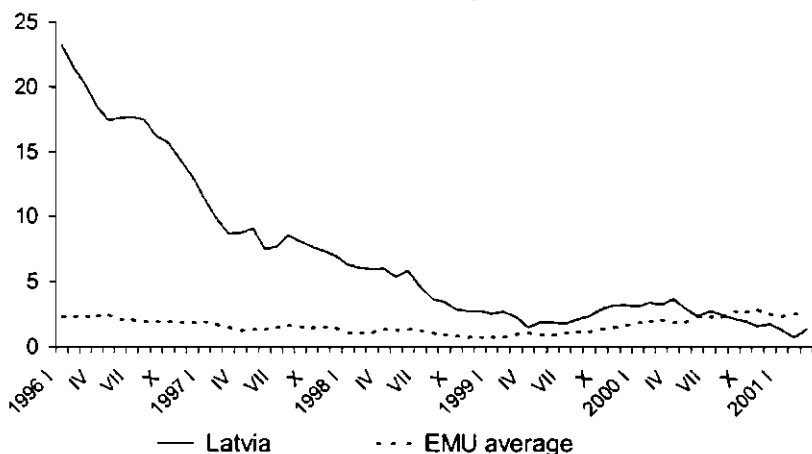
market participants about the policy stance of the central bank. Due to the decreasing inflation refinancing rate was on a downward trend during the transition period. In March 2000, given persistently low inflation, the BoL cut it's refinancing rate to the present 3.5% level.

The BoL has always clearly demonstrated its determination to defend the currency and has by now established a high degree of credibility in the financial markets. The credibility of the central bank in Latvia is proved by the fact that there is practically no need of foreign exchange intervention in the BoL day-to-day operations, and the markets always calm down quickly after each shock. At the end of April 2001, net foreign assets of the BoL reached USD 904.1 million, which amounted to 102.9 percent of the monetary base. The amount of net foreign assets covered 3.7 months of imports.

The Impact of Monetary Policy on Domestic Economy

Monetary policy supported by other macroeconomic and structural policies resulted in a low level of inflation coupled with re-establishment of positive real GDP growth. Implementing tight monetary policy also led to an overall fall in interest rates, which stimulates lending to the private sector, which, in turn, is a precondition for further acceleration of economic growth.

Latvia's inflation brought to levels comparable to EU-average (Annual CPI changes, %)



The fixed exchange rate policy has served Latvia well in bringing down inflation and creating a stable framework for economic growth. Successful monetary and exchange rate policies have been reflected in the continuous fall of inflation from 958.7% in 1992 to 2.6% in 2000. In February 2001 the annual inflation rate fell to 0.7% which is the lowest figure since regaining of Latvia's independence.

It is a common assumption that in the longer run, inflation in transition countries will be mainly driven by structural factors related to differential growth rates in the tradable and non-tradable sectors (Richards and Tersman, 1996).

In the short run, tradable prices P_t in Latvia as a small open economy are determined by nominal effective exchange rate

$$P_t = -Q_1(L) * NEER + Q_2(L) * P_t \quad (1)$$

where $NEER$ – nominal effective exchange rate, P_t – tradable prices and $Q(L)$ – polynomial lag operator. The results of estimating the equation (1) for Latvia indicates that one percent point increase in nominal effective exchange rate would create 0.1 percent point decrease in tradable price inflation.

In the long run, the purchasing power parity PPP (in its weakest form, or the so-called relative PPP) explains the price movements of trades in Latvia (Bitans, Slakota and Tillers, 2001).

On the other hand, prices of non-trades P_{nt} , in the short run are determined mainly by administrative decisions

$$P_{nt} = Q_1(L) * AP + Q_2(L) * P_{nt} \quad (2)$$

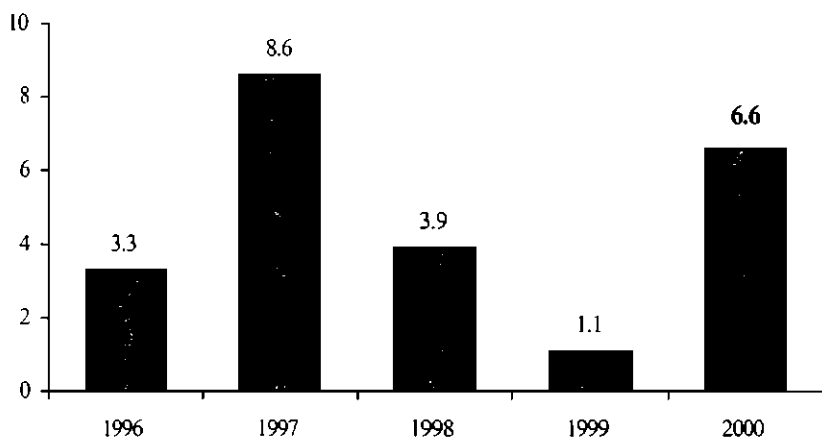
where AP – annual changes of administrative prices, P_{nt} – non-trade prices and $Q(L)$ – polynomial lag operator. The results of estimating the equation (2) for Latvia indicates that one percent point increase in administrative prices would generate 0.1 percent point increase in non-trade price inflation.

In the long-run, relationship between the relative prices of non-trades and the ratio of labour productivity is found, thus confirming that the Balassa-Samuelson hypothesis explains the long-term dynamics of prices of non-trades in Latvia (Bitans, Slakota and Tillers, 2001).

The Latvian economy, in common with the rest of Eastern Europe, experienced a sharp and deep reduction in GDP in the early stages of transition. The GDP drop bottomed out in 1995 and in 1996 the Latvian

economy began to grow again. The recovery was particularly rapid in 1997, when Latvia recorded a growth rate of 8.6%, but was slowed again in mid-1998 by the impact of the Russian crisis. The BoL reacted promptly and eased its monetary policy. As the result, only Latvia among the Baltic States had small albeit positive GDP growth in 1999. Therefore, BoL's exchange rate policy has shown its advantage over currency board arrangement, which did not imply an option of loosening monetary policy stance in case of negative external or domestic shocks. In year 2000 BoL continued supportive monetary policy. As the result, economy recovered rapidly with GDP increase of 6.6%.

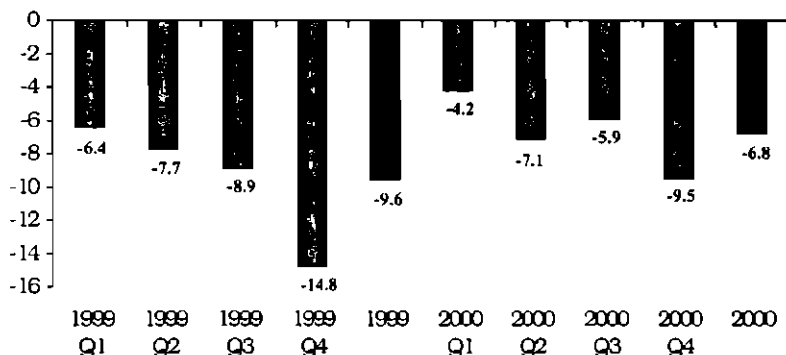
Latvia's real GDP growth (annual percent change)



The restructuring of the Latvian economy increasingly needs additional financing, new technologies and modern manufacturing equipment. Therefore, the foreign trade balance of Latvia turned negative in 1994, as imports exceeded exports. Irrespective of the fact that the trade balance has been negative since 1994, the balance of payments current account became negative only at the end of 1995, mainly due to deterioration of the trade balance. The balance of services covered the trade deficit up to the fourth quarter of 1995 and still remains positive. After Russian crisis the current account deficit temporary increased up to 10.6% of GDP in 1998. Due to the problems in Russian markets, Latvian exporters quickly reoriented their trade to the EU countries and even entered new markets in Asia, Latin America and Africa, what reflects

high degree of competitiveness of Latvia's exports. As the result, the current account deficit decreased to 6.8% of GDP in 2000, and further decrease is forecasted in the future.

Current account deficit (% of GDP)



In January 1994, average short term lending rate in lats was 72 percent, while in February 2001 it went down to 12 percent with average short term interest rates on time deposits shrinking as well (from 33 percent to 4.5 percent, respectively). At the same time, the margin between deposit and lending rates has decreased demonstrating the improved efficiency in the financial sector. In 1994, the margin reached 20-40 percentage points, while in February 2001 the margin was only about 5 percentage points. Following disinflation, the real interest rate on short-term deposits (negative in the early transition) has increased at the beginning of 2000 it was close to zero and turned to positive (4.5 percent) in February 2001, thus stimulating accumulation of savings in Latvia.

Due to increasing share of foreign trade and need for imports of modern equipment and up-to-date technologies combined with the liberal foreign exchange policy, about one half of all deposits and credits are held or granted in foreign currency. Up to 1999 deposit and lending rates in foreign currencies were lower than the corresponding rates in lats, with the spread larger and more persistent on time deposits and other long-term financial instruments. However, along with macroeconomic stabilization, the confidence in the national currency has increased. An increase in confidence can be illustrated by the fact that the interest rates on time deposits in lats and foreign currencies have gradually converged: at the beginning of 1994 the spread was as large as 60 percentage points,

in 1995 it was 1-3 percentage points, but since the beginning of 2000 it almost disappeared. Steady increase in lending since 1997 came together with an increasing share of loans issued to residents. In the end-February 2001, the share of domestic credits in the total banks' credit portfolio was 85 percent.

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Summary

Latvian monetary and exchange rate policies are oriented towards long-term stability and they have earned credibility both at home and abroad. The Bank of Latvia's monetary policy aims at maintaining exchange rate stability since the exchange rate targeting could be considered the optimum monetary policy strategy for Latvia during the transition period. The fixed exchange rate, if it is durable and credible, reduces uncertainty, eliminates exchange rate risk and provides businesses with a solid basis for planning and pricing, thereby fostering investment and international trade. The Bank of Latvia has been successful in maintaining the lats as a strong and stable currency, thus contributing to the process of restructuring the national economy and creating a stable macroeconomic environment.

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DRAWBACKS OF PUBLIC INVESTMENT POLICY IN LATVIA AND STEPS TOWARDS ITS IMPROVEMENT

Darbā tiek analizēta valsts investīciju politika Latvijā, īpašu uzmanību pievēršot Valsts investīciju programmai, kas ir galvenais instruments tās īstenošanai. Tiek analizēti šīs programmas trūkumi un nepilnības, kā arī izvirzīti priekšlikumi to novēršanai. Analīze balstās uz teorētiskām atziņām un autora personīgo pieredzi darbā ar Valsts investīciju programmas projektiem.

It is nothing new for the economists' community to hear common truth: there is correlation between future growth of the country and investments made. Almost every country in the world has set up as one of primary goals promotion of investments understanding that it may solve many of current problems like unemployment, poverty and social strain from that. Nowadays countries like companies are competing for attracting investments, which as all in our world are limited.

The amount of investments is particularly crucial for the countries in process of transformation from one economic system to another one in order to reach peer group of developed countries and their standards of living. Nevertheless sole will to promote investments is not enough in modern world where capital flows are very flexible in moving towards better-offered conditions to settle down.

Latvia is not an exception from the above mentioned and is very keen to do its best. At the first glance it seems that a lot of work has been done towards reaching the aim of sustainable growth by adopting rules of modern market economy. But there is no room for narcissism. Latvia's GDP is only 27% from EU average¹ and there is still urgent need for a strong push towards higher growth. Besides developed countries are not staying on the same place and they continue to show growth as well. As a

¹ Source: Report on Economic Development of Latvia, Ministry of Economy, Riga, June 1999, p 7.

result Latvia's growth should be big enough to keep their pace and even higher to catch up with these countries.

There are many ways how the state may involve itself in sustaining economy's growth. But in the author's opinion one of the best ones is investment in developing basic infrastructure. As a result private sector is relieved from these expenses and may invest somewhere else. Moreover it will not create any distortion in the economy by promoting unfair competition. Besides elements of basic infrastructure like roads, water and energy supply systems are used not only by companies but also by every member of society, who wants to live in normal conditions. Public investments in infrastructure are crucial in fostering the development of depressed regions as well. Nevertheless public investments should be followed with private ones because roads and water treatment plants themselves will not create growth in the economy if private investments are not made alongside.

Infrastructure, which Latvia inherited from the former Soviet Union, was designed for needs of some other economic system. After the collapse of this state one part of this infrastructure elements went in scrap, other part was successfully transformed according to needs of present life (for instance pipelines for oil transit and corresponding port infrastructure, communications) and another part is waiting for better times or resources to be invested. It is true that in the long run market forces will put all in their place but in the long run, according to John Maynard Keynes, "we are all dead" As a result state should play significant role in area where market forces for some reasons are foredoomed to failure. This is true especially for the countries in transition.

By involving itself in area where private sector has suffered failure, state's task is to be there only for the time being and to create necessary conditions for successful operations of private individuals and later to move away leaving all on market shoulders. Only imperceptible supervision should be left as a state duty.

When necessary infrastructure is created, one future option is to transfer it to private hands using concession mechanism. As a result released state resources may be used to solve other needs of society. Latvia has passed a law about concessions recently and time is needed to see a result of it in real life. Nevertheless some positive trends are seen. For instance municipality of Cesis has posted plans to lease its owned

heat provider to private company for twenty years in return for investments in upgrading heat system in Cesis²

For the development of the infrastructure and expansion of public services in Latvia Public Investment Programme (PIP) was created at the end of 1994 that was financed partly or wholly by the government. Government decree says that not less than 1% of GDP should be allocated from general government budget and 2% of GDP from loans with state guarantees for financing of this programme³ PIP ultimate goal is to support emerging private sector through development of economic infrastructure (roads, water supply and treatment systems, heat pipelines etc.) and to halt any further decline in living standards through the rehabilitation and extension of social infrastructure (schools, libraries, hospitals etc.). It is the area in Latvia where private sector has neither the resources nor the incentives to start major activities. There is no doubt that this step is welcomed and vital for converting Latvia's economy to modern market economy. But not everything is so bright in this programme after six years of operations and there is need for improvements to avoid government failure. Therefore the purpose of this essay is not to show all merits of Latvia's PIP, which are presented in the other works, but to pay particular attention to the programme's drawbacks and to make proposals for the improvement of PIP operations.

PIP's present drawbacks may be grouped as follows:

1. Insufficient financing
2. Low level of independence from outside influence and making political of PIP
3. Inflexible financing and monitoring scheme
4. Organisational imperfections
5. Weak co-operation with state owned funds with similar aims
6. Weak practical stress on regional development.

Each aforesaid issue will be described in detail in this essay and proposals how to settle these problems will be presented.

² Source: Dienas Bizness, 02.03.2001, No 44 (1576), p. 4

³ Source: Regulations of Cabinet of Ministers of Republic of Latvia on Preparation, financing and implementing of PIP //Latvijas Vēstnesis, 1996, 11th October, No.172. - 2p.

Insufficient financing

PIP is financed from government budget, loans (with or without state guarantees), grants and own resources of project owners (for instance municipality's budget). Financial resources spent on PIP from all sources increased from 1.2% of GDP in 1995 up to 3.2% in 2000⁴. Nevertheless initially planned amounts were higher and never reached (see Figure 1). There was always gap between planned and actual amount of PIP

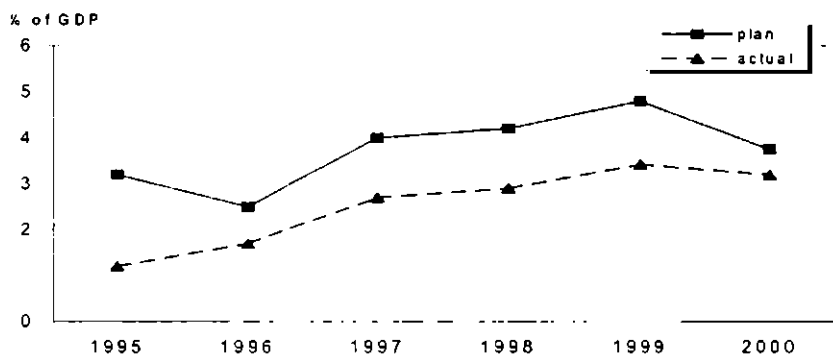


Figure 1. Latvia's PIP financing as percentage of GDP, 1995-2000⁵

There were the following reasons for this gap:

- Reduction in state budget financing during fiscal year. Nevertheless during last years this problem was not on the agenda. But another problem is arising in planning financial resources to be allocated for PIP. There is a very limited amount of finance planned for starting new projects for the next years.
- Delays with signing loan agreements for financing PIP projects.
- Refusal of municipalities to participate with their own resources and to spend from government received resources according to project time schedule. PIP has no mechanism to force them to

⁴ Source: Ministry of Economy, Republic of Latvia.

⁵ Source: Calculated by the author using data of Ministry of Economy of Latvia.

change such attitude and it very often has to rely on their good will.

- Too long project procurement procedures and preparation work for that. Project owners always plan that work will go on faster than it is the fact in reality.
- Drawbacks in financial control and monitoring systems, which did not allow to allocate financing quickly from badly performing project to another, more faster going project.

The above mentioned issues do not include one more reason, which by its nature is a positive one and should be mentioned separately. During the implementation of PIP projects some savings of costs occurred but the impact of that was not so crucial on the above-mentioned gap.

In order to solve the above-mentioned imperfections PIP's financing scheme and project monitoring system should be revised. More detailed proposals will be described later.

Low level of independence from outside influence and making political of PIP

The other negative aspect of PIP over the last five years is making political, when projects are included without proper evaluation of all pros and cons. As a result quality of PIP is plunging down. PIP always tried to avoid a situation when line ministries backed by government decree forced to include projects, which did not correspond to philosophy of PIP. As government and parliament had final word to approve PIP, there was no room for resistance. The main reason for that is PIP's low independence level in decision-making process.

Ministry of Economy (MoE) is responsible for preparation of PIP, where PIP unit is set up. This unit evaluates all projects and submits PIP draft with necessary financing for each project to government for approval. The success of approving properly prepared and evaluated PIP projects depends on minister of economy's viewpoint and his backbone, which is political figure by nature. At the same time he is responsible for many other, not less important and urgent, cases. As a result PIP's problems are sometimes left aside. Moreover ministers' de-missions, which were not so rare events, left impact on PIP as well.

Inflexible financing and monitoring scheme

Restructuring is required in PIP's financing scheme and monitoring of PIP's implementation as well, which both have proved to be not flexible with huge time lags. For instance, projects in order to get financing for the next year should be submitted to MoE by line ministries by 1st March of the current year. MoE evaluates projects and their correspondence to public investment policy. Finally PIP draft is prepared, which in the next stage is accepted by the government and together with state budget draft is submitted to parliament for final approval. At the end of autumn of the current year state budget is approved and investment resources are assigned for each line ministry and municipality. Line ministries and municipalities are spending agencies for PIP projects (but not MoE).

The above-mentioned fact is the weak point, where MoE, which is responsible for public investment policy in the country, lose its control over successful implementation of PIP. By not keeping hands on assigned resources for each project, MoE cannot act correspondingly if there are some problems with project implementation and money should be allocated to other project, which is implemented faster, or to some new one.

Provided there is a need to make changes in some project financing it will require a lot of time. In this case amendments should be made in state budget, which is a time consuming process. Aforesaid is worsened by the fact that line ministries are not willing to give money to other ministries if their project is out of time schedule and there is obvious a need for reallocation of resources. Instead responsible line ministry may offer some other project to be implemented. If PIP unit in MoE did not accept these changes then money may go out of PIP programme for other government needs. As a result none of PIP projects get benefit from it.

Due to the above mentioned reasons PIP cannot be flexible in allocating resources from project, which does not use financing properly, to new project, which was submitted recently and due to inflexible PIP financing scheme should wait at least one year.

The best solution from the aforesaid situation is assigning all amount of public investment resources to one institution, which has rights to allocate them to projects according to their needs and implementation speed.

Organisational imperfections

Another factor that damages successful implementation of PIP is hidden conflict between Ministry of Economy (MoE), which is responsible for preparation of PIP, and Ministry of Finance (MoF), which is responsible for granting necessary budget financing and sets limits to state debt.

Ministry of Finance has always tried to use state budget limits of PIP as place where to park some maintenance expenditures of line ministries. These maintenance expenditures include replacement of office equipment, small repairs and similar things, which should not be named as investments. Such kind of expenses are usually set separately in line ministry's budget. But as resources are limited then PIP seems a good place for MoF to avoid conflict with line ministries leaving a bad guy's image to MoE. Moreover attempts of MoF to take over PIP from MoE are not improving present situation and leave impact on PIP quality because a lot of time is spent not for evaluating of projects but for disputing.

Revising PIP legal background regarding criteria for inclusion of projects is vital as well. These criteria should be defined very precisely to avoid unfruitful discussions with project owners. Otherwise the above-mentioned situations will continue to repeat each year.

Low salary level in public institutions compared to private sector's level should be mentioned as well, which has left significant impact on further development of PIP. Over six years there have been three 'generations' of PIP personnel. Besides situations occurred when there were insufficiently old employees to train newcomers. This left impact on PIP quality. The only solution from that is civil officers pay-roll reform.

Weak co-operation with state owned funds

PIP is not the only structure, which tries to implement government strategy in public investment field. Regional Development Fund (RDF) and Environment Protection Fund (EPF) should be mentioned as well. Both of them receive budget financing. If one looks closer at PIP's aims and each of the aforesaid funds' aims then a lot of similarities may be found. For instance, PIP is financing environment protection projects and so does EPF. PIP supports municipalities in order to foster regional development and so does RDF. Nevertheless present co-operation between the funds and PIP is weak.

It is more rational to join these government funds to PIP. At the same time merging of these funds should be done by transforming PIP unit from MoE to separate institution supervising and implementing public investment policy in the country. General supervision of this body should be left on MoE's shoulders and head of PIP institution should be reporting to the minister. This institution will have separate approved budget for financing PIP projects. As a result PIP project financing and monitoring scheme will be more efficient and flexible.

Weak practical stress on regional development of regions

PIP is very often mentioned as one of the tools for development of weak or depressed regions by providing state support to foster growth of regional competitiveness. Nevertheless there is no clearly defined way how to do it.

PIP has always stressed that institution, which submitted projects to PIP, should prepare feasibility study including all pros and cons of the project. Practice shows that projects submitted from weakly developed regions do not always meet these criteria because they lack necessary expertise for that and their financial resources are too small to hire professionals. As a result these projects are postponed.

PIP has carried out many workshops to educate representatives of municipalities but it is not enough. In the best case it provides general knowledge about issue and more detailed knowledge requires university background in project management.

If PIP is set up as separate institution for pursuing government policy in public investments then some resources should be assigned for preparation of feasibility studies of projects from weak regions. This should go in one pace with co-operation among regions, which may plan common projects. As a good example environment sector of PIP may be mentioned, where many municipalities have united for implementation of solid waste projects in Northern Vidzeme.

Conclusions and proposals

1. PIP should be restructured in order to increase efficiency in pursuance of public investment policy in Latvia. Restructuring includes establishment of a separate institution, which has budget for financing of PIP projects. MoE should supervise this institution. As a

result this institution will be more flexible in allocating and monitoring usage of resources.

2. Revising PIP's legal background regarding criteria for inclusion of projects is vital as well. These criteria should be defined very precisely to avoid unfruitful discussions with project owners.
3. PIP resources should be merged with government funds, which are implementing similar policy towards public investments (for instance Environment Protection Fund, Regional Development Fund). It will be more efficient if PIP is set up as a separate institution as it has been mentioned before.
4. PIP should finance feasibility studies of projects coming from depressed or weak developed regions (the government has already approved the list of such regions). Otherwise regional development via PIP will be only words.
5. If a separate institution responsible for financing and monitoring of PIP projects is established then it has bigger opportunities to facilitate private capital participation in infrastructure projects. For instance co-financing scheme in form of low interest loan may be offered in return for investing private resources in upgrading infrastructure objects. Nevertheless private sector participation is realistic if it is possible to collect fee for the use of infrastructure objects (for instance heat production, water supply etc.). In this case law on concession will play a significant role.

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Summary

Main instrument for implementing public investment policy in Latvia is Public Investment Programme (PIP), which is a rolling three-year programme of infra-structural investment projects financed partly or

wholly by the state budget, loans guaranteed and not guaranteed by the government, grants and project owners resources. PIP ultimate goal is to support emerging private sector through development of economic infrastructure (roads, water supply and treatment systems, heat pipelines etc.) and to halt any further decline in living standards through the rehabilitation and extension of social infrastructure (schools, libraries, hospitals etc.). It is the area in Latvia where private sector has neither the resources nor the incentives to start major activities.

The Ministry of Economy where special unit was set up prepares PIP. Following projects are eligible for inclusion:

- investment projects of the sector ministries;
- investment projects of municipalities.

There is no doubt that establishment of PIP is welcomed and vital for converting Latvia's economy to modern market economy. But not everything is so bright in this programme after six years of operations and there is need for improvements to avoid government failure, PIP's present drawbacks may be grouped as follows:

- insufficient financing
- low level of independence from outside influence and making political of PIP
- inflexible financing and monitoring scheme
- organisational imperfections
- weak co-operation with state owned funds with similar aims
- weak practical stress on regional development.

Following proposals can be made in order to improve situation:

- PIP should be restructured in order to increase efficiency in pursuance of public investment policy in Latvia. Restructuring includes establishment of a separate institution, which has budget for financing of PIP projects. Ministry of Economy should supervise this institution. As a result this institution will be more flexible in allocating and monitoring usage of resources.
- Revising PIP legal background regarding criteria for inclusion of projects is vital as well. These criteria should be defined very precisely to avoid unfruitful discussions with project owners.
- PIP resources should be merged with government funds, which are implementing similar policy towards public investments (for

instance Environment Protection Fund, Regional Development Fund). It will be more efficient if PIP is set up as a separate institution as it has been mentioned before.

- *PIP should finance feasibility studies of projects coming from depressed or weak developed regions (the government has already approved the list of such regions). Otherwise regional development via PIP will be only words.*
- *If a separate institution responsible for financing and monitoring of PIP projects is established then it has bigger opportunities to facilitate private capital participation in infrastructure projects. For instance co-financing scheme in form of low interest loan may be offered in return for investing private resources in upgrading infrastructure objects. Nevertheless private sector participation is realistic if it is possible to collect fee for the use of infrastructure objects (for instance heat production, water supply etc.). In this case law on concession will play a significant role.*

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GREEN MARKETING OPPORTUNITIES IN LITHUANIA

Мы видим большую индифференцию в поведении Литовского потребителя если идет речь о "green issues" а это и есть суть и причина большой стагнации в процессе сбалансированного развития страны. Очень хорошо виден недостаток мотивации в существовании типичной Литовской компании говоря о внедрении EMS, недостаток обязанности перед природой.

Главной целью этой работы – сделать исследование процесса экологизации в компании особенно на влияние социального (потребителя) мнения на успешный процесс экологизации: как вышеупомянутое ускоряет или тормозит процесс.

1. Introduction

In the era of globalization, the last two centuries are specifically marked with the fast growth of production capacities. At the same the total consumption of energy and resources have increased to the huge amounts. That is making a damage in the natural environment.

Every human is responsible for the sustainable use of nature. Satisfying his / her needs cannot be based on the satisfying of needs of further generations. Human is the most important object in the world and it has made the nature to serve him, but the problem is that the same human being had forgotten about the limits. When the critical limits were discovered it was a little bit too late. Some species, some parts of the nature were already dead.

As far as we know environmental problems cannot be concerned as local there by every human's step that could impact the environment should be also analyzed in the global context.

We would like to switch to the current situation in Lithuania actually to the social approach to environmental issues. We can see a lack of motivation in the existence of a typical Lithuanian company concerning implementation of environmental management systems (EMS), lack of responsibility for the environment. It is very important to identify the hindrances that cause the

ecologization process to go slowly and the means of solution that could ease the process. We feel that the basic problems are situated on the insufficient social attention to the environment. And the background problems are caused by the lack of information.

2. Purpose of the study

The main purpose of this study is to make an investigation of the process of ecologization in a company, especially on the influence of social opinion to the successful process of ecologization how it speeds or breaks the process. It is very important to describe the process of forming social opinion especially concerning the environmental awareness.

As far as we know the customer is the basis on which any business exists, so we see an extreme need to investigate the public awareness concerning environmental issues that make influence on the behavior of the consumer (influence on the culture of consuming).

3. Methodology

This project work is mainly based on the bachelor's thesis named "Economic problems in the ecologization of local heating company in region Lazdijai" (By Vytautas Liesionis). The primary data was mainly taken from the above mentioned company, also a little investigation on the opinion of consumers and employees was made. The secondary data was taken from the books, journals (articles), the Internet, some Lithuanian laws were analyzed and discussed. Also some information was got from the Local Environmental Protection Agency.

In the very beginning we would like to make a short presentation on the process of investigation itself. First of all we would like to present the current situation in market (esp. Lithuanian) concerning environmental management issues. Ourther we'll make a presentation of the company JSCSP "Lazdiju Silumos Tinklai" (further in the text – LST) in brief. In the analysis we'll go through the main issues mentioned in the theoretical part taking the examples from the above named company and from the young Lithuanian experience in the environmental management.

In the very end some main conclusions will be made.

4. Theoretical framework

The issues about using the natural environment are getting more and more important influencing the consumers'

behavior.¹ Environmental pollution is one of the most important key aspects. After the slow start in the 70s and 80s somewhere around the 90s there was a significant growth in the consumers' segment worried about the sustainable use of the environment and about its protection. One of the most reliable evidences about the company's relation with the environment is EMS certification. The most of the consumers support the certification because it proves that the product is less harmful to the environment than others.² Later on I'm going to present some key points about certification.

As J. Szymanski (1998) says "The company must use various marketing techniques to positively differentiate their products from products of other firms. Depending on the product and on the environmental awareness of the direct clients (consumers) of the given company products the implementation of EMS (Environment Management System) may be not only a matter of market differentiation to gain the competitive advantage but it may be even the matter of staying in the business at all."

Additionally it should be noted that banks, insurance companies, private investors and other institutions interested in financial risk management perceive EMS as the factor decreasing this risk in the environmental sector.³

A. Matuszak - Flejszman sees four main reasons of the implementation of EMS:

- 1) Image.
- 2) Credibility.
- 3) Employees awareness.
- 4) Respect (consumers).

The same author defines three major difficulties in the process of implementation EMS:

- 1) Short (limited) time.
- 2) Difficulties with documentation.

¹ Antonides, G., Fred van Raaij. (1998). Consumers' Behavior: an European Perspective. Chichester: John Wiley & Co. P. 501.

² Schiffman, L.G., Lazar Kanuk, L. (1997). Consumer behavior. *New Jersey: Prentice Hall International.*, p. 21-62.

³ Jagoslaw Szymanski. (1998). The development of the environment system in Poland. *Paper was made for the World bank project on the environmental action program for the Upper Volga region in Russia*, p.9.

3) Employees' resistance.⁴

And the internal advantages of implementation of EMS (by the same author) are listed below:

- 1) Cost reduction.
- 2) Increase of profitability.
- 3) Compliance with regulation.
- 4) Avoiding charges for environmental pollution.
- 5) Reduction of the total fees amount for using environment for the economic purposes.
- 6) Chance for getting cheap bank loans.
- 7) Improvement of the employees' environmental awareness.
- 8) Cheaper insurance rate.
- 9) Safety in the work place.
- 10) Easier identification and elimination of any non - conformance.
- 11) Structured environmental management.
- 12) Growth of the self discipline and responsibility.

External advantages of implementation of EMS (by the same author) look like:

- 1) Increased investors' (shareholders) interest.
- 2) Higher competitiveness on internal and external markets.
- 3) Environmental conditions improvement.
- 4) Increased market shares.
- 5) Improved corporate image.
- 6) Better relation with the local communities.
- 7) Keeping existing customers and attracting new ones.
- 8) Increased environmental credibility in a public administration's opinion and consumers' opinion.

Companies focus on constructing logical steps, distinguishing temporal phases, documenting procedures, concentrating on certain tangible environmental effects, aiming at continuous environmental management system improvement and striving for converting inputs to outputs with the minimum of waste, whilst maintaining traditional

Alma Matuszac Flejszman. (1999). Environmental Management System Present state in Poland. Paper prepared for the seminar "ISO 14001 - three years of experience" November 18-19, Sopot, Poland.

objectives of increasing profits, expanding sales, gaining market share and reducing share.⁵

In the industrialized nations more and more companies are “going green” as they realize that they can reduce pollution and increase profits simultaneously. Meeting our needs we are destroying the ability of future generations to meet theirs. The problem is to catch the information and to have infrastructure to be able to use it. This is usually performed by the EMS certification and eco-labeling. The role of the media here also becomes crucial and the cultural capital, that is the skills and the knowledge forms employed in the process of symbolic exchange. As Haridimos Tsoukas says (1999) that the name of the game will be influence not force and in playing on that field the Lilliputians hold certain advantages.

5. Empirical Part

5.1. An Overview of the Environmental Management Situation in Lithuania

If we had to make a short overview on the current ecological situation in Lithuania, we would have to say that it is becoming better, that the total amount of pollution's emission is decreasing (especially in the energy production area). But the problem is that it is caused not by the improved technologies or the implementing and using the EMS but because of the economic crisis and energy savings. There is no movement towards the using of renewable local energy sources that is caused by the stable currency system.

As it has to be clear our country is on the way to the European Union. So the legislation and control mechanisms are being created according to the requirements of EU. The Environmental Management area is not an exception but we can still see the process coming from somewhere outside the functioning system. There is too big conflict between the current market situation and the above named tools.

As it is said in the law on tax pollution – its main purpose is to lower the pollution through the economic means and to collect money for the environment protection programs. But actually the process and the system of the taxation is incorrect at all. (we are going to present the same example of the local heating company. It makes the negative influence to the

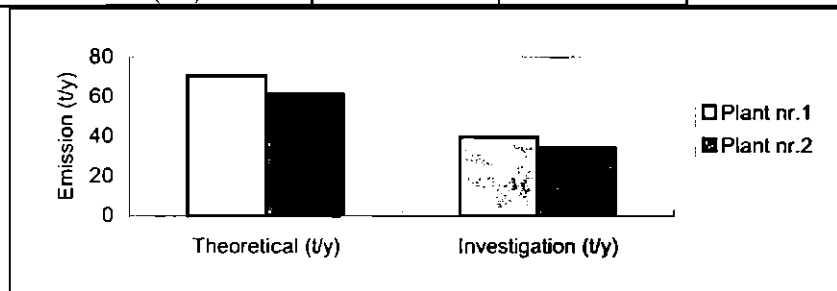
⁵ Richard Welford, Pall Rikhardson. (1997). *Clouding the Crisis: Construction of Corporate Environmental Management*. London: Earthscan., p.66.

atmosphere a lot of different toxic substances are going through the chimneys by burning oil and coal. So we will switch to the "Green" tax on atmosphere pollution.) First of all the tax should be based on the real amount of the substances spread away in the environment but actually it is based on the burned fuel (whatever it is), the used technology is also neglected. So edcompanies are not encouraged improve their technologies in that way. For example the results of investigation in plant nr.1 of LST are shown in the picture 1. Until 1st of January, 2000 there was no stimulation for the companies to make "green" investments. Table 1 shows the investments to the pollution prevention means Lazdijai region, Lithuania.

Table 1

Investments in pollution prevention means region Lazdijai, 1997-1999 years.⁶

	1997 year	1998 year	1999 year
Number of companies	3	0	1
Investments (Lt.)	2300	0	50000



Picture 1. Pollution emission theoretical and the results of an investigation (tons/year) 1999.⁷

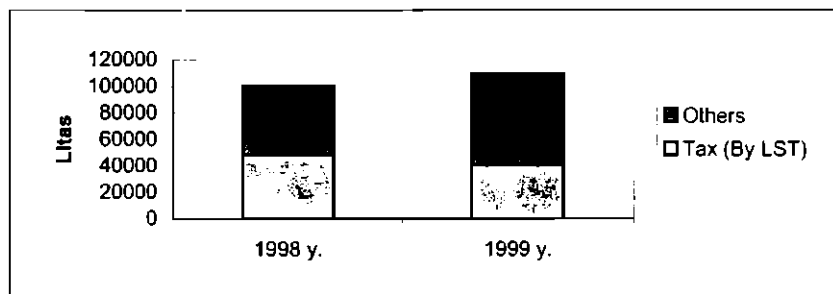
5.2. Local heating company "Lazdiju Silumos Tinklai"

As an example to illustrate the current situation and the problems faced here, is local Lithuanian heating company, "Lazdiju Silumos Tinklai" Why especially this particular company? Maybe because it is

⁶ Local environmental protection agency. (Lazdijai region, Lithuania.)

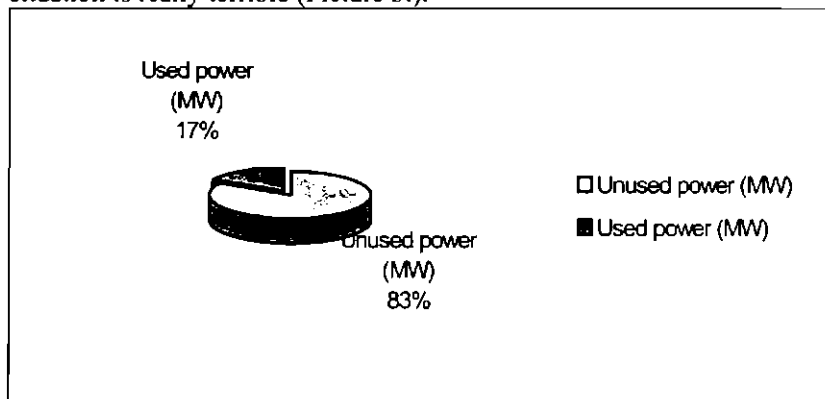
⁷ JSCSP "Lazdiju Silumos Tinklai".

the biggest pollutant in the Lazdijai region and because it pays almost half of the taxes in this region (Picture 2).



Picture 2. Taxes for the pollution in Lazdijai region in years 1998-1999 (Lt).⁸

One more specific reason: the company is very inefficient. It was built for much bigger demand of the heat and hot water. Now the situation is really terrible (Picture 3.).



Picture. 3. Unused power in LST heating plants (1999).⁹

The history of the company begins in 1981. There are 71 employees working here in the company. It is the joint stock company (of special

⁸ Ibid.

⁹ JSCSP "Lazdiju Silumos Tinklai".

purpose) 99.9% of the capital is owned by the local community and 0.1% – by the private investors. The total income for 1999 is 3.7 million Lit. Net lost for the same period is 426784 Lit. So as far as we see the firm is doing down, the reasons are said above – they have a big potential power in their plants and it still is seen a big number of consumers who refuse to use the central heating because of the high prices. The high prices are first of all caused by the tax system, from 1st of January 2000 the Added Value Tax became 9% and since the 1st of July it is 18%. So the prices automatically are coming up.

We have to mention here the specifically expensive technology used in this company. Expensive we mean concerning the environment. As an energy source they use oil and coal – the possible biggest pollutants. They also have a pot of problems with the transportation of heat energy – they are losing from 19 to 25 % of energy during the transportation. This is not only the money to the "wind" but also at the same time unreasonable pollution. It is not only caused by the old fashioned tubes, but also because of the non-sustainable way of planning, constructing and building the urban areas.

There is no Environment Management System implemented in the organization at all. There's an employee who is responsible for the Environment (ecology) but it is only a part time occupation. Only in 1997 the impact on the environment was taken for the discussion when buying the new equipment for the plant. But actually the company never overcome the limits for the biggest possible limits, since the production quantity is very low.

6. Analysis

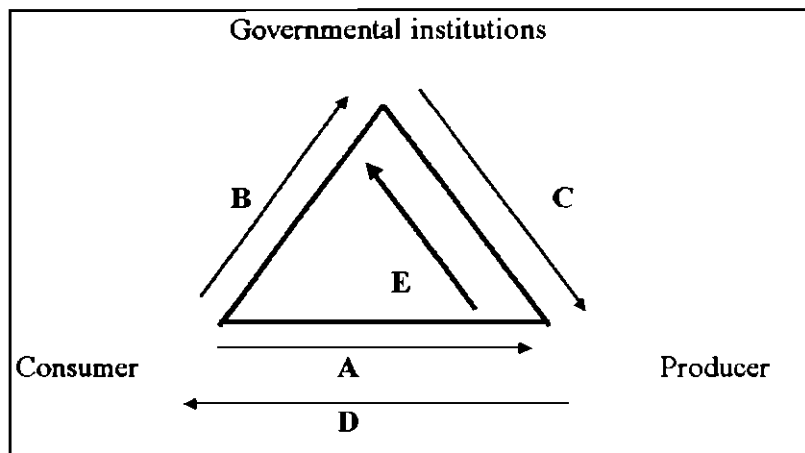
6.1. Key Market Characters

If we consider the Picture 4 as a simplified scheme of the market characters we can easily see the two flows of decisions from the consumers towards producers (direct A and indirect B through governmental institutions C). Also we can observe the flow D which shows the meeting of the consumers needs and proposing new areas for the market advantages (also environmental ones). We can easily observe weaknesses of A and B flows and one more flow E situated in between producers and governmental organizations, it is the influence which is made by the companies or businesses to the governmental institutions. A total number of 8 companies who have already implemented EMS (ISO 14001) reflect the current market awareness towards green issues (Three

companies more are going through the process of the implementation of ISO14001). No companies were eco-labelled since 1995!

All decisions are short term ones. It's the first critics which comes to mind analyzing Lithuanian environmental management situation. First of all what concerns consumers. The above mentioned little investigation shows that consumers' awareness concerning green issues are quite low (The most important key aspects in the existence of the company ex. LST):

- 1) Price.
- 2) Safety (when consuming).
- 3) Reliability.
- 4) Environmental awareness.
- 5) Efficiency.
- 6) Financial situation.



Picture 4. The market key characters (actors).¹⁰

6.2. Problems Concerning Implementation of EMS

If we look through the reasons for the implementation of the EMS. There is a weak motivation and since here is no respect and awareness from

¹⁰ Vytautas Liesionis. (Bachelor's Diploma Project, 2000). Economic Problems in the Ecologization of JSCSP "Lazdiju Silumos Tinklai". Kaunas: Vytautas Magnus University.

the public sector (consumers), all the advantages for the business lose the value. (Image, credibility, awareness). This may be caused by difficulties named by Matuszak-Flejszman but that is surely also caused by the specific Lithuanian ones: economic resignation, poor environmental education background, lack of information, international trading relation with former Soviet Union countries... etc.

Another key problem could be named as the total lack of information. As the results of the investigation show 70% of respondents think that more or less attention is being paid to the environment by the company. They don't have an idea about the amount of pollution tax paid by the company. 55% think that the biggest pollutant is the oil, not the coal. 45% have said that ecological investments don't influence the financial situation of the company.

6.3. Internal Key Problems in the Ecologization of a Company (Lazdiju Silumos Tinklai, Lithuania)¹¹

Everything happening in the same system but outside the influence the internal side of the company. We will name some main ecological and economical problems caused also by the external causes:

- Using very polluting fuel.
- There is no cleaning equipment.
- Using the polluting technologies.
- Big energy losses in the company (plant) and when transporting.
- Bad pollution accounting.
- No environment management system.

That is caused by too low attention towards environment from the point of view of company's management. And it is caused by the lack of pressure from the standpoint of the consumers.

7. Conclusions

We consider the problem in the cooperation between the three market actors. The problem is that the government is trying to implement the foreign experience that is very far ahead from the current situation. We could say the government fulfill the Product Stewardship strategy

¹¹ Ibid.

(also some companies, especially working in western markets). And the society as well as the most of the businesses are somewhere more down the level where the Pollution Prevention Strategy is. After the analysis and the investigation the following hindrances were found in the ecologization process:

- Lack of information.
- Short term decisions.
- The legislation and the governmental activity in taxes, concerning pollution and "green investments" determination.
- Incorrect accounting of pollution.
- Insufficient consumers attention to the ecological position of manufacturer.
- Insufficient governmental attention to the environment.
- The above named problems cause insufficient manufacturers' attention to the environment.

After the analysis of the possible ways of solution in the current situation in Lithuania the following concluding key points were mentioned:

- Regrouping of the reference points in the governmental program concerning environment.
- Ecologization of the manufacturing process (technical point).
- Implementation of Environmental Management system (ISO 14001).
- Environmental education and forming of the social opinion concerning the importance of the clean and safe environment.

The "Green marketing" tools cannot successfully be used because of the same lack of consumers' awareness concerning nature.

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Summary

It is very difficult for the society to see and analyze the step which it does and to compile it with the future ones. Society's awareness towards environmental problems (towards safety) should be seen in the behavior of it's members and it has to impact all other goals like gaining profits.

There is seen a big indifference in the behavior of the Lithuanian consumers towards green issues and that is the main cause of such big stagnation in the process of sustainable development of the country. Our local efforts and successful work contribute to the global environmental safety. So this problem should be considered not as a local one but it must be seen in the context. Green marketing ideas that are quite strong and effective in developed world market are fairly weak in Lithuanian market situation.

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PERSONNEL MANAGEMENT IN LITHUANIA: Context of Transition

В статье анализируются основные свойства управления персоналом (УП) в организациях Литвы в условиях трансформирования экономики. Соответственно логике проведенного автором исследования; материал в статье представлен в такой последовательности. Во первых, описывается доминирующий подход к УП в организациях Литвы. Далее, подробно характеризуются основные деятельности УП, такие как, анализ работ; планирование персонала; поиск и отбор персонала; адаптация новых работников в организации; оценка персонала; формирование карьеры; обучение, стимулирование персонала. В анализе каждой из деятельности описаны смысл, задачи, содержание и основные методы выполнения. Далее в статье анализируется субъект УП в организациях Литвы, т.е., его состав, задачи, степень участия в принятии решений в области УП.

The main features of personnel management (PM) in Lithuanian organisations under conditions of transition are analysed in consecutive order as follows: first of all, the predominant, as regards to Lithuanian organisations, approach to PM is characterised¹; this is followed by the discussion main features of different activities of PM, as regards to Lithuanian organisations; finally, the composition of PM body in Lithuanian organisations and the degree of involvement of this body in management decision making are examined.

Predominant approach to PM in Lithuanian organisations in period of transition. The analysis of publications in this area², practical experience of the author of this article and the research made lead to the conclusion that conception of the PM described in table 1 is dominating in

¹ In the article, I will limit the scope of analysis to "Lithuanian" organisations since, from my point of view, they reflect the problem concerned in the best way.

² The predominant Lithuanian approach to PM is analysed mainly by A.Sakalas (1998), R.Grigas (1993).

today's Lithuanian organisations³ Such approach to PM is predetermined by these main reasons: socio-cultural, economic environment and formed by this environment perception of companies' executives as well as the one of employees themselves⁴

Table 1

Description of Lithuanian approach to PM

Criterion	Description
Purpose of PM	To supply the organisation with the employees, in numbers, job categories and skills needed
Approach to a person	hired work force
Motivation	penalty-oriented (as a rule, economic sanctions)
Managers-subordinates relations	manager – order-giver subordinate – task executor
Empowerment	Decision making - matter of owners /top management
Social climate	social conflict

So still in the majority of Lithuanian organisations the objective of PM is – to provide the organisation with the employees in numbers and composition needed. A hired employee is understood as labour force. He or she can not (and actually does not) express almost any demands in fear to be fired. Meanwhile he or she is insisted to perform well and meet the required targets. This is why a rather poor system of motivation in organisations is being organised in a way that the employees can only lose a part of their earnings for disobedience for requirements formulated by employers and managers. Therefore in the most part of organisations managers, as stated by, still suffer from "chief", "order-giver" disease. For the other part, – the hired employees, – it seems, it is more convenient to play the executor, i.e. passive role. Furthermore, there is an attitude that was formed during the years telling that management decision making is the matter of managers (or even owners). They are responsible for the success of the organisation, therefore must think about solutions for arising

³ This is characteristic not only to organisations formed during the soviet period, but also to the newly formed "Lithuanian" organisations.

⁴ The perceptions of executives (in particular) and the ones of employees also explain the rare exceptions in "Lithuanian" organisations where the significantly different approach to personnel management is implemented – namely because of personal characteristics of managers.

problems. The good employee is the one who knows only what he or she needs to know. Well, what are the results of such approach to PM? Clearly it is social conflict, even if a latent conflict in most cases.

Major characteristics of PM activities⁵ in Lithuanian organisations during the period of transition. In my opinion, after economic and political environment has changed in Lithuania, the conception and contents of PM have expanded. Firstly, it was predetermined by higher autonomy of organisations and possibilities to perform activities of PM that were executed at the ministerial level before. Following are the major characteristic features of individual activities of PM.

Job analysis. Job analysis as a rule is limited by creation of position or job descriptions for the employees within an organisation⁶ In rare cases organisations create performance standards or their descriptions. The opinions of company executives concerning the creation of position or job descriptions is two-fold⁷:

- 1) position or job descriptions are necessary for every employee in the organisation clearly knows what authority does he or she possess, what duties is he or she supposed to perform, who is his or her supervisor, etc.
- 2) position or job descriptions are not necessary, because it is impossible to prevision everything in the documents, and the employees naturally execute all given instructions.

But in most Lithuanian organisations there is no position or job descriptions valid in real life. This was predetermined primarily by negative point of view of managers and also of all employees towards this document, which was formed during the soviet period. This is why during numerous years after the reconstitution of independence in Lithuania it was common to think that it is possible to manage without these documents.

Personnel planning. Meanwhile in most cases in Lithuanian organisation the future personnel demand is being determined by

⁵ There are being analysed PM activities, usually listed in foreign literature (see, for example: Torrington D. & Hall L., (1998); Dessler G., (1999)).

⁶ Meanwhile Lithuanian laws require managers of organisations to have position or job descriptions.

⁷ I am not discussing cases of Lithuanian-foreign joint ventures where according to foreign standards the existence of position or job descriptions is a norm.

managerial judgment⁸, and only when necessity is present. Forecasting technique of ratio analysis is being fairly successfully applied, in particular to determine workers demand. Needs for workers are determined by using ratios between some kind of factors (such as, production volume, sales volume, etc.) and number of workers needed.

Personnel recruitment. According to publications in literature treating questions of PM and growing numbers of recruitment agencies it may be asserted that this activity is considered important in Lithuanian organizations. In most cases it is a result of the Lithuanian approach to PM formulated at the beginning of the article. These major characteristics of personnel recruitment may be discerned:

- in most organizations the exigencies for the employee required are being formulated by managers;
- during the recruitment the organizational politics of hiring is being clearly expressed;
- while searching for an employee, primarily formal requirements of the job are being taken into account: level of education, experience, knowledge, skills; personal characteristics are of secondary importance;
- organizations try to excite the curiosity, attract potential candidates while accenting, often exaggerating, their positive image, popularity, higher wages, better work conditions, opportunities to travel abroad and alike things;
- the main source for external and internal applicants is colleagues, acquaintances, friends (college recruiting is in the second place); announcements and advertisement in the newspapers are popular in recruitment policy (the help wanted ads are used most often); managers of Lithuanian organizations address very seldom to private recruitment agencies.

Personnel selection. Most often in Lithuanian organizations, while performing personnel selection, one interview is supposed to be enough. This is an in-depth conversation between interviewer and the candidate, by which it is sought to decide upon future job performance of one or another candidate. Usually non-structured group interview is used in order to save time. Sometimes in bigger organizations, when the list of candidates is long and the position is important, preliminary interview is being performed.

⁸ The methods of determining personnel demand are analysed mainly by P. Šukys, (1996), A.Sakalas (1998).

Employment tests in Lithuanian organizations are not very popular. Probably the work samples tests are being applied more often, particularly when workers or technical employees are being selected, whose skills are not difficult to assess. At the same time testing the future performance of candidates to management jobs is still a serious problem. Majority of companies' executives justifies a rather low percentage of use of tests by high costs and low validity and reliability of tests.

Usually when the documents are being presented for the selection, it is required to submit several recommendations or provide the names of several persons who could confirm the truthfulness of information. Also quite often reference checks are being made, using informal ways, to receive information about the candidates from their former employers or managers.

During the selection, where required by the laws and by the specifics of the workplace, physical examination is performed.

Personnel orientation. In most Lithuanian organizations personnel adaptation (only technical) is performed informally: there are no adaptation programs and quite often no person responsible for this activity. The new employee is supplied with information concerning payroll, vacation, working hours. Very seldom (perhaps only in small organizations) the history of organization and top managers are being introduced to the newly hired. The organizational structures are kept as confidential information. Later the employee is introduced to his or her supervisor who familiarizes with the workplace. In many enterprises the technical orientation of workers and of other employees differs considerably. A worker is assigned an experienced worker who instructs how to work. There is any instruction for other employees. At the best case a position or job description is handled for the new employee and the employee received at once the tasks to perform.

Performance appraisal. Once again, because of the approach to appraising that was formed during the soviet period, today managers of rather numerous Lithuanian organisations assert that formal appraisal procedure is not necessary. In such organisations managers evaluate subordinates in informal ways. They have opinions made concerning every employee: how should he or she perform or implement the objectives formulated for him or her. Therefore the managers appraise their subordinates according subjective expectations, leaning upon sympathies or antipathies, and the results of appraisal are not being fixed in any documents. While striving to avoid disadvantages of such appraisal form, the managers of some organisations involve more employees into the process of informal performance appraisal. Before making decisions, for example, concerning reviewing wages, transfer

to another position, these managers organise conversations with majority of employees (particularly important are opinions of supervisor and colleagues of the person appraised).

Others, most often managers of bigger organisations, declare for necessity of formal performance appraisal. They assert that it is needed in order to make reasonable decisions that are being based on information provided in documents. This is how the major questions concerning the performance appraisal are solved:

- *Frequency of performance appraisal.* Common answer of executives of organisations is: "formal performance appraisal is performed when necessary and is not necessary to include all employees at the same time" Frequency of performance appraisal is determined, according to managers, by these things: reviewing remuneration, bad work results, vacancy, possibility to improve qualifications.
- *Creation of performance appraisal system.* Various Lithuanian organisations apply various lists of performance appraisal criteria. In most cases some personal characteristics, technical skills, performance standards (quantitative and qualitative), norms of behaviour (work discipline in particular) of an employee are included into the lists. There is no universally accepted scale of evaluation. Probably most used are marks, in the second place - ranks, and in the third place - descriptors.
- *Choosing of performance appraisal methods.* Often managers of organisations do not even know what method do they apply. After having evaluated their characterisation, it may be asserted that the simplest and one of most popular in the world method is most often used – graphic rating scale. Other methods used quite often are: checklist, critical incident method, BARS (behaviourally anchored rating scales). Quite common are: alternation ranking method, paired comparison method, forced distribution method.
- *Who should do the appraising?* Usually in Lithuanian organisations a rating committee for evaluation is formed at organisation managers' discretion. A rating committee is usually composed of the employees' immediate supervisor and some (three or four) other supervisors.

Career planning. Such activity in Lithuanian organisations is almost nowhere performed because of approach to the employee and also because of objective reasons (size of organisation and diversity of positions).

Personnel training and development. The description of the predominant approach to PM in Lithuanian organisations presented at the beginning of the article allows to assert that many of the organisations take care only of the employee's capability to perform the job to which he or she is accepted and which he or she is carries out. Therefore we can talk only about personnel training. In the phase of training needs one seeks to clear up what abilities or skills already in possession need to be improved, what knowledge that the employee has is already "remnant" While establishing aims of training and while forming a programs of training one orientates towards requirements of the job performed. At the same time the activity of personnel development is performed rather seldom, unless as a means of employee motivation.

Another reason that determines the degree of personnel training/development is the possibility for managers to chose and to invest money where they think it might be most necessary. While traditionally still giving the most attention for the production problems, acquisition of new technologies, financial resources are being oriented in these directions. Furthermore, they do not want to invest into personnel training or development because there is no legal mechanism of investment recovery in case if the person leaves organisation in order to work somewhere else.

However at this moment, compared with the years 1990-92, a tendency of development of personnel training activity is apparent in practice of Lithuanian organisations. Nevertheless, its quantitative and qualitative level still does not conform to other parameters of development of organisation activities. The development of this activity was determined by constantly changing environment and necessity to compete with foreign enterprises.

Meanwhile vocational training and qualification improvement in Lithuania at the state level and also at the level of individual organisations is rather spontaneous process As stated by A.Janulevičius, (1994), a personnel training is carried out not enough effectively because up till now there is no conception of this activity. In most cases the situation stipulates the need for training.

The major reason why insufficient attention is given for personnel training in Lithuania, why organisations managers do not see the need to create unified programs of employee training or development is negative image of this activity, formed during long years of soviet period. Moreover quite often the predominant approach to employee determines that qualification improvement is a personal matter of the employee. In

the best case methods of short-term training are considered to be enough: lectures, outside seminars, conferences, mobility.

Workers are also usually trained when the necessity arises – when a change in technical means or technology takes place. Training methods: study of work instructions, observation of an experienced worker or instructor, on-the-job training.

Compensating employees. In Lithuanian organisations a rather limited number of compensation methods is used. This situation in most Lithuanian organisations is determined by, as it was noted at the beginning of the article, predominant in Lithuania approach to an employee in an organisation, namely as hired labour force. In this case, as it is proven by many management theoretics, the employers accent and primarily use various direct remuneration and incentives schemes and obligations of physical and financial protection determined by the legal environment.

In my opinion, it is just like this in major part of Lithuanian organisations. When one wants to decrease turnover the remuneration is being made higher than average remuneration, but it does not give incentives for people to work better. The salaries used in many organisations are not a motivation method. Often created formal regulation concerning differentiation of remuneration (taking in account the skills, competence of an employee and not the post occupied) is lacking. Motivation of employees is being carried out with help of inclusion of bonuses to the system of remuneration, as well as of methods discussed in the collective bargaining. Formulations of bonus regulations usually are oriented towards common goals of organisation and how well employees keep to work discipline and safety requirements, also towards sanctions for bad performance, failure to execute orders and tasks etc. Probably there is no organisation where a bigger bonus would be paid for an employee for good, high performance or initiative demonstration; instead, a maximum bonus is provisioned and then explanation follows, for what reasons it may be decreased. It would be mistake not to mention that more profitable organisations, particularly those created during the soviet period, use more and more diverse compensation methods. As it is evident, it links the systems of payment and benefit package provided by the organisations. At the same time many of the newly formed Lithuanian organisations managers assert that the most important thing for the employees is good payment, which would satisfy various needs.

PM body in Lithuanian organisations in period of transition. Only one or two persons, most often non-specialist staff, work in PM department in organisations that comprise 300-500 employees. Usually the own PM

specialist (manager) is introduced at the latest in the newly established Lithuanian organisations. According to the traditions formed during soviet period employees without any specialized education work in the PM area in Lithuanian organisations; most often they only carry out strictly operational, auxiliary work and that of organising: creating and maintaining of personnel information; preparation documentation for making various PM decisions; organizing of recruiting, training and other PM activities.

Therefore it is natural that managers of many organisations think that they have enough knowledge and can perform the function not worse than an employee non-specialist. Moreover, many managers are confident in fact that at the moment recruiting and keeping necessary employee in organisation is not a big problem. When needed, managers decide upon using services of HR consultants or outside firms.

The influence of personnel department employees for decisions made in the area of PM is also rather poor. Organisation line managers, first of all top level managers, make major decisions in the area of PM. PM departments' heads personnel directors in bigger organizations participate in management decision making, usually they have staff authority.

Therefore the main body of PM in Lithuanian organisations that assumes the biggest charge of working with personnel remains the managers of different organisational levels.

The major novelty in this area arisen during the independence years in Lithuania is the specialists from "outside": HR consultants or private-owned organisations in PM area. So far, as stated by S.Migonytė (1997), private-owned recruitment and selection services are in greatest demand. There are several kinds of recruitment services in Lithuania: intermediation services (they make the biggest part); employment agencies (they carry out activities connected to provision of personnel for organisations).

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Summary

The main characteristics of personnel management in Lithuanian organisations are analysed in the article. Due to the author's opinion exhaustive explanation of personnel management in Lithuania in period of economic transition, must be presented in such logical manner: 1) at first, prevalent concern to personnel management in Lithuanian organizations has been discussed; 2) then peculiarities of various activities of personnel management in Lithuanian organizations have been analysed and 3) after all, the composition and structure of personnel management body in Lithuanian organizations must be presented.

The transformed soviet concern to personnel management, as is proved in the article, supplemented by the approach that the employee is hired labour force prevails in Lithuanian organizations. The purpose of personnel management in the Lithuanian organisations still is – to provide for organisation the necessary by number and composition employees.

The main activities of personnel management are analysed further in the article, such as: job analysis, personnel planning, recruitment, selection, orientation, performance appraisal, career planning, training & development, compensation of employees. Concretely there are given about each activity detailed description of it content and methods of performing in Lithuanian organisations. The reasons of present peculiarities of each personnel management activity are disclosed too.

The analysis of personnel management body in Lithuanian organisations showed that mainly the personnel management specialists have no professional knowledge and skills in this field so their participating in managerial decision-making is very poor. So the managers of organisations still are the main subjects and decision makers of personnel management in organisations.

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MANAGEMENT AND IMPLEMENTATION PROBLEMS OF STATE INVESTMENT PROGRAMME IN LATVIA

Savā darbā autori aplūko valsts investīciju veidošanas un īstenošanas problēmas, t.sk. valsts investīciju būtību, avotus un mērķus. Sākot ar 1995.gadu, Latvijā tiek izstrādāta valsts investīciju programma (VIP), kuras uzdevums ir novirzīt valsts izdevumus infrastruktūras sakārtošanai un attīstībai, kā arī valsts pakalpojumu līmeņa uzturēšanai un paplašināšanai. Autori izanalizēja VIP finansēšanas struktūru sektoru griezumā, tā priekšrocības un trūkumus un izvirzīja priekšlikumus tā pilnveidošanai.

State investments into infrastructure constitute the state investments non-financial contribution to an infrastructure with a view to improve the economical environment, furthering the increase of the total investment volume by creating the pre-conditions for further economic growth.

The role of state investments increases particularly in the course of reforms of the national economy (especially under the conditions of privatization), when foreign capital enters the country in the form of direct investments and when pre-conditions have to be created for development of entrepreneurship. Investment totals, their distribution by the branch affects both the possibilities of the branch in question, and the economic situation in the country as a whole, as well as enhances its competitiveness. The multiplicative effect of the investments is of great significance, too. Thus, for instance, the gross domestic product (GDP) rises, provided the investment into the production is accompanied by an increase in the numbers of the people employed (the income effect brings about increase in the employability: employability multiplier), moreover, the investments also influence the means of production (production capacity effect, connected branches effect).

Due to the authors opinion, in calculating the investments return and its effect upon the development of national economy in Latvia, the situation is aggravated by the fact that no stable economy environment has been created in the country, hence it is hard to prove numerically and

to state unambiguously whether a certain increase in the gross domestic product (GDP) results from a certain amount of investments. Operative here are both the direct, and the indirect relations, a variety of factors interact here; the result can be seen immediately (in the form of direct income), or over a longer period of time (via the taxation system or related social effects).

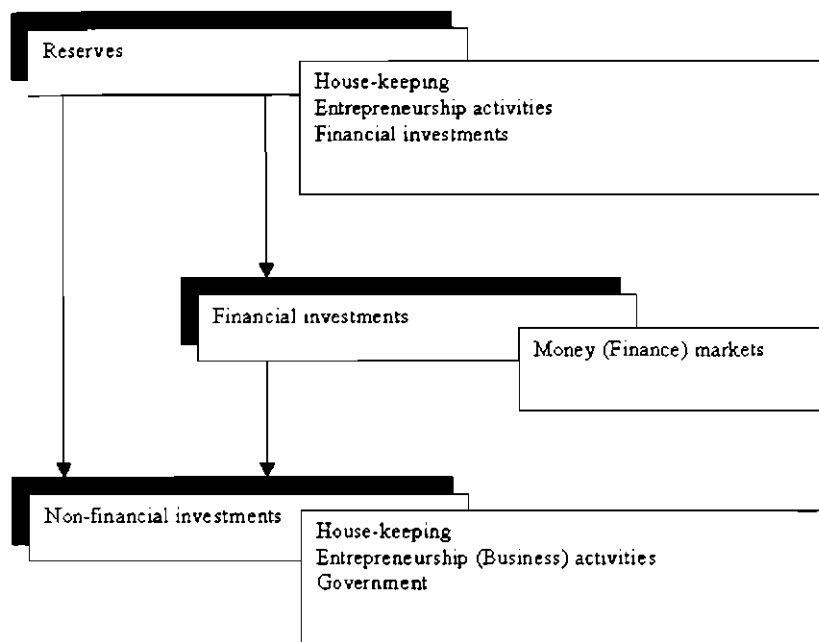


Fig.1. Formation mechanism of finance and non-finance investments

To enable investments to be contributed to the development of the private sector, the state infrastructure has to be put in order. The private sector will only unwillingly take up building infrastructure objects. Generally, a private investor lacks means and motivation towards repairing the roads and having additional lines of energy supply laid out. Even if there were sufficient means that would considerably raise the costs of any investment project. Roads, power lines and other elements of infrastructure constitute important indicators of economic and social effectiveness because they can be availed of by any member of society

both for meeting their daily needs (such as using the roads in order to get to the working place, apartment heating and lighting etc.), and production activities. Therefore having basic infrastructure objects in proper form and order, thus creating attractive environment for economic activities represents one of the State functions. Developed infrastructure forms the basis for implementing many projects, since the investor then, on launching a business project, does not have to expend means on straightening out the infrastructure.

In entrepreneurship as well, private investments must be preceded by State investments. Infrastructure by itself does not produce anything, it does not raise productivity, without investing into the production sphere no conditions for economic growth will be achieved.

The investment policies of the Latvian government are implemented mainly through the main State budget-financed investment programme, in which the major measures and investments toward putting the infrastructures in order are outlined.

Aims and objectives of the State Investment Programme activities, their funding sources and structure

Ever since 1995, a State Investment Programme (SIP) – in Latvian – Valsts investīciju programma (VIP) – is worked out, whose task is to allocate expenses for putting in order and developing the infrastructure, as well as for maintaining and extending the state services level. The SIP is funded from the main state budget, the local budgets, credits with way of guarantee, grants and the personal resources of the project introducers themselves [1].

The volume totals of the SIP drawn from the main State budget, the special budget, the state loans and grants and from other sources (donations, the funds of the project introducers themselves) have increased from 1.2% to approximately 4% from the GDP. However, in comparison to other countries the SIP volumes are low (see Table 1).

The SIP priority sectors are infrastructure improvements in communications, energetic and environment protection.

In their turn, the main States budget priorities are internal affairs, finance and education related projects.

The Ministry of Economics is in charge of developing the State Investment Programme and submitting it to the Cabinet of Ministers (CM). In order to cope with this task, the Ministry of Economics processes and

summarizes the investment projects submitted by the respective ministries in the data base, analyses them and develops a SIP project. Thereupon a rough draft for the SIP project is made according to the strategy of the CM and the investment strategy of the respective branch ministry, with due regard for the projects' priority and their economic, social and financial profitability. Prior to submitting the project to the CM, it is agreed on with the branch ministries.

Table 1

State Investment Programme, 1995–2001

	1995	1996	1997	1998	1999	2000	2001
	Million lats						
SIP	28.5	47.4	88.3	108.4	137.7	171.1	159.5
including:							
Main state budget	13.8	14.3	23.3	42.3	46.3	41.6	48.7
Special state budget	4.4	3.4	3.6	2.7	6.8	10.0	4.7
Credits	10.3	12.3	36.7	31.5	49.8	82.3	61.3
Other sources	0.0	17.4	24.6	31.9	34.8	37.2	44.9
	% from the GDP						
SIP	1.2	1.7	2.7	3.0	3.5	4.0	3.4
including:							
Main State budget	0.6	0.5	0.7	1.2	1.2	1.0n	1.0p
Special State budget	0.2	0.1	0.1	0.1	0.2	0.2	0.1
Credit	0.4	0.4	1.1	0.9	1.3	1.9	1.3
Other sources	0.6	0.6	0.8	0.9	0.9	0.9	1.0

The functions of the State-investment-programme related institutions are as follows: the branch ministries and other institutions (via the branch ministries) develop the branch investment strategy. The ministries decide on and determine the projects, prepare them and submit the project descriptions to the Ministry of Economics.

Each branch ministry and institution appoints a coordinator who is in charge of negotiations with the Ministry of Economics. The branch ministries are responsible for introducing the projects as well as for monitoring the projects and for making the necessary corrections and evaluating the completed projects.

The Ministry of Economics prepares the SIP project, analyses and selects the properly prepared projects, guiding themselves by the

government declarations and the State-determined priorities. It provides consultations to the project-submitting institutions on the requirements to project preparations and for their submitting to the SIP.

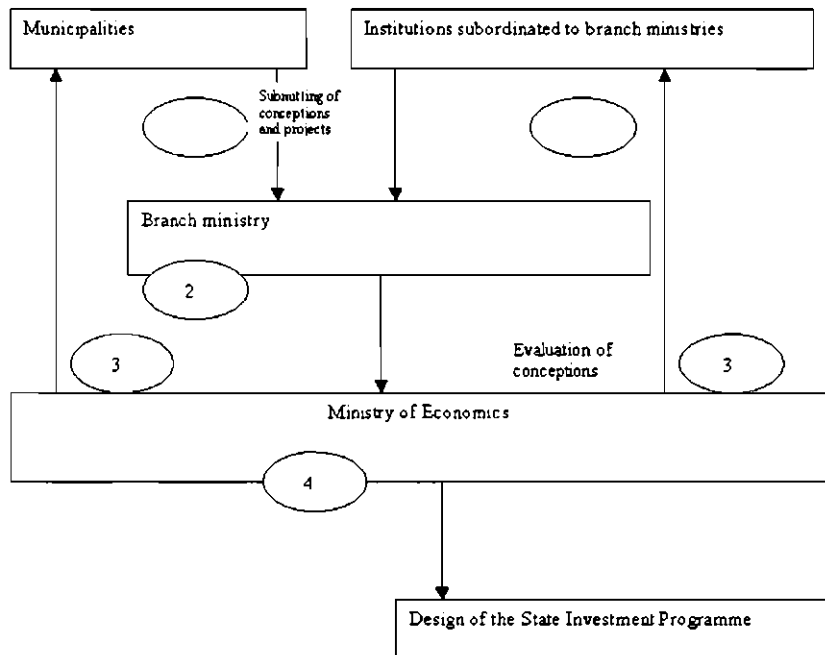


Fig. 2. Development of a State Investment Programme

The Ministry of Economics cooperates with the Ministry of Finance and the project applicants to enable the SIP to fit within the limits of the financial means available.

The Ministry of Finance plans the budget resources and divides them into maintenance and investment expenditures, as well as conducts negotiations concerning credits from abroad and signs the credit agreements, checks the project finances are used in accordance with its aim and objectives and coordinates that is not refundable financial support to Latvia.

The Cabinet of Ministers approves the SIP, determines the State's investment policies, the limits on use of foreign credits and their objectives. In accordance with the Cabinet of Ministers operation

regulations, before submitting the SIP list to the CM, it is examined by the CM commission, which, in case of its approval and adoption, forwards it to the CM.

The Parliament (Saeima) of the Republic of Latvia annually passes and adopts a law on the budget, a constituent part of which is the SIP, and approves the admissible limits of the external and the internal debts.

Taking into consideration the changes in the law "On the State Budget for the Year 2000", the Parliament had approved a State Investment Programme for 2000 to the tune of 171.1 million lats, including the planned donations and the project introducers' own means. As it was in the previous years, the intended increase in the investment total was not reached, since the actual execution of the SIP, drawing on all the financial sources, constituted approximately 70-80% from the planned one [2].

Beginning with the year 2000, not only allocations from the general earnings are reflected in the expenditures of the Ministry of Economics from the main budget, but also the institutions revenues from paid services and other earnings of their own, as well as foreign financial support to the main budget. Such a contribution derives from the budget planning methodology.

For the year 2000 it was planned to invest into the SIP 41.6 million lats from the main budget, 10 million lats from the special budget, 82.3 million lats from credits and 37.2 lats from other sources. The percentage of the main budget within the SIP in the year 2000 constitutes 24%, that of the special budget – 6%, that of state loans and guarantees – 48%, but that of other sources (local budgets, donations and the introducers' own means) makes up 22%.

Within the framework of the SIP for the year 2000, 264 investment projects are being implemented, from among 142 projects were submitted by the local governments. Compared to the year 1999, the number of the SIP projects has increased by 65 projects [5].

As in the previous years, 73% of the utilized funding total for the year 2000, mainly as credit resources were invested in the projects of the SIP priority sectors, namely, energetic, communications and environment protection projects. The SIP implementation in terms of sectors is reflected in Table 2.

Beginning with the year 1997, much attention is paid to investment projects in information technologies (IT). The volume of funding from the main budget has rapidly risen from 2.2 million lats in 1997 till 15.2

million lats in 1999. The main measures being taken in the area of the IT are connected with designing and perfecting data transfer networks of a variety of record and incorporation networks and information systems. In the year 2000, 10.4 million lats were allocated to information technologies projects, in 2001, the figure is 15.9 million lats.[5]

Table 2

State investment programme in sector terms [2]

Sector	1998		1999		2000		2001 (plan)	
	million lats	percent tage	million lats	percent tage	million lats	percent tage	million lats	percent tage
SIP	108.4	100	137.7	100	171.7	100	159.5	100
Including								
Communications	34.1	31.5	49.0	35.6	43.5	25.4	60.0	38.0
MEPRD	21.7	20.1	25.8	18.7	52.8	30.8	25.9	16.2
Energetic	11.1	10.3	12.6	9.2	32.6	19.0	14.2	8.9
Welfare	9.9	9.1	12.7	9.2	10.6	6.2	10.7	6.7
Educ. & science	4.6	4.3	5.3	3.9	8.8	5.1	13.1	8.2
Finance	9.5	8.8	10.7	7.8	7.0	4.1	5.1	3.2
Home affairs	9.3	8.6	9.6	7.0	5.1	3.0	11.5	7.2
Defence	0.7	1.9	3.4	2.4	2.5	1.5	3.2	2.0
Foreign affairs	0.2	0.2	0.0	0.0	2.0	1.2	0.0	0.0
Farming	1.2	1.1	2.2	1.6	1.8	1.1	11.4	7.1
Culture	1.6	1.5	2.0	1.5	1.0	0.6	0.7	0.4
State land service	0.5	0.3	0.8	0/6	0.7	0.4	0.1	0.1
Law	0.7	0.6	2.5	1.8	2.4	1.4	2.3	1.5
Other sectors	1.9	1.8	1.1	0.8	0.3	0.2	0.7	0.4

As from the year 2000, Latvia has been afforded the opportunity to receive financial support from the European Union Re-structural funds (ISPA, SAPARD) in order to acquire. Additional means, the state has to secure co-financing for implementing the projects. It is provided for, that support from the European Union to projects within the framework of SAPARD are not to exceed 75% from the total public investment into the project. The State Investment Programme is also used as a mechanism by means of which support projects are granted co-funding. For the year 2001 the first ISPA project ("Improvements in the Via Baltica Itinerary and in the West-East corridor"). In its turn, in the environment projects

area, financing will be continued of ISPA environment project development.

However, notwithstanding certain advantages and achievements, the existing SIP planning and implementation does not meet the new requirements, advanced by the State's major economical sectors and the integration into the EU. In the authors view the main shortcomings are as follows:

- the SIP has been weakened by the frequent government changes, which accounts for inconsistent observance of the programme strategy;
- an integrated state investment strategy is lacking, hence there are frequent investment priority changes;
- by means of the SIP, ministries and local governments are trying to solve their real-estate related problems—to do current repairs and to update technologies;
- insufficient participation of private capital in developing the infrastructure;
- the ministries and the local governments are in the habit of frequently changing already confirmed project priorities and the specific weight of the funding sources, e.g, by decreasing their own contribution to the project, at times even disrupting those into which considerable state budget means have been invested;
- sometimes investment projects are planned in actual disregard for the planning of other state expenditures;
- sometimes expenditures are included in the SIP projects, which do not qualify as investment expenditure, but just as maintenance costs;
- quite often the SIP projects are poorly calculated, due to the fact meaning the released in the course of the year do not always get fully utilized.

In order to overcome the aforesaid shortcomings, the SIP has to be developed as inter-branch and inter-region indicative medium term programme that is formed within a unified system based on identical principles. Such an approach will enable infrastructure to be developed in a coordinated manner. This kind of solution is shown schematically in Figure 3.

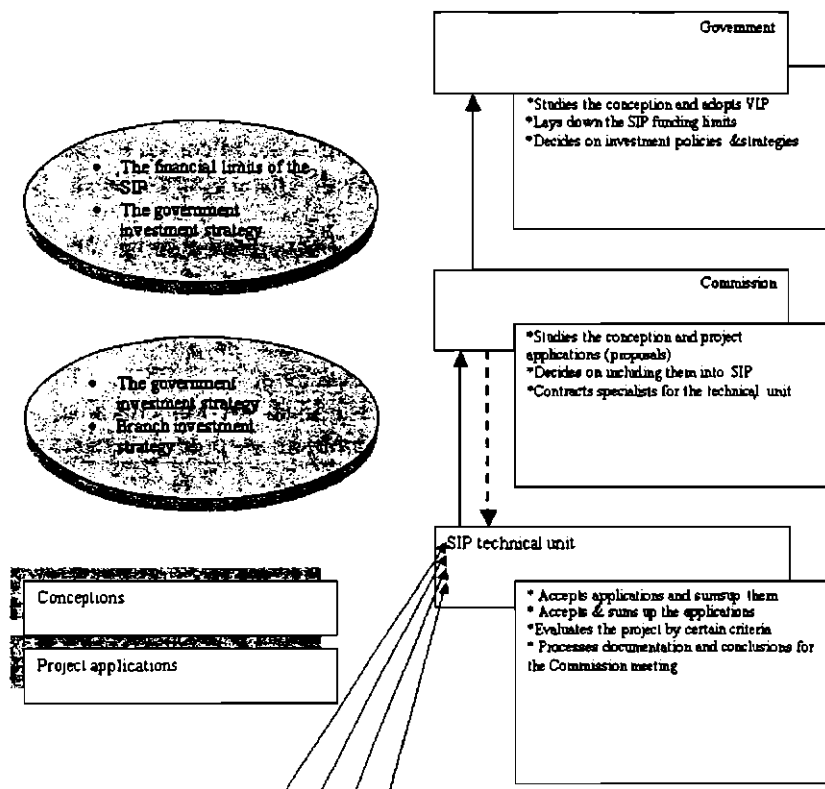


Fig.3. Envisaged development of the State Investment Programme (SIP)

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Summary

In the paper the author analyses the management and implementation of the state investment programme in Latvia.

Ever since 1995, a state Investment Programme (SIP) has been worked out, the task of it is to allocate expenses for putting in order and developing the infrastructure, as well as for maintaining and extending the level of state services. The SIP is funded from the general government budget, the local budgets, audits with the way of guarantee, grants and the personal resources of the project introducers themselves.

The Ministry of Economics cooperates with the Ministry of Finance and the project applicants to enable the SIP to fit within the limits of the financial means available.

The SIP implementation in terms of sectors is reflected in the paper. Beginning with the year 1997, much attention is paid to investment projects in information technologies (IT). The volume of funding from the general government budget has rapidly raised from 2.2 million lats in 1997 to 15.2 million lats in 1999. The main measures being taken in the account of the IT are connected with designing and perfecting data transfer networks of a variety of record and incorporation networks and information systems. In the year 2000, 10.4 million lats were allocated to the projects.

However, notwithstanding certain advantages and achievements, the existing SIP planning and implementation does not meet the new requirements, advanced by the state major economic sectors and the integration into the EU.

In order to overcome the aforesaid shortcomings, the SIP has to be developed as inter – branch and inter – region indicative medium term programme that is formed within a system based on identical principles. Such an approach will enable infrastructure to be developed in a coordinated manner. This kind of solution is showed in the paper.

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SPECIFICS OF FINANCIAL MANAGEMENT IN TOURISM

Šajā rakstā autors analizē finansu vadības nepieciešamību tūrisma nozarē, skaidrojot tos rādītājus, kas nosaka šo finansu vadības un pielietojamo metožu specifiku tūrismā.

Plaši pielietota ir noslodzes rādītāju analīze finansu vadībā, taču šim rādītājam ir savas nepilnības, tāpēc autors papildus piedāvā metodes, kuras var tikt veiksmīgi izmantotas tūrisma uzņēmumu vadībā finansu rādītāju pilnvērtīgai analīzei.

Financial management is an essential element of every company in fulfilling its revenue and profitability objectives. Financial management is important both for the production enterprises and service sector as well as functioning as a tool to determinate if the company's activities are fanatically feasible.

There is a list of specific characteristics of service sector that determines the particular importance of finance management. These characteristics combine intangibility and perishableness of the services. The main characteristics of tourism product as a combination of different tourism services are the following:

- ⇒ intangibility no possibility to test the product before the usage,
- ⇒ perishableness and inseparability-production and consumption are at the same time, unconsumed services can not be stored,
- ⇒ fixed capacity that can not be changed in a short time,
- ⇒ seasonality – fluctuating, unstable demand,
- ⇒ heterogeneity high level of variability, difficulties for standardisation, and other factors, determinate particular needs for the management.

Because of all the abovementioned characteristics capacity management is described as the main operational management problems for the tourism companies.

It is very important to measure the companies' performance using the capacity as the economic indicator of tourism enterprises.

There are different methods for the measure the operational efficiency taking into account capacity parameters as the only pattern or as the element combining different economic indicators.

Most used parameter for measurement of the tourism companies (especially hotel, air company) performance is the **occupancy rate**.

$$\text{OR} = \text{RS} / \text{TR} \times 100$$

where: OR – occupancy rate
RS – rooms sold
TR – total number of rooms

Occupancy rate shows the share (percentage) of the sold product units in respect to the total capacity. This economic parameter is frequently used both in the theory as well as in practical applications as a tool for comparison of the tourism company performance. But the occupancy rate shows just the share of used capacity without any indications of the relative profitability of travelling company. There are examples of the hotels that are operating with the high rates of occupancy – close to 90% but that doesn't mean that the profit from the rates that are paid for these tourism products are higher than the profits of some other hotel that are working with 65% occupancy rate. The reason can be different pricing and discounts on regular rates for each of the tourism companies. Therefore this so widely used economic parameter does not reflect the actual financial situation of the company.

In this paper author will illustrate three other methods that can be used as comparative parameters for the performance of tourism companies to develop effective utilisation of the fixed capacity asset revenue generating efficiency method, critical ratio method as well as yield management.

Tourism company can measure **revenue-generating efficiency of the company's assets**. This method takes into account such parameters as average price actually obtained per unit of product or service and the maximum price that might have been charged determining that way the **unit price efficiency rate**.

Determining the demand curves and relevant elasticity of different market segments can set prices. The most frequently used data are the previous records of tourism company that can be used as a base for the

segmentation as well as elasticity and demand calculations. This process enables the company to allocate the available capacity among different market segments for the specific period of time. This economic parameter reflects the opportunity costs of accepting business from one segment when another might subsequently yield a higher rate.

This asset revenue generating potential is determined as the product of the percentage occupancy and the average unit price efficiency rate.

$$\text{ARGE} = \text{TR} / \text{MR} \times 100$$

$$\text{ARGE} = \text{OR} \times \text{PE}$$

where: ARGE – asset revenue generating efficiency
 TR – total revenues received
 MR – maximum potential revenues
 OR – occupancy rate
 PE – average unit price efficiency

The second method that the author will analyze is based on the measurements of the probability of occupancy that is based on the different levels of demand for the certain period of time. A critical ratio method represents the desirability to attract additional clients – tourists. The basis of this technique is the expected contribution of the incremental available room/seat.

$$\text{PN} = \text{C} / (\text{R} - \text{S}) \times 100$$

where: PN – critical probability for n rooms/seats demand
 R – occupancy-variable revenues
 S – occupancy variable servicing costs
 C – capacity variable carrying costs

Critical ratio method shows the percentage of nights of one-year period that should be occupied to break-even for a certain rooms/seats or the rate of occupancy to break even based on a certain prices. In practice that means that lowering the price will increase the probability of occupancy.

There are different definitions what is yield management. One of the theoretical definitions is the following – yield management is a set of mathematical techniques designed to increase revenue (yield) by discounting prices when inventory is not selling and charging premium prices when it is [1]. Yield management combines room inventory management that

determinates allocation of rooms for each market segment, with pricing system for each segment. Yield management allows using of price as a tool to balance the market conditions of supply and demand.

There is a list of different specific requirements that are necessary to identify the fields in which the yield management can be applied and possibly giving positive results:

- ⇒ requirements to the product/service:
- ⇒ the companies of the industry should have fixed or relatively fixed capacity,
- ⇒ perishable inventory
- ⇒ high fixed costs, low variable costs
- ⇒ requirements to the demand
- ⇒ segmented target market
- ⇒ advanced purchasing system of the product
- ⇒ fluctuations of the demand, time variable demand

Tourism industry companies have a fixed capacity and perishable character of the products. Tourism industry is a part of service sectors and the products/services can not be stored for later they should be sold out in a given date (for example for hotels) or in given time (for example airline companies). If the company does not sell the tourism product in a given time period the opportunity to make revenue is lost. There is fixed capacity or the level to which the capacity can be expended as the limit that cannot be exceeded or it is expensive to increase the available units of the product (number of beds in hotel, number of seats in bus for sightseeing, number of seats in airline).

The initial investment in most of the tourism industry companies is very large, but the variable cost of selling additional product unit comparatively is very small.

Reservations can be made in advance – so the company can choose between the potential customer segments. Company should choose either to accept the lower paying customers who usually make their reservations well in advance or wait for the higher paying customers who typically make their reservations last minute. Problem of overselling the discounted prices as the price sensitive demand in tourism industry precede the price-stiff, paying capable late booking demand.

Yield management most frequently is applied to service industry to help to sell the service and not physical product.

The product can be priced to target different customer segments. Often tourism product demand increases over the time and time is the most effective way to segment the markets.

The product can be sold in advance.

Variable costs of the product are low.

Demand for the product varies.

The basic descriptive and simplified formula illustrating the idea of yield management is the following:

$$Y=RR/RP \times 100$$

where: Y – yield

RR – revenue realized

RP – revenue potential

The principle of price setting for optimum yield management is based on parameter settings to segment customers varying their ability or willingness to pay. In the actual financial management this yield management formula is much more complex reflecting attempts to balance between supply and demand by constant small adjustments in price.

There is need to integrate the knowledge and technological achievements into the company management process.

Yield management techniques can be divided into 4 categories:

- ⇒ mathematical programming that comprises linear programming and network flow models that are mostly used by the airline industry,
- ⇒ economics based method calculating marginal revenue and expected marginal unit review,
- ⇒ threshold curves investigating the demand behavior and bookings,
- ⇒ expert methods as a tool for forecasts and price determination.

This method comprises many different analytical methods from different fields – such as financial management, economics, statistics as well as IT achievements.

In the internet it is possible to find information about companies offering yield management services. Here is enclosed, e.g. “Yield calculator” of financial company “Resort data Processing Inc.” This “Yield calculator” is used as marketing tool to convince customers to buy the IT Yield management software program (see Exhibit 1).

In tourism industry the Yield management is understood as the optimum mix between occupancy and price with a view to increase the revenue [4].

Hotels as their calculation tool can use the following data:

- price
- length of stay
- market segments
- competitive situation

Yield technique was introduced by the airline companies in the late 1970s, namely by American Airlines and United [22] and started to develop in the hospitality industry in the mid 1980s as the goal not only concentrate on the occupancy but the achievement of the maximum revenue.

Yield management techniques have been started to be introduced by the tour operating companies. The leading companies have about 100 prices for one product group – brochure price for different seasons, early booking discount, child discount, late sales discount, travel agent commissions. Car rental companies, conference centers, resorts, restaurants, and communication companies have applied the technique as well.

There is formation of the yield management acceptance from the part of customers in tourism industry during the last decades. People sitting next to each other in the airplane do understand that they have been paid different price. However that does not mean the reaction from customer part in other industries could be the same.

There is a risk to sell cheaply early with the result that onwards higher yielding demand has to be denied.

These methods are used more for the bigger tourism businesses applying specially developed computer systems – the most known are the yield management systems of airline companies as well as of large international hotel chains. Nevertheless the idea of these methods can be adapted for the financial management of smaller tourism companies as well.

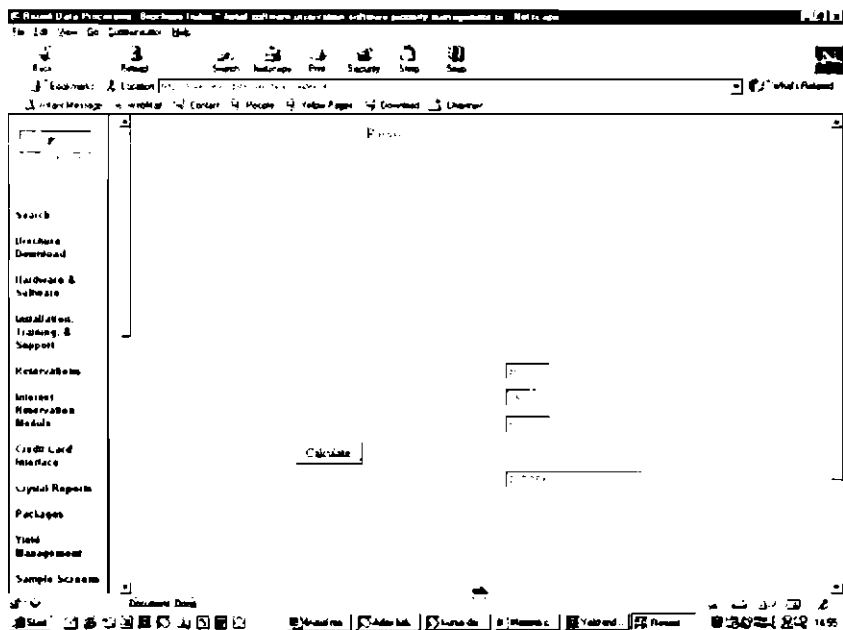
IT for yield management system consists of various elements. Customers can use only one part of the system, for example seasonal rate aspects of yield management, or entire system.

It yield system depending on program can encompass 100 different rate plans per season with 26 different seasons [22] automatically cut-off can be established for each rate for every day of the year, seasonal planning can be up to 4 years in advance, yield management allows unique rate plans

for groups, companies, wholesalers, travel agents, hour by hour discount for specialized tourism companies (for example airport hotel).

Speaking about the application of yield management in Latvia, it is evident that this system is used by our national carrier AirBaltic as well as by the largest hotels like Radisson SAS Daugava. These international companies use the IT systems of yield management in the planning process of the prices in connection to occupancy both for the seats as well for rooms. As mentioned already earlier medium as well as small size tourism companies can use this system. The level of integration of this system can vary from company to company. The minimum that should be implemented is the basic idea of yield management that there is a need additionally to classic season and off-season (or in some cases division in 3 seasons) separate many other periods based on the historical data of previous bookings as well as the future forecasts based on the plans of the next year – the early group bookings, different events that are held in the area of company.

Figure 1. Information on Yield management IT program of company “Resort Data Processing”



Yield management system is quite an expensive circumstance and company trying to implement it should calculate the possible profitability increase trying to isolate all the rest environmental factors that influence it. Yield management, as a tactical management tool is the investment in the future development of company coping with increasing competition as well as international character of tourism industry.

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Summary

Financial management is important both for the production enterprises and service sector in fulfilling its revenue and profitability objectives as well as it is functioning as a tool to determinate if company's activities are fanatically feasible. There is a list of specific characteristics of service sector that determines the particular importance of finance management. These characteristics combine intangibility and perish ability of the services. There are different methods for the measure the operational efficiency taking into account capacity parameters as the only pattern or as the element combining different economic indicators.

Most used parameter for measurement of the tourism companies (especially hotel, air company) performance is the occupancy rate. But the occupancy rate shows just the share of used capacity without any indications of the relative profitability of tourism company.

In this paper author will illustrate three other methods that can be used as comparative parameters for the performance of tourism companies to develop effective utilisation of the fixed capacity:

- 1) asset revenue generating efficiency method,*
- 2) critical ratio method,*
- 3) yield management.*

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THE IMPORTANCE OF SOCIAL PAYMENTS IN THE FORMING OF THE SOCIAL INSURANCE SYSTEM IN LATVIA

Šajā rakstā tiek aplūkota sociālo maksājumu loma LR sociālās apdrošināšanas sistēmas veidošanā. Tiek aprakstītas sociālās apdrošināšanas sistēmas sastāvdaļas: valsts obligātā sociālā apdrošināšana, fondētā pensiju sistēma un brīvprātīgā dzīvības apdrošināšana. Darbā tiek izskatītas sociālo maksājumu likmes, to sadalīšana pa speciālajiem budžetiem, kā arī statistisko datu pamatā tiek noteikta aizsardzības pakāpe, kuru nodrošina katrs atsevišķs sociālās apdrošināšanas sistēmas līmenis un visi kopā.

One of the main destinations of state is to provide welfare's standard of citizens. Therefore the system of social defence takes an important place in the achievement of social stability. The problems of the social insurance system as a part of the system of social defence are becoming more topical year by year. In this present context the social insurance includes the protection of the economically active peoples from social risk using the special state budgets and realising the programs of life insurance, therefore the social payments are including not only tax payment, but the premium of life insurance as well.

The mechanism of protection from social risk ensures person's income compensation in case of losing a job, ability to work etc. As a rule the amount of the compensation directly depends on the amount of the payments. By using the possibilities of the system of social insurance in Latvia the payer has an opportunity to regulate the level of the compensation of the lost income.

Latvian system of social insurance has been reformed recently. Latvia is one of the first countries in Europe, which has introduced the system of pension security consisting of three levels. The system of social insurance can be considered in the same way.

The first level is the system of obligatory social insurance. The payers of that level are workers, employers, the people, who are involved in

individual business, and some groups of people, who temporarily are not participating in the working process, for example: females, up bringing children up to the age 1.5 years, soldiers of the military service, husbands and wives of diplomats. The basis rate in 2001 is 35.09%: 26.09% pays the employer, 9% – employee. The rate changes for the other insurants. It's the result of the process when different groups of insurants are to be ensured against various groups of social risks. For example, the employee is ensured against disability, illness, maternity, accidents at work on professional disease, unemployment, the insurant can also get old age pension and maternity allowance.

Table 1

The Rate of Social Payments for Different Groups of Insurants

	Basis Rate of Payments	The Main Groups of Insurants
1998	37.09	Employee
1999	37.09	
2000	36.09	
2001	35.09	
1998	28.05	Working pensioners and invalids
1999	29.20	
2000	28.48	
2001	28.26	
1998	33.90	Individual businessmen
1999	33.82	
2000	32.59	
2001	32.10	

The accumulated payments are assessed upon different special budgets in fixed proportions. Pensions, allowances and compensations are paid from those budgets later. The proportions of assessment are determined each year according to the statistical data. There are 4 special budgets in Latvia:

- The special budget of state pensions;
- The special budget of insurance against unemployment;
- The special budget of insurance against accidents at work and professional diseases;
- The special budget of maternity, illness and disability.

This is the way the social payments are accumulated in the special budgets of social insurance, which are the material basis for protecting the

economically active people. What standard of protection can the first level of the system of social insurance in Latvia ensure?

The most problematic moment is paying the old age pension. The special budget of state pensions has maximum load because the next two levels are not working yet (from the view of paying pensions). Thus it's the only way to provide pension for people now. The pension from that budget is available when a person has paid social payment for at least 10 years.

Table 2

**The Proportions of the Assessment of Payments upon
the Special Budgets in 1998 – 2001**

The main groups of insurants		State social insurance					Payment's rate assessment	
		Pension	Unemployment	Accidents at work and professional disease	Disability	Maternity	Employer	Hired worker
Hired workers	1998	27.37%	3.10%	0.09%	5.94%	0.59%	28.09	9.0
	1999	27.91%	2.34%	0.09%	4.67%	2.08%	28.09	9.0
	2000	27.10%	2.45%	0.09%	4.16%	2.29%	27.09	9.0
	2001	26.93%	2.20%	0.09%	3.89%	1.98%	26.09	9.0
Working pensioners and invalids	1998	27.37%	-	0.09%	-	0.59%	21.34	6.71
	1999	27.91%	-	0.09%	-	0.59%	22.20	7.0
	2000	27.10%	-	0.09%	-	1.29%	21.38	7.10
	2001	26.93%	-	0.09%	-	1.24%	21.02	7.24
Individual businessmen	1998	27.37%	-	-	5.94%	0.59%	-	-
	1999	27.91%	-	-	4.67%	1.24%	-	-
	2000	27.10%	-	-	4.16%	1.33%	-	-
	2001	26.93%	-	-	3.89%	1.28%	-	-

State pension is only the minimum protection standard. In theory the part of social payments is accumulating on the individual payer's account, however, in practice the means accumulated in the special budget of state pensions are accessed upon the recipients of pensions. In spite of huge expenses of the special budget of state pensions, the average size of old age pension stays smaller than the subsistence minimum for many years.

Table 3**The Dynamics of Pensions and Subsistence Minimum**

	1996	1997	1998	1999	2000
Old pension's average size, USD*	63.83	70.92	85.95	98.20	96.32
Subsistence minimum	122.97	131.30	137.38	138.63	140.78
Percent of subsistence minimum	51.9%	54.0%	62.6%	70.8%	68.4%

* 1 USD – 0.6 LVL

At present the accounting mechanism of pensions is complicated enough, but in future the amount of pension will be based on the accumulated pension capital, dividing it by the number of years (i.e. a person's age) when a person will get the pension. However, according to the statistical prognosis, the amount of pension on the first level will be relatively small. Besides that, the maximum amount of social payments is determined, too, thus it is impossible to accumulate a bigger capital than it is allowed on the first level. The limit of the amount of old age pension is about 100 USD now. This temporary limitation is necessary to prevent the deficit of the special budget of state pensions.

The size of pension depends on the amount of the accumulated capital. The size of other allowances and compensations depends on person's income. But the indispensable condition for getting the allowances and compensations from the system of state obligatory social insurance is paying the social payments. The statistical data shows that the average standard of protection guaranteed by the first level is rather low.

It should be noted that in case of socially insured person's death it's dependent on relatives having rights to get the allowance for burial and pensions.

Analyzing the above mentioned, it becomes clear that the first level of the system of social insurance as a rule can't provide the usual income.

Adding the second level to the system of pension insurance will enable to get a pension, which is at least equal to the amount of subsistence minimum. This level will start to function in summer 2001. It means that social payments will be accumulated and invested for making a profit. People till the age of 30 will be obliged to make payments, people who are at the age of 30 up to 49 years now can become payers on a voluntary basis. The pension of the second level becomes available at

the age of 62, so the payments of pensions will begin at least in 13 years. Thus that time period enables to expect a considerable growth of capital.

Table 4

The average size of allowances and compensations

	1995	1996	1997	1998	1999
Disability pensions, USD per month	56.5	65.33	71.35	84.77	91.20
Illness allowances, USD per day	5.22	6.37	4.50	4.78	5.80
Maternity allowances, USD per day	4.85	5.58	4.97	5.80	6.67
Unemployment allowances, USD per month	38.67	46.28	50.63	66.80	80.12
Accidents at work allowances, USD per day			4.95	5.43	5.43
Professional diseases allowances, USD per day			3.52	5.80	6.25

At the beginning the rate of payments is 2%, but it is planned to increase it to 10%. That process will not increase tax payments, the proportion of the assessment upon special insurance budgets will be changed. By 2010 10% of social payments will be accumulated on the first level in the special budget of state pensions and 10% on the second level. According to the accounts of the investors of the new system will enable to increase the material welfare of pensioners.

After 2003 the administration of the accumulated capital of the second level will realize state and private companies' capital, but maximum secure investments in the debentures of enterprises and in foreign shares and securities will ensure the growth of capital. The insurant can choose between state and private administrators and change them. The capital accumulated on the second level can be added to the capital of the first level or the payer can insure in different insurance companies.

Table 5

The Prognosis of the Assets Growth on the Second Level

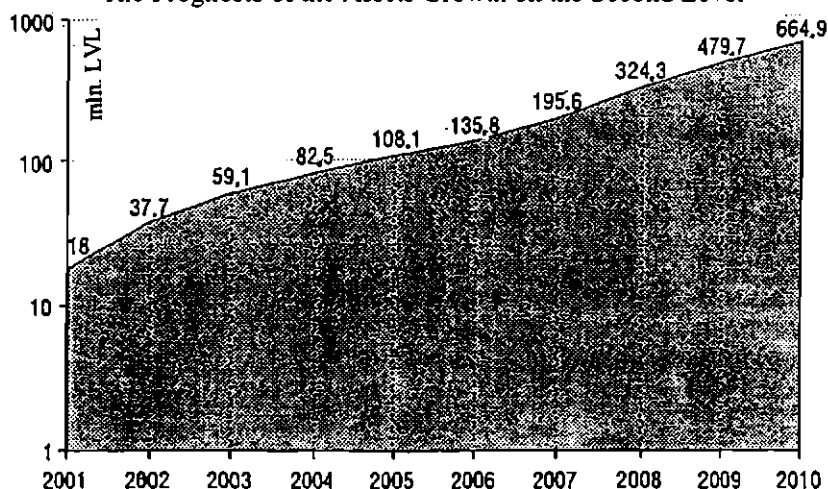
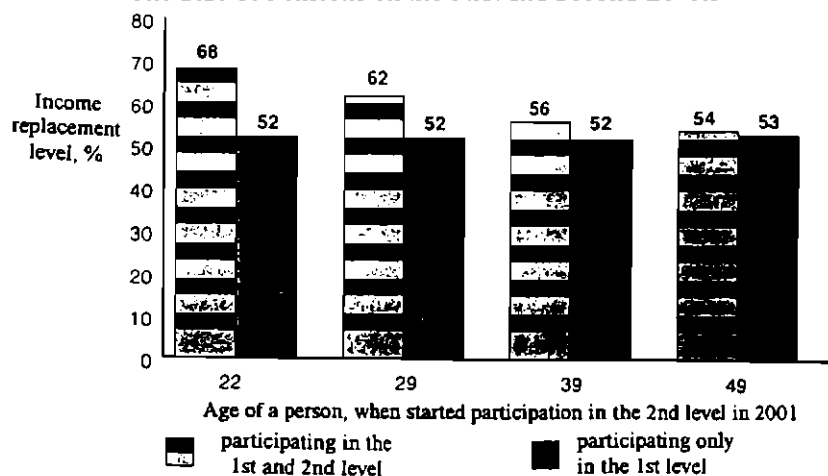


Table 6

The Size of Pensions on the First and Second Levels



The third level of the system of social insurance in Latvia is private insurance companies and pension funds. This level enables to have the

standard of protection, which a person can plan according to his or her own wish and income. In 2001, there are 4 private pension funds: 3 public funds and 1 closed-ended fund. The fixed amount of payments into pension funds is not taxed. It's a good stimulation for both individual and corporative payers.

Life insurance is not very popular in Latvia now. Therefore non-life insurance market is developing much faster than life insurance.

Table 7

The Dynamics of Life Insurance in Latvia

	1995	1996	1997	1998	1999
Cross premiums, thsd. USD	53.402	72.442	108.853	140.536	152.873
of which:					
life insurance	15.065	15.183	14.173	17.068	18.073
non-life insurance	38.337	57.258	94.680	123.468	134.800
Life insurance, % of gross premiums	28.2%	21.0%	13.0%	12.1%	11.8%
Gross premiums per capita	21.33	29.08	44.08	57.38	62.87
of which:					
life insurance	5.98	6.1	5.73	6.97	7.43
non-life insurance	15.25	22.98	38.35	50.42	55.43

Analyzing the tendencies of the development of social insurance system in Latvia, it's possible to draw a conclusion that the first and the second levels will have the main responsibility in protecting people against social risks because of low popularity of life insurance in Latvia. However, the payments to all three levels can ensure the compensation of usual person's income and living standard.

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Summary

One of the main destinations of state is to provide welfare's standard of citizens. Therefore the system of social defence takes an important place in the achievement of social stability. The problems of the social insurance system as a part of the system of social defence are becoming more topical each year.

The mechanism of protection from social risk ensures person's income compensation in case of loosing a job, ability to work etc. As a rule the amount of the compensation directly depends on the amount of the payments. By using the possibilities of the system of social insurance in Latvia the payer has an opportunity to regulate the level of the compensation of the lost income.

The system of social insurance consists of three levels.

The first level; is the system of obligatory social insurance. The accumulated payments are assessed upon different special budgets in fixed proportions. Pensions, allowances and compensations are paid from those budgets later. In spite of huge expenses of the special budget of state pensions, the average size of old age pension stays smaller than the subsistence minimum for many years. The first level of the system of social insurance as a rule can't provide the usual income.

Adding the second level to the system of pension insurance will enable to get a pension, which is at least equal to the amount of subsistence minimum. Social payments will be accumulated and invested for making a profit.

The third level of the system of social insurance in Latvia is private insurance companies and pension funds. This level enables to have the standard of protection, which a person can plan according to his or her own wish and income.

Life insurance is not very popular in Latvia now. Therefore non-life insurance market is developing much faster than life insurance.

In future the first and the second levels will have the main responsibility in protecting people against social risks because of low popularity of life insurance in Latvia. However, the payments to all three levels can ensure the compensation of usual person's income a living standard.

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Lithuania

DEVELOPMENT PROCESSES AND PROBLEMS OF LITHUANIAN SECURITIES MARKET

В статье рассматривается формирование рынка ценных бумаг в Литве, его развитие и проблемы. Процессы приватизации, их влияние на формирование рынка ценных бумаг привели к ряду проблем. Национальный рынок ценных бумаг постепенно интегрируется в интернациональные структуры.

Изучается деятельность финансовых посредников в рынке ценных бумаг, факторы влияющие на их активность и эффективность. Исследуются возможности организаций инвестиционных фондов, обсуждаются пути их эффективной деятельности. Рассматриваются возможности создания инвестиционных фондов на основе ценных бумаг предприятий, акцентирующих принципы стабильного развития.

The article offers a review of the Lithuanian securities market origin, its development and problems. Privatisation process, and its influence on securities market formation, evaluation of the activities of the national securities exchange, as well as its joining to international securities exchange structures.

The review presents analysis of Lithuania's stockbroker enterprise activities and their efficiency and singles out the problems connected with capital investment funds' existence. The article interprets the possibilities of capital investment funds organised from the securities of those enterprises that have accepted sustainable development.

Forming of National Securities Market

Transforming processes of economic system that begun after re-constitution of independence influenced origin of Lithuanian securities market. It was necessary to prepare legal base for successful reform of economics. Joint Stock Company statute, passed on 30 July 1990 and Primary Privatisation of

Public Property statute, passed on 28 February 1991 were one of the first. In Primary Privatisation of Public Property statute provided privatisation order of building, energetic, service enterprises. Defined privatisation objects and subjects, order of settlement. It was determined that after primary privatisation more than a half of valuable privatisation objects has to belong to private person. The rest part of privatisation objects might be sold later using other ways of privatisation.

It's very hard to say what were the theoretical preconditions as the ground for that very important statute. It is hard to evaluate was it taken into account-privatisation practise of foreign countries. There was no united strategy of economic transformation as it was in Poland (1). It is said that so fast and not fully scientifically based privatisation was influenced by several important reasons like progressing crisis of economic, regressing possibility to privatise public property, rather unstable political situation.

It was planned to privatise 72.9% of public property in privatisation programme that was prepared quite hastily. Signing of shares was foresight as the main way of privatisation. About a half of all privatisation objects were sold through auction, but it was just 2.3% of all privatisation objects value. Such situation allows formulating a hypothesis that setting of primary and final price of privatisation object was quite distinctive. This hypothesis was pointed out in study that was carried out for analysis of several countries privatisation process (2).

Primary privatisation of public property was started in September of 1991, but in the year of 1997 was most active. During 1997 more than 40% of all privatisation property was privatised. Information about primary public property privatisation in Lithuania is shown in Table 1.

Table 1

Information about primary public property privatisation

Indexes	Number of objects, units	Capital, million LTL
1. All public property	8044	13547
2. Privatised property	5710	3491
3. Privatised signing shares	2923	2628
4. Privatised through auctions	2726	79
5. Privatised in competition	15	499

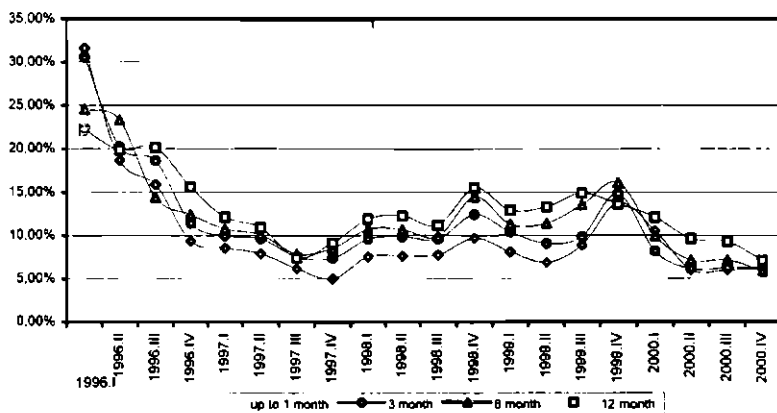
There were issued many shares during privatisation process. About 1.5 million Lithuania's residents become a shareholder. In other words, almost a half of Lithuania's residents became potential participants of

securities market. There was very big inflation in the years 1991-1993 in Lithuania. Because of that the creating centralised securities market was very important. Such securities market would create conditions to trade in securities for real price and shelter small investors. Considering situation of securities market Lithuania's government decided to establish dematerialised model of securities market.

Activity of Securities Exchange

National Securities Exchange was established on 3rd September, 1992. Constitutive assembly of National Securities Exchange took place on 20th April, 1993. The first session was arranged on September 14, 1993. 19 financial stockbrokers enterprises were registered, 22 securities of 19 emitents were inserted into trade list during first session. Turnover of the first session was very little – just 1630.50 LTL.

Lithuanian National Securities Exchange model was created together with “SBF Bourse de Paris” and SICOVAM (French securities depository). National securities exchange corresponds to international standards and recommendations of G30.



Picture 1. General tendencies of government securities profitability

Government of Republic of Lithuania emits various securities that are sold in local and international capital markets. Short-term securities, emitted by government are called Treasury bill. Securities of longer than a year term are called State bond. The longer term of government

securities the more profitable they are. General tendencies of government securities profitability are shown in the Picture 1.

Government securities trade quite well reflects changes of fiscal policy of the State. Main investors in government securities are banks and insurance enterprises. They buy almost two thirds of all government securities emissions. Insurance enterprises have to invest in government securities because of strict demands that controls their activity.

There are three lists of enterprise's shares for trade in securities: Official, Current and Not-listed securities. In the Official list inserted companies that shows high economical potential, securities are liquid and economic activity is stable. To enter this list are able only those companies, which securities were successful traded in Current list not less that half a year and other demands are fulfilled.

According to data of May 2001 there were 6 securities of joint stock companies in Official list and 39 securities of joint stock companies in Current list. Trying to evaluate this situation from position of investor, selection is quite low. It is said, that Lithuania's security market is quite shallow and not very attractive for investor. Finance analysts note that Securities Superintendence Commission makes also too strict restraining. Securities Superintendence Commission functions as follows:

- Registering of securities emissions
- Handing and abolition of licence for securities trade
- Preparing and confirming of rules that regulates activity of securities market subjects

Securities turnover in Lithuanian securities exchange does not show significant growing tendencies. Analysts from biggest in country bank Vilniaus Bankas affirm that there is no ground to say that any positive basic and long term changes happen as economic situation of the country is not favour for securities market excitement.

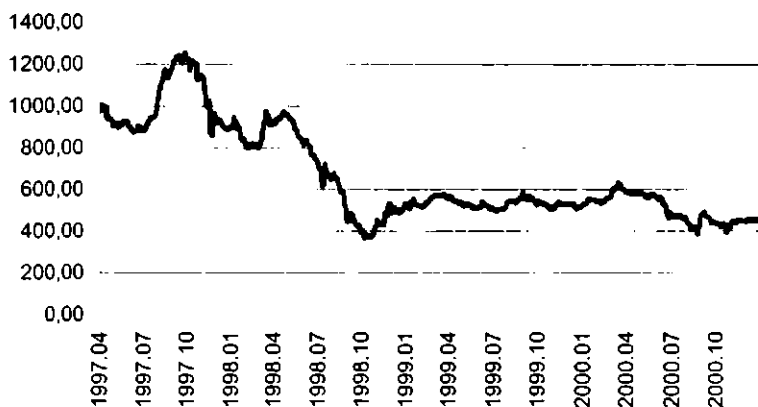
Lithuania's Securities Market Indexes

Indexes characterise Lithuania's securities situation and changes. For formation of National securities exchange indexes methodology from International Finance Corporation (IFC) was used. This methodology was adopted for calculating indexes in increasing securities markets.

This type index is like price index; it reflects securities price changes direction, dynamic and amount in second market through certain time. Comparing to other indexes, this index does not reflect changes of

securities turnover. Any changes, connected to dividends are not pointed out also.

Changes of Lithuania's securities market characterise index LITIN. It is calculated for second securities market and it depends on the number of emitted securities. It means that every share emission is inserted into index counting base and has established influence in proportion to its market capitalisation. Index LITIN expresses ratio between total shares capitalisation in certain time and the same shares capitalisation in the beginning of index calculating. Index is expressed in points and its initial value is 1000. Only ordinary shares could be inserted into LITIN index counting base. Different emissions of the same issuers are inserted as different shares. Changes in index LITIN are made if number of shares that are in index increases or decreases. Changes of index LITIN are shown in Picture 2.



Picture 2. Changes of index LITIN

Index LITIN was successfully used together with Estonia and Latvia indexes TALSE and DJRSE counting general index Baltic – 30 (B30). Such common index helps national and foreign investors to form an opinion about securities market development.

Index LITIN – VVP characterise Government securities market. It is counted by the same method adopted to bond market. This index helps investors to decide about conjuncture of government securities in the second market at a certain moment or during time period. This index also

gives information about government securities price changes and profitability.

Index LITIN – VVP is also price type index. All new in auction sold government bonds are inserted into index counting base next day after their payment. All government securities that left two days till redemption are crossing out of index counting base.

Mediators of Public Turnover

Finance stockbrokers enterprises and commercial banks subdivisions finance stockbroker's branches earn their living by mediation in public securities turnover in Lithuania. Finance stockbroker's enterprises and commercial banks subdivisions finance stockbroker's branches development of growing is shown in Table 2.

Table 2

The number of finance stockbroker's enterprises and commercial banks subdivisions finance stockbroker's branches

	1993	1994	1995	1996	1997	1998	1999	2000
All finance stockbrokers enterprises and commercial banks subdivisions finance stockbroker's branches	76	102	99	63	59	49	43	34
Finance stockbrokers enterprises (subdivisions) that have a right to trade in National Securities Stock Exchange	35	59	63	53	50	49	37	29

According to size of own elementary capital finance stockbrokers enterprises are divided to A, B, and C categories. The licence of A category allows earning one's living by all kinds of finance stockbroker's enterprise activities that are established in the law of Securities Public Turnover:

- Mediate in public securities turnover
- Buy and sell securities with own or clients name for own or clients capital

- Advice in direct way investitures about securities price, investing in securities, its buying and selling
- Manage client's securities portfolio and capital means, that are separated for operation with securities
- Take care client's securities
- Advice issuers about securities emission and filling up investments
- According to agreement with issuer organise and carry out his securities emission
- Manage issuers and investors securities accounts
- Lend for clients securities and own capital means to gain securities according to Securities Commission confirmed rules.

Specialised licence of category B allows to earn one's living just by part kinds of finance stockbrokers activities: commerce of securities with own name, organising and carrying out securities emission with spreading guarantee are not allowed. Licence of category C allows just advising about investing in securities. These finance stockbrokers enterprises has no right to execute commerce of securities with own or client's name.

Commercial banks acquires right to execute securities operations according to Lithuania Bank given licence in the case if commercial bank licence does not limit these operations. The final conclusion about commercial bank ability to execute mediation in public securities turnover carries out Securities Commission. Commercial bank licence according to activity volume corresponds to finance stockbrokers licence category A.

The Perspectives of Investment Funds Activities

Securities market situation is closely connected with possibilities of investment funds activities. Investment funds are one of financial mediators that act in capital markets. Investment fund is like an investment company that have diversified investment portfolio and redeemed shares. The owner of redeemed shares has a right to return them to company and to get for that proportional part its own share any time (3).

Liquid and effective acting capital markets where is possible to trade in financial capital is a necessity for success of investment funds. There is no effective acting capital markets and no security guarantees in the countries where the economic structure is changing. In spite of decade of

years that economic structure changes into free market economics in Lithuania investment funds activity is quite problematic.

From Lithuanian financial system history is seen that investment funds tried to act here already in the beginning of transformation period. A bulk of financial institutions were established expecting for quick and big profits. Investment companies that had to break off existence because of not competent specialist and several another reasons were one of them. Investment companies couldn't develop their business because of these reasons:

- There were no capital market that would form normal capital demand and supply intercourse
- There were no conditions that would ensure enough liquidity of capital
- There were no pricing mechanism based on marked laws
- Laws that regulates property relations were reconcilable not enough
- There were no laws that would limit risk of investment funds activities
- Management of investment funds rights and responsibility were defined not exactly

In the year of 1995 The Statute of Investment Companies was adopted as interest in rationally functioning investment funds is increasing. This statute was corrected several times. In general The Statute of Investment Companies corresponds to European Union normative documents that regulates corresponding sphere. So, the law basis for establishment and functioning of investment funds is prepared. Adopting of other existing law for functioning of investment funds is not complicated. These aspects of investment funds activities that can't follow Lithuania's law could be based on European Union law acts.

Experience of countries that went through economic structure changes shows that main obstacles for successful functioning of investment funds can be kept as

- Shortage of skilled investment funds managers
- Shortage of investment alternatives
- Problem of securities liquidity
- Small activity of investors

These obstacles interfered establishment and functioning of investment funds in Lithuania also. It is hard to expect to induce activity of

investment funds in Lithuania using administrative means. The association of financial stockbroker's enterprises offered suggestions to improve laws that are regulating activity of investment funds. In spite of that improving of laws was delayed for unknown reasons.

NSEL 30 index fund was one of first investment funds that started activity with rationally evaluated investment environment and possibilities. Share spreader and depository of this fund is Vilniaus Bankas. According to this fund strategy all gathered capital means would be invested to shares of 30 biggest enterprises. These enterprises are the biggest Lithuania companies, listed in National Securities Exchange official and current lists. It is provisioned that the fund diversifies investment portfolio every quarter. Because of this reason portfolio is not quite active. It is possible, that after NSEL 30 index investment fund will follow other.

With integration of Lithuania into continent global structure comes recognition that business success depends on enterprises development to sustainability. The conception of Sustainable development integrates so important aspects of activity like total quality management, environmental management, work security, and other. There is increasing number of enterprises that have certified its activity according to separate components of sustainable development in Lithuania.

Creating of fund that would invest in enterprises that manages sustainable development is expedient trying to co-ordinate sustainable development management and investment funds activity sphere development processes. Such funds exist very successfully in number of Western countries. Existence of such funds is positively influenced by social, political, and economical environment. Evolution of ecological culture in Western countries has quite long tradition.

Analogue of investment fund that invests in enterprises that recognise sustainable development could be the fund "Sustainable Performance Group" that is registered in Switzerland. This fund invests in securities of worldwide famous companies that manage sustainable development.

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Summary

Lithuania's securities market is quite young, rising part of finance market. It originated and developed together with fast and discrepant economic system transformation process. Securities process organising and control experience of other countries was used to create National securities exchange. Privatisation should be considered as a main reason of securities origin. Shares in securities market started circulate as a consequence of privatisation. Government securities were started to emit some time later.

National securities exchange decides securities trade and other questions. National securities exchange corresponds to international standards. The driving forces in security exchange are finance stockbrokers enterprises. They are main securities market participants and organisers. They have monopoly for mediation redistributing capital that is embodied in securities. The number of financial stockbroker's enterprises during last five-year decreased almost twice in Lithuania. Instead of that quality of their work and turnover increased significantly.

Indexes characterise securities market situation and changes. There are two indexes used in Lithuania. Index LITIN is separated for evaluation of enterprises share market changes. Index LITIN – VVP is separated for analyse of government securities market. Index LITIN was successfully used together with Estonia and Latvia indexes TALSE and DJRSE counting general index Baltic – 30 (B30). Such common index helps national and foreign investors to form an opinion about securities market development.

Securities market and investment funds are connected closely. At this moment activity of investment funds is not active because of having no favour opinion of society and no benevolence legal regulation. The funds formed from securities of enterprises that accepted sustainable development would have great perspectives.

At the moment Lithuania's securities market is considered to be shallow and not attractive to investors. There are few participants in security market and many of securities are not liquid enough. Too strict regulation of Securities Supervision Commission makes negative influence. Securities have no traditions in Lithuania's social life, as it is a new occurrence. On other hand securities market can't be distinctive with big demand, as life quality standard is quite low.

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EXCHANGE RATE POLICY IN POLAND UNDER TRANSITION

Pāreja no valsts plānveida ekonomikas uz tirgus ekonomiku prasa arī adekvātu valūtas kursa politiku. Autore savā rakstā mēģina izvērtēt valūtas kursa politiku Polijā pārejas perioda laikā.

The transition from a state-controlled to a market economy requires an adequate exchange rate policy. The aim of this paper is to attempt to assess the exchange rate policy in Poland in the period of transition.

The evolution of the exchange rate policy depends on both internal and external conditions. Internal conditions encompass the monetary policy target and the country's economic and financial performance. External conditions include currency crises, changing prices of currencies and interest rates, the introduction of the euro and integration with the European Union.

This paper is divided into four sections.

The first section looks at the evolution of the exchange rate system in Poland.

Part two focuses on the objectives of exchange rate policy in the context of the objectives of monetary policy.

*Part three presents the instruments of exchange rate policy:
parity adjustments,
de-rationing and convertibility
intervention on the exchange market*

Part four presents the problem of the choice of the currency regime from the perspective of integration with the European Union.

The paper ends with Conclusions and References.

Introduction

In exchange rate policy, the main question for a national monetary authority is what kind of policy and strategy should be applied.

In the 1990s, Poland's exchange rate policy underwent numerous changes in connection with political developments, economic reform, reforms of the banking system and growing inflationary pressures. Apart from continuing the struggle against inflation, other targets included maintaining external liquidity, stimulating exports and protecting their efficiency.

Since the very beginning of reform, membership of the European Union has been the strategic objective of the Polish government. After association with the EU in 1992, Poland's exchange rate policy had to fall into line with that of the EU.

At the same time, the country's membership in the International Monetary Fund, the World Bank Group and Organization for Economic Cooperation and Development limits the freedom of the Polish monetary authority. The internal conditions of the economy additionally limit the room for maneuver for the monetary authority.

The choice of exchange rate policy involves the choice of its target, exchange rate regime and instruments. All these elements must be harmonized with the internal and external conditions. Exchange rate policy in Poland has changed frequently because of changing monetary policy conditions and targets. This paper presents the evolution of the targets, exchange rate regime and instruments of Poland's exchange rate policy as well as the problem of its harmonization with EU standards. The results of the policy are measured with the level of achievement of its targets.

1. The evolution of the exchange rate system in Poland since 1990

The evolution of Poland's exchange rate system under transition was from a fixed rate, through a crawling peg, managed float to full float as of April 14, 2000.

Poland entered the nineties with an exchange rate system that was a part of the stabilization program. The fixed rate of the zloty against the U.S. dollar was a nominal anti-inflation "anchor"

After a period of a fixed exchange rate against both the dollar and a basket of five currencies (with the dollar accounting for 45% of the basket, the Deutschemark for 35%, pound sterling, 10%, French franc, 5%, and Swiss franc, 5%), a pre-announced crawling peg system was introduced in 1991. Initially, monthly devaluation stood at 1.8%. In May 1995, an additional element of the exchange rate system was introduced. The National Bank of Poland (NBP) permitted fluctuations within a band

of +/- 7% around a central parity which continued to be set in accordance with the crawling-peg devaluation mechanism. In February 1998, the band was widened to +/- 10%. That was a period of a gradual expansion of the band for permitted exchange rate fluctuations, accompanied by a gradual reduction of the crawling devaluation.

Table 1

Evolution of exchange rate regime in Poland

Year	Exchange rate regime
Before 1990	Multiple exchange rate
From January 1, 1990	Fixed against the dollar 1USD=9500 ZL
From May 17, 1991	Fixed against a basket of 5 currencies: 45% – USD, 35% –DM, 10% – GBP, 5% – FRF, 5% – CHF
From October 19, 1991	Pre- announced crawling peg to a currency basket. Monthly devaluation – 1.8-1.4%
January 1, 1995	Redenomination, 1 new zloty =10 000 old zlotys
From May 16, 1995	Float within crawling band. Central rate with a band of fluctuation (+, - 7%), devaluation of the central rate at the 1.2% per month against the five- currency basket
From January 1, 1999	Modification of the currency basket (45% USD, 55% Euro).
From April 12, 2000	Full float i.e. liquidation of the currency basket, central rate, band of fluctuation and crawling peg

Source: NBP bulletins 1990-2000.

On January 1, 1999, the Monetary Policy Council (MPC), in connection with the introduction of the euro, modified the currency basket. Five currencies were replaced with only two: the dollar (45%) and euro (55%). In March 1999, the band for the zloty's fluctuations from central parity was broadened to +/- 15%, whereas the rate of crawl was reduced to 0.3% per month.

On April 12, 2000, the MPC decided to float the zloty, i.e. liquidate the currency basket, central rate, band of fluctuation and crawling peg devaluation. It was the latest stage in the evolution of the Polish exchange rate regime.

The evolution of the Polish exchange rate system is compatible with changes taking place in other Central European countries seeking admission

to EMU. All these countries started their exchange rate system reforms with the introduction of a fixed rate and are headed toward a full float.

2. Objective of the exchange rate policy

Exchange rate policy is an important instrument of the central bank's monetary policy. Exchange rate policy targets were closely linked with the economic policy target and monetary policy target including a reduction in inflation and sustained economic growth.

The objective of the exchange rate policy was a part of monetary policy in Poland. Overall, exchange rate policy was used to increase the effectiveness of monetary policy and its influence on interest rate and monetary aggregates.

The introduction of the National Bank of Poland Act on January 1, 1998 and the subsequent establishment of the Monetary Policy Council (MPC) on the basis of that act led to an institutional change in decision-making in the area of monetary policy.

The MPC is made up of the NBP president and nine members appointed in equal proportions by the national president, the Sejm and the Senate. The MPC sets annual monetary policy guidelines and makes decisions on key instruments used by the central bank.

In 1998, the MPC prepared "A Medium-Term Monetary Policy Strategy for 1999-2003." The document is of fundamental importance to an expanded horizon of the policy and its coordination with the country's preparations for integration with the European Union, followed by membership in the EMU.

The primary goal of the Polish central bank is to maintain price stability.

Since 1999, Poland has adopted a direct inflationary target. In pursuing this target the NBP applies available policy instruments including key interest rates, open market operations and reserve requirements. The strategy provides for two types of targets: short-term targets and medium term targets. The MPC has decided that the medium-term target of monetary policy will be to reduce inflation to below 4% by 2003.

The actual exchange rate policy was the continuation of a policy initiated in 1990. The NBP had to pick between two conflicting goals: the need to limit inflation and the need to counteract the growing current-account deficit.

The exchange rate policy was subordinated to the attainment of the inflation target and the creation of conditions for an effective interest rate policy.

The direct inflation strategy is accompanied by extended exchange rate flexibility.

The evolution of exchange rate conditions and the medium-term target were the main causes for changing exchange rate policy.

3. Instruments of exchange rate policy

The instruments of exchange rate policy have been modified with the evolution of the exchange rate system and exchange rate conditions. The most important instruments are:

- parity (dollar, basket) adjustments,
- de-rationing and convertibility,
- market intervention.

Parity adjustment

Before the reform, the Polish foreign exchange market was characterized with a multiple level of exchange rates and the segmentation of foreign-exchange transactions. There was also a black market rate, much higher than the official rate. On January 1, 1990, the unified fixed exchange rate was expressed in dollar terms. The government decided to maintain the exchange rate at a level of ZL9,500 to the dollar even if inflation was to exceed the assumed level. The exporters' lobby exerted pressure on the government to reduce the price of the zloty. The evolution of the devaluation of the zloty is presented in Table 2.

In May 1991, the zloty was devalued from ZL9,500 to ZL11,100 to 1\$, accompanied by adjustment against other currencies. At the same time, the monthly devaluation policy was introduced. The monthly crawl level decreased consistently until it was abolished in April 2000. The fluctuation band, implemented in 1995, was subsequently broadened from 2% to 15% until the full float was introduced. Ever since the move to the new exchange rate mechanism in 2000, the price of the zloty has been strongly influenced by events on international markets.

Table 2

History of devaluation of the zloty

Date of change	Rate of devaluation of the parity	Rate of devaluation of the monthly crawl	Band of fluctuation around the central rate
May 17, 1991	-17%	-	-
Oct.15, 1991	-	1.8%	-
Feb. 26,1992	-12%	-	-
Aug. 27, 1993	-8%	1.6%	-
Sept. 13, 1994	-	1.5%	-
Nov. 30,1994	-	1.4%	+/- 2%
Feb. 16, 1995	+ 6% 1/	1.2%	+/- 7% 2/
Jan. 8, 1996	-	1.0%	-
Feb. 26, 1998	-	0.8 %	+/- 10%
July 16, 1998	-	0.65%	-
Sept. 9, 1998	-	0.5%	+/- 12.5% 3/
March 24, 1999	-	0.3%	+/- 15%
April 12, 2000 4/	-	-	-

1/ Dec. 22, 1995- Revaluation against basket as a result of growth of official reserve.

2/ May16, 1995. 3/ Oct. 29, 1998 4/ Abolition of montly devaluation 0.3% band of fluctuation.

Source: NBP bulletins 1990-2000

De-rationing and convertibility

The creation of a free foreign-exchange market for businesses and individuals on March 15, 1989 was an important step in the liberalization of foreign-exchange restrictions.

On January 1, 1990, an internal convertibility of the zloty was introduced. That decision initiated a very important stage on the way toward an external convertibility of the Polish currency. At the same time, a \$1 billion stabilization fund was set up in cooperation with G-24 countries.

Current-account restrictions in Poland were abolished in 1995 with the adoption of IMF Art. VIII. In accordance with OECD requirements, Poland widened the convertibility of the zloty in 1996. Further liberalization (external convertibility) under the Foreign Exchange Act took effect on January 1, 1999. This legal act is based on international standards guaranteeing freedom of payments and capital transactions with some exceptions. Long-term controls were liberalized but some controls on short-

term capital, direct investment and real estate transactions remained. In April 2000, Poland introduced a managed float as part of the exchange rate regime. The process of convertibility is illustrated in Table 3. Poland has proceeded from a lack of convertibility to internal convertibility, IMF Standard, external convertibility to full convertibility as anticipated in 2004.

Market intervention

At the beginning of the reform, market intervention was impossible due to the absence of an exchange market and the adoption of a fixed exchange rate. Until 1995, the exchange rate was specified with monetary authorities. The development of the foreign exchange market was slow due to a small number of commercial banks authorized to handle foreign exchange operations.

Table 3

Evolution of convertibility in Poland

Stage of convertibility	Date of introduction	Current account control	Capital account control
Free foreign exchange market	March 15, 1989	Yes	Yes
Internal convertibility	Jan. 1, 1990	Yes	Yes
IMF Standard	June 1, 1995	Yes. Convertibility at the minimal level.	Yes
OECD requirements	Nov.22, 1996 Poland's accession	Yes. Enlargement of convertibility	Yes. Some measure of liberalization is introduced.
External convertibility	01.01.1999 Foreign exchange Act	No	Long term controls liberalized, some controls on short term capital, direct investment and real estate transactions remain
Full convertibility	2004	No	No

Source: NBP bulletins 1990-2000

The evolution of the exchange market is presented in Table 4. In 2000, the main instruments of the exchange market were used on the interbank market. The main players on the forex market in Poland were domestic

banks. In 1992 average daily turnover on the foreign exchange market was \$20 million to 30 million. In 1993, turnover ranged from \$200 million to \$300 million, and in 1996, \$600 million to \$650 million was reported. The future market has grown at a slow rate. Its development accelerated after the adoption of Article VIII of the IMF in 1995 and the liberalization of banking regulations. In 1996, 20 banks concluded future transactions. The introduction of the full floatation of the zloty will accelerate the further development of the foreign exchange market. The euro will be used in all transactions on the inter-bank foreign exchange market. The cost of transactions will decrease because of a decreased number of currencies used in transactions on the foreign exchange market.

With the free movement of capital, risk on the exchange market will increase, thus leading to higher demand for derivatives.

The exchange market is where the central bank carries out its currency intervention operations. Interventions start in the managed float system. The central bank moves in when the exchange rate on the forex market exceeds the fluctuation band. The scope of intervention depends on the deviation from the central rate. In the middle of the '90s, the NBP intervened on the market more often than at the end of the decade. From 1994, commercial banks bought more foreign currency than they sold because of a high inflow of foreign capital to Poland. From 1994, the flow of foreign capital was of great importance for exchange rate policy. As a result, the official reserves of the NBP increased, and the zloty began to appreciate. The rise in foreign reserves led to an increase in the monetary base. The NBP sterilized reserve inflows. To reduce the appreciation of the zloty, in 1996, the central bank bought more than \$3 billion on the forex market. In 1997, the NBP intervened 39 times on the market to sell and buy dollars because of the alternate appreciation and depreciation of the zloty caused by Czech and Asian crises. These sterilization operations were frequently accompanied by calls for higher interest rates. Moreover, the real appreciation of the zloty led to an increase in the current-account deficit. In 1998, the NBP reduced the number of intervention operations to 23. Most of them were carried out in the first half of the year. Central bank interventions stopped in August 1998. On June 7, 1999, the NBP abolished fixing transactions on the forex market, chiefly because of commercial bank speculation. After the decision to float the zloty, interventions are possible, but the NBP has not resorted to this instrument as yet.

The modifications in exchange rate conditions and the results of exchange rate policy are presented in Table 5. The liberalized exchange rate policy leads to an increased threat that Poland may be exposed to the

devastating effect of a sudden flight of short-term capital, accompanied by a wider current-account deficit.

Table 4

Development of interbank foreign exchange market

Instrument of interbank exchange market	1990	1993	1996	1999	2000
Foreign currency deposits in local banks	1	1	1	1	1
Foreign currency deposits abroad	1	1	1	1	1
Limited foreign currency trade	0	0	1	1	1
Free foreign currency trade	0	0	1	1	1
Forward transactions	0	1/2	1	1	1
Investment in foreign bonds	0	0	1	1	1
Corporate foreign currency accounts	0	0	1	1	1
Share of market in appreciation of exchange rate	0	1/4	1/2	1/2	1

0 – trend didn't occur, 1 – trend occurred in full scope

Source: W.J. Kostrzewa, Bank Centralny a sektor banków komercyjnych in: Bank Centralny w polskiej gospodarce rynkowej. NBP. Warszawa 1994.p.9 and NBP bulletin 1996- 2000.

Table 5

Evolution of exchange rate conditions

Years	NBP gross official reserves in billions of \$	Current-account balance in billions of \$	NBP exchange rate ZL / \$ average a/in new zloty
1989	2.5	-7.0	0.05
1990	4.7	+3.1	0.95
1991	3.8	-2.2	0.95
1992	4.3	-0.3	1.1
1993	4.3	-2.3	1.6
1994	6.0	-0.9	2.3
1995	14.9	-2.3	2.4
1996	17.9	-1.4	2.7
1997	20.7	-4.3	3.3
1998	27.4	-6.8	3.5
1999	25.5	-11.6	4.0
2000	27.5	-9.8	4.3

Source: NBP bulletins 1989-2000, NBP annual reports 1989-2000

4. The currency regime from the perspective of integration with the European Union

Poland signed the Association Agreement with the EU in 1992. In 1994, Poland formally applied for membership. In keeping with the decisions of the EU summit in Luxembourg in December 1997, Poland received a positive avis from the European Commission. The official beginning of negotiations with Poland was set for March 31, 1998. By now, 13 of the 29 negotiating areas have been closed. By Dec. 31, 2003, Poland wants all the negotiating chapters closed, and will be ready to enter the EU. Progress in integration with the EU has been accompanied by efforts to become a member of other European and international institutions.

In 1991, Poland became a member of the Council of Europe, in 1996 it joined the OECD, and in 1999 Poland, the Czech Republic and Hungary were admitted to NATO. Earlier, Poland became a member of the IMF and World Bank Group (1986).

Table 6

Evolution of Maastricht criteria in Poland

Year	Inflation rate	Interest rate	Government deficit ratio ***	Government debt ratio***
1990	585.8	61.0	3.1	+35.0
1991	70.3	40.0	-6.7	62.0
1992	43.0	39.0	-6.6	85.0
1993	35.3	35.0	-3.4	86.0
1994	32.2	31.0	-2.8	72.0
1995	27.8	24.0	-3.6	58.0
1996	19.9	23.3	-3.1	51.0
1997	14.9	24.0*	-3.2	46.7
1998	11.8	11.0**	-3.7	44.7
1999	9.8	12.0**	-3.2	42.7
2000	8.5	13.0**	-3.1	50.0
2000 UE	2.4	7.2	3.0	60.0

* for 52 weeks bonds, ** for 5 years government bond s, *** % of GDP

Source: NBP bulletins 1990-2000.

The EU integration process is made up of three stages: **Stage 1** before Poland's entry into the EU – This is the time of negotiations and adaptation of the Polish legal system. The government, central bank and

commercial banks have taken relevant joint action. The Foreign Exchange Act of December 1998 provided for the replacement of the ECU with the euro in 140 Polish legal acts. The December 1988 Regulation of the President of the National Bank of Poland recognized the euro as a convertible currency. Polish banks tend to offer some products denominated in euro to companies and individual clients. Consequently, before the launch of the euro on January 1, 1999, the Polish banking system was prepared for this event.

Stage 2 – period after Poland's entry into the EU (2003) – a time of adopting new legislation and preparations for Stage 3.

After accession, Poland will have Member State status with derogation under the rights and obligations specified under Article 122 of the Amsterdam Treaty. Poland would take part in the EU, but would use its national currency as a non-participant in the euro area. During Stage 2, Poland will continue macroeconomic stabilization, structural reform and further align its legal regulations to the acquisition in this area. Moreover, the function of the euro as an international currency on the Polish financial market will improve. One of the conditions of Poland's accession to the EMU will be participation of the zloty in the ERM2 within two years before entry in the EMU.

Stage 3 – after Poland's entry into the Monetary Union – the euro will be used along the same lines as the national currency. Adoption of the euro will bring numerous advantages. Poland may share advantages such as a reduction in exchange risk, a reduced cost of transactions, increased transparency and optimal capital allocation.

Poland has made noticeable progress in convergence with the Maastricht criteria. Since the start of 1990, inflation in Poland has steadily decreased. At the end of 2000, inflation amounted to 8.5%. The Monetary Policy Council decided that the medium-term target of monetary policy will be to reduce inflation to below 4% by 2003. At the same time, interest rates will be reduced.

Implementation of the fully floating exchange rate system will help improve the effectiveness of monetary policy and bring the market rate closer to the equilibrium rate prior to its renewed fixing within the ERM2.

The government deficit ratio and government debt ratio in Poland are consistent with the Maastricht criteria. However, achieving all the Maastricht criteria for accession into the Monetary Union by Poland must be a process extended in time.

Conclusions

Poland is in the process of opening its financial system still further, preparing its national currency for full convertibility, with the prospect of integration with the European Union. The above analysis of Poland's exchange rate policy yields several conclusions:

In spite of internal and external limits, the exchange rate policy in the first 10 years of transition was generally effective and flexible. The main objectives were met in the level of inflation, official reserves, convertibility and floating of the zloty. This same goes for the exchange rate of the Polish currency against the dollar and euro. The medium-term strategy concerning participation in the European Union was also carried out successfully.

However, negative developments included a widening current-account deficit, increased exchange rate pressure brought about by capital account liberalization, and decreased competitiveness of Polish exports.

The evolution of the exchange rate regime shows that changes in the system were in harmony with monetary policy and economic development, but after flotation, the price of the zloty was strongly influenced by events on international markets. The flotation of the zloty against the dollar reflected changes in the dollar-euro rate during this period.

The evolution of exchange rate policy instruments indicates that the policy's development depends on the development of the currency market.

The Polish government has adopted December 30, 2002 as the date of the country's technical readiness for membership in the EU. This means that the NBP will be ready to enter the European System of Central Banks and participate in the common monetary and exchange rate policy.

The euro has a major impact on monetary and exchange rate policies, and the prospects for replacing the Polish zloty with the euro are promising. The euro influences the targets and instruments of Poland's monetary and exchange rate policies in harmony with the rules and objectives of the EU policies.

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DEVELOPMENT OF LATVIAN INNER AUDIT

Raksts veltīts Latvijas Republikas iekšējā audita attīstības atspoguļošanai. Rietumu valstīm ir pietiekami sena audita attīstības vēsture. Savukārt bijušajās padomju republikās audits nepastāvēja, tikai administratīvās pārvaldes sistēmā eksistēja daži tā elementi. Rakstā dots ieskats par vairākiem nozares attīstības posmiem, par galvenajiem šķēršļiem Latvijas Republikas iekšējā audita attīstībā, kā arī sniegta informācija par atbildīgām iestādēm un lielākajiem uzņēmumiem, kas darbojas šajā nozarē.

The institute of inner auditors of the USA gives the following definition to inner audit: "Inner audit is an independent evaluation in the frames of an organisation aimed on checking and determining its efficiency. The goal of in inner audit is to help the members of organisation to fulfil their duties efficiently. To achieve it inner audit provides them with the data of analysis, evaluations, recommendations, advice and information about the checked objects"¹

The development of audit in the west countries has a rather long history. However, in the former republics of the USSR audit as such didn't exist, there were only its separate elements in the frames of the administrative and command system²

The first period covers the time from 1988 to 1991. That time these services were generally connected with the inspections of enterprises. It was a limited kind of services provided by separate inspectors, mostly the ones from state institutions.

During *the second period* from 1991 to 1994 the auditors' firms were founded and the international auditors' firms providing not only inspection, but also a wider range of different services entered the market of Latvia. These services included the financial analysis of enterprises' activity, the evaluation of

Аренс Э.А., Лоббек Дж.К. *Аудит*. М.: Финансы и статистика, 1995.

² Denišš A. Auditorpakalpojumu attīstība Latvijā. *Audits '98*. R.: RMS Forum, 1998.

enterprises and their fixed assets, the development of business projects etc. – entered the market of Latvia. Some of the local firms founded during the second period were “Invest-Rīga” “Interaudits” “Audit” “ACS” “Grāmatvedis” The internationally recognized “Cooper & Lybrand” “Ernst & Young”, “Price Waterhouse” “Arthur Andersen” “KPMG” and later “Deloitte & Touche” also entered the market.

With the formation of the market of auditor’s services the appropriate laws were developed. The Ministry of Finance approved the Auditors Activity Rules, which were later replaced by the Sworn Inspectors Law. The corps of licensed sworn inspectors was formed. The basis for the introduction of international accounting and inspection standards in Latvia was made.

In 1995, *the third period* began, when the new edition of the Sworn Inspectors Law was adopted. The necessity of these changes was defined by the situation in the market. According to the law the enterprises needed the services of sworn inspectors firstly for the improvement of annual reports. The professional organization of the sworn inspectors activity, the methodical preparation and certification were given in the competence of the Sworn Inspectors Association, thus putting it into accordance with the international practice.

At the same time the following four tendencies of audit development are formed and exist nowadays:

The first tendency is a further diversification of auditors’ services, which is determined by the demand in the market. The specific gravity of the so-called corporate financial services is increasing and absolutely new kinds of services such as the services in the questions of the introduction of informative systems of technologic, the auditing of management quality etc.

The second tendency is a further increasing of the quality of services. The demands of quality made some local firms to evaluate the further strategy of business.

The third tendency is the necessity of a complex approach to the solution of all the problems of enterprises proved by practice. Today a broad range of services is demanded:

- sworn inspectors’ and auditors’ services;
- accounting services;
- the perfecting of management system;
- the projecting of enterprises reorganization;
- property evaluation;

the working out and the evaluation of business plans;
consulting in the formation of quality systems;
the auditing of systems of quality;
consulting in the tax field;
consulting in the questions of finance and economics;
the selection and attestation of employees etc.

It is necessary to mention that only the auditors' firms, which have specialists in each kind of services, can provide the appropriate quality of this range.

The fourth tendency considers the competition, which becomes stronger. In the connection of the conditionally limited Latvia's market the competition in the field of auditors' services increases not only between the auditors' firms, but also between individual sworn inspectors. Competition is just what can be a pre-condition for the further development of the range of auditors' services and the increasing of their quality.

The Inner Audit in Government and Its Legal Security

The inner audit system has been successfully functioning in banking sector and in big companies for years. The introduction of inner audit in government should stimulate the development of inner audit in the whole country. The necessity of the inner audit introduction in government was determined both by the requirements of European Union regarding the increasing of the administrative capacity and by the inner necessity of the Republic of Latvia.

The inner audit introduction in government was started in *May 1997*, when State Administration of Civil Service in collaboration with British Council organized 6-week-long studies for the representatives of all ministries, organized seminars and discussion with the state secretaries of ministries on the subject of the possibilities of the inner audit development in Latvia and carried out the first experimental auditing in the Ministry of Culture and in the Ministry of Justice.

In 1998, in the Progress Announcement of European Commission³ it was notified that there was a necessity of contributions in the perfecting of management and control system and a range of drawbacks of the existing system was mentioned. European Commission also requested to found an

³ Andrejeva V. Sadarbība starp valsts strukturām un citām institūcijām grāmatvedības un audita likumdošanas attīstības jomā. // *Audits '99*. R.: RMS Forum, 1999.

efficient system of inner audit as a pre-condition for the foundation of a decentralized system of inner audit.

On 9th February, 1999 the Cabinet of Ministers took a decision that the responsibility for the general coordination of inner audit would take the Ministry of Finance.

On 2nd March, 1999 the Cabinet of Ministers adopted a more precise *Plan of Government's Measures* for the elimination of the drawbacks, which had been mentioned in the Announcement of European Commission. The plan contained the regulation of laws concerning the inner audit system including the developing of a conception, the necessary rules of the Cabinet of Ministers and the basic method for the work of the structural units of inner audit.

On 23rd March, 1999 the Cabinet of Ministers made a decision about the formation of a decentralized inner audit system. On 5th October, 1999 in accordance with the developed conception the Ministry of Finance worked out and the Cabinet of Ministers adopted *the Inner Audit Rules and the Inner Audit Council Regulations*.

In order to provide the independence of inner audit the Rules contain the request that inner auditors cannot participate in the fulfillment of the direct functions of a ministry (an enterprise).

In accordance with *the Rules of the Cabinet of Ministers* the ministries and, according to the decision of the state secretary, their subordinate institutions, the institutions under their supervision and other central governmental institutions financed from budget in the frames of their structure establish independent structural units – *the structural units of inner audit*, which are directly subordinate to the state secretary of a ministry (the institution manager). At the same time a unified system of inner audit, which meets the requirements of European Union, provides the carrying out of financial audit for the state budget assets and carries out the audit of management and execution evaluation is founded.

Besides the development of the normative base, the development of some explaining and methodical materials is also essential. When working out the documents, both the recommendations of European Commission regarding the development of inner audit in government and the experience of foreign governmental institutions are taken into account.

The Ministry of Finance has worked-out *the Standards of Inner Audit in Government*. The standards include nine units containing the requirements to inner audit:

1. The volume of inner audit – fixes the responsibility of managers for the determination of the volume of inner audit, the discovering and elimination of dishonest affairs and determines the duties of inner auditors.
2. Independence – determines the organisational status and structure of the structural units of inner audit, the requirements, which must be followed when working out the inner audit regulations and the requirements, that the inner auditors must follow in order to provide the objectivity of audit.
3. The evaluation and planning of audit risk – determines the necessity of three levels of plans – strategic plans, annual plans and the plans of a specific audit.
4. Personnel selection and training – determines the duties of an inner audit manager in personnel selection and training.
5. The approach to audit – explains the approach to system audit and the system of inner control, the importance of auditors' evidences and the necessity of their documenting.
6. Inner audit management – determines the duties of an inner audit manager and his responsibility for auditors' work supervision and the quality control.
7. The reports on audit to the managers – determines the requirements, that inner auditors must fulfil when working out the final reports on audit and the order of their preparation and handing in and the order of the working out of the annual report on the activity of a structural unit of inner audit.

The unit No. 8 "Ethics and professionalism" and the unit No. 9 "Relations" consider the norms of auditors' responsibility for the use of facts and information, received during the auditing process, which concern the relations of inner auditors with the other workers of an institution, other controlling structures and external audit.

The worked out standards make a basis for external auditor's work in a governmental institution. These standards are planned to be actual regularly, taking into account the changes and the development of inner audit in the country⁴

According to the Rules of the Cabinet of Ministers, the Inner Audit Council is to be established in order to carry out the supervision of inner

⁴ Nulle D. Iekšējā audita attīstība valsts pārvaldē. // *Audits '99*. R.: RMS Forum, 1999.

audit system and its development. The Inner Audit Council is a co-ordinating institution, aimed on the co-ordination of the introduction of the inner audit system and the realisation of a unified state policy in perfecting the work of government institutions, its efficiency and rationalisation and on giving recommendations and consulting the structural units of the inner audit of ministries and other governmental institutions concerning the questions of inner audit.

The Inner Audit Council will consist from five members and it can include the representatives of public organisations, scientific institutions, professional training institutions and business, which have knowledge and are experienced in the sphere of inner audit⁵

To provide the independence of inner audit, it is stipulated in the Rules of the Cabinet of Ministers, that the head of a structural unit of inner audit is directly subordinated to the state secretary (manager of an institution) and that he is not responsible for the working out and introduction of the procedures of inner control.

The experience of West Europe countries shows that there are good collegial relations between inner and external audit and the plans of inner and external audit are regularly coordinated in order not to be crossed and to provide a maximally efficient use of resources. Considering this experience the Rules pre-suspect an annual handing in of the strategic and annual audit plans and the reports about the work of inner audit to State Control.

In order to contribute to the mutual trust and understanding a joint seminar for inner auditors and State Control about the necessity of their cooperation was organized in collaboration with the experts of *SIGMA* and a joint plan of operations to assist the further collaboration has been worked out.

A significant contribution to the development of inner audit has been made with the experts of *PHARE* project *The Government Reform in Latvia*. In order to explain the essence of inner audit and to form a unified concept of state secretary and the officials, who are responsible for the formation of the inner audit system the seminars on the subject of inner audit has been organized.

⁵ Andrejeva V Sadarbība starp valsts struktūrām un citām institūcijām grāmatvedības un audita likumdošanas attīstības jomā. //Audits '99. R.: RMS Forum, 1999.

In frames of the project inner auditors of many ministries has got the necessary theoretical and practical knowledge. A study trip to Great Britain where the inner auditors have worked with the experienced inner auditors of England, getting experience and forming the concept about how inner audit actually works has been organized. A study course *The Basis of Inner Audit* for inner auditors from different ministries has also been organized⁶

The Ministry of Finance has a well-established collaboration with the inner auditors from England, Lithuania, Estonia, Poland and other countries. The Ministry also assists the establishing of professional relations between the inner auditors who are working in different spheres: business, banks and government sector.

In general it can be mentioned that for the last year a big and successful work in developing the necessary methodical and normative documents, educating inner auditors and a real introduction of the inner audit system in government has been carried out.

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Summary

The research article reflects the Latvian inner audit development. The West countries have splendid ancient history of audit development. At the same time the audit doesn't exist in the former soviet republics, excepting some elements in the executive administration system. The author has focused on analysis of several development points in the branch, as well as to main difficulties of Latvian inner audit development. The author indicates the main companies and state bodies operating in this branch.

Keywords: Inner audit, auditors' services, Inner Audit Rules, Inner Audit Council, structural units of inner audit, Standards of Inner Audit in Government.

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DEVELOPMENT OF ELEMENTS OF CORPORATE GOVERNANCE SYSTEM IN LITHUANIA IN THE TRANSITION PERIOD

The paper addresses the problem of the development of corporate governance system in Lithuania during the transition period. The evolving elements of the market-based as well as of bank-based system are marked out. The development of the bank-based system is analysed from the perspectives of the development of banking sector in Lithuania as a whole. It is shown that opportunities for establishment of effective corporate control by banks depend upon further increase in lending volume, which is related not only with overall economic situation but also with the development of lending practices and the relationship between banks and corporations.

The problem of the development of corporate governance systems has evolved as large corporations became confronted with the problem of protecting the interests of minority shareholders. The reason for the protection was to allow them to get fair and equal access (together with large shareholders) to the returns of the corporation. As conflicts of interests between major stakeholders have started to threaten the development and perspectives of the corporations the problem was perceived in the broader sense. Analysis of the conflicts among minority shareholders and large shareholders concerning the access to the value created at the corporations and the possible ways to solve them showed that the roots of this kind of conflicts were in management position in the companies, in their understanding of the goals of the corporation. As a result one conflicting party that was mostly skilled at mobilizing capital for investing could have (and did really have) different views from the other conflicting party that was mostly skilled at using resources, i.e. management. Therefore the first party (outsiders) involved in the conflict was viewed as including not only minority shareholders, but also larger shareholders and lenders, as well. And the conflicts centred round the

possibilities for this party to earn maximum returns from capital employed by the corporation, which can be seen as the major goal of capital suppliers.

Quite a number of research papers [Schleifer A. Vishny R.W., 1995, Estrin S. 1998, Corporate... 1998, etc.] published recently investigated possibilities to solve this kind of conflicts, including laws, regulations, existing management control practices. A number of solutions available for disciplining the management and their efficiency were discussed (such as capital market solutions, labor market solutions, efficient contracting, financial intermediation). As a result of different sets of solutions that emerged in different countries of the world, two major types of corporate governance systems evolved, i.e. market-based and bank-based systems, with a mixture of elements from both of them in majority of countries in the world.

The question that is posed today internationally is – what type of corporate governance can be most suited for companies. This question is even more important for the companies in transition countries, which have started to develop market economy just ten years ago and in which corporate organization systems are still under development. This paper investigates the elements of corporate governance system that can be traced currently and looks for the trends of development of the system in order to reach effective management control in Lithuania. Problems of corporate governance are viewed in relationship with the development of financial system in Lithuania. The emphasis is put on its implications towards the development of production companies in Lithuania in particular. Effective mechanism of governance is capable of facilitating company restructuring, which in its own turn can induce the increase of the value-added of the companies in the sector, and lead to a successful implementation of long-term strategies, ensuring survival of the companies and their further development. It can become the issue for the survival and successful restructuring for different sectors of the economy as well.

Major characteristics of the bank-based corporate governance system

The analysis of corporate governance systems [Institutional Investor... 1998, Studies in 1997] clearly shows their relationship to the financial systems that are existing in particular countries. In the countries with well-developed banking system being the main supplier of funds to companies a bank-based corporate governance system was

developed. In such a system company insiders execute effective control over management decisions in order to ensure returns from lending and to prevent the default of companies. Main characteristics of such a system are:

- Major shareholders include banks, financial and non-financial institutional investors as well as company management, with close ties to government representatives and workers;
- Concentrated shareholding;
- Cross-holding among the companies and with institutional investors;
- Interest protection through participation in decision-making process on the board of directors;
- Monitoring and disciplining of the management based on the accountability of the company board of directors;
- Weak management discipline through capital markets;
- Active bank participation in debt control in the companies;
- Reliance on long-term goals in company development.

Implications of the privatization process for corporate governance

The development of the particular type of corporate governance system is determined mainly by the pattern of development of ownership structures in the companies. In case of Lithuania as well as other transition countries of Central and Eastern Europe ownership structures have emerged as a result of privatization processes. The differences in privatization methods applied have forced essential differences in ratios between insider and outsider owners.

On the first stage of privatization Lithuania has used the method of mass (voucher) privatization extensively, which resulted in quick privatization of majority of small and medium enterprises and the emergence of a class of small shareholders. According to some sources their number could have been more than 1 mn by 1993. Altogether management and employees were allowed to participate in company ownership, though their participation was limited initially to a certain percent. Though there are no reliable data, it can be stated that company insiders became important and strong shareholders. The third group of shareholders that has emerged at the same time was newly established financial-industrial groups that managed to get into shareholder structures through the use of shortcomings of the applied privatization method.

The second stage of privatization was aimed at privatizing mainly large companies on the commercial bases in anticipation of large capital inflows. As a result the ownership structures became dominated by large shareholders, which included foreign strategic investors, financial-industrial groups as well as company management.

Implications of the banking sector development on corporate governance

The development of banking sector in Lithuania can be viewed through its participation in solving corporate governance problems. Commercial banks, being the strongest financial institutions in Lithuania, clearly dominate its financial system. The number of banks was quickly increasing at the beginning of 1990s as the idea of 'swiss-type' banks has been promoted and very liberal law on banking was adopted. In 1994 there were 28 licensed banks already. The first stage of the development of banking system was characterized by several features, which also influenced the specifics of corporate control by banks:

- in fact non-existent banking regulation, as a liberal law on banking was not supported by stronger regulations and did not prevent from bank default;
- establishment of low capitalized banks which went in tune with low responsibility of bankers in their decision-making;
- establishment of small banks serving the interests of particular groups of people, aimed at short-term quick returns or directly consuming the loans;
- small number of loans and their low quality due to their use for risk projects or consumption, leading to the extreme increase in lending risks for the banks;
- short-term nature of bank loans and their resources;
- low management skills leading to non-competent banking decisions, which were based on non-economic lending principles, large operating expenses, huge exposure to single borrower, lack of loan monitoring process and risk management methods;
- state interventions in bank activities, forcing special loan decisions, distributing unequally resources for lending.

The reasons altogether lead to huge loan losses and forced banking crises at the end of 1994. As a result stronger regulations were imposed

on banking sector and the number of banks decreased to 12 in 1997 and to 10 in 1999.

The same reasons did not allow the banks to establish corporate control mechanism. Small banks were unable to develop a diversified loan portfolio and in fact were forced to give loans to particular customers. As the management of such banks and companies was intertwined, there were no reasons for loan monitoring, ensuring risk reduction of banking activities. As a result the increase in bank loan portfolios was followed by increase in non-performing loans, which accounted for 28.3% of total value of loans by 1998, but dropped to 10.5% by the middle of 1999 [7].

Besides, due to strengthening regulations banks were prevented from participation in company ownership exceeding 10% of share capital. Though the reasons of such a decision are quite understandable, it did not allow to establish stronger management control by banks.

Such trends were followed by the low levels of external financing of the corporations by loans in Lithuania, investigated by J.Kairys and A.Šabūnas (1999). According the data provided by the researchers in 1997, the debt/assets ratio made 0.11 on average for Lithuanian companies, against 0.28 for Estonian companies, and 0.26 for G-7 countries. Such a situations poses a question, on one hand, about availability of loan financing from banks, and on the other hand, about management attitude towards external financing, which can lead to stronger control of their decisions.

Possibilities of corporate control by banks in Lithuania

Possibilities of the development of strong corporate control by banks, first of all, depend upon level of loan financing by banks. The loan financing by banks of Lithuanian companies can be reflected by several measures. The ratio of total loans to GDP allows to detect the general level of lending in the country. This ratio has been as high as 21.4% in 1994, but has declined since that time to 14.0% in 1999 [Monthly 1999]. Combined with in low external equity financing, it shows extreme lack of external funding by companies. It can also reflect reluctance of banks to lend.

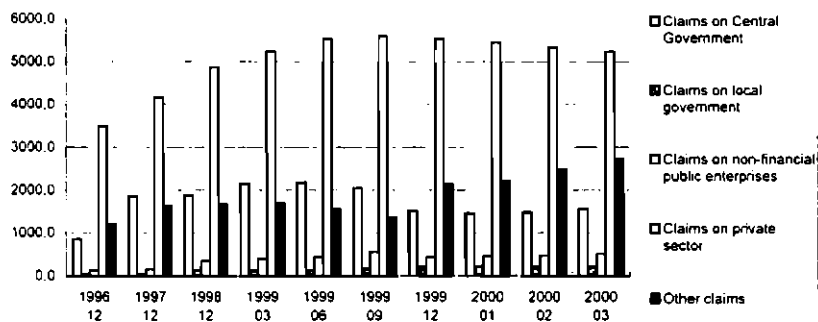
One of the reasons of the situation can be the cash-based nature of the economy in Lithuania that was extremely heavily at the beginning of the development of banking sector. As a result banks did not succeed in

pooling of savings through deposits and facilitation of investments through loans. Quite a number of other financial intermediaries became serious competitors to banks by attracting savings of the public.

RATIO OF LOANS/GDP AT CURRENT PRICES

End-of-period	Total Loans as Part of GDP
1994 12	21.40%
1995 12	15.09%
1996 12	10.88%
1997 12	10.82%
1998 12	11.98%
1999 12	13.88%

STRUCTURE OF LOANS BY STATE AND PRIVATE OWNERSHIP



Riskiness at the economy of Lithuania as a whole, as well as riskiness of its companies, prevents banks from high involvement in the lending to private business. At the same time this prevents the banks from taking a specific role of a stakeholder, capable of executing control over long-term decisions made on the company level.

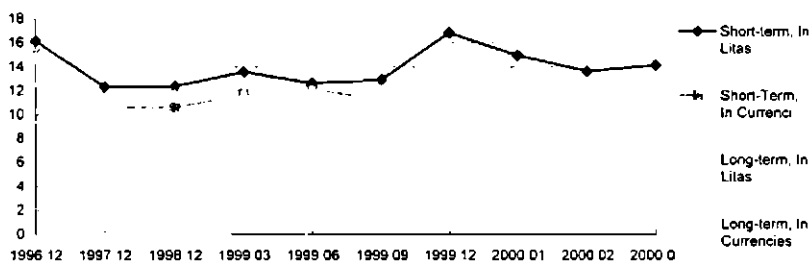
The figure above shows the dynamics of the structure of loans in Lithuania. The figure shows clearly that a rather important part of the resources of banking system are used for government financing. Such decisions of the banks are motivated by the requirements towards bank liquidity.

Another reason can be an attractive interest rate on government securities. This interest rate allows banks to increase their earnings without exposing banks to additional risks as lending to government is viewed as a rather safe one. Besides, banks have turned to generation of

revenues from sources other than loans that also reduces the risk of their activities. As a result the structure of bank earnings shows that the share of interest revenue from loans compared to total revenue is constantly decreasing - from 65.2% in 1995 to 38.0% in 1998.

The analysis of structure of interest rates on loans declared by banks clearly shows higher interest rates prevailing on short-term loans as well as high general level of interest rates. This shows that short-term loans could have a higher impact on the level of bank interest revenues. Combined with a higher level of short-term lending it can explain the reasons lying behind the mentioned facts.

AVERAGE ANNUAL INTEREST RATES ON LOANS



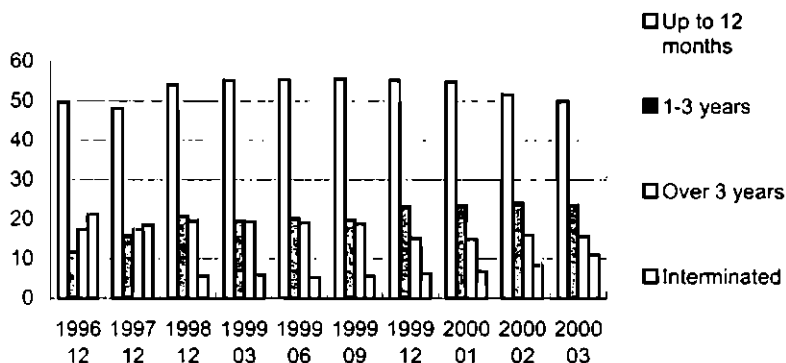
The existing level of loan financing of companies can have several explanations. On one hand, direct lending was and still is perceived as an extremely risky business from the point of view of bank as well as a company. With the short-term loans accounting for the largest share in total lending, currently bank goals concerning the company are clearly short-term, with rare cases of bank involvement in long-term company restructuring. On the other hand, as banks expand their non-lending operations, there emerge other kinds of transactions, which strengthen relationship between banks and companies.

The structure of bank loans in manufacturing shows the significant drop in short-term loan share and the increase in the share of long-term loans. This can be a signal of significant changes of bank policy towards lending. It can also be an indicator of a going shift from short-term to long-term goals in the financial system of Lithuania.

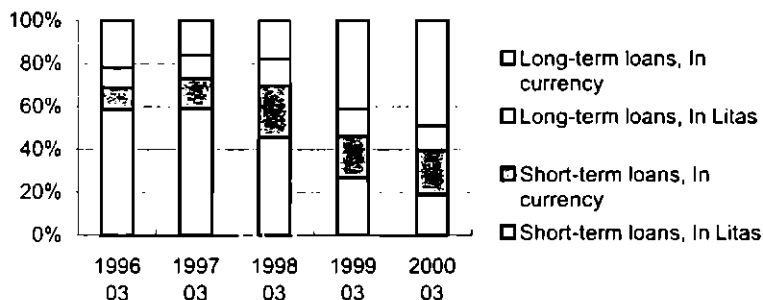
Further increase in lending and other company related transactions is tied with overall economic conditions (i.e. overcoming the consequences of Russian crisis by Lithuanian companies), or specific decisions (tying

litas to euro currency). At the same time the preconditions of establishing stronger and more efficient management control from the bank will appear.

COMPOSITION OF LOANS BY RESIDUAL MATURITY



STRUCTURE OF LOANS IN MANUFACTURING



Conclusions

Lithuanian corporate governance system can be characterized as a mixture of elements from market-based system and bank-based system, which

by now have not turned into efficient mechanism of management control. The development of bank-based system is related with evolvement of strong banks, seeking long-term goals in their relationship with corporations.

Prevailing short-term in the goals of stockholders as well as creditors due to high risk perception and possible fluctuations in the situation in the economy do not allow for the establishment of strong corporate control.

Long-term goals emerge mainly when company shares are acquired with their skilled management teams, or in cases of concentrated management with outsiders. Banks are prevented from participation in company ownership by the still existing banking regulation requiring bank participation not to exceed 10% of share capital, but they act as a rather active part in controlling the use of loans by management. Further expansion of bank-company relationship, as well as increase in banker skills and their interests in the long-term company returns can facilitate the development of elements of bank-based corporate governance system.

Development of market-based system has not been a success yet due to several reasons. First of all, National Stock Exchange of Lithuania is constantly losing its importance as indicated by the value as well as turnover of the trading, the inability to attract external investors. As a result the weak stock exchange does not provide the rights protection for minority/small shareholders. There are also legal constraints in the protection of their rights, such as exemptions from the implementation of the mandatory offer to repurchase shares from minority shareholders, etc.

Major capital market transactions have the aim of concentrating ownership, including takeovers. But these appear to be nearly the only means of disciplining the management in the current situation. As there is general lack of mechanism of protection minority shareholders rights in the capital market, a conclusion can be drawn that Lithuanian financial system does not provide enough assumptions for the development of market-based corporate governance system.

Therefore further development of effective mechanism of governance should concentrate on corporate control by banks. Along with the increase in bank lending and emergence of deeper relationship with companies, banks could be capable of facilitating company restructuring, which in its own turn can induce the increase of the value-added of the companies in the sector, and lead to a successful implementation of long-term strategies, ensuring survival of the companies and their further development. It can become the issue for the survival and successful restructuring for different sectors of the economy as well.

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Summary

The traditional debate on corporate governance systems deals with the problem of protecting the interests of minority shareholders in order to allow them to get fair and equal access (together with large shareholders) to the returns of the corporation. The paper analyses conflicts of interests emerging in the corporation in the broad sense. Analysis of the conflicts among minority shareholders and large shareholders concerning the access to the value created at the corporations and the possible ways to solve them show the roots of this kind of conflicts in management position in the companies, in their understanding of the goals of the corporation. A number of solutions available for disciplining the management and their efficiency have emerged in different countries of the world. As a result two major types of corporate governance systems evolved, i.e. the market-based and bank-based systems, with a mixture of elements from both of them in majority of countries in the world.

For countries in transition, which have started to develop market economy just ten years ago and in which corporate organization systems are still under development, it is of great importance development of the system ensuring effective management control. Problems of the development of corporate governance should be viewed in relationship

with the development of financial system in Lithuania. The emphasis is put on its implications towards the development of companies in Lithuania in particular. Effective mechanism of governance is capable of facilitating company restructuring, which in its own turn can induce the increase of the value-added of the companies in the sector, and lead to a successful implementation of long-term strategies, ensuring survival of the companies and their further development. It can become the issue for the survival and successful restructuring for different sectors of the economy as well.

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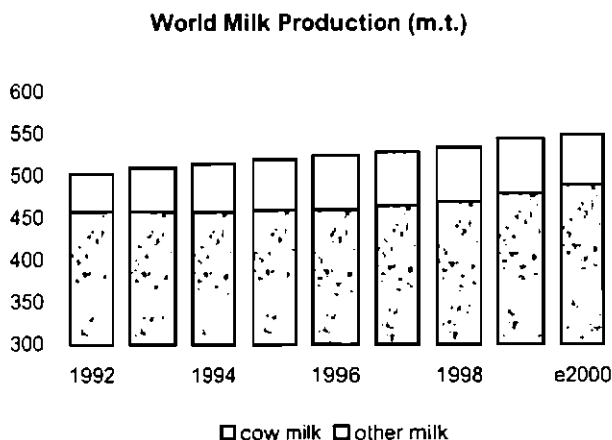
PROBLEMS IN THE PRODUCTION AND TRADE MANAGEMENT OF MILK PRODUCTS IN THE REPUBLIC OF LATVIA

Production and Trade in Dairy Products in Europe

1. Milk Production

World milk production in year 2000 is continuing to grow, but at a slower rate than in the previous year. According to provisional statistics and forecasts, 571 million tonnes are estimated for the year 2000, which is 8 million tonnes or 1.4% higher than 1999. Recent statistics show that the growth rates for 1998 and 1999 were 1.2% and 1.9%, respectively. Compared with 1992, which marks the lowest level of the 1990s, there is an increase of 47 million tonnes (9%). Buffalo milk continues to show the strongest growth, with 2.2 million tonnes or 4%. Its overall share is now 11.3%. The share of cow milk remains at 85% and that of goat and sheep milk is 3.6%. [1]

Figure 1

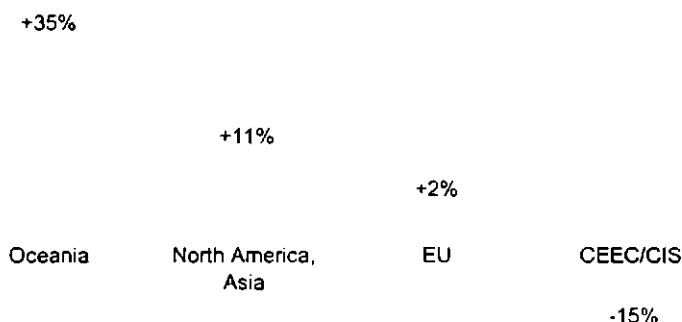


During 2000, cow milk production will increase by 6 million tonnes to 484 million, a lower increase than the previous year that recorded growth of 7 million. This growth is mainly concentrated in North America, parts of Latin America, Asia and Oceania. In Europe, milk production will decline both in Western European as well as some Central and Eastern European countries. Oceania and Asia, ongoing growth can be expected. Milk production is strongly dependent on pasture, and the growth trend can be affected by changing weather conditions. The 1999/00 season started favourably, but towards the end conditions worsened.

European milk production is declining in 2000, after having increased significantly in the previous year. The increases in 1999 had been mainly in the EU, where milk production was up 1.3 million tonnes and deliveries to dairies were 1.44 million tonnes up on 1998. Thus, the increased milk quotas, which came into force on 1st April, 2000, had already been anticipated for several member countries. In addition, in some states where quotas were not increased, more milk was produced. Therefore, more super-leivies on excess milk sales have been imposed during 2000, and this will lead farmers to bring their milk production in line with the quotas for 2000/01, milk sales show a reduction of 1% in the EU. [1]

Figure 2

Change in Cow Milk Production Since 1993



In Central and Eastern Europe, the situation varies from country to country. Production in the Baltic States, Poland, Belarus, Romania, Bulgaria and the Ukraine is suffering from drought, and will continue to decline as it has already been doing in recent years. In the Czech Republic

and Hungary, a more or less stable production is expected. For Russia, various sources report different developments with regard to both 1999 and 2000. However, what had been described as a crisis was, in fact, a problem for importers. The strong devaluation, following the financial crisis of 1998, improved the competitive position of Russian milk producers.

Around 290 million tonnes of cow milk were delivered to dairies in 1999, which is approximately 68% of the production shown in Table 1 [2]. In some Central and Eastern European countries, the dairy industry had, and still has, great difficulty in maintaining its market position against large farms which have undertaken to market their milk and dairy products themselves. In recent years, this situation has improved in only a few countries. The question is how is this development progressing? Will it lead to a structure of big farms with their own processing in relatively small units or, will it be just a question of time before the dairy companies invest in large-scale processing and marketing and are able to ensure regular payments to the dairy farmers? For most of those countries without accurate delivery statistics it can be assumed that their delivery share is low, and therefore the average percentage of milk production delivered to dairy factories may be between 60 and 70%.

The utilisation of milk follows long-term trends. The long-term trend was interrupted for a period lasting from mid-1998 to mid-1999, but returned in the second half of 1999. The long-term trend is characterised by an increase in the production of cheese, which absorbs most of the milk production growth, fresh dairy products and milk for liquid consumption, milk powders, particularly whole milk powders, ingredients with special properties for tailored application, and a stagnation of butter and skim milk powder output.

The market for liquid milk and fresh dairy products can be divided into basic and higher added value products. The basic product is traditional liquid milk. For this product, where consumption levels are already high, measured either by country or income groups, no market growth due to increases in both production and distribution capacity of the dairy industry.

The classical milk market, in general, is stagnating in developed markets such as Europe and North America, but is continuing to grow in the other areas of the world due to growth in distribution capacity to a still growing number of consumers. However, in Eastern Europe sales declined. The total quantities are estimated at about 81 million tonnes, to which a further 11.5 million tonnes of other fresh products and milk

drinks can be added and 3.5 million tonnes of cream for consumption (table 2) [2].

According to a recent survey by Rabobank International, which based in the Netherlands but operates worldwide, concentration in the dairy industry is continuing. This concentration is carried out through mergers, acquisitions and strategic alliances.

Table 1

Cow Milk Deliveries to Dairies¹⁾

'000 t	1996	1997	1998	1999	e2000
EU 15	113 467	113 818	113 753	115 193	114 800
Iceland	105	105	109	111	
Norway	1 737	1 682	1 670	1 645	1 545
Switzerland	3 080	3 101	3 068	3 008	
Estonia	490	518	532	404	
Latvia	361	362	464	390	
Lithuania	1 332	1 412	1 474	1 207	
Bulgaria	452	642	701	740	
Slovakia	877	898	929	936	
Slovenia	398	399	420	435	450
Czech Republic	2 610	2 386	2 450	2 385	2 460
Russia	14 300	12 550	12 400	12 800	
Ukraine	6 246	4 470	4 590	2 739	2 650
Poland	6 588	6 973	7 221	6 642	
Hungary	1 522	1 549	1 687	1 669	
Croatia	340	488	404	393	

e Estimated

¹⁾ Only cow milk, unless otherwise stated

Many companies already in the top 20 have continued to grow. One of the most spectacular recent mergers was the Danish/Swedish Arla Foods that has been formed by MD Foods and Arla, because it is a merger of companies operating in different countries. Operations beyond national borders are, however, not a new development, but most companies to date have extended their activities through acquisitions. In New Zealand, negotiations are not yet completed and the situation remains unclear, but even so more operations are being extended beyond borders. Another spectacular development is the new position of the Italian-based company Parmalat, which has moved within a 2-year period from 13th to 4th place in the ranking by dairy turnover. The dairy business section of the international food companies Nestle, Kraft Foods and Unilever did not change significantly. [3]

Table 2

Production of Liquid Milk in Dairies

'000 t	1995	1996	1997	1998	1999
Belgium	806	797	757	734	677
Denmark	549	548	540	543	544
Germany	5 815	5 806	5 721	5 613	5 612
Greece	347	541	555	574	580
Spain	3 865	3 706	3 677	3 706	3 631
France	3 957	3 935	3 992	4 107	3 934
Ireland	580	552	549	559	546
Italy	2 998	3 005	3 002	3 263	3 459
Luxembourg	62	51	51	18	18
Netherlands	902	887	883	855	860
Austria	578	579	594	607	617
Portugal	722	749	812	831	885
Finland	765	746	734	726	719
Sweden	1 058	1 059	1 040	1 028	1 010
United Kingdom	6 890	6 868	6 805	6 795	6 740
EU 15	29 839	29 830	29 712	29 959	29 831
Iceland			43	42	41
Switzerland	539	533	520	512	504
Norway	642	635	547	529	505
Czech Republic	475	496	503	503	489
Slovakia	381	391	387	406	410
Slovenia	145	149	142	143	150
Estonia		43	54	49	
Latvia	50	51	54	62	66
Lithuania		85	80	82	74
Poland	1 251	1 296	1 340	1 350	1 267
Hungary	600	603	559	582	596
Russia	5 576	5 305	4 799	5 000	5 200
Ukraine		4 000	3 832	3 492	
Croatia	155	162	262	285	280

The progress that some companies have made in the rankings has, of course, pushed others to a lower position, although most of these have increased their turnover in 1999. Currency changes also have an impact because greater turnover in national currency might have resulted in a reduced turnover expressed in US dollars.

Table 3

The world's Top 20 Dairy Companies

Company	Country	Dairy turnover	Ranking	
		bn US-\$ 1999	1999	1998
1. Nestle	Switzerland	12.9	1	1
2. Dairy Farmers of America	USA	7.4	3	3
3. Danone	France	6.7	4	4
4. Philip Morris (Kraft)	USA	6.3 ¹⁾	2	2
5. Parmalat	Italy	6.1	6	13
6. Suiza Foods	USA	6.0	15	16
7 Arla Foods (MD Foods + Arla)	Denmark /Sweden	5.3	13+20	12+17
8. Lactalis	France	5.1	5	6
9. Campina Melkunie/MKW/Emzett	Netherlands	4.9	9	8
10. Snow Brand Milk Products	Japan	4.7	8	7
11. Unilever	Netherlands/UK	4.5 ¹⁾	12	15
12. Friesland Coberco Dairy Foods	Netherlands	4.3	7	5
13. Bongrain/CLE	France	3.7	10	9
14. Land O'Lakes	USA	3.3	16	20
15. Meiji Milk Products	Japan	3.2	11	10
16. Sodiaal	France	3.1 ²⁾	17	14
17. Dean Foods	USA	3.0	19	21
18. Morinaga Milk Industry	Japan	2.9	14	11
19. Nordmilch	Germany	2.6	17	
20. Glanbia	Ireland	2.5	19	.

¹⁾ Estimated²⁾ 1998

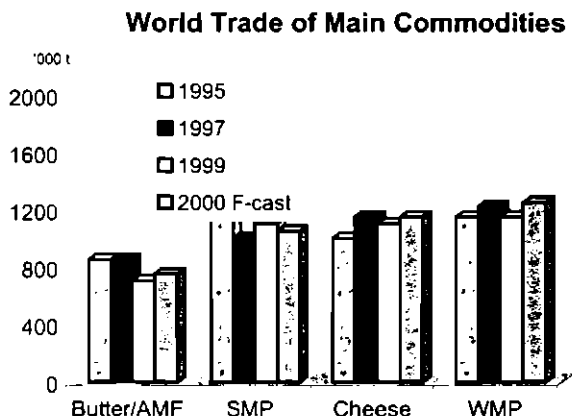
2. Trade in Dairy Products

The international trade in dairy products is continuing to grow. The long-term growth trend was interrupted in 1998 and 1999 by the economic crises in many parts of the world. [2]

The international trade in liquid milk and fresh dairy products is still very small, both in volume and in terms of milk. It does not cover more than between a half and 1% of the total volume of all milk traded. It is, however, a growing market, particularly for Western Europe en route to Central and Eastern European destinations. This trend will continue in 2000. In addition, Central and Eastern Europe has a high level of dairy consumption in general, and consequently this particular market can be regarded as a growth area

where some countries may grow faster than the already existing import business which can be replaced by domestic production.

Figure 3



The recovery in the trade in skim milk powder already started around mid-1999. The EU and the United States together exported 450 000 tonnes in 1999, which was 58% more than in 1998. The other world market suppliers, in the main, exported less. In 2000, however, the total trade in skim milk powder will not increase further, because world production will be unchanged and stocks are limited in most countries. On 30 June 2000, year five of the current WTO arrangements ended. With the start of year six, there will no longer be the possibility of a roll-over of unused quotas for exports, with subsidies continuing to the following year. For the European Union, the limit will be 272 000 tonnes and for the United States 68 000 tonnes. Therefore, the trade volume for the 12-month-period from July 1999 to June 2000 will not be achieved for either in the following year, particularly because neither is competitive without refunds unless international prices continue to grow. But after having cleared the intervention stocks and with falling production, the EU will not have sufficient supplies to export even the quantities that permitted in the next 2 or 3 years.

World trade in butter is again recovering. In recent years the long-term trend has been one of decline that accelerated by the collapse of some

markets in 1998. Therefore the recovery that is expected in 2000 is simply a return to the normal trend. With regard to future market development, it is really a question of whether the trade volume in future years will continue to follow the long-term downward trend or if it will stabilise at a certain level. It is true that market access arrange of 0.2 million tonnes on the previous year. The EU production, however, declined.

The strong increases in Russia are mainly due to the domestic market situation, where the growing demand for milk cannot be covered by liquid supplies alone. Skim milk powder production is likely to be unchanged in 2000. The declining trend over many years ceased in 1999, with a recovery of 5% to 2940 million tonnes, mainly attributed to growing production in the European Union and the United States following the increased milk supplies and reduced opportunities for marketing whole milk powders.

The market for canned condensed and evaporated milk continues to decline in traditional producing countries, such as the Netherlands, Germany and the United States, where production is based on raw milk supplied from dairy farms to processors. In most of these countries production is recorded statistically. It is assumed that production will grow in other areas of the world, where the manufacturing is based mainly on reconstitution from dairy commodities. Unfortunately, no detailed statistics on this production are available.

3. Consumption in Dairy Products

Over the medium- and short term, total milk consumption results from total production, adjusted for the changes in stocks of dairy products. In the years 1999 and 2000, there has been a build-up of butter stocks in the EU and the United States. There are, however, clear signs that the peak of this development has been reached.

The situation is different for skim milk powder. In the European Union the skim milk powder stocks have been declining since the second half of 1999. total stock movements have to be taken into account when world consumption of milk and dairy products is monitored. The overall impression is that in the second half of 2000 stocks will be reduced, since world production of milk does not increase at the same rate as consumption.

The data on consumption in individual countries presented in the statistical annex cover liquid milk, milk drinks and fermented milk, cream, butter and cheese. In general, these refer to consumption in all

forms, although the accurate definition may vary from one country to another. The question also arises as to whether all consumption is included or only consumption of products that are marketed via the commercial distribution channels.

Developed markets for liquid milk are, in general, characterised by a level development or even a decline on a per capita basis. This is due to several different factors. One is that frequently the estimated figures of farm consumption and the direct sales from farms to consumers are included in the figures, and with a declining number of farms this part of the total consumption could also decline.

Another possible reason is that liquid milk in private households is increasingly limited to use as a beverage. As a result, utilisation for meal preparation is declining since an increasing number of dishes are offered by the dairy and food industries via the commercial distribution channels in an already prepared form to consumers. In addition, within this group the ordinary types of liquid milk are substituted partly by fermented milks, milk drinks and desserts offering higher added value to consumers. There is also an ongoing decline in doorstep delivery, which results from the structural change in retail trade and the increased longevity of liquid milks through actual treatment methods.

The situation is different in developing markets. The volume of sales is rising simply because of the growing distribution system and extended availability to a growing number of consumers, particularly in countries with a low level of consumption.

The long-term trend of butter consumption in the major areas of production and consumption is characterised by a slight decline. In some cases, the declining trend has been arrested, but not generally reversed. In the European Union, the demand from private households is continuously falling, whereas the demand from catering outlets and food services is growing. One major factor for the stabilisation of butter consumption is the subsidised disposal of butter in special schemes for utilisation in bakery, confectionery, ice cream and other food items.

The consumption of cheese continues to grow, and many signs even point to an acceleration in many markets. Furthermore, countries with a high level of consumption are still reporting a growth in cheese consumption, for example France. As mentioned above, an acceleration of world consumption can be expected for the current year, because in many countries, including Central and Eastern European countries, the economic recovery is bringing higher imports and also, in some cases will

have a stabilising influence. In addition, the restrictions imposed by the WTO arrangements may not have a major influence because the European Union, as the major origin of exports with refunds, has in recent years been continuously far below the permitted volumes, both because of the lack of demand and insufficient supplies.

Russia continues to be a major importer. The future, however, will depend on the economic conditions as to whether the domestic production in Russia will again increase its share in the market and whether the downward trend in consumption can be reversed.

The growing trend in the cheese trade is mainly due to the fact that cheese consumption is increasing worldwide. The percentage of world trade in overall cheese production is stable or even slightly declining even though volume is growing. Despite the recovery, the Russian import market is still far below the large volumes encountered before the crisis, and the EU market is still far below the volumes exported in the period 1995 to 1997, which were above 500 000 tonnes and are now fluctuating around 400 000 tonnes.

The major importers are presently the United States, Japan, the European Union and Russia.

The trade in whey products was more stable than that of other dairy products. However, whey products have become attractive in recent years because of reduced prices. The availability of whey products is also increasing and therefore trade volumes will grow with production since markets and uses for whey products are constantly being developed by processors and are accepted by the food industries.

The outlook for further growth in international trade seems fair. Many of the major markets have growing economies and promise growing demand. However, the years 1997 to 1999 showed that their stability is not comparable to that of well-developed countries. It is quite clear that these export markets bear higher risks of major cyclical fluctuations than others.

With the completion of year six of the current WTO regulations there is, at present, no follow-up from 1 July 2001. It can be completely ruled out that any new arrangement can be achieved within the first half of 2001 within the framework of the WTO II negotiations. Generally, it has been agreed that for the following years the status quo of year six will be fixed. Such an arrangement will require formal decisions of the negotiating counterparts.

4. Current Situation and Further Development of Dairy Farming in Latvia

Within the framework of the Concept for the Development of Agriculture in 1998 the dairy farming was prioritised and acknowledged to have a large potential in increasing its production volume and export possibilities. However, we still have a number of strategic problems hindering the development of dairy farming and carrying out its potential:

- lack of uniformity in milk production and processing;
- low productivity of cows being the reason for small general milk production volume;
- high costs in milk production, processing and sales;
- insufficient quality of milk and dairy products;
- lack of turn-over resources for the investment into modernising the farms and milk-processing enterprises.

To further the development of dairy farming in Latvia the following objectives should be set for the next 6-7 years [4]:

ON THE LEVEL OF DAIRY FARMS:

- establishment of a rational milk production system;
- conformity to EU requirements in sanitation, hygiene and cattle welfare;
- improvement of milk quality;
- increased productivity of cows by achieving the average volume of 5000 milk kg per cow all over Latvia;
- reduction of production costs.

By rationalising the milk production system it is necessary to gradually increase the herds by reaching the average number of 20-40 cows in a herd, the optimum number being 60-80 cows in a herd. This kind of structure will ensure a sufficient intensity in milk production, increase in productivity, reduction of production costs and improvement in milk quality. This is the only way to meet the requirements of the European Union.

ON THE MILK-PROCESSING LEVEL:

- establishment of a rational, economically substantiated milk-processing structure;
- conformity of milk-processing enterprises to the requirements of EU in quality, hygiene and food safety criteria;

- production of high-quality, competitive dairy products for the local and export markets;
- strengthening of stable, long-term contractual relationship basis between milk producers and milk-processing enterprise;
- putting the local market in order and developing export transactions.

By rationalising the milk-processing system the main processing capacity will be concentrated in a few most effective processing enterprises. This will allow for making targeted investments into the processing industry in accordance with the EU sanitation, hygiene and quality requirements, as well as to develop a system of milk collection and supply and to create stable, contractual relationship with milk suppliers.

By achieving the above-mentioned objectives within the next 6-7 years it is feasible to gradually increase the milk production volume up to 1-1.2 million tons per year, raise the milk-processing volume up to 75-80% of the total milk production level and ensure a successful development of export.

In order to achieve the defined goals the optimisation of dairy farming should be started already in 2001. The process will be launched by rationalising both the production and processing systems. The support policy should be focussed on helping the milk producers, stabilising the milk market, improvements in processing enterprises and development of dairy products' market. To carry out the above tasks it is planned to support several activities so essential for furthering the dairy farming:

1. Development of cattle breeding, including the purchase of cattle for breeding, assessment of sires, assessment of bulls' dams and renewal of herds. The increased productivity of herds will be achieved by improving the milk control system. The legal basis and the fulfilment of the above activities will be ensured with the Ministry of Agriculture. The main activities connected with the development of cattle breeding will be carried out till 2003 and continued thereafter.

2. Establishment and development of animal health control system.

3. Foundation of an independent milk laboratory. The legal side of the issue is tackled with the Ministry of Agriculture the supervision of its fulfilment is taken care of by the Ministry of Agriculture jointly with the Latvian Dairy Committee.

4. Direct payment to milk producers. To develop the milk market it is necessary to support milk producers and encourage their co-operation

with legal processing enterprises. Milk producers will become recipients of direct payments provided:

- a producer has a dairy farm with no less than 5 cows under supervision (the number of cows will be gradually raised);
- a producer sells the milk on contractual basis to either a milk-processing enterprise or a budgetary institution.

Within the coming 4 years it is envisaged to increase the minimum amount of cows in a farm to 15. Possibly, some additional conditions or restrictions will be introduced. The basic legal work and the supervision of its fulfilment in this respect will be done with the Ministry of Agriculture. The system of direct payments will be intact till at least 2003.

5. Foundation and sorting out of the Register of Milk Producers.

In order to establish a legal milk market a stable contractual basis should be established between milk producers and enterprises. The optimisation of dairy farming will result in the establishment of a permanent circle of milk producers for each of the processing enterprises. All the milk producers and the amounts of the produced milk will be recorded in the Register of Milk Producers. This will make it possible not only to control the milk trade, but also the quality of the produced milk and the fulfilment of the supervision program in the herd. In order to ensure a coordinated information system the Register of Milk Producers will be created in close co-operation with the Supervision Register.

In the future the Register will serve as a basis for the establishment of EU milk quota system. Considering the amount of milk supplies of the previous year each milk producer will be granted a certain production quota.

The legal basis of the Register will be established with the Ministry of Agriculture. Implementation and administrative work will be taken care of by the Latvian State Domestic Animal Pedigree Information Data Processing Center and the Latvian Dairy Committee.

In the present situation of larger possibilities to export milk products an increasing attention should be attributed to increasing the competitiveness and recognition of Latvian dairy products. This can be ensured with creating a uniform export brand for the Latvian dairy products. In conformity with the EU standards the branded products will be subjected to heightened requirements. Most specifically this refers to "intervention" products, like butter and skimmed milk powder. By achieving the said quality requirements Latvia right from the moment of

joining the EU will be able to introduce the procedure of organising the joint dairy product market. To achieve the above said it is necessary:

- to work out standards for the Latvian dairy product brand, to register the said standards as state standard, to make the design for the brand;
- to ensure regular supervision of the compliance with the standards of the brand in all the enterprises included in the brand program and producing the branded products;
- to trade the branded products in the local and foreign markets, to register trade volumes and do the statistics.

The introduction of the brand will be financed from state subsidies and subsequently from the fees of the enterprises involved in the program.

Within the framework of developing the dairy product market large attention should be paid to increasing the consumption of milk. One of the options is "Milk in Schools" program widely used in the European Union for promoting the sales of dairy products. The launching of this program in Latvia is currently being considered.

Next to the national support programs, from 2000 to 2006 two SAPARD subprograms will be introduced within the framework of the EU pre-accession support funds, and namely:

- **Modernisation of Agricultural Machinery, Equipment and Buildings.** The milk producers will be able to use the funds of this subprogram for the modernisation of production, strengthening the competitiveness as well for activities aimed at meeting the EU requirements pertaining to sanitation, hygiene, veterinary issues and cattle welfare. Besides, the program is focussed also at the introduction of a rational dairy-farming system.
- **Improvements in Processing and Marketing the Products of Agriculture and Fishing.** This subprogram is meant for the modernisation and improvements in processing enterprises to help them to comply with the EU requirements in hygiene, quality, food safety and environmental protection issues. Besides, the program aims at rationalising the processing system, introduction of contractual relationship between the producers and processing enterprises as well as at furthering the stability of the producers' income.

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Summary

World milk production estimated at 571 million tonnes for year 2000, which is 8 million tonnes or 1.4% higher than in 1999.

The growth of cow milk production can be observed throughout the world, with the exception of Western Europe and some Central and East European countries. In the EU, it is slightly declining, because new quota allocations imply a stricter quota discipline.

68% of all milk produced is delivered to dairy companies in the countries from where statistics is available. Thus the share has increased significantly in recent years, because in many developed countries it is already near to 100%.

The international trade in dairy products is growing again after a levelling off in the period between mid-1998 and mid-1999. The recovery started with skim milk powder followed by cheese, whole milk powder and powder and fresh dairy products. In addition, the international trade in butter might grow again in 2000, but the question is whether this is just a return to regular levels, which have been fluctuating between 0.7 and 0.9 million tonnes over several years without any clear trend.

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KLAIPEDA PORT: DYNAMICS OF LOGISTIC CARGO FLOWS MOVEMENT

Klaipėdas osta ir ļoti svarīgs satiksmes mezgls, kas savieno jūras transportu ar kontinenta dzelzceļu, ceļu un iekšējo ūdens ceļu transportu. Ņemot vērā jūras transporta ienesīgumu, tas ir viens no vislētākajiem satiksmes un transporta veidiem, un tas garantē vislētākos tarifus.

Rakstā tiek analizēta ostas paplašināšanās, kravu uzņemšanas palielināšana u.c. problēmas.

Being important knot in unified logistic system port is taking a part of very important connecting link. It connects different systems: sea transport with mainland, rail and internal water road transport system. Port is a conjunctive link between water and mainland transport. Due to the high profitableness sea-transporting conveyance guarantees lowest tariffs. That's why it's almost always cheaper. Port has great significance for the economic of ports and government while attracting transit torrents. There's discussed the shipping dynamic of East Baltic ports, characteristic of Klaipeda port, ruling structure, main shipping companies (users) and change of movement of cargo torrents in the article (1997-2000). There are analyzed such a problems as expansion of the ports, rationalization of their controlling, enlargement of cargo torrents.

Introduction

The main centers of raw material and semi-manufactured goods, having influence on the transport system of the Baltic States, are the East countries (Russia, Byelorussia, the Ukraine, Kazakhstan, etc.) possessing rich sources of metal, timber, oil and chemical products and the Baltic States themselves. Besides, modern world attempts for the transfer of the "dirty" processing from highly developed states to other countries. As the processes of producing semi-manufactured goods and extraction of raw materials concentrate in new places, the problem of raw materials, semi-

manufactured goods and container cargo is essential for the countries located between such states. In the future a big growth of the flow of containers, raw materials and semi-manufactured goods is expected from America and South-East Asia countries to the ports on the East coast on the Baltic Sea by big vessels of Panama type.

For the above reasons the ports and improvement of the management of logistics cargo flows gain a great significance. *The port, as a logistic knot, play in the entire transport system the role of a joining chain, i.e., it joins different systems of transport: maritime transport with the road, railway and inland water transport. In other words, the port is a joining chain between the water and inland transport.* Due to high profitableness of the maritime transport means, especially deep-sea maritime transport, the lowest tariffs per 1 t/km are guaranteed as compared with any other means of transport. The costs of the maritime transport are usually lower (Baublys, 1995). Thus *in the development of the ports it is necessary to provide a possibility for changing cargo flows and transport systems.*

The port of Klaipeda is a typical continental European port performing also a variety of maritime administration functions (Bartkevicius, 2000). As attracting transit flows, the port gains a specific significance for the economics of Lithuania, because it entrusts major revenue to the state. Advantages of the port of Klaipeda as a transit port depend mainly on its geographic situation. It is the farthest northern ice-free port – even during the coldest winter vessels need no icebreakers. Besides, it is the shortest distance for cargo transportation through Kaipeda from Byelorussia, the Ukraine, the eastern districts of Russia as compared with other Baltic ports. It has as well developed net of railways and inland roads. Concerning the importance of the port of Klaipeda in the transportation system in Lithuania, the port of Klaipeda is given the name of the gates from the West to the East. Transport corridors crossing Lithuania are acknowledged as priority European transport corridors. Thus the port of Klaipeda is considered to be the object of strategic significance. Aiming for proper representation of their own interest and better results of the port of Klaipeda, the port companies have joined into associations (Bartkevicius, 2000). In developing its business activities, the port of Klaipeda concentrates on two main directions: a) East-West transit; b) Lithuania export-import. The market regularly dictates conditions, it demands for the improvement for cargo loading. Approximately 70% of cargo output of the companies in the port of Klaipeda are transit cargo the consignors and consignees of which are

located on a big territory in the East and in the West and they may choose for their cargo transportation routes through any Eastern Baltic coast. The ports of the Baltic region compete for drawing the flows of transit goods and creating the image of transit countries. Under conditions of growing competition among the ports an important thing is to escape bureaucracy or repudiating customers in the management of cargo movement through the port of Klaipėda. Aiming for the objectives of transit business promotion, Lithuania is attempting to create business environment attractive in technical, technological, organizational and legal aspects entrusting a reliable and safe maintenance of transit flows. The Law of Klaipėda State Sea Port establishing the status of a free port to the port of Klaipėda was adopted. It gives hope for wide possibilities to improve conditions for cargo transit through the port of Klaipėda. *Drawing up the draft of Klaipėda Logistics Center for Transportation is an event of significance. (Reports of Administration of Klaipėda State Sea Port (AKSSP), 1993 – 2000).* The idea is cherished to build a deep-water port with the depth of 15-18 meters in front of the port gate permitting to admit in the port of Klaipėda the biggest capacity vessels sailing in Baltic Sea.

Systemic improvement of the port of Klaipėda is performed pursuant to the Port Development Program to the year 2015 adopted by the Republic of Lithuania Government. Due to the implementation of the above program, the output of the port of Klaipėda will grow up to 30-32mln. tons of cargo per year (Bank of the World documents, 2000).

Rational maintenance and usage of maritime economy may entrust continual conditions for the development of maritime and inland business, cargo transit and employment of inhabitant's ad income to the state budget (Paulauskas, 2000). The growth of the cargo output and the number of personnel in the port of Klaipėda will be a significant step in solving the problem of unemployment, a very important problem for the city of Klaipėda. One working place in the port of Klaipėda creates 4-5 working places in the economy of the country (Vasiliauskas, Misiunas, 2000).

Having in mind the significance of the port activities and logistic transportation of cargo for social-economical achievements of the country, city and organizations, the port of Klaipėda and the changing (dynamics) of the movement of the cargo flow during the period of 1997 – 2000 was chosen as an object of the research.

Objective: To determine the changing of the movement of the cargo, influencing factors, possibilities of growth of the cargo in the port of Klaipėda and the place of the port in respect of other Baltic ports.

Methods of the research: analytic, statistic methods, analysis and other methods were used in the work.

1. Lithuania in the European Network

Geographic situation of Lithuania was decisive for the historic role of the country between the East and West. Transport has been acknowledged the priority sphere of economy in Lithuania. The State Program of Transport Development adopted by the Lithuanian Government provided the following directions of the policy of transport:

- integration of the Lithuanian transport system into the European net of transport and market of transport services;
- privatization of the objects of the state sector rendering services of commercial transportation, stimulation of investments of foreign private capital, development of local and interState transportation services;
- elimination of technical, technological, organizational discrepancies between the Lithuanian transport network and the transport network of the West and North Europe;
- entrusting of activities, reconstruction and development of the strategic objects of transport infrastructure;
- coordination of the system regulating legal activities with the legal basis of the countries of the European Union and Western Europe, joining the main multiparty contracts.

The strategy provided in the above program received favorite estimation in the inter-state level.

Inter-state corridors crossing the territory of Lithuania were acknowledged to be corridors of the priority European net of transport (TEN – Trans-European Network). The second European Transport Conference in 1994 (Crete Conference) has approved of:

- the corridor No 1: Warsaw-Kaunas-Tallinn-Helsinki;
- the corridor No 9 with branches: 9B – Klaipeda-Kaunas-Vilnius-Minsk-Kiev; 9D – Kaliningrad-Kaunas.

Thus Lithuania occupies an important place in the European transport network and there is an actual possibility to improve logistic cargo and passenger flows through Lithuania. The role of the port of Klaipeda in this logistic transportation flow is specific and significant.

But it also closely influenced by the processes of the world maritime transport and its future development.

2. Situation in the world maritime transportation and tendencies of development

Changes in the world related to the entire globalization of economics, overflow of free capital and quite a big growth of the number of population was helpful for the growth of the cargo output. The world cargo flows were influenced by phenomena of crisis (in Russia and Asia) and this have also influence on the interState trade as the rate of growth decreased 3.5% in 1998 as compared with 10.5% in 1997, the year prior crisis. Such dynamics had evident influence on the maritime trade.

In 1998 the growth of cargo transportation by maritime transport made only 2.2% and this was the lowest result during 12 years since the crisis of 1987. In absolute numbers it was the first time that the output of maritime cargo transportation exceeded 5 mrd. tons and reached 5.064 mlrd. tons. The hopes for the situation to change for the best are cherished this year. The situation in the market of the transportation of general cargo was more favorable. The output of container transportation continued to grow, in 1998 it reached 163.7 mln. standard containers and the growth was 8.3% as compared with 1997. The tendency of growth of container transportation in the future may be seen in the prognosis. The decrease of the demand for maritime transportation influenced the dynamics of the development of commercial fleet, in 1999 the deadweight tonnage made 788.7 mln. tons (growth only 1.6% as compared with 1998) (Brodin, 2000).

Characteristic structure of changes in the world fleet was as follows: the growth of the tonnage of container vessels made 5 mln. tons or 9% as compared with 1997 and the tonnage of loose bulk and dry cargo decreased 2.5 mln. tons or 12.5%. The distribution of the world commercial fleet was continuing for the benefit of the flag of convenience countries. In 1998 the growth of the fleet of highly developed and developing countries was less than 1% and the tonnage of vessels of the above countries increased 4.4%. Today the owners of actually 2/3 of the vessels sailing under the flags of convenience are highly developed countries and 1/3 – developing countries. The changes in the shipping and maritime trade caused decisive changes in the market of the freight. The situation in the market of mass transportation of raw materials was not useful for ship owners, especially in the sector of dry cargo

transportation. The consequences of the crisis in Asia also played their role (World Economics and InterState Relations, 2000, No 9).

Quite a different situation was observed in the market of general cargo. The liner shipping – contradictory dynamics of changes in freight tariffs: the growth between the USA Pacific Ocean ports and Asian countries. Trans-Atlantic transportation between Europe and North America was carried out under conditions of the decrease of the tariffs in both the directions. It is likely that the tendency of decrease in the freight market will remain in the nearest future.

It should be noted that the practice of the state support to is continued in the world. Even the countries of highly developed economics considered and consider such support to significant. It is frequently in the form of direct financial assignments. For example, the Federal Administration of the USA plans to assign 560 mln. US \$ for the drafts of underwater dredging in the ports of New York and New Jersey for accepting the vessels with the draught of 45 feet in the nearest four years. The means of such assignments will indemnify 75% of the value of draft work (Brodin, 2000, p. 49). All the above and any other problems may be successfully solved only by means of effective management of the ports, rational choosing of relevant management methods and planning the cost price of technologic operations in the port terminals.

3. Main methods of the port management

Depending on the degree of the participation of the private sector in the business activities of the port (Sauerbier, 1985) the following four main methods of the port management may be provided (Table 1):

Table 1

Methods of the Port Management and General Characteristics

Methods of the port management	General characteristics
1. State ports	<ul style="list-style-type: none"> the infrastructure, territory, waters and the commercial functions and activities are subordinate by State/ municipal institution - administrations of ports
2. State/ private ports	<ul style="list-style-type: none"> The State and municipal institutions - administration of port controls an infrastructure, territory, and also water area of port.

Methods of the port management	General characteristics
	<ul style="list-style-type: none"> • The action not self-connected with the infrastructures management and safety of port is executed of the State-commercial, of composite also of private companies, which has the licenses and other lawful legal bases of activity.
3. Private / State ports	<ul style="list-style-type: none"> • The territory of port, property of ground, the infrastructure of port – is controlled of private structures. • The state carries out only functions of the control.
4. Private ports	<ul style="list-style-type: none"> • The functions of an infrastructure, territory, control and supervision of port - are controlled by the private companies.

The first three ways of management of port meet in the advanced countries of the world, fourth – will develop the countries. It is very difficult to define, which of ways is more favorable. The most of the authors of the management theory of port accentuates such main criteria, which helps to establish the way of the management of port, which is the most acceptable for one or another country:

- A general level of development of the country;
- Resources financial possibilities;
- Business condition and risk level;
- The concept of a privatization in a State level;
- The management of "Culture" at a State level.

"Port, as the object of management" is a complex system, conditions that decides a plenty of the external and internal factors. It is very important to set off port and its consumers influencing different external actions, which define the further policy of management of the companies of port. (Sau., 1997).

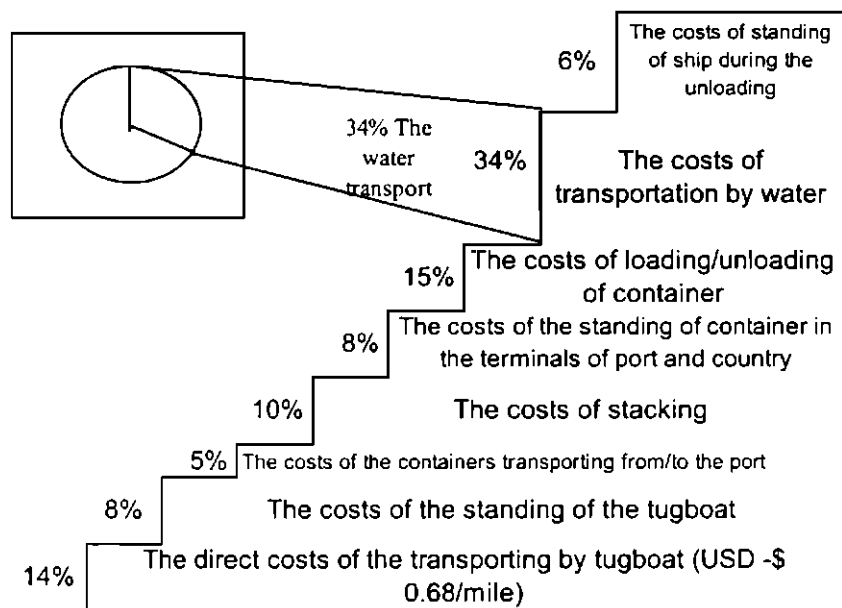
Constant changes of methods of processing of cargoes in port, when constantly improve used technology, obliges port and of the cargo companies to modify a brass and to rationalize the systems of control, that will adapt to new conditions better. (Lambert. 1993).

Though during of technological progress the equipment of port are improve also grow the offers of services, effective technology utilization very considerably depends on other internal bases: depends on the

political decisions of the country or economic bases creating the necessary demand to offered services of port. (Hoyel, 1984).

4. Planning of technological operations of demand in the terminal of port

The lacks of technical capacity – more often met problem in port – that is, when the vessel should wait for moorage in quay. It considerably raises the costs of parking of a vessel in the port in the general costs structure of port (Port Management, 1990). The general placement of the movement of the costs of the cargo in the port is shown in 1st picture.



Picture 1. The costs of cargo in the port

Therefore, wishing to reduce them and to attract a maximum of the potential clients in port, it is necessary to pay attention to, this where is necessary to improve quality of work of port, that the time of parking of the ship in port was reduced up to a minimum. Searches of the optimum decisions on technology of work of terminals of port and their practical application increases the quality and the efficiency of the process of a

manual in the all port. One of the basic parameters, which characterize efficiency of technological processes in the terminal of port, is a cost price of the processing of one ton of cargoes, overloading them from one type of transport into another.

The cost price of processing of one ton of cargoes is established as the sum of the expenses intended for all quantity of the processed cargoes by means of the following major factors:

- Volume of a flow of cargoes (in tons);
- Expenses of a labors;
- Expenses of mechanisms and equipment at processing the goods;
- Expenses are connected to safety of a cargo
- Expenses of warehouse and loading mechanisms;
- Expenses of the electric power and fuel;
- Conditions of a nature.

The effective technological process in the terminal should be organized so that the parameter of the cost price of processing of the goods would minimal (Baublys., 1997).

Knowing the value of the cost price on the each moment of period of the planning, it is possible to effect optimizing of technological operations in the terminal of port operatively, replacing the cost price.

Because the volume of transportation of cargoes and the distance of transportation are increasing, the value of cargoes is increasing, that's why the information technology of logistics system is becoming the significant factor, as at any moment it is important to know a concrete place of movement of the goods and its position.

5. The importance of data of information system for improvement of government of the port companies

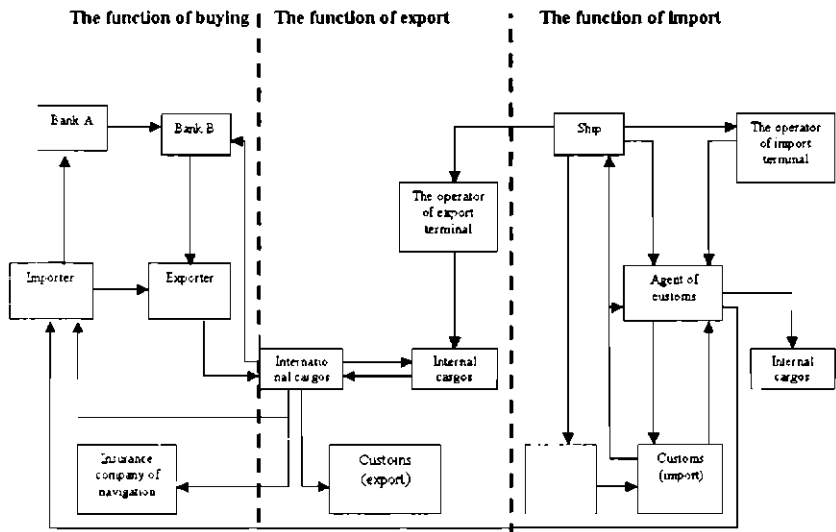
All functions of management – planning, management, motivation and control refers to continuous information flows about it that occurs in organization and behind its. Only receiving the exact information and in time, the managers can plan ahead possible (probable) problems, to develop abilities of understanding, when the actions of a correcting are necessary- that is, opportunity to supervise all course of events. The especially large influence in the facelift of cargo flow represents logic information systems (Garalis, 2001).

The information control system of the sea cargo company, is well developed, accepting the strategic decisions of management of the

company, provides all organization with the exact, newest or reliable information. This information helps the heads of the companies to elevate of the purpose, the task, and the opportunities at use of resources of the company and to assume the correcting actions in the expansion, development and raising of the activity of company of port.

Electronic system of an exchange of the data including the termination of different functions - loading / unloading, receipt of the accounts, order of services connected with port, registration of procedures of customs, control of cargoes and their place of punching, insurance of a cargo, selection of vehicles and the different services of cargo distributions, which helps only to operate effectively activity of the company of port, but also to save time and costs, to lower an opportunity of mistakes and to increase the insurance of cargoes taking place in the port terminal. (Port Management, 1990)

The scheme of electronic system of the motion of the data of port terminals. It is shown in Picture 2:



Picture 2. The scheme of electronic system of the motion of the data of port terminals

After Gerhard Muller (1991), on the carried out accounts the electronic system of a change of the data, is implanted in the port

terminals, increases the work effectiveness 20-25% (Port Management, 1991).

The information system of terminals of port facilitate all in a ring of the working companies (agency service of the ships, freight forwarding, customs house, railway and vehicle) work, directly influences safety of a cargo, on this grows not only companies of port and on appeal of all port, but also movement of a cargo going through port. (Meurn, 1985).

However, the port of Klaipeda hasn't created it yet, despite the provided advantages of unified information system. That's why the necessity of its' creation is emerging.

6. The East Baltic ports the loading dynamics

In the Baltic Sea east coast in 8 ports in 2000 were overloaded 139.7 million tons of a cargo (in the Klaipeda port – 19.4 millions 13.9 percents from all cargo volume of these ports. The port of Klaipeda took the fourth place between them), cargo volumes are shown in second table (the account of work of AKSSP, 2000)

Table 2

The East Baltic ports the loading dynamics in 1999 – 2000

The Port	Over-loaded, m. t. 2000	Over-loaded, m. t. 1999	00/99, %	Difference, m. t. 00/99	Without rock-oil cargo, m. t. 2000
KLAIPEDA	19.40	14.97	+ 29.56	+ 4.43	14.20
Butinge	3.48	0.69	+ 404.4	+ 2.79	0.00
<i>In Total these ports of Lithuania</i>	22.88	15.66	+ 46.1	7.22	14.2
Liepoja	2.96	2.32	+ 27.59	+ 0.64	2.57
Ventspils	34.76	34.14	+ 1.82	+ 0.62	8.38
Riga	13.35	12.01	+ 11.15	+ 1.34	10.52
<i>In Total these 3 port of Latvia</i>	51.07	48.47	+ 5.36	+ 2.60	21.47
<i>Tallinn (4 ports)</i>	29.35	26.45	+ 10.95	+ 2.90	11.53
<i>Kaliningrad</i>	4.39	4.14	+ 5.91	+ 0.25	3.44
<i>St. Petersburg</i>	32.01	28.17	+ 13.86	+ 3.84	24.68
Total:	139.7	122.89	+ 13.68	+ 16.81	75.32

In these ports without rock-oil and its production were overloaded in total 75.3 million tons cargo (in Klaipeda – 14.2 million tons – 18.9 %.

Without rock-oil and its production in 2000 the loading in the port of Klaipeda in this region has conceded only to the "Large" port of St. Petersburg).

In the three biggest ports of Latvia (Ventspils, Riga and Liepoja) in 2000 have been overloaded in total 51.1 m. t, general overload has increased 5.4 % (In Klaipeda – has increased 29.6%, in Ventspils – 1.8%, in Riga – 11.1%, in Liepoja – 27.6%).

The 7 small ports of Latvia have been overloaded in total 0.77 m. t – about 39% more than early years.

In the port of **Ventspils** in 2000 rock-oil products have increased 13% and loading of rock-oil 4.0%, them were overloaded 26.4 m. t; metal decreased in a third, is loaded 0.98 m, t. (in Klaipeda – 3.56 m. t – has increased 24.7%), loading of ferroalloys was falling down 21.2% (was loaded 0.13 m. t, in Klaipeda 0.79 m. t, has increased 3.9 times); coals has increased 15 times, are loaded 0.4 m. t; other cargoes either have decreased or their volume wasn't great.

The port of **Riga** the main cargos in 2000 were: wood – 4.15 m. t, has grown 20.0% (In Klaipeda – 0.68 m. t, practically hasn't changed); metal – 1.76 m. t, (has increased 5.0%); rock-oil products – 2.81 m. t, (has increased 30.0 %, in Klaipeda – 5.20 m. t, have increased 31.3%); containers are overloaded 84.93 thou. TEU (in Klaipeda about 20.4 thou. TEU, cargoes of Ro-Ro have decreased in half.

In the port of **Liepaja** the rock-oil products have increased 62.0%, were loaded 0.39 m. t, also have increased loading of Ro-Ro means, have decreased loading of containers (were overloaded 3.28 thou. TEU) and loading of metal, the volumes of other cargoes weren't very varied or, by comparison, weren't big.

The port of **Tallinn** it is the formal combination of four ports (Tallinn-Muug-Paljasare-Paldisk). The port of Muuga was overloaded 22.0 m. t of cargoes in 2000, loading of others of Estonian ports was on much less, nor in the port of Klaipeda (Tallinn (the center) – 4.3 m. t, Paljasare – 1.8 m. t, Paldiski – 1.2 m. t). In 2000 loading of the all port of Tallinn, as compared with early years, was increased 11.0%, at most at the expense of fluid products, which are loaded 17.81 m. t, this is 60.7 % off all loading (increase – 22.8%). The containers were overloaded 76.72 thou. TEU – 17.1 % more than in 1999. The volumes of loading of dry cargoes haven't achieved the level of last year. The port of Muug has overloaded the dry cargoes much less nor the port of Klaipeda.

In the port of **St. Petersburg** in 2000, as compared with early years, the loading has grown 13.9 %. The metal were overloaded 7.13 m. t (was increased 9.0%), rock-oil products – 7.39 m. t (was increased 1.0%), the containers – 3.67 m. t (was increased – 29.0%), the loading of grain – 0.90 m. t – was decreased 36.0%.

In the port of **Kaliningrad** in 2000 the rock-oil and its products are loaded 0.95 m. t – was increased 7.8 %, the containers are overloaded 16.28 thou. TEU, the increase amounted 13.8 %, the loading of metal was increased 2.7 times, but are loaded only 0.11 m. t, the volumes of other cargoes weren't very varied. (the account of work of AKSSP, 2000)

7. The characteristic of Klaipeda port

The port of Klaipeda is located in the east coast of the river Dane, which connects the Curonian Bay and the Baltic Sea. The Maximum gauge in the port are 10.5 m, territory of land are 393 ha, from them 157 ha are using for cargo works, 12 km from them of quay, 4 km are used for operations of port (The document of World Bank, 2000).

The port of Klaipeda is the main of the international corridor Nr.9 the branch Nr.9B multimodal the transport site connecting sea and overland ways by the direction of East-West. There is the northernmost not freezing port in the east part of Baltic Sea. There is good communication with Russia, Ukraine, and Belarus: auto road Klaipeda-Vilnius-Minsk-Moscow, developed railway system the port are servicing two railway stations: “Klaipeda” and “Draugyste”

The regular navigation lines connect the port of Klaipeda with Russia, Poland, Germany, Sweden, Morocco, Ecuador, Costa Rica, USA, South Korea and other countries.

To the port of Klaipeda sail in about 7000 ships every year, the more than from 50 world countries (the account of work of AKSSP, 2000).

The port of Klaipeda can accept conditionally small ships (about 40 000 tons). Compared together others nearby The Baltic ports which maximum allowable displacements, for example, the in port of Gdansk (the maximum displacement – about 140 000 tons) and in the port of Liepoja (the maximum displacement – about 150 000 tons), in Gdynia (130 000 tons), in Kaliningrad (50 000 tons), in the Ventspils port of powdery cargoes (90 000 tons), in Riga's port (60 000 tons), in Tallinn and Muug (120 000 tons), it is evident that their maximum displacements are better than in the port of Klaipeda (Paulauskas, 2000). That is why in

the Klaipeda port such types of ships are loading only partly. The rest of part ship volume is embarking in the nearby ports.

National enterprise "The Management of Klaipeda National Seaport" wants to deepen the canal of mouth and the water area of port in quay till 14 m of depth. If the gates of port deepen from 11.5 to 14 meters, then the ships could come to the port which maximal draught is 12.5 m. Also, in accordance of Clarkson's cargo tanks list, is established, that in this case the ships could come to the port which DWT balance from 40000 to 60 000 tons (The document of World Bank, 2000). On this having deepened the port of Klaipeda, has increased not only the volume of cargo when is the same number of ships, but also has increased the number of ships. After reconstruction of the port gates the port of Klaipeda will attract the more of ships and herewith the more flows of cargoes. The port of Klaipeda could service 60 000 DWT, which are going in other ports for the shallow water area of Klaipeda port (The document of World Bank, 2000).

8. The Klaipeda port between other ports of the world

The Sea portrages – it is economical reflection of countries and reciprocity of ports. The ports reflect the economical condition of country. Therefore looking on delivery of cargoes of the country (grade and quantity), is probably exact enough to define change of an economic situation in the country.

Deliveries of a cargo in the majority depend on the sale and on the industrial tendencies in the country. The port cannot exist without other port, therefore change of conditions in the one port (depth, the technology of cargo works) influences the same changes in other ports. So, it is necessary to emphasize a place of port in a general national economy, from the point of view of transit deliveries, communication of port and outside the port, possible hypotheses of development of port and possible parameters of port, depending on the economics behind port and development of ports of the world. Potential opportunities of ports define the port-outside, which establishes the tendencies development of port. Having analyzed the largest of ports of the world, it is simple to allocate the port-outside, which they serve, and to define the general tendencies of a flow of cargoes. (Paulauskas, 2000). The inhabitants of the small port-outside countries with the advanced industry receive the larger flow of

cargoes, which are transported through ports, than in the countries with the less advanced industry.

At the same moment the large ports, such as Rotterdam, Antwerp, Hamburg and others, serve not only the traditional port-outside – part of cargoes overloaded in these ports, and further are transported by vessels to the Baltic port and to other sea ports. So, the first place among ports of Europe in the general turnover of cargoes occupies of Rotterdam (first place in world sea overloads) – 294 m. t. in 1994. It is the very modern automated port, in which are working just 10 000 people, but it creates of 380 000 workplaces. Supposedly, that to 2010 the volumes of cargoes will be raised up to 417 m. t. (Bazaras, 1999).

The port-outside of ports of the Eastern Baltic Sea are located from Finland up to Poland: Byelorussia, Baltic countries, Western and Central Russia, Southern Ukraine, Finland.

There are living about 150 millions people. In these ports in 1997 were overloaded about 190 millions tons of cargoes, that practically the one inhabitant receives about 1.25 tons of a cargo overloaded in ports.

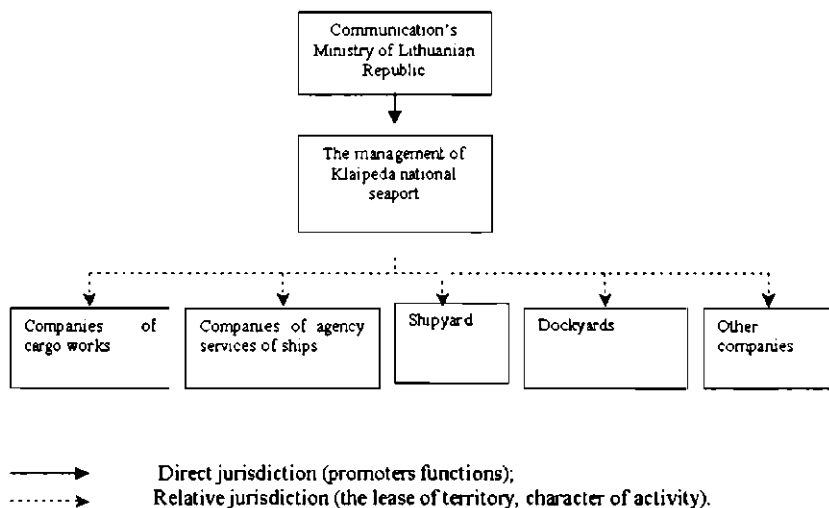
Looking at the tendency of development of World ports, especially in Western Europe, looking at possible cargo flow, which would be from 1.8-2.0 tons for one inhabitant for one year, in a chain of ports from Finland up to Poland the flows of a cargo in the future can increase up to 250-300 millions tons for one year. This quantity of cargoes can be accepted as feature at development of ports, planning their prospect for 20-25 years. (Paulauskas, 2000).

9. The structure of State seaport Klaipeda and the infrastructure of the general port

After Lithuanian independence re-creation arose an idea of united, modern and universal interstate seaport. Depending on that the structure of Klaipeda seaport was reformed radically. The management of Klaipeda State seaport (AKSSP) was formed in 1992. AKSSP has the water area and the territory of Klaipeda port which within the jurisdiction of Communication's Ministry. The development of the port is a very expensive therefore not only the state should care about the development of the port but also the private companies of the port.

There are the main directions of activities in the government strategy of AKSSP: organization of the navigation, the security in the port and approaches, development of the programs of the port infrastructure,

creation and improvement of the information systems, collection of port dues for loads and ships, and also others functions. They influence the government policy of port companies. (Paulauskas, 2000) Picture 3 shows the general structure of Klaipeda port.



Picture 3. The general structure of Klaipeda port

In the Klaipeda port work various private and State companies of cargo works, companies of agency services, the forwarding companies, the shipyards, the dockyards and the others companies. There are four main companies, doing cargo works in Klaipeda:

1. Joint-stock company "Klaipedos juru kroviniu kompanija" "KLASCO"
2. Joint-stock company "BEGA"
3. Joint stock company "Klaipedos Smelte"
4. Joint-stock company "Klaipedos terminalas"

The activity of these port companies of cargo work is connected with loading and unloading of ships, with storing of liquid substances, dry substances and packed substances, with loading from the ships into trucks, rail wagons and from them into the ships, also with storage and keeping in open and covered store-houses and in separate store-grounds.

The variety of companies of cargo of the port enables the clients of the port the wide choice. The big competition inside the port prompts the efficiency of operations of cargo companies and the reduction of prices. The law of the Klaipeda State seaport regulates the activity of the port. The land and the infrastructure of the port is the State property. According to the confirmed investment program by the government of Lithuanian Republic the underlying object of the Klaipeda port is the perfection of the landing stage of the port, the deepening of the northern water area and of the landing stage of the canal of the port till 14.5 m, the reconstruction and the development of the piers. For this purpose in 2000 were invested more than 30 million Lt and was signed contract of the credit with the World Bank.

10. The users of the port

The shipyards, the dockyards, the independent cargo companies, the other enterprises, which signed the contract with the management of the port, do the economic-commercial activity in the Klaipeda port. The enterprises of the port have created the associations to represent their interests: the cargo companies – the association of Lithuanian sea cargo companies, companies of agency service – the association of the Lithuanian shipbrokers and agents, the forwarding companies – the association of the forwarding companies. Six main enterprises of the port are in the list of 100 greatest Lithuanian enterprises by the volume of sales and services, and by the additional value. The enterprises of the Klaipeda port in 1997 paid 83 862 thousands Lt of various taxes into the budget of the country. So, 7370 Lt of taxes have accrued to one worker of the Klaipeda port. (Vasiliauskas, Misiunas, 2000).

The Klaipeda port like the most of the other ports, is the multipurpose port which does all the main functions: there the ships come to the port and leave the port, there are executing the cargo works of ships and other transport systems, the ships stand safely in the port, the loads are stored, are carrying out the shipbuilding and ships repairing, are doing services of agency work.

The port is constantly deepening, clearing, renewing the existing and the creating of the new infrastructure. The optimums for the users of the port, for loading and for passengers prepare and they improve in cooperating with enterprises of the port. There is implanted in Klaipeda

port the newest technology, which meets the standards of the world level in the sphere of loading and navigation security.

The main element of the successful work of the port is the clients of the port: internal, working in the port: the companies of cargo work and the shippers, the agents of ships, and other; external: the owners of cargo, the operators of the lines of the navigation and other.

There are these big companies of sea cargos in Klaipeda port:

The Klaipeda company of the sea cargos "KLASCO"

The Company of the sea cargos "BEGA".

The Company of the sea cargos "Klaipedos Smelte"

The Company of cargo work Consortium "Klaipedos terminalas"

The Company of loading of rock-oil products "Klaipedos nafta"

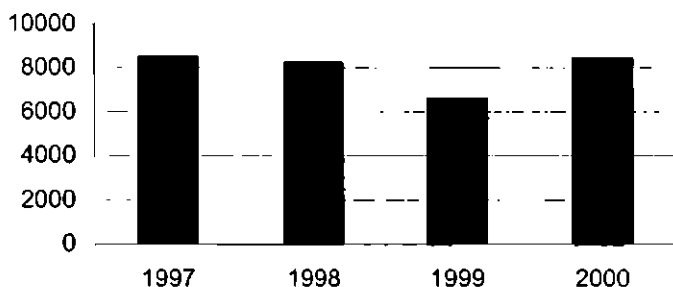
Also there are some smaller enterprises: "Krantas Shipping" "Lietuvisku durpiu krova" and others. All the companies of the loading load about 19 million tones of cargo. The main flows of cargos, which influence the Klaipeda port are: rock-oil products, metal, ferroalloys, fertilizers, wood, grain, sugar, containers, scrap metal, RO-RO, feedstuff, cement, other cargos.

10.1 Joint-stock company "Klaipedos juru kroviniu kompanija "KLASCO" – the biggest company of loading in Klaipeda port, which loads almost a half of transported cargos through the port of Klaipeda. It has the biggest experience of the loading of metal in the Baltic countries. The company uses 18 quays, the general length of them – 3229 m, and the depth near quays is from 8 to 12 meters. The portal and container cranes, tugs and other technique are used for loading. The lifting capacity of them is from 0.5 to 40 tons. The company consists from three detachments: the port of dry cargo, RO-RO terminal and the new terminal of containers. There are loading metal, fertilizers, wood, grain, sugar, frozen products, containers, wagonload, motor transport and is serving the passengers. Yearly capacity of the containers of terminal is 150 000 TEU. In RO-RO terminal is serving the ships, which transported wagonloads, trailers, trucks and passengers. The crossing connects with regular ferries and RO-RO type lines of ships with ports of Germany, Mucran and Kyl, with port of Sweden Ohus. The Picture 4 shows the volumes of loading in 1997-2000 (the account of work of AKSSP 1997-2000m.).

The KLASCO in 2000 transshipped 28.4%, more than a year ago, but in December transshipped less than in December of 1999 and less

than in November of 2000. One of the reasons of this situation is a high tariff portage services by rail in Russia.

	Year			
	1997	1998	1999	2000
Thou. t	8490.92	8218.36	6593.15	8463.51



Picture 4. The dynamics of cargo flows of "KLASCO"

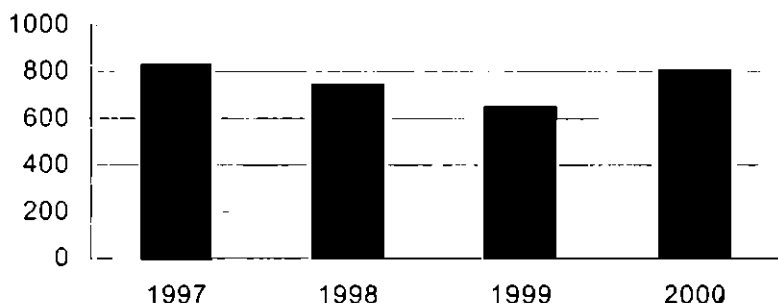
10.2 The Consortium "Klaipėdos terminalas" loads these cargos: RO-RO; containers and the general cargos. The equipment they have, apart from transshipping and storing gives a wide spectrum of extra services: cargo weighing, sorting, and transferring of cargo into rail wagons and so. In the consortium transships the main part of nonstandard and large cargos transported through the port of Klaipėda: industrial equipments, receptacles, constructions that demand especially high qualification of transshipping and good organization of work.

At the moment the terminal has two RO-RO quays (general length – 340 m, depth – 7.5 m) 64 000 m² of open store grounds and 3000 m² of covered heated store houses, the all RO-RO, containers and general cargos needful technical equipments, which satisfy modern requirements, Picture 5 shows the volume of loading of enterprises. (The account of work AKSSP of 1997-2000m.).

In 2000 from the all loading of containers in the port the consortium "Klaipėdos terminalas" transshipped – 39.2 % (in the new KLASCO terminal 56.9%, "Lietuvisku durpiu krova" and in the shipyard "Baltija" 3.9%). The consortium has purchased the universal crane "Liebherr LHM 250" in 2000. This crane of 64 t carrying power is used

to transfer containers and general loads. The company gets the new possibilities for more operative loading, which can increase possibilities to attract more clients.

Thou. t	Year			
	1997	1998	1999	2000
	828.86	743.17	645.38	800.38

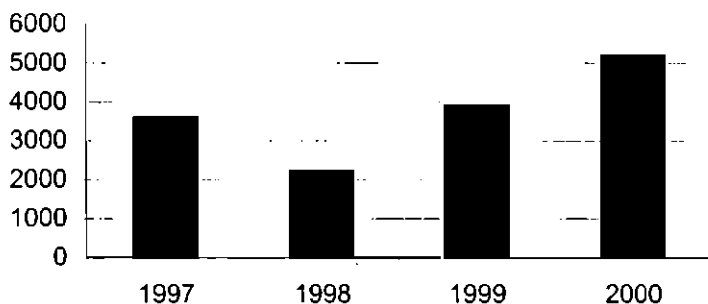


Picture 5. The dynamics of cargo flows of consortium “Klaipedos terminalas”

10.3 Joint – stock company “Klaipedos nafta”. The main activity of Joint – stock company “Klaipedos nafta” – to pour rock-oil products: fuel oil, diesel oil. In the company also certificates the rock-oil products, to clean the water from rock-oil products, to supply the ships with fuel and water. In 2000 were finished 95% of works of reconstruction of terminal. Now it is one of the modern objects in the Europe, its power is 7.1 m rock-oil products per year. The park of reservoir can place 350 000 m³ the rock-oil products, and 124 oil tanks can be poured in two trestles of railway at the same time. The Picture 6 shows the dynamics of loading of rock-oil products in 1997-2000. (The account of work AKSSP of 1997-2000m.).

When the Klaipeda port becomes deeper and competition of export of rock-oil products processed in the company become well, it will attract the additional flows of cargo.

	Year			
	1997	1998	1999	2000
Thou. t	3591.49	2233.67	3914.85	5197.57

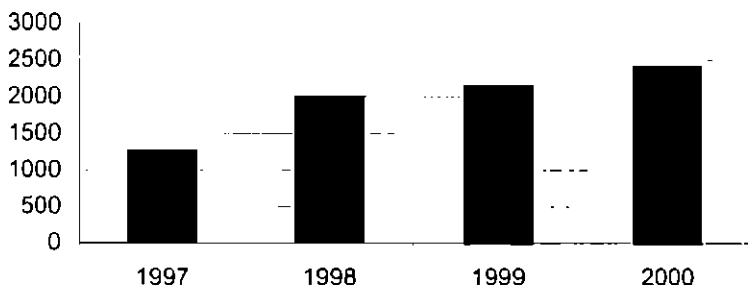


Picture 6. The dynamics of cargo flows of consortium "Klaipedos nafta"

10.4 JSC "Bega" specializes to load the fertilizers, cements and other dry cargos. Also they load wood, peat, and general cargos and give services of storing. JSC "Bega" is one of three biggest companies of Klaipeda port. The terminal of liquid fertilizers consists of reservoirs warmed by the electricity (the general tankage is 40 000 t), the stations of pouring out off the railway tanks and the pumping station with the network of pipes to jetty, where at the same time can be loading two tankers (their power is 24 000 t per twenty-four hours). The terminal of dry fertilizers consists of two wagons unloading stations and two equipments of ships loading and the mechanized store – house of dry fertilizers (the capacity is 40 000 tons), connected with station of unloading, with the equipments of loading and with transporters galleries. Picture 7 shows the volume of loading. (The account of work AKSSP of 1997-2000m.).

"Bega" during the year 2000 trans-shipped 2,413.83 thousand tons. It's 12.1% more than in the year 1999. The main torrents of the cargo were: dry and liquid fertilizers, timber, etc. Introducing new technology of dry goods shipment of agriculture influenced the growth.

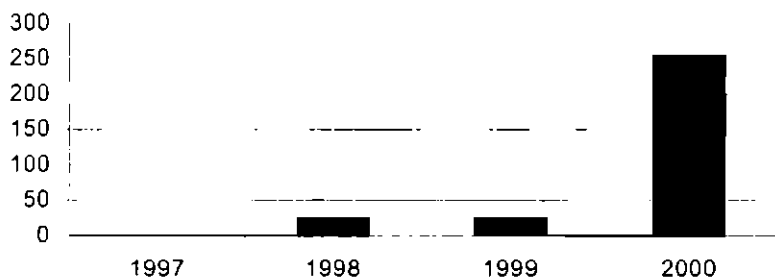
	Year			
	1997	1998	1999	2000
Thou. t	1266.4	2002.1	2151.9	2413.83



Picture 7 **The dynamic of cargo flows JSC "Bega"**

10.5 JSC "Transfosa" is developing two trends of activities: ships dry cargo, gather and clean oil polluted water.

	Year			
	1997	1998	1999	2000
Thou. t	0	23.84	23.84	254.71



Picture 8. **The dynamic of the cargo torrent JSC "Transfosa"**

Dry cargo are laded from ships and barges by three 16 tons lifting power swimming jennies. Ships and barges are used as swimming storehouses. This technology allows trans-ship to 5000 tons dry cargo per

twenty-four hours. From ships and motor vehicle gathered oil polluted water is being cleaned in the water purification station of the company. The volume of shipping work is presented in Picture 8 (the account of the work of AKSSP, 1997 – 2000).

Fertilizers are main “Transfosa” cargo. Company greatly increased its annual extent of the shipping. Comparing company’s shipping extent in year 2000 with the year 1999, it increased by 230.87 thousand tons.

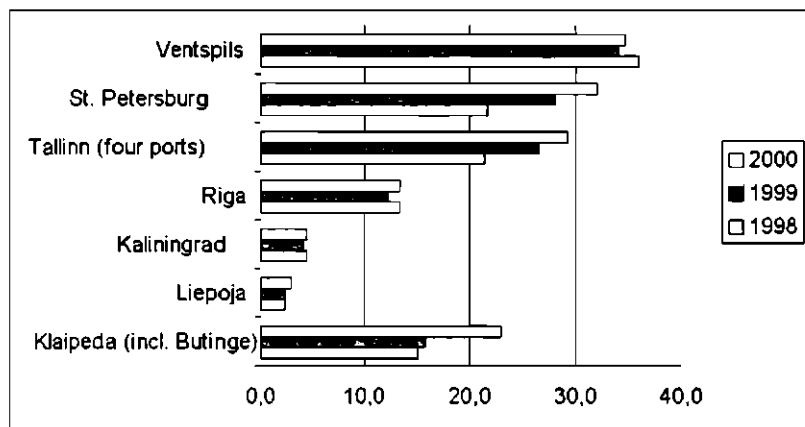
11. The competition of the port of Klaipeda

One of the most important conditions influencing development of the port is a port competitor, because only accurate estimation of port competitors allows:

- define the spheres of activities, where port is strongest and can further strengthen its positions;
- define the spheres of activities, which are comparatively vacant;
- define the most complicated, by competitive point of view, areas and, after making SWOT analysis, set the real borders of opportunities concerning other corridors of port and transport;
- more precisely define the influence of seasonal prevalence for certain cargo torrents and based ourselves on facts try to take over the cargo torrents, which though partly depends on seasonal prevalence.

All the three Baltic republics and Russia are natural competitors in East-West cargo transportation. But Klaipeda port has some advantages. The port of Klaipeda is not freezing up all the year contrary to Riga, Tallinn and St. Petersburg that are freezing up. They need iceboats for they could guarantee sail in during the winter. The port of Klaipeda in comparison with other Baltic ports has the best mainland roads with four lines Euro standard highway to Vilnius and railway roads to the East and Moscow. Being near each other, ports (Klaipeda, Liepoja, Ventspils, Riga, Tallinn, Kaliningrad, St. Petersburg, etc.) are competing among themselves. It’s because they are serving the same market, where the main torrent of the cargo is going East-West directions. So, it’s expediently to analyze near each other being ports as competitors concerning concrete torrents of the cargo. In the Picture 9 there is presented the volume of the shipping work in the East Baltic seaports (the account of the work of AKSSP, 2000).

Ports	1998	1999	2000
<i>Klaipeda (incl. Butinge)</i>	15.0	15.7	22.9
<i>Liepoja</i>	2.3	2.3	3.0
<i>Kaliningrad</i>	4.5	4.1	4.4
<i>Riga</i>	13.3	12.1	13.4
<i>Tallinn (four ports)</i>	21.4	26.5	29.4
<i>St. Petersburg</i>	21.6	28.2	32.0
<i>Ventspils</i>	36.1	34.1	34.8



Picture 9. The change (dynamic) of the East Baltic seaport shipping 1999 - 2000 (thousands of tons)

During the year 2000 there was trans-shipped 84 million tons dry cargo in Russian seaports. It's 7.5% more than two years before. There were about 85% of countries foreign trade cargos directed through the Russian ports in the year 2000. It's 10% more than in 1999. Baltic countries and the Ukraine ports got over 10 million tons of Russian import and export cargo. The main reason for increase of torrent cargo through the Russian ports was the right tariff policy of Transport and Communication ministries. The ports of the country have the possibility to take over the torrents of the cargo contemporary being owned by Baltic countries and the Ukraine ports (Jatulis, 2000, page 16).

Ports of Ventspils, Riga, St. Petersburg, and Tallinn are making the biggest influence for the port of Klaipeda, concerning metal torrents of

the cargo. Due to the competence of ports, only the corresponding qualified use of work and technique can help maintain possessing and attract additional torrents of the cargo.

Ventspils, Riga, Tallinn, St. Petersburg, Kaliningrad, Butinge, Primorsk have the influence for the port of Klaipeda, concerning oil products.

Ventspils and Kaliningrad (concerning fertilizers), Tallinn (concerning grain and fertilizers) are making the biggest influence for the port of Klaipeda, concerning fertilizers and other dry torrents of cargo.

Ventspils has old tradition for fertilizers treatment. Besides there are dry cargo terminal, which capacity is 6 million tons per year.

In Kaliningrad port built fertilizers' terminal can also have influence on the port of Klaipeda. Though conveyance by railway and comparatively long time swimming down the Kaliningrad canal shouldn't do considerable influence for the port of Klaipeda. Good service quality and relatively competitive tariffs of the terminal can positively have an effect upon the terminals of the port of Klaipeda that are working with dry cargo.

The conveyance of containers should increase, because there's more such kind of cargo being carried by ships. The competition among ports, concerning containers, will grow, because almost all ports are building or modernizing terminals of the containers.

There are these terminals of the containers in the East Baltic coast now: St. Petersburg, Riga, Klaipeda, Ventspils, and Tallinn. A small amount of containers lade Kaliningrad and Liepoja.

Practically all the East Baltic seaports are planning or building terminals of the containers.

There was built a new terminal of the containers in the port of Klaipeda with perspective to trans-ship to 150000 – 200000 TEU per year. The same is made in Ventspils with perspective to trans-ship to 250000 TEU per year. There is being planned to build a new terminal of the containers in Tallinn port with perspective to trans-ship to 250000 TEU per year. The same plans are being made in Kaliningrad with perspective to trans-ship to 170000 TEU during the same period.

St. Petersburg and Riga are expanding their terminals or containers. It's necessary to appreciate ports of Finland and Poland, which now are lading about 600000 TEU.

So, the conveyance of the containers through the East Baltic seaports is perspective. It's possible partial taking over the torrent of the containers from the main West European ports, especially when there will

increase the local torrent of cargo and torrent of the cargo to East countries.

Liepoja, Riga, Tallinn, Kaliningrad (the east terminal of Baltijsk) are the main near being and building ports of RO-RO torrents of cargo that have influence on the port of Klaipeda. Contemporary very intensive RO-RO conveyances are going through the ports of Stockholm and Tallinn, because RO-RO ship line system is very good developed there.

Practically the situation concerning the torrents of cargo of all competitive ports is very similar. The survey of logistic expenses in the region indicates that logistic expenses in Lithuania were the lowest. Transportation through the port of Klaipeda offers faster conveyance to Russia than by road transport through Poland. In that case unnecessary loading at railway, entering the Poland and traffic jams are being avoided.

Conclusions

1. Though the port of Klaipeda is situated in favorable geographical position and has good roads communication. The port needs to improve infrastructure, administration, client service and information systems.
2. Particular focus attention and efforts to the improvement of information systems, the creation of unified center of information systems and logistics could be perspective point of view in the improvement of the port of Klaipeda administration. While striving to increase general effectiveness of the port, it's necessary to connect all the users of the port under unified logistic administration system. However, the port of Klaipeda hasn't created it yet, despite the provided advantages of unified information system. That's why the necessity of its' creation is emerging.
3. It is necessity to strive for more close and comprehensive cooperation, while striving for new users attraction to the ports of East Baltic countries, enlarge the movement of logistic cargo flows. Having such a results of communication, exchanging and processing gained valuable information, it's important to connect all these ports under the unified computer system. This could essentially enlarge the effectiveness and competition activity as of the ports of the region as of the separate port. Firstly it should be properly disposed for productive cooperation to accomplish this big project. There should also be solved political-economical problems of East Baltic countries corresponding to this logistical aspect.

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Summary

The necessity to get over water obstacles, growing cargo flows in the world; profitableness of high sea transport and other factors more and more are raise the importance of the ports. The port, as a logistic knot, play in the entire transport system the role of a joining chain. It joins maritime transport with the road and railway transport.

The integration of Lithuania transport to European network and inter-state corridors' crossing Lithuanian territory are investigated questions in this article. There's discussed condition of world shipping and tendencies towards the development. Also mentioned growth of fleet, increase movement of containers and general cargo flow and decrease of shipping tariffs. So all these questions raises the necessity of effective port administration, while planning rational technological operations in a port terminal and strive to decrease the expenditures of load and administration. First of all it's necessary to improve technologies and administration systems of information, while striving for better administration of growing movement of cargo flows. The scheme of port terminal data movement system, which could greatly raise the effectiveness of port work, is shown in the article.

The loads' dynamic of East Baltic ports also is investigated in the article. Lots of attention is given to the port characteristic, structure, infrastructure, and aspects of expansion of Klaipeda for the port position among other ports. There are described port users and the movement questions of trans-shipped cargo flow (1997-2000). The attention is given to the largest seaport cargo company of Klaipeda "Klasco" and other smaller cargo companies' activity. Common competitive growth aspects of ports' and port of Klaipeda are been discussed. The volume of load during 1998-2000 in ports of East Baltic is presented: Klaipeda, Latvia, Estonia, Kaliningrad, and St. Petersburg. There's a presumption that container conveyance through East Baltic countries is perspective and the intensity of trans-shipped containers and other flows should increase. While making canals of information and communication among the ports of all the East Baltic countries and of separate ports the attention is turned to perspective of developing unified information systems.

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PRICE FOR THE BORROWED CAPITAL IN LATVIA

Uzņēmējdarbībā iesaistītā kapitāla struktūru ietekmē gan pašu, gan aizņemtā kapitāla cenas. Aizņemtā kapitāla cenas pamatā ir procentu likmes, kuras jāmaksā aizņemtā kapitāla devējiem. Statistika uzskaita kredītiestāžu izsniegto ilgtermiņa un īstermiņa kredītu vidējās likmes. Laika posmā no 1993. gada līdz 2000. gadam Latvijā tās ir ievērojami pazeminājušās. Kā tas ir ietekmējis aizņemtā kapitāla cenu?

Rakstā tiek analizēti uzņēmējdarbībā iesaistītā aizņemtā kapitāla faktiskās cenas aprēķina rezultāti Latvijā periodā no 1993.gada līdz 2000.gadam un aizņemtā kapitāla struktūras un nodokļu politikas izmaiņu ietekme uz tā cenu.

Capital is an integral factor of production and, just like any other production factor, it has certain value, price. An enterprise benefits from acquiring capital for price as low as possible, just like any other production factor.

Two prices can be calculated for capital of an enterprise: the historical one and the marginal one. Calculations of marginal price are more common and more widely discussed in literature since marginal price is used in a range of plan calculations relevant to the enterprise. Calculations of historical capital price are only mentioned in literature¹. The calculations thereof, however, raise certain interest, in particular in the period of transition from socialistic economy to market economy where capital raising is one of the main problems.

Capital of the enterprise forms from equity capital and borrowed capital. The net weight of borrowed capital in the aggregate capital has increased at Latvia during the period from 01/01/1993 to 10/01/2000 from 33.7% to 50.4% while the net weight of equity capital has experienced proportional decrease.

Profitability of equity capital has been less than that of the aggregate capital during most of the period except the year 1993 (see Table 1). It proves that borrowed capital has been so expensive that the enterprise has had to pay interest not only from the profit gained from the borrowed

capital but also from the part of the profit generated by equity capital. It leads to the question what has been the cost of borrowed capital?

The price for borrowed capital is based on interest rate to be paid for the use thereof. The average interest rate paid by enterprise during a certain period of time can be calculated by dividing of the paid amount of interest by the average amount of borrowed capital during the given period.

Table 1

Profitability of the aggregate capital and equity capital engaged in business in the Republic of Latvia on 1993 – 1999²⁻⁸
(%)

Period	Profitability of aggregate capital	Profitability of equity capital
1993	6.0	6.6
1994	2.3	1.5
1995	1.3	- 1.2
1996	0.9	- 2.1
1997	2.5	0.9
1998	4.0	3.4
1999	3.5	2.4

Statistic bulletins published by the Central Statistical Bureau of Latvia on basic financial indices of business contain some information that could be used for such a calculations, subject to certain tolerance. The Profit and Loss Account item "Interest payments and similar expenditures" presents all the interest payments made for short-term and long-term debts of the enterprise. This item also includes other costs, like loss from currency transactions, for example, except if it constitutes principal activity of the enterprise. The said loss can not be shown separately due to lack of data. Therefore it is assumed that in general all the interest payments and similar expenditures involved in business at Latvia reflect the amounts used towards payment of interest for use of borrowed capital. Summary of the results of calculations is given in Table 2 and the data about average annual interest rate on the loans granted by credit institutions in lats are shown there for comparison purpose. As it follows from Table 2, the average actual interest rate for use of borrowed capital in business has been fluctuating between 3.9 and 5.0 per cent, and they have showed no expressed trend to decrease, in contrast to the interest rates for loans of credit institutions during the same period.

The significant difference between the average actual interest rates for borrowed capital engaged in business and those for loans granted by credit institutions can be explained by the fact that the borrowed capital consists not only of loans received from credit institutions but also a range of other kinds of borrowed capital. Most of them at least cost less than loans of credit institutions, and part of them generate no interest payments being available to enterprises free of charge, like un-drawn dividend, for example.

Table 2

Average actual interest rates for borrowed capital engaged in business and average interest rates for loans granted by credit institutions in lats applicable in Latvia at 1993 – 1999²⁻⁹

No	Year	Average actual interest rate for borrowed capital	Average interest rate of credit institutions	
			For long-term loans	For short-term loans
1	1993	4.9	...	...
2	1994	3.9	36.8	52.0
3	1995	5.0	27.4	34.7
4	1996	4.6	17.2	24.7
5	1997	4.4	13.3	14.0
6	1998	4.9	12.9	14.2
7	1999	4.7	13.2	13.9

The interest rates for other types of borrowed capital also are not likely to have remained unchanged during the given period. Changes may have occurred, for example, in the average interest rates for debts to subsidiaries and associated undertakings, for loans from other creditors, etc. There is not available from statistics information summary about the average interest rates applicable to other types of borrowed capital. Therefore it is not possible to calculate the effect of changes in interest rates for various kinds of borrowed capital on the average actual interest rate. Some conclusions follow, however, from analysis of the borrowed capital structure.

The borrowed capital structure can be calculated from the date of the above-mentioned statistic bulletins.

The structure of borrowed capital engaged in business at Latvia during the research period has changed (see Table 3). Major changes have

occurred during the period from 01/01/1993 to 10/01/2000 in 4 areas: the net weight of loans from suppliers of goods and services and contractors as well as that of bills of exchange has decreased notably while the net weight of loans received from credit institutions and amount owed to subsidiaries have increased. It evidences business crediting and concern development in Latvia. Among negative trends there should mainly be noted the notable increase of due tax and contributions to social security payments during 1996 and 1997.

Table 3

Structure of borrowed capital engaged in business in Latvia
During the period from 01/01/1993 to 10/01/2000^{2-8,10}

No	Types of borrowed capital	1993 01.01.	1995 01.01.	1997 01.01.	1999 01.01.	2000 10.01.
1.	Debenture loans	0.0	0.1	0.0	0.0	0.0
2.	Convertible loans	0.3	0.6	0.2	0.2	0.2
3.	Loans from credit institutions	11.0	18.5	12.2	19.7	20.3
4.	Payments received on account of orders from customers	4.6	4.4	3.0	3.4	4.2
5.	Loans from suppliers of goods and services, bills of exchange payable	41.4	29.3	28.4	25.6	25.7
6.	Amount owed to subsidiaries	0.2	0.5	3.7	7.4	8.9
7.	Amount owed to associated undertakings	1.3	6.4	5.4	1.8	2.2
8.	Taxes and contributions to social security	3.5	1.7	13.6	7.6	5.1
9.	Other credits and other loans	31.5	35.6	29.9	29.6	28.5
10.	Accruals	3.6	1.2	2.1	2.6	3.1
11.	Un-drawn dividends	2.6	1.7	1.5	2.1	1.8

Since 1998 the net weight of tax and contributions to social security payments in the borrowed capital has trends to decrease. The net weight of other loans and other creditors in borrowed capital has also decreased.

The decrease of net weight of loans from to suppliers of goods and services, bills of exchange payable, other creditors and loans supported the increase of actual interest rate for borrowed capital since the above-mentioned types of capital represent the cheapest part thereof. Therefore, increase of net weight of loans from credit institutions and amount owed to undertakings associated referring to the most expensive part of the borrowed capital has found balance with decrease of net weight of the cheaper capital, and the actual interest rate for borrowed capital has

remained rather stable. In such a situation the question raises why the enterprises have increased the net weight of expensive capital and reduced that of the cheaper one during the period from 1993 to 2000? Development of trade economy, in particular development of competition, has contributed notably to it. Competition at market entails improvement of payment discipline that, on the turn, reduces loans from suppliers of goods and services. In countries with developed market economy the net weight loans from suppliers of goods and services has a trend to decrease. In Germany, for example, it made 25% of the aggregate amount of liabilities in 1990 and 22.6% in 1996¹¹ In Latvia the net weight loans from suppliers of goods and service and that of bills of exchange payable was 25.7% on 1st October, 2000 against 41.4% on 1st January, 1993.

The actual interest rate for borrowed capital does not however mean the price for borrowed capital. Since the interest for use of the borrowed capital reduces the profit subject to taxes the enterprises pay business income tax in respectively less amount using the borrowed capital, and therefore the price for the borrowed capital is reduced correspondingly.

The basic rate of business income tax in Latvia is 25% of the profit subject to taxes. The Law on Business Income Tax envisages a range of adjustments to be taken into consideration when the profit subject to taxes is calculated, based on the profit before taxes. The data of statistic bulletins showing the basic financial indices of business permit calculation of the actual per cent of the business income tax imposed on profit before taxes (and not on the profit subject to taxes) since the interest payment reduce the profit before taxes. See results of the calculation in Table 4.

Table 4

Business income tax in per cent of profit before taxes in business in Latvia during the period from 1993 to 1999²⁻⁸

Year	Profit before taxes, LVL	Business income tax, LVL	Business income tax in per cent of profit before taxes
1993	263 356 830	102 704 869	39.0
1994	124 707 447	64 489 283	51.7
1995	40 166 147	39 007 324	97.1
1996	33 658 527	52 328 966	155.5
1997	252 330 346	75 550 072	29.9
1998	233 097 519	87 888 890	37.7
1999	198 873 800	82 223 600	41.3

Actually, the business income tax calculated in per cent of profit before taxes differs essentially from the basic tax rate – 25% of the profit subject to taxes, and it fluctuates notably. However, investigation of causes of the above-mentioned phenomenon is not the purpose hereof. It deserves to become a subject of separate study.

On the one hand, the fact that adjustments of profit before taxes result in significant increase of the part of profit paid for taxes means that the tax burden imposed on business exceeds 25% if calculated in per cent of the profit before taxes. On the other hand, the higher is the proportion paid by the enterprise from the profit before taxes as the income tax the more it benefits from use of borrowed capital: savings on taxes are higher. Given that business income tax makes 155.5% of profit before taxes the savings on tax are higher than the interest payment amount, and it means that the state declines tax amount exceeding the interest payments, and the use of borrowed capital becomes especially profitable, moreover the state as if “pays extra” for it.

To calculate the actual price for borrowed capital, the actual interest rates of borrowed capital must be reduced by the actual business income rate in percent of profit before taxes. The calculation is made in table 5 using data from tables 2 and 4.

Table 5

Actual price for borrowed capital in Latvia in the period from 1993 to 1999.

Year	Actual interest rate for borrowed capital	Business income tax in per cent of profit before taxes	Actual price for borrowed capital (%)
1993	4.9	39.0	3.0
1994	3.9	51.7	1.9
1995	5.0	97.1	0.1
1996	4.6	155.5	-2.6
1997	4.4	29.9	3.1
1998	4.9	37.7	3.1
1999	4.7	41.3	2.8

In fact, the actual price for borrowed capital fluctuates within still a wider range (from -2.6 to 3.1) than the actual interest rate for borrowed capital. Therefore, the price for borrowed capital at Latvia is strongly influenced by tax policy rather than the loan interest rates and capital structure changes.

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Summary

The notable decrease of interest rate on loans granted by credit establishments has had no significant effect on the average actual interest rates for capital engaged in business. They have experienced just minor changes during the period from 1993 to 1999. Essential changes have occurred in the borrowed capital structure: the net weight of loans from credit institutions and amount owed to subsidiaries has increased while that loans

from suppliers of goods and services, bills of exchange payable, other creditors and other loans has decreased. While loans from suppliers of goods and services, bills of exchange payable, other creditors and other loans represent borrowed capital cheaper than loans from credit institutions and amount owed to subsidiaries since they generate smaller interest amounts reflected in Profit and Loss Account in the interest payment item, the net weight of more expensive borrowed capital has increased during the research period while that of the cheaper kinds has decreased. Such a situation has been furthered by development of market economy at Latvia, in particular development of competition.

The actual price for borrowed capital has changed in much wider range than the actual interest rate. It has resulted from the rapid fluctuations of the actual proportion of business income tax against profit before taxes. Therefore, the price for borrowed capital has been strongly influenced by tax policy rather than the changes in loan interest rates and capital structure.

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NEW TECHNOLOGIES AND INDICATORS OF FINANCIAL EFFICIENCY

Termins "tehnoloģija" attiecas uz veselu virkni sfēru, ieskaitot finanses. Jaunas tehnoloģijas ieviešana ir saistīta ar finansu resursu un materiālo resursu zaudējumiem. Jaunas finansu tehnoloģijas pielietojšanas iespējamības kritērijs rod ekonomisko problēmu. Tēzēs tiek piedāvāts izteikt tehnoloģijas ieviešanas finansiālās efektivitātes kritēriju kā attiecību starp optimālajiem, objektīvajiem procesa indikatoriem (kas aprēķināti, veidojot modeli) un reālajiem rezultātiem.

The integration in world economics for Latvia and other countries is connected with the use of the possibilities of new technologies. The actuality of investigation of this problem is determined also by the fact that new technologies are one of the most popular and the most beneficial directions of international investing. In this connection it looks appropriate to consider the problem of technology being a subject becoming a special investigation. Especially today this term emphasises a significant number of different kinds of activities. In 2000 an international conference in Krim was devoted to the problem of the development and realisation of new technologies, of the increase of economic efficiency, of the use the advanced methods for getting a new product.

From this point of view the question of the classification of the new methods of this for product creation (including the field of management and finance as the new fields of the use of the advanced methods for getting a new product and of realisation of this product) is becoming of great interest.

Technology (the art of combining a set of methods and ways of getting and processing raw materials and, in the collective meaning, product in general with a broad use of scientific principles) traditionally used to be applied to manufacturing, mostly to mechanical engineering. That was exactly where the key factors of production (machines, equipment) determining the progress of accompanying branches were

created. Let's list the factors that assist the development of knowledge about the technology as an independent field of research.

The first factor is the development of manufacturing and its specialisation;

The second factor is the broad introduction of scientific working out;

The third factor is the reduce of time between the technological decision concerning the production of a good and its broad introduction;

The fourth factor is the increase in the level of intellectual investment when working out the methods influencing a product or a process.

The fifth factor is the acute necessity of the use of efficient methods and ways of getting and using a product with a big intellectual component for the countries.

The perfecting of the process of the extraction of raw materials, and machinery production was the key object of the investigation and the application of technological novelties. Here the main classification basis of the technology development as a field of knowledge was the belonging of the way of good production to a certain branch (for instance, mining technology, i.e., the extraction and procession of minerals, the technology of machinery construction etc.).

The division of technology into independent kinds in the result of the specialisation of this work has expressed in the use of the technological novelties and other criteria as the base of classification. Among them are, for example, such criteria of the classification of technological processes, as the correlation of the process with the way of getting materials (in this case the technology of materials and its separate kinds, for example, the technology of fibrous substance in weaving etc., are distinguished).

Because of the factors, providing the development of the scientific and technical progress, the new technological solutions used to be called in accordance with the level of technological novelty of a manufactured article or a process (technological product). This is why the element of intellectual novelty, contained in this technological product, became the measurement criteria of the level of the height of the working out of the technological product. The content of the process was also reflected in the title of the according technological product (for instance, high technology).

Today the concept "technology" is connected with a wide range of branches. Now the technology includes the scientific content in its name as the dominating basis (for instance, computing technology, non-waste technology etc.). The concept of technology as the way to combine the special methods of raw materials processing with the method of the most

economical and effective result achievement that is corresponding to the conception of the researcher has spread over the other fields, for instance, over the financial relations. This is why the concept “new banking technologies” and others started to be especially distinguished.

This is the evidence of the spreading over of the striving for the use of a combination of rational ways of the achievement of the favourable result in the production of any product, for instance, the product “banking technology” in our case. At the same time it is interesting that the concept “technology” in this meaning describes a specific kind of intellectual product, which is used not only in a certain branch, but mainly (in connection with the obligatory presence of the dominating basis) in the way of getting the product, its processing irrespective of the branch. This is why the following technologies are distinguished: thin technologies (in chemistry, biology), non-waste technologies (raw materials processing in any branch), closed technologies (agricultural production and other branches), exact technologies (machinery construction, tool-making production), high technologies (machinery construction and other branches) and computer technologies (informational branch and other branches).

The field of influence on the combination of the methods of human activity management also became an object (and care) of the application of the regulated and the most efficient approach to the achievement of a pre-planned positive result in the field of management with the use of advanced ways and methods in management (the technology of management etc).

High technologies in machinery engineering reflect the general approach to the use of the achievements of the scientific and technical progress of the advanced branch of economics. The suggested classification of the used technologies is shown in the Table 1.

The grouping of technologies shown in the Table 1 enables to mark that the bases of classification, first of all, reflect the increasing specialisation in the development of technologies. Secondly, there is an opposite tendency. It is characterised by the fact, that the accumulation of pre-workings out is accompanied by the appearance of new qualities of a technological product. It leads to the enrichment of the possibilities of use of a new technology (as a product), to the widening of the field of its application. The example, proving the last thesis, is the striving of financial managers for the use of logic, which is used for the creation of a new technology in the specific field banking and finance.

Even a special branch of the construction of such technologies – financial engineering – has appeared.

Table 1

Classification of the Development of Technologies on Different Basis

Base of classification	Field of application of the technology	Examples
1	2	3
Belonging to a specific branch	Connection with a specific branch	Extraction of raw materials
Way of getting or use of the new project	Connection with the way of production or use of the project	Getting or use of processed materials
Level (portion) of intellectual novelty in getting (use) of the project	Connection with the portion of intellectual novelty in the project, irrespective of the branch	Production of good and taking of managerial decisions (including the sphere of information and finance)

So it can be concluded that the introduction of any new technology (as a kind of intellectual product) is obligatory connected with the outlay of financial and material resources. This is why the decision about the use of perspective technological workings out is always connected with the determination of economic efficiency of the suggested decision. The technology, as a new product, can be introduced only in case it provides a certain increase of economic (and often also social) efficiency. Thus the criteria of the possibility of the application of the new technology obligatory relates to the economic aspect.

In practice, the following indicators measure the efficiency of technological product: the proportion of the outlay of raw materials (energy, labour productivity level) per one unit, manufactured with the application of technological novelties. The other indicators are connected with the process of production intensity, the cost of product, etc. In other words, the criteria of the application of a technological method can be measured with the reduction of temporary costs of the final good production without decrease of its quality parameters (it is better if it accompanied by the improvement of its quality indicators and characteristics). In the wide meaning, the application of high technologies in machinery construction, which includes the materialisation of significant intellectual outlay and the estimation of its efficiency, relates also to the sphere of the approving of management technologies.

The problem of the measurement of production and management efficiency (including the efficiency of management of the introduction of advanced technologies) appears. From the methodological point of view,

one of the least developed branches in this aspect is the relation between the indicators and criteria of the estimation of the results of an economic object's financial activity. This is why bringing the practice of efficiency estimation to a more organised system will enable to perfect the procedure of determination of the introduction and the use of high technologies in machinery construction.

In the present, the applied indicators of production results characterise the efficiency of process only from a certain point of view. These indicators can be brought to a system. In this case gross product of an enterprise (or sales volume indicator) will be regarded as an indicator of the "upper" level of production efficiency determination. It characterises the final stage of the production of a good and reflects the result of all process of production. However, when using this indicator, it is difficult to distinguish the "investment" of separate factors of production, for example, the level of the use of the fixed assets or current assets of a company, and the investment of the new progressive technologies in the efficiency of production for the first time.

The concept "criteria" of the efficiency of production process is frequently used (in literature) for the characterization of the efficiency of production process or the applied technology.

What is the relation between the concepts "indicator" and "criteria"? The definition of the indicator as the value, which determines the criteria, is taken for an axiom. Such an approach is not completely correct. The efficiency indicators characterise the development of an economic object from different sides while the indicator is only a part of the whole (i.e., a part of criteria). Moreover, each indicator characterises one specific side of production process, including one of the sides of finance flows.

When working out a business plan for an enterprise, for example, a wide range of indicators is used. In total these indicators enable to determine the outlines of the functioning of the finance flows of an economic link.

To determine the efficiency of the modern technology being offered, it is important to distinguish only a part of these indicators. The change of their value (in comparison with the basic values) will show the level of the efficiency of the use of a new technological product (new technologies).

In this case how should we understand the possibilities of the use of the concept "criteria"?

In the practice of the enterprise finance flows' management there is the following approach to the solution of the problem.

The theoretical correlation between the concepts "the indicator of business efficiency" and "the criteria of business efficiency" is that the criteria

of efficiency of the process is measured only with the correlation between the optimal, grounded indicators of the process (calculated before the realisation of the process, when constructing its model) and the real results.

In this case the criteria of the manufacturing process efficiency expresses the interval (level) of the achievement of the ideal (calculated) indicators of the business plan or the comparison of the indicators from the business plan with the achieved real values.

So the calculated and thus understood criteria give a fairly objective reflection of the results of the subject's financial (and economic) activity and its changes caused by the use of the new modern technologies.

This is why the example of the optimality of the prognosis calculation is the level of the approach of the calculated indicator (value) to the theoretically pre-determined parameters. So the level of the accordance of the factual development to the limits, determined in a thoroughly calculated business plan, can be a well-founded objective and full criteria of the organisation of the functioning of an enterprise and its finance flows (including the results of the use of a new industrial technological product, for example).

The use of the financial indicators of the functioning of a corporation is especially important as regards the realisation of management, planning (including budgeting) and prognosis function by the financial manager.

The other aspect of the problem of the measurement of the efficiency of the use of the new progressive technologies and the calculation of the costs for the introduction of the technologies is connected with the broad use of the analytic information of the financial field data. The improvement of the quality of the process of providing financial analysts with the new information includes a continual collection, processing (systematisation), transmission and keeping information about the use of the technological product, the working out an economic decision and its use in the activity of an enterprise.

So in organisation management, for example, in the case of choice of the sources of corporation's fixed capital and working capital financing, and in other kinds of financial work in an enterprise it is important to carry out a continual correction of the financial data of the results of the applied technology, as it will enable to have a precise information about changes in the level of costs, which are connected with the introduction of a new technological product, and to influence the optimisation of these costs value at time.

Among the problems that are connected with the use of new technologies and the ones due to an immediate investigation, the following problems can be mentioned:

- Development of the model of determination of the efficiency and the price of a new technological product;
- Investigation of the possibilities of the use of new financial technologies in virtual environment;
- Working out of the juridical base of the conditions of production and the application of new technologies;
- Providing of a safe use of a new technological product.

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Summary

The paper deals with the macroeconomics postulates versus financial efficiency indicators of the new technologies. Author concentrates on aspects of macroeconomics that is common in all schools that are not homogenous.

The problem of the measurement of production and management efficiency (including the efficiency of management of the introduction of advanced technologies) appears. From the methodological point of view, one of the least developed branches in this aspect is the relation between the indicators and criteria of the estimation of the results of an economic object's financial activity. This is why bringing the practice of efficiency estimation to a more organised system will enable to perfect the procedure of determination of the introduction and the use of high technologies in machinery construction.

In the present, the applied indicators of production results characterise the efficiency of process only from a certain point of view. These indicators can be brought to a system. In this case gross product of an enterprise (or sales volume indicator) will be regarded as an indicator of the "upper" level of production efficiency determination. It characterises the final stage of the production of a good and reflects the result of all process of production. However, when using this indicator, it is difficult to distinguish the "investment" of separate factors of production, for example, the level of the use of fixed assets or current assets of a company, and the investment of the new progressive technologies in the efficiency of production for the first time.

The definition of indicator as the value, which determines the criteria, is taken for an axiom. Such an approach is not completely correct. The efficiency indicators characterize the development of an economic object from different sides while the indicator is only a part of the whole (i.e., a part of criteria). Moreover, each indicator characterizes one specific side of production process, including one of the sides of finance flows.

In the practice of the enterprise finance flows' management there is the following approach to the solution of the problem.

The theoretical correlation between the concepts "the indicator of business efficiency" and "the criteria of business efficiency" is that the criteria of efficiency of the process is measured only with the correlation between the optimal, grounded indicators of the process (calculated before the realization of the process, when constructing its model) and the real results.

In this case the criteria of the manufacturing process efficiency expresses the interval (level) of the achievement of the ideal (calculated) indicators of the business plan or the comparison of the indicators from the business plan with the achieved real values.

So the calculated and thus understood criteria give a fairly objective reflection of the results of the subject's financial (and economic) activity and its changes caused by the use of the new modern technologies.

Among the tasks in perfecting the technological product we shall mention the following: Use of the most advanced techniques; turn to uninterrupted processes of good production; full use of raw materials and striving for non-waste production; providing a high level of ecological cleanness; solution of the used assets, documents, materials unification problem.

These decisions must be the most economical ones, which are directly connected with the possibilities of use of the up-to-day system of economic subject functioning efficiency indicators and criteria.

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REGULATION OF THE NATIONAL CURRENCY EXCHANGE RATE IN A SMALL AND OPEN ECONOMY

В статье раскрываются особенности регулирования курса национальной валюты, которые определяются некоторыми условиями, то есть небольшой и открытой экономикой, состоянием платежного баланса страны, сальдо текущего счета, политикой внешней торговли, экономической политикой правительства.

Очевидно, что масштаб национальной экономики в некотором смысле определяет и уровень открытости экономики и ее деятельность в процессе глобализации.

В статье делается основной вывод о том, что в небольшой и открытой экономике лучше всего использовать фиксированный режим регулирования курса национальной валюты.

The article deals with the specifics of the regulation of the national currency exchange rate that are determined by the following factors: small economy, open economy, the state of the balance of payments, current account deficit, foreign trade policy, the goals of the Government and its economic policy.

It is obvious that the scope of the national economy in some respect determines the level of its openness, its involvement into the process of globalisation, participation in the global processes of reproduction, etc.

The main conclusion of the article is the following: the effects that the system of exchange rate regulation (mainly through foreign trade volumes) may have in a small and open economy due to external factors. This means that the best options are: pegging the rate of a national currency to a chosen anchor currency, setting a fluctuation band of the national currency, or choosing another mechanism of pegging the national currency to an anchor currency.

The choice of an exchange rate is one of the most important decisions, which determines the growth of the national economy and standard of living.

In a small and open economy (like Lithuania) the exchange rate plays a dual role. On the one hand, its flexibility can help to achieve and maintain competitiveness in international markets and the "soundness" of the balance of payments. On the other hand, a fixed exchange rate has a stabilizing effect on a country's nominal economic values.

Countries, which choose either a fixed or floating exchange rate quite rarely, apply their extreme versions, i.e. a strictly fixed or absolutely free regime regulated only by the market. There are numerous intermediate models, which are limited by the mentioned extremities and most of countries adopt namely such models.

The tendency evident since 1970 shows that more and more developing countries refuse pegging their currencies to just one currency. While in 1976 as much as 63 per cent of the developing countries had their currencies being pegged to one currency, in 1989 this indicator decreased to 38 per cent [4, p. 19].

"An international survey of a general character has demonstrated (but without indicating the tendencies of causality) that the correlation between the flexibility of an exchange rate, growth of external competitiveness and inflation is positive" [4, p. 20].

Yet, besides reduction of inflation, there are many other independent, due to their significance, tasks of economic policies and the success of decisions taken in relation to them in one way or another depends of the choice of the exchange rate mechanism.

It is widely accepted that the main advantage of a fixed exchange rate should be associated with the tendencies of declining inflation, an objective eagerly pursued by developing and transitional countries. At the same time, economists who view economic growth as main objective advocate less rigid exchange rate regimes.

Choice of exchange rate regime. Though discussions regarding the issues of the choice of exchange rate systems are widely discussed [4, 6, 8, 11, 15] no consensus has been reached so far as to the best exchange rate regime because its choice is determined by numerous exogenous factors and developments in other policy areas. At the same time, a certain measure of agreement exists with regard to the conditions under which a country would be choosing a certain specific exchange rate

policy and with regard to the characteristics of countries, which determine such a choice.

The choice of an exchange rate regime can be determined by the following factors:

- 1) economic policy objectives;
- 2) stochastic character of the environment;
- 3) a country's structural characteristics; and
- 4) degree of reliability of those responsible for policy implementation.

All countries, especially those pursuing reforms encounter all those factors. Moreover, the problems related to the balance of payments and the need to maintain external competitiveness make the choice even more complicated.

Generally speaking, national economic policy objectives are rather evident. First, ensuring the growth of the national economy, second, guaranteeing the public welfare; third, maintaining price stability, and fourth, keeping inflation rate at a low level. From the theoretical point of view, the objectives are in certain contradiction with one another. Due to the limited scope of this paper, the relationship between the contradictions and their causes will not be analysed. In principle, specific conditions of each country "eliminate" the internal contradiction of these objectives. For instance, while certain countries might view as their priority combating unemployment, the priority of others might be curtailing high inflation, overcoming economic decline, etc. Actually, the priority of one objective (within the system of four priorities) makes use of the other objectives and determines the instrumentation of their attainment. Alongside economic growth, one of the main economic policy priorities of Lithuania is non-deficit national budget. Actually all cabinets accorded due attention to the attainment of this objective but the effort has considerably intensified over the past three years.

Such important structural characteristics of the national economy as openness to international trade, the level of integration into the global financial market, price flexibility (including labour price) and indexation practices, degree of the substitution of domestic goods and import, level of fiscal budget, domestic and external debt, foreign trade balance, the current account balance, etc. also make a significant effect on the choice of the exchange rate regime and its stabilising properties.

In the case of a very open economy (which is illustrated by the share of foreign trade in the total output or Gross Domestic Product) "a flexible

exchange rate, especially if it is highly unstable, may undermine the role of the national currency as the means of exchange and store or measure of value" [10]. Therefore very open economies would benefit from fixed exchange rate systems. However, external shocks, which have stronger impact on open economies with fixed exchange rates that may reduce the advantages of such systems.

The assessment of the openness degree of Lithuania's economy based on its foreign trade turnover (see Table 1) clearly shows that it can be attributed to the group of open economies.

Table 1

Lithuania's foreign trade turnover in 1993 – 2000

Year	Exports (% of GDP)	Imports (% of GDP)	Foreign trade turnover (% of GDP)
1993	82.5	93.6	172.9
1994	55.4	61.4	116.8
1995	53.0	47.6	117.7
1996	53.4	63.2	116.5
1997	54.5	65.1	119.6
1998	47.2	59.1	106.2
1999	39.9	20.2	90.0
2000	46.5	53.1	99.6

Source: [9].

Despite a slight decline in the turnover in 1998–2000 (resulting from the Russian crisis, which caused lower consumption and fall in exports) its rate has remained high thus testifying to a significant degree of openness of Lithuania's economy.

Hence, the characteristics of the openness of the economy strongly "commend" a fixed exchange rate regime for Lithuania.

The degree of integration of the national assets market into the global financial market also affects the choice of an exchange rate regime. If the degree of such integration is high, domestic and foreign interest rates are evenly linked through the relationship between interest rate parities. In such cases the problem of the choice of an exchange rate regime is addressed taking into account the source and character of shocks.

Again, the scope of this paper does not allow us to analyse other characteristics of the economy and their role in the choice of an exchange rate regime.

An important benchmark in the analysis of the reliability of those responsible for policy implementation is the currency board arrangement. The advocates of the currency board emphasize such advantages of the arrangement as the elimination of currency exchange risks and resulting decrease in interest and inflation rates while its opponents point out such disadvantages as the loss of the main monetary policy instruments, possible settlement difficulties and lower competitiveness of the Lithuanian goods in the international market.

The assessment of the currency board arrangement introduced in Lithuania more than five years ago clearly indicates that:

- 1) the fixed exchange rate and the full backing of the monetary base by gold and convertible currency reserves has eliminated the exchange rate risk and ensured steep decline of inflation and interest rates;
- 2) the pegging of the litas to the US dollar was regarded by the population and economic entities as an incontestable guarantee of stability;
- 3) the fixing of the exchange rate has ended the intensifying debate about its "appropriateness" and cooled off the interest groups that demanded adjustments of the exchange rate (mainly devaluation) of the litas;
- 4) withdrawal from discretionary monetary policy has dashed all hopes of the Government to have a direct access to the central bank funds in "extraordinary circumstances" and this has undoubtedly contributed to the improvement in tax discipline;
- 5) at the time of its introduction, the Bank of Lithuania did not have enough monetary policy experts for effective implementation of an active monetary policy. Therefore its "automation" was a sound alternative at that time.

The effect of the arrangement became evident quite soon. Inflation (December-on-December) dropped from 188.7 percent in 1993 to 2.4 per cent in 1998. Interest on loans in litas decreased from 88.7 to 12.6 per cent (as of end-December of a respective year) and the official reserves (as of the end of a respective year) rose from US dollars 412.3 million to 1460.0 million. The confidence in the litas boosted, which was evidenced by the increase in deposits over the above period from litas 1314.8 million to litas 3877.1 million (as of the end of a respective year). Eventually, the

stabilisation of the financial situation had a positive impact on GDP growth: though in 1994 it was still declining, in 1995 its growth amounted to 3.3 percent, in 1996 to 4.7 per cent, in 1997 to 7.3 per cent and in 1998 to 5.1 per cent.

Despite the prominent signs of stabilisation, the limitations of the currency board arrangement gradually manifested themselves and became especially evident in the context of the 1995-1996 banking crisis. The problems of the banking sector gave rise to discussions regarding the shortcomings of the arrangement and the necessity to restore the functions of a modern central bank to the Bank of Lithuania. Based on the gained experience, a number of the deficiencies of the currency board arrangement can be distinguished, namely:

- 1) countries seeking EU membership will have to join the Exchange Rate Mechanism (ERM). This means that their central banks will have to take on all the functions of modern central banks;
- 2) pegging of the litas to the US dollar does not ensure fluctuation of the exchange rate of the litas and currencies of EU member states within the required bands;
- 3) practice has shown that the currency board arrangement is too inert in the stabilisation of a situation resulting from nominal shocks and tolerates cyclical and random deviations from main factors caused by money market tendencies, which are not always acceptable; and
- 4) being a passive observer of the money market, the central bank can in no way influence money market interest rates.

The Bank of Lithuania has introduced the main open market operations and has established the procedure for granting the overnight (Lombard) facility. A further step before choosing the final objective is linking the litas to the euro (for which the final date has not yet been set). To sum up this part of the paper, it is necessary to note that at the moment of un-pegging and re-pegging of the litas it will not be re-valued or devalued and the monetary base will remain fully backed by gold and convertible currency reserves.

A fixed exchange rate policy means clear division of tasks between fiscal and monetary policies. Monetary policy is designed to maintain the fixed exchange rate as long as it is in line with the elements of the economic policy and in particular, with the elements of the fiscal policy which are aimed at the stabilisation of domestic economic growth [15, p.15].

The system of the fixed exchange rate of the litas creates certain drawbacks with regard to the monetary policy. Majority of monetary policy analysts agree that foremost, the central bank, which maintains the fixed exchange rate by interventions into the currency market cannot exert more significant or efficient influence on the real economy, i.e. on the current gap between GDP and potential level of the national output in the event of full employment. This is the prime concern of the governments of developed countries because the gap closely correlates with other indicators that characterise the "soundness" of the economy, such as unemployment and inflation.

The Bank of Lithuania, which has chosen the system of an absolutely fixed exchange rate, also periodically performs un-sterilised interventions into the currency market by exchanging the litas into the anchor currency, US dollars as and vice versa. It maintains the exchange rate of the litas by continuously "filling the gap" between the supply and demand of the money market.

Most of theoreticians working in the field monetary policy agree that under the conditions of a fixed exchange rate the central bank cannot manage the money supply exogenously, while this is one of the intermediate objectives of central banks [8, p. 20].

The specialists of the Bank of Lithuania are well aware of these problems, let alone the concept of the neutrality of the currency as such: after pegging the national currency the degree of the Bank's activity and role in regulating economic and monetary indicators and prices have become rather limited. If the Bank of Lithuania decides to maintain an absolutely fixed exchange rate of the litas, it will not be able to manage, exogenously, the factor of the net foreign assets of the monetary reserve and, at the same time, the money supply. Consequently, this would prevent it from managing the "turns/cycles" of the economy.

"Thus, after fixing the exchange rate, the most efficient levers and main responsibilities for optimising the regulation of the economy fall to the fiscal policies of the Lithuanian government which, by complementing the steps of the Bank of Lithuania, also begins to influence monetary policy variables endogenously" [8, p. 13].

But should the Bank of Lithuania regret that after the exchange rate of the litas has been fixed it may only influence economic processes to a limited extent? Recent economic indicators show that a passive monetary policy, characterised by automatic equilibrium in the money market has importantly contributed to the reduction of inflation in transitional

economies, and this is the only macroeconomic objective of the Bank of Lithuania, as set forth in the law.

Having briefly discussed the choice of the exchange rate regime, let us analyse more extensively the factors, which are closely inter-related and influence the exchange rate of the litas and the necessity (dispensability) of its adjustment.

The subject matter of the paper requires certain insight into the context of the global financial system. Should regulation on the global scale be stricter or laxer, whether state financial assistance should be higher or lower and whether an exchange rate regime should be milder or more rigid? There are no clear answers to these questions because the problems of modern economic policies are closely related. A person responsible for policy implementation whose aim is to design an ideal financial system has three objectives. He wants to see the continuity of the national sovereignty, regulated, supervised and protected financial markets and benefits from the global capital markets [3]. Yet, these three objectives are in contradiction with one another. They form an "impossible trinity", which is the main destabilising factor of the global financial architecture.

Each proposal for a consistent reform must single out two components of the above three at the expense of the third component. For instance, those wishing to see regulated markets and maintenance of the national sovereignty must try to attain this objective by integrating the capital market. Those willing to maintain the national sovereignty and, furthermore, to allow the integration of capital markets, must come to terms with the fact that the global market will be absolutely free. And those wishing to see the integration and regulation of the capital market on the global scale must give up the national sovereignty.

This "impossible trinity" turns many of the most radical projects of the global financial markets into utopias if politicians are not ready to choose two objectives out of the three. Therefore the best thing one could expect in the short-run is seeking of compromise in relation to them.

The author is inclined to raise the same question once again: is there a fixed or flexible exchange rate regime? The inconsistency in the position of the International Monetary Fund reflects deep contradictions among economists regarding exchange rate regimes [3]. It is evident that the official architects of international finances (G-7, G-22 and other country groups) deliberately avoid this subject. This is because the exchange rate problem, more any other, is stuck in this "impossible trinity" which

hampers the implementation of the financial reform at the international level. This area is one of those where compromise is inevitable.

In the world of increasing capital mobility countries cannot have a fixed exchange rate and at the same time preserve independence of their monetary policies. They must choose between the confidence and stability provided by the fixed exchange rate and the control of the policy necessitated by a flexible exchange rate. Traditionally, the decisive factor for the choice of a country has been its vulnerability to external shocks, such as unexpected fluctuations in the prices for raw materials. A flexible exchange rate regime places a country in a better position when adjusting to external shocks whereas in the countries with a fixed exchange rate regime wages and prices are subject to pressures.

Nevertheless, flexible exchange rate regimes have one major deficiency, i.e. their fluctuations can be inadequate and they might become highly unstable, especially in the context of intensive capital inflows and outflows. Such instability entails real economic costs. Moreover, a flexible exchange rate can undermine investor confidence in the currency and thus make combating inflation difficult. In order to combine the best elements of both models/regimes most of transitional economies have used a mixed model by establishing a free link of their currencies with one foreign currency or a currency basket.

Policy shapers tend to diminish the importance of an exchange rate. They are trying to prove that any regime is good if the fundamentals of the economy are strong. Yet this is trivial truth. Needless to say, a country would benefit from tight fiscal and monetary policies, but recent developments have shown that the choice of an exchange rate regime undoubtedly affects its vulnerability in the event of crises. The Asian countries faced difficulties due to their rigidly fixed exchange rates, and subsequent turmoil was caused by the fluctuations of flexible rates.

At first glance, a flexible exchange rate seems to be the best "move" in the world of mobile capital. A flexible currency would force enterprises and investors hedge themselves against fluctuations and would not allow them to be lulled by a false sense of security. It should also make foreign banks be more cautious when making credits. At the same time, it should grant policy shapers the right to develop independent monetary policy. History is also on the side of higher flexibility. Since the mid-70s, the number of countries having flexible exchange rates has been constantly growing.

But a more thorough analysis shows that the effects of the choice are not quite clear. According to the World Bank, over the past 30 years, the

number of countries with flexible exchange rate regimes that faced crises was higher than that of countries with fixed exchange rate regimes. Yet, the crises were more severe in the latter. Furthermore, monetary independence might be more nominal than real, at least in developing countries with small-scale financial systems. Faced with unexpected panic in the market, transitional economies, which depend on foreign capital, have to raise their interest rates enormously in order to prevent their currencies from crash.

A good example is Mexico. It has a flexible currency, which depreciated by more than 10 per cent as a result of investor panic in the wake of the Russian crisis. However, interest rates in Mexico were considerably higher than in Argentina operating under a currency board arrangement. In other words, Mexico paid a high price when proving to investors that its currency would not be allowed to depreciate freely.

As the current situation indicates, it is most likely that emerging economies will split into two groups. Countries with flexible exchange rates and relatively low level of integration into the global financial markets will form one group while the second group will consist of countries, which have closely linked their economies with currency boards or currency unions and whose financial systems are therefore highly integrated into the global financial markets, and which have significant presence of foreign ownership [3].

Conclusions

The general analysis of the characteristics of Lithuania as a small country with open economy shows that it would be most advantageous for it to pursue the policies of fixed exchange rate. But that one of the conditions for the existence of a fixed exchange rate regime would be responsible fiscal policy and the policies promoting nominal prices and wage flexibility. As these areas do not largely depend on the will of those implementing the monetary policy, close co-operation between the Bank of Lithuania and other state bodies, the Seimas and Government in particular, is necessary.

It is likely that two major currency blocks will originate on the global scale: one representing the US dollar and the other standing for the euro area. By different means, different countries will achieve the "impossible trinity" of integration, regulation and sovereignty. Countries belonging to regional currency unions will surrender their sovereignty for the sake of integration and countries with flexible exchange rates will

preserve their sovereignty but often, at the cost of limited integration with the remaining world.

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Summary

The article deals with the conditions determining the choice of an exchange rate regime. A special emphasis is placed on the analysis of the type of the exchange rate regime (i.e. fixed or freely floating) which should be chosen by countries with relatively small and open economy.

Certain country features, such as economic policy objectives, character of the environment, country structural characteristics and competence of those implementing policies are outlined in the article.

The argumentation of the article leads to the conclusion that the characteristics of openness suggest that relatively small and open economies should adopt fixed exchange rate regimes.

It is also noted that countries with fixed exchange rate regimes have been most successful in curbing the growth of inflation. Nevertheless, such countries are more vulnerable to external shocks.

The functioning of the currency board arrangement in Lithuania is analysed from time perspective. The advantages and shortcomings of the arrangement are presented. It is stated that under the conditions of the currency board arrangement as one of the versions of fixed exchange rate regimes, tasks are divided between fiscal and monetary policies whereby regulation of the economy becomes the domain of the government fiscal policies.

Certain references to the global financial system are made and the incompatibility of different objectives or the concept of the "impossible trinity" is pointed out. It is argued that that emerging/transitional economies will split into two groups. One of them will be represented by countries with flexible exchange rates and relatively low level of integration into the global financial markets while the second group will consist of countries, which closely link their economies with currency boards or currency unions and whose financial systems are therefore highly integrated into the global financial markets, and which have significant presence of foreign ownership.

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THEORETICAL AND PRACTICAL ASPECTS OF CORPORATE BORROWING

В статье приводится теоретический и практический анализ займов предприятиями и корпорациями у финансовых посредников. На основе обширного обзора литературы показано по каким критериям определяется величина банковских кредитов и процентов. В статье также исследуется влияние конкуренции между банками на величину выдаваемых кредитов, процентов за них, условий и влияния распространенного внутреннего и внешнего контроля на их отношения. Большое внимание в статье уделено процедуре банкротства, потому что ее эффективность может стимулировать подходы от внешних финансов к частным компаниям.

The author of this article analyses some theoretical and practical aspects of corporate borrowing from banking firms. The overview of wide range of theoretical literature helps to explain what sort of factors can influence the size of enterprise borrowing from financial intermediaries, the size of interest rates and so forth. The author also examines whether the competition among banking firms can increase the volume of corporate borrowing or decrease interest expenses (rates), does the scale and terms of corporate borrowing depends on the prevalent corporate internal or external control, borrowing relationships and other circumstances. A great importance in this article is attached to the bankruptcy proceedings, because the effectiveness of it can also stimulate the access of external finance to private companies.

The Necessity for the Protection of Creditor Rights

In a wide range of theoretical and practical literature researchers have been analyzing the aspects of corporate borrowing from banking firms. It is still difficult to explain what sort of factors can affect the size of enterprise borrowing from financial intermediaries, corporate borrowing costs (interest rates), the scale of borrowing (the use of debt instruments, loans availability).

There are many reasons, which influence the use of external finance: for example, competition among banks can increase the volume of corporate borrowing and decrease interest expenses. On the other hand, banking consolidation process (mergers and acquisitions) can reduce small business lending. Other theorists think, that this is not a problem, because competitors may fill some of the lending gap if small business lending decreases as a result of a merger in the financial intermediary market. The scale and terms of corporate borrowing also depends on the prevalent corporate internal and external control (benefits and deficiencies of internal and external corporate control are presented in Table 1), relationship lending, corporate control mechanisms, bank equity ownership in borrowing firms, the signaling role, collateral requirements and other circumstances.

Table 1

Benefits and deficiencies of internal and external corporate control

Internal control		External control	
<i>Benefits</i>	<i>Deficiencies</i>	<i>Benefits</i>	<i>Deficiencies</i>
The possibility to reduce moral hazard problem ¹ between internal managers of the firm.	Lessened possibility of creditors' intervention. This arises the lenders' risk.	The possibility to unify different interests of market participants.	The bigger contradictions between different investors (owners and creditors).
The possibility to reduce moral hazard problem between managers and firm's owners.	Business risk can be more preferable to shareholders of a firm than its' creditors.	The possibility to influence the activity of indebted company. This can reduce the lending risk to creditors (banks).	External investors (i.e. creditors) may lack necessary qualification to influence the activity of debtor. It's expedient to consider universal and specialized banking aspects.

¹ Moral hazard can make debt contracts problematic. Moral hazard problem is likely to occur when the amount of external finance needed is large relative to the amount of insider finance (angel and venture capital should facilitate the availability of external finance at this moment whereas firms with steadier income flows more often obtain external debt finance from banks and other financial institutions).

Internal control		External control	
The availability of getting higher return because of the reduced moral hazard.	External financing can be concerned with the higher borrowing costs.	The possibility to reduce the external financing costs.	The external management of indebted company may be concerned with higher costs of staff training, higher responsibility.
Higher self-dependence of decision-making.	It can arise the complexity of financing firms' activity with external finance.	Can arise the availability of external financing.	Investors, which participate in management (external) of the company, have to take the responsibility for the results of the influenced company.
More efficient (fast) process of decision-making.	The risk of financial intermediaries (creditors) can potentially increase.	The bigger possibility to decrease the risk of creditors.	Informational misunderstandings can be directly related with irrational decisions.
The importance of specialization criteria. This can be partly concerned with the more qualified management and control of a firm.	The effective external financing of large-scale business can be limited. This situation can also arise problems, concerned with the assurance of liquidity.	The relationship lending and collaborating with banks can increase the value of a firm.	
Creditors do not usually hold the responsibility for the final results of debtor.	The separation of the invested capital and control of a firm.	It is easier to get acquainted about the company and also the overall industry, related to the debtor's activity.	

Dealing with financing models, the major lessons should be summarized as follows:

- Banks enhance aggregate investment and also improve its quality.
- Given significant informational asymmetries, regarding borrowers, bank loans are special in that they signal quality in a way that other forms of credit do not.

- ❑ A profit-maximizing bank may ration credit if it knows less than borrowers do about payoff-relevant attributes, or if borrowers can make undetectable choices of assets or effort that affect the bank's return.
- ❑ Credit history may play an important role in credit allocation.
- ❑ Collateral can reduce, but will not necessarily eliminate, credit rationing.
- ❑ Loan commitments may lessen incentive problems and thereby reduce credit rationing.
- ❑ Banks sometimes intervene in the financing of illiquid loans with liquid deposits. This is concerned with the service, provided by banks in an environment where random shocks perturb preferences for the timing of consumption.

Conventional wisdom argues that bank lending would typically not be available to private and even small business until they achieve a level of production where their balance sheets reflect substantial tangible business assets that might be pledged as collateral (such as account receivable, inventory and equipment).

Of course, this is quite essential to analyze these problems (mentioned above), but, on the other hand, it should be notable, that theorists and specialists still doesn't pay a keen attention on the creditors' rights protection and their intervene possibilities after filling the bankruptcy petition to indebted companies. This is also one of the factors, stimulating financial growth circle and the scale of lending. It is necessary because, if creditors will be secured as much as possible, such condition will stimulate the flows of external finance and further development of the economy, especially of the transition economy.

Some of the theories and intuitions, which provide research hypothesis in the financial literature, are summarized in Table 2.

It is necessary to identify criteria, which would facilitate external finance availability to financially troubled or disciplined debtors (private companies).

Table 2

Research Hypothesis

Bank Equity Claims	Relationship Lending
<i>Corporate borrowing costs</i>	
Bank ownership of equity in borrowing firms reduces borrowing costs	Relationship concentration reduces overall monitoring costs and these benefits are transferred on to the companies.
Bank ownership of corporate equity reduces borrowing costs by outside lenders when the banks' claim is small or large.	Borrowing concentration does not reduce, and possibly, increases borrowing costs, because concentration gives the banking monopoly power over the firm.
Bank ownership of corporate equity increases borrowing costs by outside lenders, if the banks claim is in the intermediate range, because outside lenders view bank ownership within this range as a signal of increased riskiness.	It's possible, that banks may be willing to extract borrower surplus when they hold an equity position in a company.
<i>Collateral requirements</i>	
Bank ownership of equity in borrowing firms enhances loan availability and therefore also reduces collateral requirements.	Long-term and concentrated borrowing relationships should reduce the use of collateral.
Banks become more concerned about moral hazard, when they hold both - equity and debt in firms. In this model, banks prefer secured debt, which is expected to reduce moral hazard.	Borrowing concentration reduces loan availability and hence increases collateral requirements.
<i>Loan availability</i>	
Very small (or large) equity claims will decrease loan availability, because banks will limit their own supply at low ownership levels, and outside lenders will limit their supply at high ownership levels.	Some theorists (Greenbaum, Kanatas and Venezia) argue that the fundamental consequence of close relationships is the potential creation of monopoly power in banking market, which can reduce loan availability. This was also verified by Houston and James.
If banks are allowed to hold equity in borrowing firms, they will be more willing to finance profitable projects with lower loans quality.	Companies with closer ties to banking firms should have greater availability of capital.

Private Enterprises as a Key Source for Economic Growth

Rapid liberalization and sustained macroeconomic stabilization have laid the basis for institutional change in the more advanced countries, i.e. Eastern and Central Europe. Nevertheless, in the less advanced countries, progress in liberalization and privatization has been slow, stabilization of the transition economy has been jeopardized by the persistence of budget constraints. The business environment for new enterprises also still remains deeply flawed. Today, there are many financial troubles and difficulties, concerning the activity of private firms and start-ups in transition.

Of course, enterprises and households are responsible for decisions, concerning scales of production and consumption, financial stability, etc. Such decisions have to be taken in response to incentive structures, embodied in the allocation of ownership rights, creditors' interest (rights) protection as well as the regulations, related to the economic behavior.

One of the main relatively largest roles is attached to financial intermediation. Financial institutions are crucial players in the process of transactions over time, these institutions are responsible for the organization of payments and the enforcement of financial discipline and, in particular, the channeling of savings and investment. Banks are crucial players in external business financing in the transition economy.

Private (small and medium) enterprises in market economies, and also in transition countries, always have to become a key source for growth and innovation. The living standards in the country depend on the effectiveness of private enterprises. And the effectiveness of private enterprises is related to the activity of financial intermediaries- banks and their lending scales. This also has always been the core of financial research. Private enterprises are the heart and the incentive of the economic, political and social transition. Small and medium enterprises are also an important source of market competition and they typically ensure an effective level of this competition. These criteria should be very essential in transition economies. According to the literature, policies of promoting the activity of private enterprises are central to a successful transition.

Despite potential benefits private enterprises bring, these firms still receive much less attention from governments than large (monopolies, oligopolies, etc.) enterprises. Small and medium enterprises, and also start-ups in transition economies often operate in imperfect (uneven) playing fields. Complicated, indistinct and improper tax systems, still viable corruption, administrative burdens and interference, anticompetitive

conditions, *access to finance are the principal impediments* of private (especially – to small and medium) enterprises creation process, extension and to their sufficient participation in the economy.

The institutional system in the transition economy, which supports small and medium enterprises with external financial resources, still remains ineffective: *banks are reluctant to finance private enterprises because of perceived high transaction costs and the lack of accurate financial information, transparency, ineffectiveness, etc.* These financing problems particularly are pronounced in transition economies, given the inexperience of banks and the brevity of credit histories. This is the main reason, concerning the shortage of finance in order to expand and develop private (and also start-up) business.

The most effective strategy of promoting and stimulating the activity of small and medium enterprises in our region should satisfy these requirements:

1. Provision with finance (main criteria).
2. Improvement of business environment.
3. The strengthening of small and medium enterprises support networks, logistic.

This article underlines the provision with finance criteria. An effective financial strategy must support and also strengthen with the potentials of financial intermediaries to finance private companies, new entrants (start-ups), which adopt their business to new competitive markets and support competitiveness, and small and medium enterprises. This strategy should also provide financial intermediaries with the commitment to develop all of these firms financing patterns. Effective external financial support, financing the activity of companies can often make valuable contributions and investments. This is dependent on the interest of banks concerning the participation in the process of financing private activity. Much of external finance from commercial banks is at least partially “insider” finance in the sense that insiders are required to assume much of the losses if loans are not repaid. It’s important to identify, what kind of rules, principals and conditions should be essential in order to induce financial intermediaries to participate in the process of financing firms’ activities, i.e. what should be financing models of private enterprises? The other problem is, that, nowadays, financial intermediaries still suffer from political interventions, poor management and weak balance sheets, consistent with bad loan portfolios.

Business environment. It shouldn’t be under discussion, that the partial responsibility for the business environment has to be rested on the

government policy. It is also necessary to find out impediments, interferences of business development and also to design policies, based on the best practice examples.

Support networks. Usually, support networks, logistic and other requirements include the transformation of the concrete ideas into business plans and the means of the expanding of business activity.

All these capacities, listed above, must still be built further in the most rest of transition economies, including Baltic States.

The progress of liberalization, stabilization and privatization process is the hallmark of the transition. This is also the result of the transition, that financial institutions undergo (or have to undergo) major changes over the all period of transition. In many ways, the development of financial intermediaries, which financially supports markets and enterprises, is the core of transition. If the basic reforms have been implemented, the state has to undertake the new role, the main focus of institutional reform shifting toward the strengthening of financial institutions (such as competition policy, bankruptcy, corporate governance, regulation of finance, disciplinary, etc.) and their financial capacity.

Consideration of Reasons, Stimulating Bank Lending

The process and incentives of commercial banks' participation in enterprise financing and the scale of external financing are extremely dependent on the protection of creditors rights. More precisely, the scope of external finance, supported by financial intermediaries, is dependent on the development of laws of corporate governance, including the protection of stakeholder rights, insolvency regulations, bankruptcy proceedings, etc. The effectiveness and interest of the activity of commercial banks is also closely related to the reimbursement of principals, payment of interests, collateral requirement, seize of assets, senior creditor status and other aspects. It means, that the financial stability of commercial banks is very dependent on financial conditions and the financial status of borrowers (their liquidity and solvency), which hold obligations to their creditors commercial banks. Evidence suggests, that there also is the shortage of effective banking regulation. That is the reason, which should influence the stability of financial systems and sufficiency of financial flows in the transition economy.

According to the overall macro and microenvironment in Lithuania, there is a real threat of future losses in banking sector because of

potentially fast increasing amount of enterprise bankruptcies and liquidation. Many theorists, specialists and even politicians anticipate, that new *Enterprise Bankruptcy and Enterprise Restructuring laws*, enacted this year (2001), will increase the amount of bankruptcies in our country considerably. Such situation will also inevitably and potentially influence financial results of creditors – commercial banks² This is a core problem in transition economies. The thing is (and this is not something new), that firms in transition are short of internal capital because of poor income (low sales), inadequate investments, inefficiency and other reasons. Other external financial resources (and financial institutions) also perform ineffectively (capital markets, investment, pension, venture capital funds), equity and debt markets still are shallow (banks and capital markets permanently compete with each other).

Inseparable necessity, as mentioned above, is the protection of creditors' rights at the moment of the financial crises of enterprises, when such companies experience financial difficulties. An effective legal system should ensure and also stimulate the scale of lending to potential borrowers³ This is a compulsory requirement for the growth of the economy. For example, it is necessary, that claims of senior creditors after the bankruptcy petition would be complied firstly. This circumstance will stimulate the lending (financing) process and the development of the transition economy. On the other hand, commercial banks will not be induced, and concerned, with the lending process to firms, which are financially disciplined, even though, the supplement of additional external financial resources can often improve the stability of insolvent enterprises, improve ratios of solvency, liquidity, increase the amount of working capital, investments and the like. In theory, bank equity holdings of debtors can moderate the problems of provision with external finance. Because banks hold equity and debt stakes in a firm, free-rider problems should be less severe. In addition, because of its financial stake, the bank is probably well informed about the firm's financial position

² The author of this article pays attention to commercial banks, because he makes the conclusion, that banks are the main external recourse for finance of the activity of firms, and also of small and medium enterprises. In addition, credit institutions and capital markets have a function of both – competitive and complementary roles.

³ Nowadays, the lack of access to long-term bank loans, collateral requirements, costs of access to external financial resources, bureaucracy and other impediments discriminate such firms.

and its prospects. Therefore, problems in obtaining credit because of information asymmetries are reduced. This is also the problem, that commercial banks often lack the expertise experience of evaluating business activity of the borrower in advance. It becomes significant, when it is necessary to make the decision either to intervene in business activity (i. e. to finance it) or not. Access to external finance is likely to become more important as the private sector is getting more developed. This also stimulates substantial growth of the economy. In comparison with more advanced transition countries to less developed, it should be notable, that:

- In more advanced transition countries (such as Hungary, Poland) it is still difficult to obtain funding for long-term financing (funding investments).
- Whereas in the less advanced transition countries (such as Lithuania) even access to short-term financing (funding working capital) sometimes can become quite difficult for small and medium enterprises.

It is also should be notable, that limited competition (or consolidation process) in financial sector relieves banks of the pressure of lending to smaller companies or start-ups (there are high risks and transaction costs, associated with commercial lending). Limited competition in financial intermediation sector also increases interest rates to borrowers. So, the limited competition can arise some impediments of relieve, the access of external finance to companies, because of higher interest rates banks fix, and the absence of the pressure of financing private activity. On the other hand, there are also serious disadvantages when firms run into difficulties, because the large number of banks to be consulted makes it hard to reach rapid agreement on the measures necessary to ensure the troubled firm's survival. Some findings suggest that when financial claims are spread among many creditors, financial distress is more costly than when they are concentrated. Difficulties in negotiating with creditors may lead to under investment and inefficient liquidation. It is still unclear whether the concentration in banking sector will considerably affect the expenses of the use of external finance to companies, which operate in Lithuania. Financial literature also suggest that the concentration of financial claims enables firms to avoid the bankruptcy courts and yet still work out of financial distress. Even though, in some research papers there is suggested that companies which rely more on bank financing are more likely to restructure outside the bankruptcy proceeding. It is evident, that, as a consequence of the present privatization process in banking sector in

Lithuania, there is a real threat of banking market concentration. This also can be affected by the potential merger of Scandinavian banks (Swedbank and SEB), which are the main shareholders of the largest banks in Baltic States. According to the opinion of the author, it is also necessary, that the financial environment and discipline have to ensure an effective pressure on productivity-decreasing firms to release resources and assets as well as to provide playing field for new entrants. Effective bankruptcy proceedings should facilitate this potential.

The need for regulation can be characterized by whether they serve market participants' interest. For example, accounting standards can hinder business, but these costs can be compensated by the benefits of getting access to reliable and fair information (transparency criteria) about the company and its' activity, business conditions and partners, and also potential investment opportunities. This can lessen the credit rationing. In addition, in the absence of intensive monitoring, firms may contract excessive debt in relation to their real economic needs and use the additional funds for activities that are riskier or at any rate harder for banks to monitor. More over, many of the smallest firms do not have audited financial statements that can be shared with any provider of external finance. As a result, private companies often cannot credibly convey their quality⁴. This arises the costs of external financing. Between market-based institutions and companies, there are corporate law and legal system, which have to ensure the protection of creditors and shareholders rights, effective (and not long lasting) bankruptcy process regulation, competition policy and regulation of financial process and financing. According to this, financial intermediaries were not well-developed and qualified in transition economies. The intervention and accession of foreign capital, i.e. financial institutions, should improve this situation (the stability of banking sector, bigger financial resources and the availability of external finance – loans). The transition process was stipulated by the formation of two-tier banking system and the creation (or adoption) of the principal framework for corporate and bankruptcy laws, including insolvency procedures, pledge regulation, and the protection of the rights of stakeholders.

⁴ Private companies are arguably the most informational opaque and, therefore, have much difficulty in obtaining intermediated external finance.

The Importance of Effective Bankruptcy Procedures

The rights of creditors (and the protection of these rights) during the bankruptcy procedures, and the secured rights of creditors, as holders of collateral, influence and stimulate the willingness of banks to lend to companies (even to companies in financial trouble).

The rights of creditors also strengthen their ability to intervene in the restructuring process and the decisions making. The combination of bank-induced managerial changes, financial support and pressure in suppliers is typical of the role commercial banks play when their debtors are in financial distress. As a result, at the absence of an appropriate legal system, there possibly can be created conditions to improper business practices, including asset-stripping, cheating of creditors and also shareholders.

The importance of the legal regulation for economic performance and the improvement of this process have been widely described in international comparative studies [9]. This is expedient to exclude some tendencies, concerned with the legal regulation and its' effected financial intermediation system.

- Countries, offered good protection of shareholders rights, tend to have more developed capital markets and less concentrated ownership structures.
- Countries with better protection of creditor rights also tend to have more developed banking systems, better efficiency of financial intermediaries, and, as a result, have the tendency to grow more rapidly in the long run.

R. La Porta, F. Lopez de Silanes, A. Shleifer and R. Vishny proposed a rating system which described the level of the protection of shareholders and creditors rights. Concerning their research, according to the priority of commercial banks and borrowers relationship, it is expedient to exclude that the index of creditor rights includes four variables, which address the crucial role of creditors in bankruptcy system:

1. Restrictions, such as creditor consent, exist for reorganization, as opposed to liquidation.
2. Secured (senior) creditors are not delayed in bankruptcy process, meaning that their pledged assets are not frozen.
3. Secured (pledged) assets have to be sold firstly, satisfying the rights of senior creditors.

4. Management can be effectively replaced with a court or creditor-appointed manager during the process of all bankruptcy procedures.

There is also expedient to compare the main differences between well-developed countries and their legal systems, concerned with the stakeholder rights protection, because it is very dependent on the incentive to finance the activity of enterprises and start-ups in transition. For example, Anglo-Saxon tradition tends to have the best protection of shareholder rights and the most developed capital markets. On the second hand, German tradition has weaker shareholder rights protection, but relatively stronger creditor rights regulation. French tradition trails between these two groups. Scandinavian countries also lie somewhere in between.

It is reasonable to overview the change of stakeholder rights protection since 1992 till nowadays [9] in transition economies:

- Transition countries in the early stage of the past decade had better developed shareholder rights protection than creditor rights protection.
- Creditor rights have been strengthened since 1992.
- Shareholder rights protection have experienced notable improvements in the Commonwealth of Independent states, but much less than in Central and Eastern Europe. Central and Eastern Europe countries remained closer to the model with stronger emphasis on creditor rights.

During the process of the analysis of insolvency procedures and the regulation of legal environment, which regulates bankruptcy procedures of insolvent enterprises, and also creditors' rights, it's very important to identify the trigger mechanism, which should be optimal to put an entity into legal insolvency. For example, if the trigger is pulled too early, such action can simply have detrimental effects for the debtor, which makes the best efforts to save the business. On the other hand, if the trigger is pooled too late, creditor rights may be impaired because of the real possibility, that the debtor's asset may be depleted (detrimental effects for the creditor). Comparing some countries, where is enacted different legal bankruptcy systems, it is appreciably, that insolvency systems in most developed

countries have a trigger that relies either on a combination of “cash criteria” and “accounting criteria” or one of these two criteria⁵

There is some inefficiency, concerning bankruptcy “trigger criteria” For example, an automatic trigger was regulated by the Bankruptcy Act in Hungary, in 1992. This meant, that any company, which accounted in its balance sheets debt outstanding more than 90 days overdue, was required to file the petition for bankruptcy procedure. Such situation was stipulated by the massive amount of bankruptcies, and insolvency cases in 1992, and concerning not very effective and efficient reorganization procedures. All these circumstances resulted the amendment of the Bankruptcy Act.

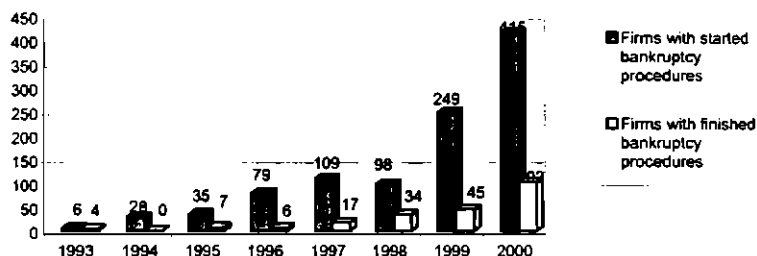
Analyzing the situation in Lithuania, the new Bankruptcy law has been enacted this year. The new regulation of the bankruptcy system gives to creditors an opportunity to file the petition for bankruptcy procedure of the debtor, if its’ debts outstanding are in overdue of more than 90 days. This requirement simplifies and accelerates the process of filling up the petition of bankruptcy procedure. Other Bankruptcy laws, enacted in 1992 and 1997 didn’t provide for such possibility to file the bankruptcy petition. This is necessary to avoid such discrepancies, as they were pronounced in other countries.

According to the bankruptcy systems, it is necessary to mention, that not only in Lithuania, but more than in a half of Eastern and Central European countries the insolvency legislation was enacted, continuously improved or amended. This process is still on course. For example, Lithuania, over the last decade, has enacted three Bankruptcy Acts (1992, 1997, 2001). This substantial amendment of insolvency legislation is also partly related to the accession process to European Union.

The effectiveness of bankruptcy procedures is dependent on the speedy proceedings of the insolvency. As a rule, if bankruptcy procedure delays reorganization or liquidation process of insolvent enterprise, it would harm to the debtor and the creditor, and also overburden the overall (court) system. A quick insolvency proceeding can preserve the value of insolvent enterprise. The relation (tendencies) between finished bankruptcy procedures and not yet is showed in Picture 1.

⁵ Underlying “cash criteria”, a firm is considered as insolvent, if it is impossible to pay off debts in a timely period (for most economies this means 90 days fashion). Underlying “accounting criteria”, a firm is insolvent, if its liabilities exceeds or are equal to its’ assets (for example, such insolvency system functions in Lithuania).

Tendencies of becoming bankrupt and bankrupted firms



Picture 1. Tendencies of becoming bankrupt and bankrupted firms in Lithuania during 1993 – 2000 year period.

Strict time limits have to be included in insolvency proceedings in order to implement bankruptcy petitions effectively, the drafting and voting on restructuring (reorganization) plans of reviving enterprises, the valuation and fast sale of assets have also to be carried out effective. This would eliminate delays of enterprises bankruptcy proceedings.

The problems of slow insolvency proceedings are also visible in Lithuania. Even though, there are significant problems of filling up the bankruptcy petition. The necessary condition is that liabilities of insolvent company have to be equal or bigger than its' asset, not taking into consideration, that company can't meet its' obligations (engagement) to lenders (banks, state, suppliers and other creditors). Some politicians argue, that such regulation of insolvency proceedings in Lithuania have already made about 10 billions LTL (2.5 billions USD) of loss. It's very necessary, that the bankruptcy petition have to be filled on time. As it is expected, the new bankruptcy legislation should eliminate these problems.

Special attention has also to be given to the level of creditors approval in order to implement a reorganization plan of companies in trouble. For example, Lithuanian bankruptcy law requires 100 percent of creditors approval of insolvent company reorganization. There is no any requirement of reorganization plan approval of simple majority of creditors. This also can delay the bankruptcy proceedings or push the enterprise forward liquidation.

The most necessary requirement is that the trustee has to make sure creditors that collateral of secured creditors is protected. The lack of the existence of senior creditors status will harm the finance of firms' activity.

This will also influence the overall economy of a country. Therefore, there will not be any bank, which would be stimulated by intensifying lending to potential borrowers under such conditions (at the absence of senior status). Before the enactment of the new bankruptcy law in 2001 in Lithuania, such debates have been quite viable, especially in coalitions with socialist tendency. So, there exists (in Lithuania) the necessity to promote investment finance and to implement an efficient and effective liquidation, i. e. the priority among creditors must be respected.

According to Lithuanian Bankruptcy legislation, it doesn't provide secured creditors with the highest priority. For example, administrative costs have to be repaid first and foremost, i.e. before the secured creditors are compensated. On the other hand, administrative and liquidation costs have to be covered, otherwise it will not ensure an effective insolvency procedures and this situation will last an indefinite time. Of course, the implementation of bankruptcy system depends on the professionals, appointed to this process (delays and the lack of well-trained personnel are the main reasons of this inefficiency). Professional requirements, standards, training and licensing of administrators and liquidators of the insolvency system have to be developed and improved continuously. The qualification and competence of these professionals is very dependent on the quality, complexity and requirements of exams, provided by this commission.

The other and essential problem is, that insolvency proceeding has a negative connotation. This negative connotation particularly is important when the filling of the bankruptcy petition is applied to big enterprises, manufacturers with the potentially serious social problems. Many people, and also journalists, other specialists, because of the ignorance, the bankruptcy petition link with the liquidation of companies in financial trouble and the increase of unemployment. Nobody pays attention, that insolvency proceeding just can help to implement the reviving plans of bad, inefficient companies, and improve their financial conditions. It is very necessary to enlighten the society that insolvency procedures can effectively facilitate negotiations between borrowers and creditors, it can also help to avoid premature closures of companies, facing financial difficulties. The Restructuring Act of insolvent enterprises should improve the solution of panic shocks of the society. In addition, the new bankruptcy and restructuring legislation will reveal the benefits and deficiencies of the solution financial problems in the future.

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Summary

This article deals with some elements of corporate borrowing and the interest of banks' lending to private companies. The author shortly summarizes, that the availability of external finance in transition is quite complicated to private business, and to start-ups. Borrowing costs, competition among banks, banking consolidation, prevalent corporate internal and external control, bank equity holdings in borrowing firms, the signaling role, collateral requirements, relationship lending, etc. can influence the availability of external finance to private companies. Some research hypothesis related to financial theories and intuitions of corporate borrowing are also shortly presented in this article (in Table 2). However, the core of this article is concerned with the opinion of the

author, that the scale of lending and the disciplinary of borrowing are dependent on the effective bankruptcy proceedings and the creditors' rights protection after filling the bankruptcy petition to indebted firms. Some basic conclusions are presented in this summary:

1. *The most effective strategy of stimulating the activity of private enterprises is provision with finance, improvement of business environment and the strengthening support networks.*
2. *The scale of bank lending may depend on the effective bankruptcy proceedings and creditors' rights protection.*
3. *An increased amount of bankruptcies and liquidation of financially troubled firms can inevitably influence the financial results of banks (this is a potential problem in Lithuania because of the newly enacted bankruptcy and enterprise restructuring legislation in 2001).*
4. *An effective protection of creditors' rights at the moment of financial crises of indebted enterprises should facilitate the solution in order to avoid the losses in the banking sector.*
5. *The lending process is rationed by commercial banks because these financial institutions often lack the expertise experience of evaluating business perspective of the borrower in advance (underinvestment). In some transition countries, it is still difficult to obtain even short-term financing. More over, many private companies do not have audited financial statements that can be shared with any provider of external finance. This also can cause troubles of availability to external finance.*
6. *The trigger mechanism should be optimal to put an entity into legal insolvency. The rights of creditors, during the bankruptcy procedures, and the secured rights of creditors influence and stimulate the willingness of banks to lend to companies. The rights of creditors also strengthen their ability to intervene in the restructuring process and the decision-making. Bankruptcy and restructuring of indebted enterprises' procedures delays can harm the debtor and the creditor, and also overburden the overall system.*
7. *Insolvency procedure has a negative connotation. The society, because of the ignorance and incompetence, the bankruptcy petition links with the liquidation of companies in financial trouble and the increase of unemployment. Therefore, the society has to be enlighten that insolvency procedures can effectively facilitate negotiations between borrowers and creditors. It can also help to avoid premature closures of companies facing financial difficulties.*

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FORECASTING OF A COMPANY'S CASH BALANCE

Uzņēmuma īstermiņa aktīvu vadība risina krājumu, debitoru parādu un naudas līdzekļu optimizācijas jautājumus, lai uzņēmums varētu efektīvāk izmantot savus resursus. Līdz ar to jautājumi par uzņēmuma īstermiņa aktīvu vadību ir cieši saistīti ar uzņēmuma naudas plūsmas prognozēšanu.

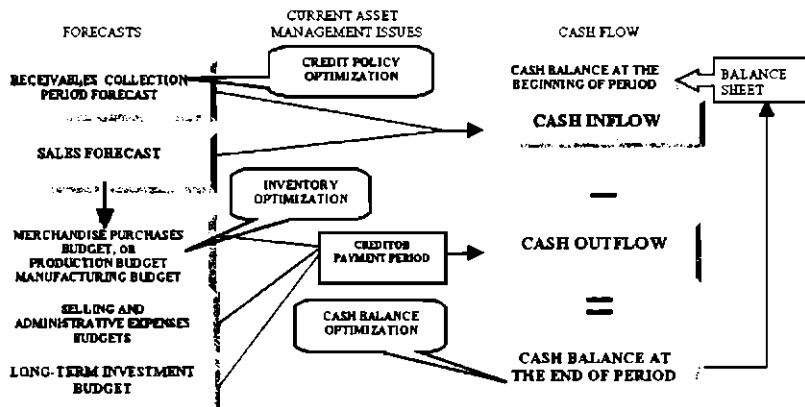
Rakstā tiek parādīts uzņēmuma naudas plūsmas sastādīšanas secības plāns, uzsverot apgrozāmo līdzekļu vadīšanas jautājumus, kā arī apskatīta Monte Karlo simulācijas un statistisko metožu izmantošana naudas plūsmas prognozēšanā. un to pielietojums konkrētā uzņēmumā.

Sound finance management is a key for a success of any company. Management of current assets might at the first glance seem less important than capital budgeting, dividend policy and other decisions, closely related to long-term development of the company. However, competition in the modern world requires for current assets management to become a significant company management instrument, and approximately 60% [1, 593] of finance executive working time is dedicated to current asset management.

While decreasing receivables collection period and amount of the inventory, company can find a way to decrease investment in current assets and to reach financial and production economy. The principle of Zero Working Capital is that inventories can be financed by suppliers through accounts payable. Hence we may conclude that the company targets to reduce the investment in current assets. At the same time the company should have sufficient current assets to secure its operations, therefore it should work on estimations of optimal level of current assets. Optimization of company's inventory, credit policy, cash balance is an ongoing process, and can bring return in the future, thus issues related to planning of the company's activities should be reviewed along with management of current assets. These issues are rarely discussed in relation to each other in publications, thus the author has paid a special

attention to correlation of these subjects, demonstrating relationships between the management of current assets and the cash flow forecast.

In order to project the cash flow, the company should not only forecast the revenues and expenses, but this planning should have a specific sequence, while linking it to a current asset management issues.



Cash flow forecast sequence

In order to project the cash flow, analyzing the customers' payment behaviour, the receivables collection period should be forecasted first. The forecasted debtors' payment periods depend on company's credit policy and vice versa. If customers' payment behavior analysis shows that debts are repaid during long period of time and irregularly, company should revise and improve its credit policy if the credit policy is changed, the possible changes in receivables collection period forecast should be revised accordingly.

The next step for the cash inflow plan is to link company's sales forecast with company's receivables collection period forecast.

After sales forecast is completed according to budgeting sequence and taking into account creditor's payment period, the outgoing cash flow is to be determined. While accomplishing this, all companies whose operations require inventory should solve inventory optimization issues with a view to reduce the expenses.

When incoming and outgoing cash flow has been forecasted, cash balance is the difference between the mentioned values. When forecasting cash balances, the cash balance optimization should be taken into

account, in order to avoid shortage of money and to use the money more efficiently.

The author performs cash flow forecasting in a service enterprise, basing on theoretical formulations developed. The purpose of the calculations is to show the importance of current asset management in forecasting cash flow, by exploring the possibility to apply various methods, as well as sequence for planning. The company in question targets to forecast the optimal balance necessary for the operations, as well as possibilities to repay the debts for the time period forecasted of 14 months.

The first step to cash flow forecast is to predict the behaviour of company's debtors. When analyzing the data from previous time periods, the correlation in debtors' debt repayments are noted, and the receivables collection period forecast is created.

The author uses two-year operation data, including 348 invoice payment cases, for the analysis of debtors activities. Data are analysed, using MS Excel and SPSS.

In order to obtain the information on efficiency of credit periods set by the company, the author performed correlation calculations between the set deadline and payment date. The results showed no correlation between credit periods set by the company and the date of actual payment. In a situation like this, the credit period, one of the main credit policy instruments basically has no effect upon operational results of the company and the customer behaviour, thus other credit policy instruments for the receivables management should be used.

It is also important to determine whether the payment date depends on the amount of the invoice. According to the correlation calculations between payment date and transaction sum, the author has determined that there is also no correlation between these two values – therefore the company has no need to forecast debtors' behaviour with various sums in bills.

In order to determine the debtors' behaviour, the autor compiled the receivables aging shedule and uncollected balances schedule. The results showed no clear relationships in debtors' behaviour; the repayment behaviour fluctuates from quarter to quarter, and between the both years.

To interpret the results the author used a chart foreseeing to see clear tendencies in changes of debtors' behaviour. The author performed possible tendencies calculations for each of the payment curves. Consequently none of the indices showed clear trends, thus indicating that

calculations done previously are not sufficient to predict the debtors' behaviour.

Assuming there is a correlation among various client and product categories, and the repayment and delay showings, the author divided the clients into four groups – state institutions, financial institutions, partners and others. Products were also divided into four groups, according to their functions. To determine the possible correlations, as foreseen by the author, the ANOVA dispersion analysis was performed. The results showed that there is a correlation between client groups and repayment period, and between client groups and repayment delay, and that the debtors' behaviour is not dependent on the product it has purchased.

During the time period in question the company has issued 125 bills to state institutions, 51 bills to financial institutions and 47 bills to other organisations. A more detailed analysis of these groups showed that the only client group whose average delay is close to zero were financial institutions – 0.31 day, while for state organisations and other clients it was 8 and 13 days respectively, but for partners the average delay was one month.

As the previously performed analysis had not offered a sufficient information for correlations in debtors' debt, the author chose the cluster analysis method as the possible solution. As the result of this analysis clients were divided into four groups, according to repayment time, with the centers 405, 253, 96 and 16 days, and number of cases 1, 9, 30, 309 in each group respectively. After the delay the client groups centers lied in 395th, 246th, 76th un 1st day on 1, 8, 34 and 305 cases in each group respectively.

To foresee the receivables collection period in the company on the basis of correlations previously determined in the cluster analysis, the debtors' debt settlement for both years has been determined, as percentage in a defined period of time (see Table 1).

Although the percentage of debtors who pay the debts during the first ten days is determined, it does not mean that the payment will take place in a current month. Therefore the author calculated for each month the percentage of monthly sales amount which is collected in the same month, on the grounds of payments pattern approach.

Table 1

The division of debtors according to payment period

Repayment period (days)	Amount, Ls	% of the total sales
0-10	294860	38.17%
11-30	267010	34.56%
30-45	34935	4.52%
45-60	34492	4.47%
60-90	72806	9.42%
90-120	20011	2.59%
120-150	10129	1.31%

On the basis of the calculated results, the author's calculations show that the following receivables collection period forecast is quite reliable (see Table 2).

Table 2

Receivables collection period forecast

Repayment month	% from sales in the current month
Current month	35%
Next month	25%
Third month	30%
Fourth month	3%
Fifth month	2%

35% of the debtors settle the debts in the current month, and this coefficient was acquired by rounding down the average percentage of settlements in the current month, as calculated previously. For the second month it is projected that the payment is effected by the remaining part of debtors who settle bills during the period of 10 days, as well as two thirds of debtors who settle bills during the first 11 to 30 days (see the results in Table 1). The remaining part of the latter will effect the payment on the third month, along with the debtors who settle the payment in the first 90 days. During the fourth and the fifth months the payments are affected with debtors according to cluster analysis division into 90 to 120 days and 120 to 150 days. It is forecasted to receive 95 % of debtors' debts. Although all debtors have settled their debts to the company up to now, 5% of them delay the settlement considerably un unforeseeably, therefore repayment data of these debtors cannot be used in cash flow forecast.

This receivables collection period forecast will be useful only for the nearest future, since any additional information on debtors' behaviour might force to revise or, in case of necessity, to update the forecast. The main reason why the debtors' data analysis of the company showed no clear correlation is the small amount of data and the individual character of each transaction.

The company's receivables collection period forecast can be also changed by revisions in credit policy. Since for the company in question the debtor collection period is quite long, revisions of the possible credit policy conditions should be analysed, or the credit policy should become tighter. The analysis performed in the paper shows that there is no correlation between debt payment date and credit period set by the company, and therefore the company practically cannot affect the debtors' behaviour by prolonging or shortening the credit period. However, the author believes that repayment period revision might bring a return in the future, since the Latvian economic development will affect the business culture and the history of mutual payments will have more impact. At this point a company may set the desirable credit periods for each product group and the conditions for prolongation of the term. The author predicts that business environment culture development will bring more clients to observe the payment dates and the payment term will become a significant credit policy instrument.

Credit standard settings is another credit policy instrument. Company may expand the operations with client groups which settle the bills promptly, e.g., in the finance sector. If the sales amount proportion for groups, which pay the invoices on time, increases, an average debtors' debt repayment period will become shorter. Also customers' credit worthiness must be additionally evaluated before any new contracts, when working with customers with bad credit history.

One of the reasons behind the debtors delaying in debt settlement is an open debt collection policy. The company does not prompt the client about the delay in repayment until the due date has been passed significantly. On the one hand, it creates a positive attitude from clients part, but from the other hand, the company acquires a long debt repayment period, which is difficult to forecast, and it should be shortened. The company should follow up to invoice repayment, determining the remainder deadline for various risk groups.

Taking into account the resources mentioned, the author forecasts that the company has a potential to reach the collection of 95% debtors'

debts during a period of three months, all the while increasing the part of debtors' who settle the payment in the first 60 days. 5% of the debts' repayment cannot be predicted.

After the receivables collection period forecast has been set, the sales amount and expected costs should be forecasted. Next the forecast, taking into account the expected receivables collection period and payment period for the suppliers, is entered into cash flow plan, and as the result we get the incoming, outgoing cash and cash balance forecast. If the company's operations require inventory, the inventory flow analysis should be performed before cash flow forecast, with a view to determine the optimal inventory turnover which decreases the total inventory maintenance and purchase costs, at the same time ensuring the sufficiency of inventory to satisfy demand. There is no inventory in the company in question therefore the inventory management issues are not to be discussed.

The author uses Monte Carlo simulation for the cash flow forecast.

Initially the finance model is drawn up with reflecting all types of income, variable and fixed costs, as well as the correlation between all variables. The numbers shown in the model are not the forecast result, but initial estimate, showing the most likely or the average value for the variable.

Before the Monte Carlo simulation is initiated, the division of each variable forecasted value is performed with setting the appropriate division type, the potential value ranges and the most possible value. There are 154 variables in the model, or 11 various variables for each of 14 months. Variable values were set after consulting the company's management and utilizing the budget and sales portfolio drawn up by the company.

As the time period surveyed is quite short, it is possible to evaluate the credibility of indices, and the correlation among the variables in various periods was not used in the model, since conditions of the showings fulfilment were defined as independent from the results of other periods.

The accuracy of the forecasted values depends on the accuracy of variable values definition therefore the defined value confirmation check should be performed. In order to perform it in the compiled model, the author performed test simulations, analyzing the credibility of results and correcting the definitions of variable values.

The next step in cash balance forecast is to join the financial plan and cash flow plan with the receivables collection period forecast and projected payment period for the suppliers.

When preparing the cash flow plan, not only the forecasted data but also operation results from the previous periods should be taken into consideration, since a number of variables are dependent on these results. First of all, the cash balance in the beginning of the period equals to the actual cash balance before the period planned. The expected cash income should be supplemented with the debts from previous periods, according to receivables collection period forecast. Also the costs connected with the sales results of the previous periods should be adjusted.

After the cash flow pattern is specified, additionally the expected values are defined, including:

- monthly cash expenses, necessary to determine the optimal cash balance, and
- cash balance at the end of the forecasted period, necessary for the analysis for potential debt repayment.

Simulation can commence now. Initially the author subjected 25,000 cases for the simulation, but having performed several repeated forecasts, the expected values results were significantly varied. Thus the number of simulation cases was increased to up to 50,000 cases. As the result, there was a smaller deviance indices of expected values.

The simulation showed that average monthly cash expenses at various probabilities can vary from 27488 Ls to 48142 Ls. When forecasting the monthly expenses, the company should be careful and build on bigger expected expenses, instead of hoping that the better conditions will come true. Optimal cash balance at the end of the month depends on the expected expenses for the next months and payment.

For the company in question majority of expenses (rent, public utilities payments, salaries) come in the beginning of the month, therefore cash balance at the end of the month is no less than 2/3 of expected expenses in the next month.

Taking into consideration strictness of sales forecast conditions setting, the author believes that the potential cash balances are within the probability limits of 40% to 90% (this probability indicates the possibility of smaller cash balance). In order to determine the company's capacity to repay debt within the period surveyed, the author determines the optimal cash balance at the end of period with each chosen probability level.

Subtracting the optimal cash balance from the expected cash balance, we get a sum, which can be used to repay debts (see Table 3).

Table 3

Expected repayment potential at the end of surveyed period

Probability of smaller cash balance	Expected cash balance	Expected expenses for the next month	Optimal cash balance	Possible debt settlement
40%	93947	37735	25157	68790
50%	101942	38371	25580	76362
60%	109919	39034	26022	83897
70%	118768	39765	26510	92258
80%	129131	40665	27110	102021
90%	144284	41957	27972	116312

The calculations show that the company will be able to cover the debts within the limits of 68,800 to 116,300 Ls at the end of the period. In order to define the possibilities to repay the debts, the company should revise and update the forecast, so that, when the variations and uncertainty of variable values decrease, the debt repayment forecast will become clearer.

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Summary

1. *When forecasting the company's cash flow, not only the income and expenses should be planned, but also the planning should have a certain sequence, all the while linking it to current asset management issues.*
2. *Before the cash income flow is determined, the receivables collection periods should be forecasted. The author believes that the most comprehensive information on debtors' behaviour can be obtained by using various statistical methods in the analysis of data from the previous periods, such as correlation, dispersion, regression analysis, cluster analysis and others. By linking the forecasted receivables collection periods with the company's sales forecast, we get cash income plan.*
3. *According to budgeting sequence, the company's expenses are projected next, and cash outflow plan is drawn up, while taking into account the payment period for the suppliers. All companies, whose operation require inventory, should solve the inventory optimization issues when drawing up cash outflow plan, in the view to decrease expenses.*
4. *When forecasting the cash balance, the cash balance optimization issues should be taken into consideration, so that company could avoid shortage of cash, and it would be used efficiently. Cash balance depends on a number of variable values of cash inflow and outflow uncertainty levels and variations, therefore, when forecasting cash balance, appropriate methods should be used, e.g., Monte Carlo simulation.*
5. *Debtors' data analysis, performed by author, showed no clear correlations. One of the reasons is the small amount of data and individual character of each transaction. Due to such looseness the receivables collection period forecast should be revised on a regular basis and the changes in debtors' behaviour should be analysed. A significant credit policy instrument, credit period, is not effective to influence customers' payment behaviour.*

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6. *When forecasting the company's cash flow and cash balance, the author determined that two thirds of the planned expenses for the next month is the optimal cash balance at the end of a current month. Bearing in mind the optimal monthly cash balance and expected income and expenses, the company's ability to settle debts to creditors is forecasted. The forecast more accurate results can be obtained only if variations and uncertainty of variable values decrease.*

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INDICATORS OF STATE ECONOMIC SECURITY IN FOREIGN ECONOMY SPHERE

Ekonomiskā drošība ietilpst valsts svarīgāko funkciju sastāvā. Attīstošas valsts drošība ārējās ekonomikas sfērā ir cieši saistīta ar finansu stabilizācijas nodrošināšanas un ekonomiskās izaugsmes uzdevumu risināšanu.

Starptautiskās ekonomiskās drošības faktoriem ārējās ekonomikas sfērā var izdalīt divus noteicošos faktorus: valsts maksājumu bilances stāvoklis un nacionālās valūtas kursa stabilitāte pret pasaules galvenajām valūtām. Šo faktoru robežvērtību pārsniegšana rada tādas negatīvas sekas, kā valsts nespēju atbildēt par ārējām saistībām, konjunktūras destabilizāciju nacionālajos finansu tirgos utt.

Pētījums pamatojas uz Latvijas un citu attīstošu valstu ārējā parāda un eksporta attiecības dinamikas salīdzinošo analīzi. Izpētīta valsts ekonomiskās drošības faktoru savstarpējā atkarība makrolīmenī. Aplūkots to loma nacionālās finansu stabilitātes nodrošināšanā un ekonomiskās izaugsmes priekšnosacījumu formēšanā pēc Latvijas Republikas piemēra.

The base of national security is economic security. At the same time it is closely connected with the related areas, such as defence, information, ecology and energy. Thus, one of the most important governmental functions is the ensuring of economic security. The problem of economic security is a derivative of the tasks of economic growth at every stage of both state and social development. This is the reason why its specific contents change according to the external and internal conditions at a certain time period.

The problem of security of a developing country within the world economy is directly connected with its success in achieving financial stabilisation and in economic growth. Thus there are two major groups of possible threats to national economic security.

The first group results from the necessity to stimulate foreign trade and to maintain a reasonable foreign trade balance. Here the principle goals are the volume of exports and the rate of its growth. These are determined, in their turn, by the rate of economic growth, state budget revenues, the expenses for the repayment of foreign debt. In accordance with these goals, it is necessary to form a foreign trade policy that is focused on the maintenance and stimulation of export volume and its goods structure. In addition, the reduction of export volume worsens the investment positions in foreign market. The circumstances are the growth of interest rates for foreign loans and the reduction of their volume.

The second group of threats is connected with the stability of national currency and the volume of gold and currency reserves of a country. Both the condition of the finances of the country and the growth of foreign investment (direct and portfolio) are necessary for national economic development depend on the dynamics. National currency devaluation leads to the reduction of foreign investors' profit or, in some cases, to losses from their investments.

Thus the following two key factors can be underlined among the factors which influence state economic security in foreign economy sphere: first, the condition of payment balance of a country and, second, the stability of national currency exchange rate to the world's main currencies. These factors determine such national economy indicators as foreign trade volume, foreign investment flow and, overall, the perspectives of economic growth (Figure 1).

Each of these factors has its marginal values. The reduction of these values leads to such negative circumstances as inability of the country to repay foreign debt, destabilisation of national financial markets, including the possibility of a currency crisis, the reduction of imports below the critical level and a range of others.

Developing countries that carry out market reforms face investment deficits and use foreign loans. As the creditors are mainly focused on risk and profitability of investments, the volume of the granted loans can be different depending on the position of international financial organisations, the credit rating of a country and other factors.

The most widespread indicators used for the evaluation of country's solvency are:

- The volume of gold and currency reserves;
- The ratio of annual export volume to foreign debt;
- The ratio of annual exports to the annual foreign debt repayments.

There are different evaluations of critical (marginal) level of the indicators. However, overall, concerning such parameter as the ratio of exports to foreign debt repayments, they vary from 25 to 40% (Table 1).

It is worth noting, that in countries with transitional economies a significant portion of foreign loans is used for foreign economic activity stimulation, including exports. In the last years many of them experienced a significant growth of exports that have improved the ratio of annual export volume to foreign debt and the ratio of annual exports to foreign debt repayments. Thus the mentioned indicators of state economic security in the international economy sphere are closely connected with each other.

Table 1

Indicators of Foreign Debt and Export Volume of Developing Countries

Countries	1995	1996	1997	1998
Foreign Debt, % to Export				
Argentina	325	311	293	281
Brasilia	279	291	297	301
China	76	75	62	56
India	208	196	183	166
Latvia	31	29	22	22
Poland	127	117	104	94
Russia	106	112	128	141
Foreign Debt Repayments, % to Export				
Argentina	19.0	18.6	16.8	17.0
Brasilia	18.0	20.6	21.3	21.3
China	3.4	3.6	3.1	2.8
India	10.9	11.1	10.8	9.7
Latvia	n/d	5.9	3.6	2.6
Poland	3.5	4.2	4.1	3.7
Russia	6.5	7.4	10.3	10.9
Rate of Export Growth, % to the Previous Year				
Argentina	32.9	13.3	10.1	7.6
Brasilia	6.9	2.8	5.9	5.9
China	45.0	1.8	4.2	11.5
India	21.3	5.5	8.6	16.3
Latvia	24.4	15.5	22.2	10.0
Poland	34.7	6.6	18.0	19.4
Russia	20.0	10.0	-2.0	-2.0

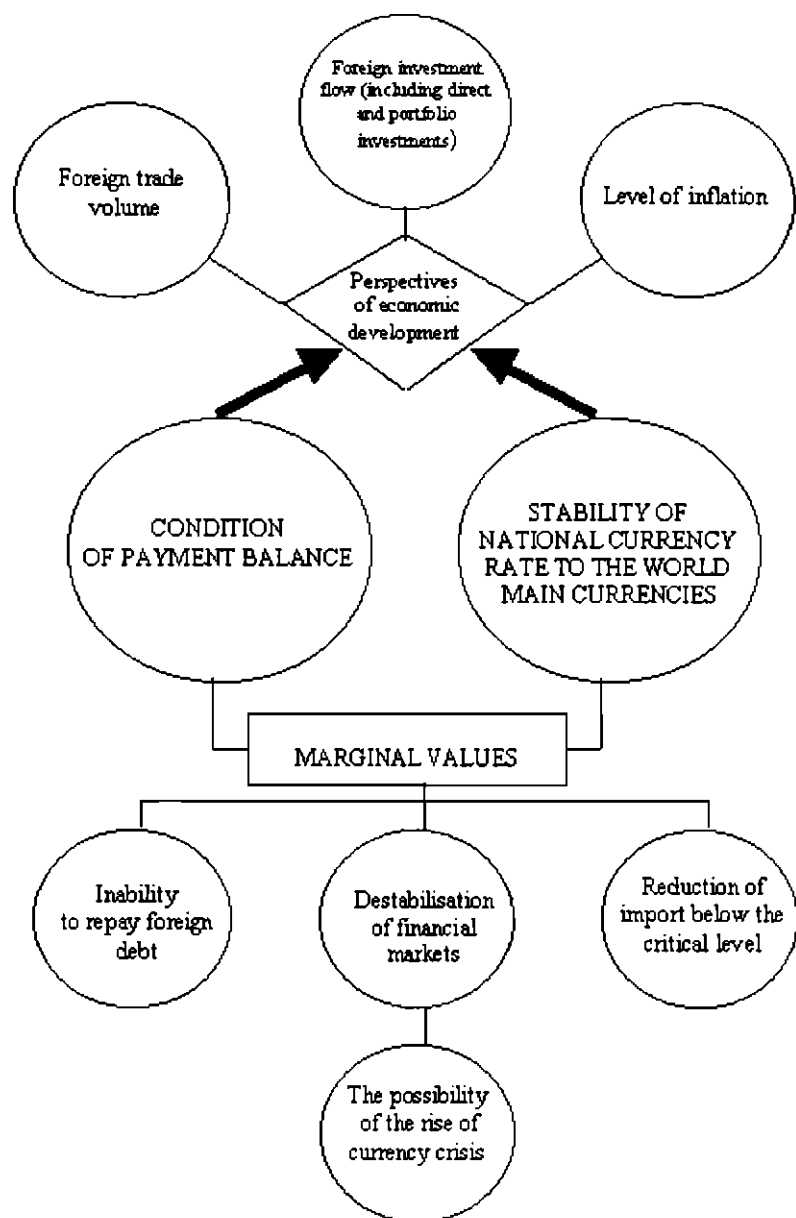


Figure 1. State Economic Security Indicators in the Sphere of Foreign Economy

A comparative analysis of foreign debt and export volume indicators of the Baltic States (Table 2) shows that the lowest percentage ratio of foreign debt to exports is in Estonia, but the highest one is in Lithuania (7.4% and 81.0% in 1999, accordingly). It is significant that in 1999 this ratio worsened remarkably in all three countries. This was connected with a significant reduction in the goods export of the Baltic States in that time period, which was, in its turn, greatly influenced by the negative impact of Russia's financial crisis.

Table 2

Foreign Debt and Export Volume Indicators of the Baltic States

Countries	1997	1998	1999
Foreign Debt, % to Export			
Estonia	6.8	6.0	7.4
Latvia	22.0	22.0	35.6
Lithuania	36.2	45.3	81.0
Tempo of Export Growth, % to the Previous Year			
Estonia	62.9	11.7	-5.3
Latvia	22.2	10.0	-5.7
Lithuania	15.5	-4.1	-19.3

In 1999 the export of Latvian goods declined by 5.7% in comparison with the previous year. Imports, in turn, declined even more (by 8.4%), resulting in a better trade balance. In 2000, however, the volume of Latvia's exported goods exceeded not only the level of 1999, but also the level of 1998 (pre-crisis).

The negative result of Latvia's trade balance is partly covered by the positive net export of services. In 1999 both export and import of services declined (by 8% and 15% accordingly). Transit makes about 2/3 of the volume of exported services (or 10% of GDP). Seaports and the railway have central roles in the process of transit. The transportation of raw oil and oil products makes approximately 60% of Latvia's transit.

A strategic task of economic policy is maintaining the level of exports and ensuring a stable rate of export growth. The goals of Latvia's foreign trade policy include the initiation of trade in new foreign markets with a low risk and the increase of market share in the existing markets. Latvia carries out a relatively liberal trade policy. In the conditions of world globalisation and economic convergence Latvia's trade policy

takes into account the international agreements and their role and duties in international organisations.

The establishment of trade relations with the country's most important partners is provided by bilateral and trilateral agreements, for example, free trade agreements, and by multilateral agreements, such as *GATT* and *GATS* that enable the establishment of trade relations with a bigger number of countries on unified principles. The further trade liberalisation is connected with the priorities of Latvia's trade policy – the integration with the *EU* and the participation in *World Trade Organisation (WTO)*.

On 10th February, 1999 Latvia became a full member of *World Trade Organisation*. The norms of *WTO* include three main instruments of trade protection for the government to protect local manufacturers:

Measures of national market protection;

Antidumping measures;

Compensation measures.

On 11th February 1999 the *National Market Protection Law* was adopted. On 16th December, 1999 *Antidumping Law* was adopted, that came into force on 1st July, 2000. In May, 2000 the Law "*About Protection against Subsidised Import*" was adopted. It considers the cases of compensation when subsidised import causes the losses of local manufacturers. At the same time Latvian laws enable the use of all three *WTO* provided instruments of protection if needed.

On 1st July, 2000 *National Market Protection Bureau* was founded in order to ensure a unified market protection laws administration. The organisation subordinates to the *Ministry of Economy*.

After joining *WTO*, Latvia implemented the most favourable trade regime with the 135 countries, which are the members of this organisation. It enabled the widening of foreign economic collaboration with most of countries of the world, and opened up new markets for the sale of Latvian goods and services. Latvia has the most favourable trade regime also with a number of countries, which are non-members of *WTO*, such as Armenia, Azerbaijan, Byelorussia, Kazakhstan, Russia, Moldavia, Tadjikistan, Turkmenistan, Uzbekistan, China and Vietnam.

Latvia is mainly oriented to the process of deepening integration with the *European Union* and with the countries which are in the process of integration with the *EU*; that is, to the preparing and signing foreign trade agreements, which follow from these priorities. *Free trade agreements (FTA)* involve 29 countries, including the *EU*, and make a

united free trade region that Latvia has joined. In the framework of this free trade region, Latvia is to sign agreements with Romania and Bulgaria. At the moment Latvia has implemented *FTA* with the *EU*, *European Association of Free Trade*, Czech Republic, Slovakia, Slovenia, Poland, Hungary, Estonia, Lithuania, Ukraine and Turkey.

When creating a free trade region in the Baltic States, it is necessary to take into account that their primary goal is to become a member of the *EU* and to be fully involved in the European economic turnover. Due to the process of adaptation of the laws of the Baltic States according to the *EU* requirements and the difference in harmonisation tempos in the countries their collaboration would have a positive impact on their development, for instance:

- The Baltic States would be able to share the experience in the introduction of separate the *EU* acts;
- It would be possible to reduce the costs connected with the interpretation of the *EU* normative acts and public education;
- It is easier for a group of countries than for one country to persuade the *EU* members to apply special conditions for the candidate countries on their present level of development;
- The *EU* could give a positive esteem of an agreed collaboration of the Baltic States considering the adaptation of the laws.

Free shifting of labour and trade in services are important factors for the creation of a free trade region in the Baltic States. Taking into account geographic location of the Baltic States, a trilateral agreement in the control of strategically important goods export, import and transit is extremely important.

A harmonised adaptation of laws according to the rules and directives of the *EU* is necessary both in connection with the movement of the Baltic States to the *EU* and for the formation of a free trade region.

Export efficiency is calculated as the ratio of the good parity of an according good or a group of goods and the nominal rate of the US dollar to national currency (Latvian lat). Good parity calculation is based on the following formula:

$$PP^i = \frac{P^d (1 + tr)}{P^e (1 - t^e)}, \quad (1)$$

PP^i – good parity for the i good (lat/dollar);

- P^d – manufacturer's price for the exported good in national market;
 P^e – internal realisation price of the exported good;
 tr – portion of transportation expenses;
 t^e – rate of export duties.

The reduction of export combined with the increase of foreign debt and the expenses for it repayments makes a pre-condition for the decrease of country's credit rating and, as a circumstance, the rise of interest rates for foreign credits and, accordingly, the reduction of their total volume. Thus the marginal value of export can be determined as its growth with a tempo, which is not lower than the increase of foreign debt and the interest payments.

After the Bank of Latvia had established fixed bounds on the national currency to *SDR* it became more stable to any separate currency than it would be possible if it was bounded to one currency. The changes in the lat's rate to separate currencies that make *SDR* basket only depend on the fluctuations in the world's money market.

Fixed currency rate inflation in Latvia should be lower or at least not higher than the level of inflation in its main foreign trade partners in order to maintain the ability to compete in foreign markets. In a middle-term period Latvia will hardly be able to meet this condition, at least considering western countries. Thus the only way to maintain the ability to compete is to increase productivity.

The Bank of Latvia calculates the lat's real efficient rate to the currencies of 10 main trade partners. The real exchange rate of the lat is calculated as follows:

$$R_r = R \cdot \pi / p, \quad (2)$$

R_r – real exchange rate;

R – nominal exchange rate;

π – price index in the country, to the currency of which the exchange rate is being calculated;

p – national price index.

In 1998 it rose significantly against the Russian ruble and the Ukrainian grivna as these countries devaluated their currencies. Considering the western partners the real rate of lat remained relatively stable. In 1999 the real rate of lat to the currencies of the 10 main trade

partners rose by 4.7%, to the currencies of developed countries – by 7.3%, but to the currencies of developing countries it declined by 1.7%.

After Latvia becomes a member of the *EU* the next step will be the joining *European Monetary Union*. Thus the fixing of lat to EURO is inevitable. However, the Bank of Latvia has decided to keep lat fixed to the *SDR* basket until Latvia joins the *EU*.

The stability of national currency rate to the world main currencies combined with some other factors is a major determinant of foreign investment flow. In spite of both the Asian and Russian crises, in 1999 Latvia managed to attract a significant amount of foreign investment. Continuing consequent measures to better the business environment and to ensure macroeconomic stability, Latvia has successfully used the advantages of its relatively well-developed transit infrastructure and cheap, but skilled labour.

The volume of direct international investment increased from 22.5 mln Ls in 1992 to 1.099 mln Ls in the end of 1999 that made 453 Ls (777 USD) per capita. According to the ranking of *ERAB*, in the end of 1999 Latvia was the 4th between Central and East Europe and an countries considering the accrued direct investments, leaving the first three places for Hungary, Czech Republic and Estonia.

The portion of foreign investment in GDP is an important indicator that reflects the relative role of foreign investment in economic activity in general. In 1997 in Latvia this indicator made 9.3% of GDP, but in 1998 and 1999 it was 6.0%.

Direct foreign investment plays an important role in the coverage of the current account of the balance of payments. In 1997 direct foreign investment covered the deficit of current account by 152%, in 1998 – by 51%, but in 1999 – by 58%. In all, through the end of 1999, the biggest amount of foreign investment was made in the transport and connection sector (25% of the total amount), in finance (21%), in industry (20%) and in trade (16%).

In 1999 the biggest investment flow to Latvia was from Denmark (13.7%), the USA (9.7%), Germany (8.4%), Sweden (8.2%), Great Britain (7.3%) and Russia (7.3%).

In 2000 besides the stable governmental macroeconomic policy that meets the requirements of *ICF* and is oriented to the fulfilment of the *Maastricht Criterion* of the *EU*, there is the possibility that the Latvian government will carry out the measures to form a stable and development-oriented business environment which remain the main factor in drawing both foreign and local investment.

In 1999 the *Board of Foreign Investors in Latvia (BFI)* paid attention to the following problems:

- The availability of skilled labour, i.e., the bettering of educational system;
- Tax policy and administration;
- Transport infrastructure/Border crossings/Customs control;
- The elimination of corruption;
- The availability of long-term financing in local currency;
- The introduction of the activity plan in order to eliminate the administrative obstacles for the foreign investments flow to Latvia;
- The availability of the services provided by state institutions (Latvenergo, Rīgas Siltums etc.).

Taking into account the rise of competition for direct foreign investments among Central and East Europe an countries, in March, 2000 the *Cabinet of Ministers* approved the Plan "About the Support of Nationally Important Investment Projects" The Plan provides for the stimulation of important investment projects within the framework of the *EU* requirements in the following ways:

- Measures of labour training and the increasing of labour skills;
- The preparation of infrastructure;
- The use of fiscal stimulation in the field of high technologies.

The introduction of the Plan with its main principles based on a more efficient use of governmental assets, including the assets granted to the *State Investment Program*, could allow Latvia to successfully compete for investment projects in the field of high technologies.

The other measures, which are necessary for the attraction of significant amounts of foreign investments, are:

- A consequent and clear completion of privatisation;
- The stimulation of regional collaboration (in the field of energy, transport and capital market development);
- The stabilisation of law, mainly in the sphere of tax application, foreign trade and property law, and its further development and application;
- The bettering of the court system activity;
- The developing of financial market (market supervision, pension funds and mortgage lending);
- The implementation of anti-corruption program;

Significant governmental investment in the development and introduction of science and technologies.

The considered indicators connected with Latvia's foreign economic activity have their own marginal values, which change in accordance with national circumstances and the existing economic policy. The exceeding of these marginal levels leads to financial crisis, which prevents from the achievement of economic growth.

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Summary

The problem of security of a developing country within the world economy is directly connected with its success in achieving financial

stabilisation and in economic growth. Thus there are two major groups of possible threats to national economic security. The first group results from the necessity to stimulate foreign trade and to maintain a reasonable foreign trade balance. The second group of threats is connected with the stability of national currency and the volume of gold and currency reserves of a country.

The condition of payment balance of a country and the stability of national currency exchange rate to the world's main currencies determine such national economy indicators as foreign trade volume, foreign investment flow and, overall, the perspectives of economic growth. Each of these factors has its marginal values. The reduction of these values leads to such negative circumstances as inability of the country to repay foreign debt, destabilisation of national financial markets, including the possibility of a currency crisis, the reduction of imports below the critical level and a range of others.

A comparative analysis of foreign debt and export volume indicators of the Baltic States shows that the lowest percentage ratio of foreign debt to exports is in Estonia, but the highest one is in Lithuania (7.4% and 81.0% in 1999, accordingly). It is significant that in 1999 this ratio worsened remarkably in all three countries. This was connected with a significant reduction in the goods export of the Baltic States in that time period, which was, in its turn, greatly influenced by the negative impact of Russia's financial crisis.

In 1999 the export of Latvian goods declined by 5.7% in comparison with the previous year. Imports, in turn, declined even more (by 8.4%), resulting in a better trade balance. In 2000, however, the volume of Latvia's exported goods exceeded not only the level of 1999, but also the level of 1998 (pre-crisis). The negative result of Latvia's trade balance is partly covered by the positive net export of services.

A strategic task of economic policy is maintaining the level of exports and ensuring a stable rate of export growth. On 10th February, 1999 Latvia became a full member of World Trade Organisation. The norms of WTO include three main instruments of trade protection for the government to protect local manufacturers:

- Measures of national market protection;*
- Antidumping measures;*
- Compensation measures.*

Latvia is mainly oriented to the process of deepening integration with the European Union and with the countries, which are in the process of integration with the EU. A harmonised adaptation of laws

according to the rules and directives of the EU is necessary both in connection with the movement of the Baltic States to the EU and for the formation of a free trade region.

Thus the marginal value of export can be determined as its growth with a tempo, which is not lower than the increase of foreign debt and the interest payments. Fixed currency rate inflation in Latvia should be lower or at least not higher than the level of inflation in its main foreign trade partners in order to maintain the ability to compete in foreign markets. In 1999 the real rate of lat to the currencies of the 10 main trade partners rose by 4.7%, to the currencies of developed countries – by 7.3%, but to the currencies of developing countries it declined by 1.7%.

The stability of national currency rate to the world main currencies combined with some other factors is a major determinant of foreign investment flow. In the end of 1999 Latvia was the 4th among Central and East Europe an countries considering the accrued direct investments, leaving the first three places for Hungary, Czech Republic and Estonia. In 1997 the portion of foreign investment in GDP in Latvia made 9.3% of GDP, but in 1998 and 1999 it was 6.0%.

In 1999 the biggest investment flow to Latvia was from Denmark (13.7%), the USA (9.7%), Germany (8.4%), Sweden (8.2%), Great Britain (7.3%) and Russia (7.3%).

In March 2000 the Cabinet of Ministers approved the Plan "About the Support of Nationally Important Investment Projects" The Plan provides for the stimulation of important investment projects within the framework of the EU requirements in the following ways:

Measures of labour training and the increasing of labour skills;

The preparation of infrastructure;

The use of fiscal stimulation in the field of high technologies.

The considered indicators connected with Latvia's foreign economic activity have their own marginal values, which change in accordance with national circumstances and the existing economic policy. The exceeding of these marginal levels leads to financial crisis, which prevents from the achievement of economic growth.

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PRODUCTION AND SERVICE DEPARTMENTS DIRECT AND INDIRECT COST SENSITIVITY ANALYSIS

Through processing of a firm's management accounting information for the purpose of understanding the complex economy of the firm for management decisions is a major issue now that informatics is in a state of unprecedented development.

Such deep processing of the information is only possible with the help of mathematical modelling, where equality and inequality systems play a major role.

As it is well known, one of the basic problems in management accounting is the determination of the total costs and their allocation. Linear system information analysis techniques including the Tucker-Balinski pivot transformation method as described in book "Яунземс Андрей. Математика для экономических наук. Общий курс. Латвийский Университет, 1993" are used in this work. The problems of sensitivity analysis of primary and total costs of production and of service are examined. The AILA educational-scientific software program based on Excel and Visual Basic developed by the authors is used for the calculations.

The purpose of this research is to develop and improve calculation and analysis methods of total cost allocation, which are discussed, for example, in books [1], [2], [3]. Using analogy between allocation of firm's total costs and *input-output* analysis of national economics, we transfer some of results of *input-output* analysis to the given management accounting problem. For average cost informative analysis including sensitivity analysis, linear system information analysis techniques and the Tucker-Balinski pivot transformation method are used in book [5]. Theoretical concepts are illustrated by examples where *Microsoft Excel* is used for calculations.

1. General concepts, equations, initial information.

1.1. Product allocation balance for a given period of time.

Let us assume that a firm has n departments. Every department produces only one product and every product is produced only by one department. Products are numbered 1, 2, ..., n and named first, second, n -th product.

In the manufacturing process departments are technologically interconnected: departments use products produced by another departments as production resources. Therefore departments make mutual supplies. In a given period of time total outputs, intermediate consumptions and final products can be described by product allocation balance presented as system of equations (1).

Product allocation balance for a given period of time (1).

$$x_{11} + x_{12} + \dots + x_{1n} + y_1 = x_1$$

$$x_{21} + x_{22} + \dots + x_{2n} + y_2 = x_2$$

$$x_{n1} + x_{n2} + \dots + x_{nn} + y_n = x_n$$

x_i is volume of i -th product or total output of i -th product;

x_{ij} is intermediate consumption of i -th product used to produce x_j units of j -th product;

y_i is final product of i -th product;

$i = 1, 2, \dots, n; j = 1, 2, \dots, n.$

Balance (1) usually reflects past events, it is an accounting balance for a past period of time. But it could also be a prognosis balance for a future period.

Using product allocation balance for a given period of time, we can construct $(n \times n)$ -matrix $A = (a_{ij})$. Matrix A is the matrix of firm's internal technological coefficients. They call matrix A as firm's internal technology.

$$\text{By definition } a_{ij} := \frac{x_{ij}}{x_j}$$

Therefore a_{ij} is amount of product i -th used to produce one unit of product j -th.

Often equation $x_{ij} = a_{ij} x_j$ is used.

The column A_i of matrix A is firm's output necessary to produce one unit of i -th product.

Of course, in production external resources are also used. We should stress that in this research matrix A is not a matrix of technological coefficients. No technology is considered in this research, only internal technology.

Note. Determination of matrix of internal technological coefficients is associated with fixing of standart costs and scientific rationing using ratio of resources defined in technical documentation and information about real use of products for an accounting period.

Thus, the base of planning, management and accounting is technological and statistical studies and calculations.

Product allocation balance (1) can be written as equality in a form of matrix (2).

$$(2) AX + Y = X \text{ or } (I - A)X = Y,$$

where

$X = (x_1 \ x_2 \ \dots \ x_n)^T$ is the $(n \times 1)$ -total output vector;

$Y = (y_1 \ y_2 \ \dots \ y_n)^T$ is the $(n \times 1)$ -final product vector;

$AX = (a_{11}x_1 + a_{12}x_2 + \dots + a_{1n}x_n \quad a_{21}x_1 + a_{22}x_2 + \dots + a_{2n}x_n \quad \dots \quad a_{n1}x_1 + a_{n2}x_2 + \dots + a_{nn}x_n)^T$ is intermediate consumption of products as $(n \times 1)$ -vector;

Let symbol I represent an identity $(n \times n)$ -matrix.

If the system (1) is given, it is possible to construct matrix A and obtain system (2). And vice versa if system (2) is given it is possible to obtain balance (1).

But it would be a mistake to assume that system (1) is informatively equivalent to system (2). Still content influences the form and the form influences the content. Technological coefficients a_{ij} are more stable compared with volumes x_i , x_{ij} .

Use of system (2) allows larger-scale of analysis and prognosis.

Like balance (1) balance (2) also can be a reflection of the past periods; it can be accounting balance for a past accounting period. Main significance of balance (2) is analysis and prognosis, the firm is analyzed as a united system.

1.2. Primary costs and secondary costs. Concept of total costs. Product allocation balance for a given period of time.

We assume that in i -th department x_i unit of i -th product was produced in a period of time.

Product primary costs have a real content. Primary costs are costs which directly emerge when product x_i is produced and they are practically measurable. Primary costs consist of, for example, wage, depreciation, the purchased raw material costs etc. Primary costs can be measured directly in terms of money.

The primary costs of product x_i do not include costs of self-made products x_{1i} , x_{2i} , ..., x_{ni} , used to produce x_i . Self manufactured materials, goods and services make secondary costs.

It is logically to define total costs of product x_i as a sum of product x_i primary costs and total costs of products x_{1i} , x_{2i} , ..., x_{ni} used to produce x_i . Hence, total costs of product x_i is defined by total costs of products x_{1i} , x_{2i} , ..., x_{ni} where product x_i is included. Total costs cannot be measured, these are calculated costs.

In order to calculate total costs, the average total costs and average primary costs are used. It can be written as a matrix equality (3), which is a dual equality for equality (2).

$$(3) \quad ATC = APC + A^T [ATC] \quad \text{or} \quad (I - A^T) [ATC] = APC,$$

where:

$ATC = (ATC_1 \quad ATC_2 \quad \dots \quad ATC_n)^T$ is average total cost $(n \times 1)$ -vector;

$APC = (APC_1 \quad APC_2 \quad \dots \quad APC_n)^T$ is average primary cost $(n \times 1)$ -

vector;

$(n \times 1)$ -vector $A^T [ATC] = (A_{11} ATC_1 + A_{12} ATC_2 + \dots + A_{1n} ATC_n \quad A_{21} ATC_1 + A_{22} ATC_2 + \dots + A_{2n} ATC_n \quad \dots \quad A_{n1} ATC_1 + A_{n2} ATC_2 + \dots + A_{nn} ATC_n)^T$

The i -th component of vector $A^T [ATC]$ is sum of total costs of products used to produce one unit of i -th product.

Equations (2) and (3) can be written as a table 1:

Table 1.

	X	
Y	I - A	ATC
	APC	

Scalar form of table 1 is written as a table 2.

Table 2.

	x_1	x_2	...	x_n	
Y_1	$1-a_{11}$	$-a_{12}$		$-a_{1n}$	ATC_1
Y_2	$-a_{21}$	$1-a_{22}$		$-a_{2n}$	ATC_2
...
Y_n	$-a_{n1}$	$-a_{n2}$		$1-a_{nn}$	ATC_n
	APC_1	APC_2	...	APC_n	

1.3. Two basic identities.

Theorem 1. Total primary costs of total output X are equal with total costs of the final product Y :

$$(4) \text{ APC } X = \text{ATC } Y$$

Proof. Multiplying both sides of equation $Y = X - AX$ by vector ATC , we obtain

$$\text{ATC } Y = \text{ATC } X - \text{ATC } AX = \text{ATC } X - A^T[\text{ATC}] X = (\text{ATC} - A^T[\text{ATC}]) X = \text{APC } X.$$

Algebraic identity is valid for every single kind of product:

$$(5) \text{ APC}_i x_i + (\text{ATC}_i - \text{APC}_i) x_i = \text{ATC}_i y_i + \text{ATC}_i \cdot (x_i - y_i),$$

which allows a clear economic interpretation.

Really, equation's (5) left side is a sum of primary and secondary cost of total output x_i . Therefore it is a total cost of total output x_i .

Equation's (5) right side displays total costs of final product y_i and total costs of intermediate consumption $x_i - y_i$. Therefore this sum also equals the total costs of total output x_i .

1.4. Calculation of total output and average total costs.

Using theoretical results from book [4].

Definition 1. Non-negative $(n \times n)$ -matrix A is called productive if there is a vector $X > 0$ where $X - AX > 0$.

Note, that if internal technological matrix A is constructed from the observed balance (1) with positive total output X and positive final product Y , matrix A is productive. However, in practice the components of vector Y , which represents intermediate products, equal to zero. In this case the question about productivity of internal technology is still open. Even well known productivity criterion of Brauer-Solou may not give the result.

Productivity of internal technology can be determined by the following theorem [4].

Theorem 2. Theorem about productive technology. Non-negative $(n \times n)$ -matrix A is productive then and only then if the matrix $I-A$ has a non-negative inverse matrix $(I-A)^{-1}$

Let us assume that the non-negative inverse matrix $(I-A)^{-1} S$ exists.

Systems (2), (3) can be written as

$$(6) (I - A) X = Y \Leftrightarrow Y = SX$$

$$(7) (I - A) [ATC] = APC \Leftrightarrow ATC = S^T [APC].$$

Equality of matrixes $Y = SX$, $ATC = S^T [APC]$ can be written as it is shown in the table 3.

Table 3.

	Y	
X	S	APC
	ATC	

Table 3 in scalar form is shown as the table 4.

Table 4.

	y_1	y_2	...	Y_n	
x_1	S_{11}	S_{12}		S_{1n}	APC_1
x_2	S_{21}	S_{22}		S_{2n}	APC_2
...
x_n	S_{n1}	S_{n2}		S_{nn}	APC_n
	ATC_1	ATC_2	...	ATC_n	

Table 4 allows to calculate the total output X that corresponds to the given final product Y and average total costs that correspond to the given average primary costs.

Tables 5 and 6 give us a complex view about production and costs.

Product allocation balance is written in the table 5 and cost allocation balance is written in the table 6.

Table 5.

$a_{11} x_1$	$a_{12} x_2$	...	$a_{1n} x_n$	y_1	x_1
$a_{21} x_1$	$a_{22} x_2$	...	$a_{2n} x_n$	y_2	x_2
...	
$a_{n1} x_1$	$a_{n2} x_2$	...	$a_{nn} x_n$	y_n	x_n

Table 6.

$ATC_1 \cdot a_{11} x_1$	$ATC_1 \cdot a_{12} x_2$	...	$ATC_1 \cdot a_{1n} x_n$	$ATC_1 \cdot y_1$	$ATC_1 \cdot x_1$
$ATC_2 \cdot a_{21} x_1$	$ATC_2 \cdot a_{22} x_2$	...	$ATC_2 \cdot a_{2n} x_n$	$ATC_2 \cdot y_2$	$ATC_2 \cdot x_2$
...					...
$ATC_n \cdot a_{n1} x_1$	$ATC_n \cdot a_{n2} x_2$	...	$ATC_n \cdot a_{nn} x_n$	$ATC_n \cdot y_n$	$ATC_n \cdot x_n$
$APC_1 \cdot x_1$	$APC_2 \cdot x_2$	...	$APC_n \cdot x_n$		
$ATC_1 \cdot x_1$	$ATC_2 \cdot x_2$	...	$ATC_n \cdot x_n$		

1.5. Process of iterations to compute total output and average total costs.

To the given final product Y an appropriate total output vector X and to given average primary cost vector APC an appropriate average total cost vector ATC in practice often are calculated using process of iterations.

Let us assume that vector Y is given. Process of iterations is defined with equation (8):

$$(8) Y_k = Y + AY + A^2Y + \dots + A^k Y; k = 1, 2,$$

Analogically, if vector APC is given, process of iterations is defined with equation (9):

$$(9) APC_k = APC + A^T[APC] + (A^T)^2[APC] + \dots + (A^T)^k[APC]; k = 1, 2, \dots$$

Process of iteration (8), (9) has a clear economic interpretation and therefore it is widely used in practice. But there are no references about the process convergence in literature sources on management accounting. Convergence is taken for granted.

Theorem 3. Convergence sufficient conditions [4]. If A is productive technology, then

$$(10) \lim_{k \rightarrow \infty} Y_k = X; \lim_{k \rightarrow \infty} APC_k = ATC.$$

1.6. Elements of informative analysis for output and costs. Sensitivity analysis.

Using pivot transformations in table 1 and educational-scientific software program AILA developed by the authors, extensive total output and average cost informative analysis is possible, including parameter and sensitivity analysis. *Microsoft Excel* table links give us a possibility of empirical sensitivity analysis, which was impossible before computer age.

In this work only few sensitivity analysis indicators will be examined: derivatives and elasticity matrixes.

Let symbol $(TC)'_{PC}$ represent the derivative of total costs TC with respect to the primary costs PC, which can be written as jacobian – $(n \times n)$ -matrix.

Let symbol $(TC)^{el}_{PC}$ represent the elasticity of total costs TC with respect to the primary costs PC, and write it in a form of $(n \times n)$ -matrix.

From basic equations we obtain the following relations:

$$(11) (TC_i)'_{PC_j} = (TC_i)'_{APC_j} (APC_j)'_{PC_j} = \frac{s_{ji} \cdot X_j}{X_j}; i, j = 1, 2, \dots, n.$$

$$(12) (TC_i)^{el}_{PC_j} = \frac{s_{ji} \cdot APC_j}{S \cdot APC}; i, j = 1, 2, \dots, n.$$

Let symbol $(ATC)'_{APC}$ represent the derivative of the average total costs ATC with respect to the average primary costs APC, which can be written as jacobian – $(n \times n)$ -matrix.

Let symbol $(ATC)^{el}_{APC}$ represent the elasticity of the average total costs ATC with respect to the average primary costs APC and write it as a $(n \times n)$ -matrix.

From basic equations we obtain the following relations:

$$(13) (ATC_i)'_{APC_j} = s_{ji}; i, j = 1, 2, \dots, n.$$

$$(14) (ATC_i)_{APC_j}^{el} = \frac{S_{ji} \cdot APC_j}{S_i \cdot APC} = (TC_i)_{PC_j}^{el}; i, j = 1, 2, \dots, n.$$

Let symbol $(ATC)'_A$ represent the derivative of the average total costs ATC with respect to the matrix of internal technological coefficients A and write it in a form of $(4n \times n)$ -matrix.

Let symbol $(ATC)_{A}^{el}$ represent the elasticity of the average total cost ATC with respect to the matrix of internal technological coefficients A and write it in a form of $(4n \times n)$ -matrix.

Those indicators are calculated using method of numeral differentiation and using *Microsoft Excel* table links.

The above-mentioned derivatives and elasticities allow us to evaluate changes of total costs and average total costs, if primary costs, average primary costs or technological coefficients change.

That kind of information is useful in decision-making process planning investments in order to decrease average primary costs or technological coefficients.

2. Example.

2.1. Initial information and total cost calculations.

Let us assume that a firm has 4 departments.

Table 7 depicts balance of product allocation and information about primary costs in a given period of time. Average primary costs are calculated.

Table 7.

X ₁	X ₂	X ₃	X ₄	Y	X	PC	APC
0	35	12	15	300	362	240	0.6630
27	16	50	25	400	518	150	0.2896
12	30	20	10	0	.72	85	1.1806
0	0	0	0	100	100	50	0.5000

From the table 7 matrix A is derived (table 8). Scientific argumentation of matrix A is connected with rationing, technological and statistical calculations.

Table 8.

A =	0.0000	0.0676	0.1667	0.1500
	0.0746	0.0309	0.6944	0.2500
	0.0331	0.0579	0.2778	0.1000
	0.0000	0.0000	0.0000	0.0000

Table 9 is a special case of the table 2.

Table 9.

	x1	x2	x3	x4	
Y1	1.0000	-0.0676	-0.1667	-0.1500	ATC1
Y2	-0.0746	0.9691	-0.6944	-0.2500	ATC2
Y3	-0.0331	-0.0579	0.7222	-0.1000	ATC3
Y4	0.0000	0.0000	0.0000	1.0000	ATC4
	APC1	APC2	APC3	APC4	

Technology A is productive, table 10 is a special case of the table 4.

Table 10.

	y1	Y2	y3	y4	
x1	1.0174	0.0901	0.3215	0.2073	APC1
x2	0.1186	1.1053	1.0901	0.4031	APC2
x3	0.0562	0.0928	1.4868	0.1803	APC3
X4	0.0000	0.0000	0.0000	1.0000	APC4
	ATC1	ATC2	ATC3	ATC4	

Table 11 shows the vector of average primary cost APC and the vector of calculated average total costs ATC.

Table 11.

APC	ATC
0.6630	0.7752
0.2896	0.4893
1.1806	2.2840
0.5000	0.9670

Table 12 is a special case of the table 6. Table 12 gives extensive information about primary and total costs.

Explanation: We used an operation with matrix represented by symbol *.

It can be illustrated by the example:

$$(x_1 \ x_2 \ x_3) * (y_1 \ y_2 \ y_3) := (x_1 \cdot y_1 \ x_2 \cdot y_2 \ x_3 \cdot y_3).$$

Table 12.

	ATC*A ₁ x ₁	ATC*A ₂ x ₂	ATC*A ₃ x ₃	ATC*A ₄ x ₄	ATC*Y	ATC*X
	0.0000	27.1318	9.3023	11.6279	232.5587	280.6208
	13.2124	7.8296	24.4674	12.2337	195.7393	253.4824
	27.4084	68.5210	45.6807	22.8403	0.0000	164.4504
	0.0000	0.0000	0.0000	0.0000	96.7020	96.7020
APC*X	240.0000	150.0000	85.0000	50.0000	525.0000	
ATC*X	280.6208	253.4824	164.4504	96.7020		795.2557

2.2. Elements of sensitivity analysis.

Derivative of total costs TC with respect to the primary costs PC, written in jacobian – (4×4)-matrix, is displayed in the table 13.

Table 13.

	PC ₁	PC ₂	PC ₃	PC ₄
(TC ₁)' PC _j	1.0174	0.0829	0.2826	0.0000
(TC ₂)' PC _j	0.1290	1.1053	0.6674	0.0000
(TC ₃)' PC _j	0.0639	0.1515	1.4868	0.0000
(TC ₄)' PC _j	0.0573	0.0778	0.2504	1.0000

Elasticity of total costs TC with respect to the primary costs PC, written as a (4×4)-matrix, is displayed in the table 14.

Table 14.

	PC ₁	PC ₂	PC ₃	PC ₄
(TC ₁) ^{el} PC _j	0.8701	0.0443	0.0856	0.0000
(TC ₂) ^{el} PC _j	0.1221	0.6541	0.2238	0.0000
(TC ₃) ^{el} PC _j	0.0933	0.1382	0.7685	0.0000
(TC ₄) ^{el} PC _j	0.1421	0.1207	0.2201	0.5171

Derivative of average total costs ATC with respect to the average primary costs APC, written as a jacobian – (4×4)-matrix, is displayed in the table 15.

Table 15.

	APC ₁	APC ₂	APC ₃	APC ₄
$(ATC_1)'_{APC_j}$	1.0174	0.1186	0.0562	0.0000
$(ATC_2)'_{APC_j}$	0.0901	1.1053	0.0928	0.0000
$(ATC_3)'_{APC_j}$	0.3215	1.0901	1.4868	0.0000
$(ATC_4)'_{APC_j}$	0.2073	0.4031	0.1803	1.0000

As we saw previously, elasticity of average total costs ATC with respect to the average primary costs APC equal with elasticity of total costs TC with respect to primary costs PC, displayed in the table 14.

Derivative of average total costs ATC with respect to the internal technological coefficient matrix A, written in a form (16×4)-matrix, displayed in the table 16.

Table 16.

$(ATC_1)'_A$		0.0919	0.0436	0.0000
	0.4979	0.0580	0.0275	0.0000
	2.3237	0.2708	0.1284	0.0000
$(ATC_2)'_A$		0.8568	0.0719	0.0000
	0.0441	0.5409	0.0454	0.0000
	0.2059	2.5245	0.2119	0.0000
$(ATC_3)'_A$		0.8451	1.1526	0.0000
	0.1573	0.5335	0.7276	0.0000
	0.7342	2.4899	3.3959	0.0000
$(ATC_4)'_A$		0.3125	0.1398	0.7752
	0.1014	0.1973	0.0882	0.4893
	0.4735	0.9207	0.4118	2.2840

Elasticity of average total costs ATC with respect to the internal technological coefficient matrix A, written as a (16×4) -matrix, displayed in the table 17.

Table 17.

$(ATC_1)_A^{el}$		0.0080	0.0094	0.0000
	0.0479	0.0023	0.0246	0.0000
	0.0994	0.0202	0.0460	0.0000
$(ATC_2)_A^{el}$		0.1183	0.0245	0.0000
	0.0067	0.0341	0.0644	0.0000
	0.0139	0.2988	0.1203	0.0000
$(ATC_3)_A^{el}$		0.0250	0.0841	0.0000
	0.0051	0.0072	0.2212	0.0000
	0.0107	0.0631	0.4130	0.0000
$(ATC_4)_A^{el}$		0.0218	0.0241	0.1202
	0.0078	0.0063	0.0634	0.1265
	0.0162	0.0551	0.1183	0.2362

Note: blank cells in the tables 16, 17 mean that the technology does not use the associated product as resource in production of another corresponding product.

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Summary

1. *Problems of management economics are new for Latvia. Cost allocation tasks, decision-making where limited factors exist, decision-making under uncertainty all these problems can be studied and solved, applying mathematical model and methods of informative analysis.*
2. *Calculation and sensitivity analysis of the total average cost can be successfully performed by pivot transformations of linear equations system.*
3. *In the sensitivity analysis of average total costs derivatives and elasticities are very expressive indicators that are systematised in the form of matrix.*
4. *In this research we examine some problems associated with the total cost calculation and indicators of sensitivity analysis. In order to use the theoretical results in practice scientific normative basis is required.*

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CONSTRUCTION, MANAGEMENT AND PROTECTION OF IMMUNIZED FIXED INCOME SECURITIES PORTFOLIOS

Darbā izmantotas divas imunizēta fiksēta ienākuma vērtspapīru portfeļa konstruēšanas, vadības un aizsardzības metodes.

A. Ar Teilora formulas palīdzību. Izmanto plūsmas "aktīvi mīnus saistības" pašreizējās vērtības pirmās kārtas un augstāku kārtu atvasinājumus pēc ienesīguma. Pirmās kārtas atvasinājumu pielīdzina nullei, otrās kārtas atvasinājumu maksimizē.

B. Ar integrāļa palīdzību. Maksimizē laukumus zem plūsmas "aktīvi mīnus saistības" pašreizējās vērtības grafika virs ienesīguma ass segmentiem.

Abas metodes aprobētas ar dažādiem ienesīguma likmju maiņas scenārijiem.

Aprēķini veikti ar Microsoft Excel programmu Solver

Abstract

Two immunized asset cash flow construction techniques using linear programming are investigated and compared in this work.

A. The conventional techniques using Taylor's formula. We are using the first and higher derivatives of the cash flow's "assets minus liabilities" present value at yield. The conditions: the first derivative equals zero, the second order derivative is maximized.

B. Techniques proposed by the authors using the integral. We maximize the areas under the present value of the cash flow "asset minus liabilities" curve below intervals of yield axis.

The second method is more general than the first one.

These methods are applied in portfolio management and protection against interest risk. Both methods are tested using different yield change scenarios.

The presentation of the material is illustrated with an example calculated by Microsoft Excel.

1. Immunised fixed income portfolio construction methods.

1.1. Duration and volatility.

The given cash flow is $C = (t_1, c_1), (t_2, c_2), \dots, (t_n, c_n)$.

The present value of cash flow with a given force of growth δ is:

$$V(C, \delta) = c_1 \cdot e^{-\delta \cdot t_1} + c_2 \cdot e^{-\delta \cdot t_2} + \dots + c_n \cdot e^{-\delta \cdot t_n}$$

First order derivative is:

$$V'(C, \delta) = \frac{dV(C, \delta)}{d\delta} = -(t_1 \cdot c_1 \cdot e^{-\delta \cdot t_1} + t_2 \cdot c_2 \cdot e^{-\delta \cdot t_2} + \dots + t_n \cdot c_n \cdot e^{-\delta \cdot t_n}).$$

$$\text{Therefore volatility } (C, \delta) := \frac{dV(C, \delta)}{d\delta \cdot V(C, \delta)} =$$

$$= -(t_1 \cdot \frac{c_1 \cdot e^{-\delta \cdot t_1}}{V(C, \delta)} + t_2 \cdot \frac{c_2 \cdot e^{-\delta \cdot t_2}}{V(C, \delta)} + \dots + t_n \cdot \frac{c_n \cdot e^{-\delta \cdot t_n}}{V(C, \delta)}) =: -\text{duration } (C, \delta).$$

In order to simplify our presentation and calculations, let us assume that the length of the given cash flow time intervals equals to 1, therefore: $t_1 = 1, t_2 = 2, \dots, t_n = n$.

And so the cash flow is: $C = (c_1, c_2, \dots, c_n)$.

$$\text{Then } V(C, \delta) = \sum_{k=1}^n c_k \cdot e^{-\delta \cdot k}, \text{ or } V(C, \delta) = \sum_{k=1}^n c_k \cdot v^k,$$

where $v := e^{-\delta}$.

The derivatives of the given cash flow are:

$$V'(C, \delta) = \sum_{k=1}^n k \cdot c_k \cdot v^k \quad V''(C, \delta) = \sum_{k=1}^n k^2 \cdot c_k \cdot v^k$$

$$V'''(C, \delta) = - \sum_{k=1}^n k^3 \cdot c_k \cdot v^k$$

1.2. The immunised asset flow construction problem.

Let us assume that we have the following liabilities flow

$$L = (l_1 \quad l_2 \quad \dots \quad l_n).$$

Now we focus on assets flow

$$A = (a_1 \quad a_2 \quad \dots \quad a_n),$$

that enables us to make payments l_j .

We construct the asset flow as a portfolio that consists of m separate cash flows

$$B_1 = (b_{11} \quad b_{12} \quad \dots \quad b_{1n})$$

$$B_2 = (b_{21} \quad b_{22} \quad \dots \quad b_{2n})$$

$$B_m = (b_{m1} \quad b_{m2} \quad \dots \quad b_{mn}).$$

Every single cash flow B_1, B_2, \dots, B_m can be interpreted as a fixed income security, for example, bond that is available for the investor.

Let us assume that at the moment the opportunity cost of capital is δ_0 .

Then the present value of the liability flow is $V(L, \delta_0)$.

The present values of the given flows B_1, B_2, \dots, B_m are denoted as $V(B_1, \delta_0), V(B_2, \delta_0), \dots, V(B_m, \delta_0)$.

We have a sum of money at our disposal that equals the present value of liability flow $V(L, \delta_0)$.

Using this sum, we construct the asset flow A as the portfolio that consists of flows

B_1, B_2, \dots, B_m we purchase x_1 units of flow B_1, x_2 units of flow B_2, \dots, x_m units of flow B_m .

Therefore the constructed asset flow A we can denote as:

$$A = x_1 B_1 + x_2 B_2 + \dots + x_m B_m.$$

According to the portfolio construction the present value of asset flow equals the present value of liabilities flow:

$$V(A, \delta_0) = x_1 \cdot V(B_1, \delta_0) + x_2 \cdot V(B_2, \delta_0) + \dots + x_m \cdot V(B_m, \delta_0) = V(L, \delta_0).$$

In this model we assume that every single cash flow B_i can be freely divided. It means that x_1, x_2, \dots, x_m – non-negative real numbers.

Our objective is to construct the asset flow so that the present value $V(A, \delta) - V(L, \delta)$ of the flow "assets minus liabilities" would be non-negative if the yield δ fluctuates around the initial value δ_0 .

This is the very essence of the immunisation problem.

1.3. Immunisation using Taylor's formula.

Conventionally the Taylor formula is applied for immunisation of the portfolio [1]:

$$V(A, \delta) - V(L, \delta) = [V(A, \delta_0) - V(L, \delta_0)] + [V'(A, \delta_0) - V'(L, \delta_0)](\delta - \delta_0) + 0.5 [V''(A, \delta_0) - V''(L, \delta_0)](\delta - \delta_0)^2 + o[(\delta - \delta_0)^2].$$

Asset flow is constructed so that the following conditions are fulfilled:

- (1) $V(A, \delta_0) = V(L, \delta_0)$
- (2) $V'(A, \delta_0) = V'(L, \delta_0)$.

Then the following equality is true

$$V'(A, \delta_0)/V(A, \delta_0) = V'(L, \delta_0)/V(L, \delta_0) =: \tau.$$

Conditions (1), (2) have a clear financial interpretation. This means, the asset flow is constructed so that:

First, the present value of asset flow equals the present value of liabilities flow;

Second, duration of asset flow equals the duration of liabilities flow.

To satisfy the second condition, it is enough and necessary that duration at least one of the flows B_1, B_2, \dots, B_m is bigger than duration of the liabilities flow.

If the two above-mentioned conditions are true, then

$$V(A, \delta) - V(L, \delta) = 0.5 [V''(A, \delta_0) - V''(L, \delta_0)](\delta - \delta_0)^2 + o[(\delta - \delta_0)^2].$$

Using linear programming, non-negative numbers x_1, x_2, \dots, x_m should be calculated so that $V''(A, \delta_0) - V''(L, \delta_0)$ value is maximal.

The asset portfolio constructed by this method is immunised.

Anti-immunisation and different levels of immunisation were discussed in the paper [3].

1.4. Information for optimisation task.

Let us formulate optimisation task using vectors and matrixes: $L, B, D, D^{(k)}, X$.

l_1	l_2	...	l_n
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Table 1.1. $(1 \times n)$ - vector-row L . Let us denote liability vector as L .

$b_{1,1}$	$b_{1,2}$...	$b_{1,n}$
$b_{2,1}$	$b_{2,2}$...	$b_{2,n}$
...
$b_{m,1}$	$b_{m,2}$	...	$b_{m,n}$

Table 1.2. $(m \times n)$ - matrix $B = (b_{ij})$. Let us denote B as bonds cash flow matrix. Rows of matrix B are cash flows B_1, B_2, \dots, B_m .

v	v^2	...	v^n
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Table 1.3. $(1 \times n)$ - vector-row D , or discount vector. $v := e^{-\delta}$

$1^k v^1$	$2^k v^2$...	$n^k v^n$
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Table 1.4. $(1 \times n)$ - vector-row $D^{(k)}$, which will be denoted as the discount k -th derivative vector $k \in \{1, 2, 3, 4, \dots\}$.

x_1	x_2	...	x_m
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Table 1.5. $(m \times 1)$ - vector-column X . Let us denote vector X as the content of asset portfolio.

In these denotations:

$$DB^T X = V(A, \delta); D^{(1)} B^T X = V'(A, \delta), \dots, D^{(k)} B^T X = V^{(k)}(A, \delta)$$

$$DL^T = V(L, \delta); D^{(1)} L^T = V'(L, \delta), \dots, D^{(k)} L^T = V^{(k)}(L, \delta).$$

1.5. Immunisation using integral.

We have not found this immunisation method in any financial literature sources so far. Therefore we claim copyrights. Two

immunisation methods: the conventional using duration, and the proposed immunisation using integral are compared in the paper [4]. It turns out that conventional immunisation using Taylor's formula can be obtained as a narrow special case of the one offered by the authors.

Our objective is to maximize area under the present value $V(A-L)$ of the cash flow "asset minus liabilities" curve below intervals of yield axis: $[\delta_0 - 0.01; \delta_0]$, $[\delta_0; \delta_0 + 0.01]$.

For these purposes, let us express $V(A-L)$ as function of δ and X :

$$V(A-L) = \sum_{j=1}^n \left(\sum_{k=1}^m x_k b_{kj} - l_j \right) e^{-\delta j} = D(B^T X - L) =: f(\delta, X).$$

Let's calculate left side square LSQ and right side square RSQ as integrals:

$$\text{LSQ} \int_{\delta_0 - 0.01}^{\delta_0} f(\delta, X) d\delta = D_{\text{LSQ}} (B^T X - L), \text{RSQ}$$

$$\int_{\delta_0}^{\delta_0 + 0.01} f(\delta, X) d\delta = D_{\text{RSQ}} (B^T X - L),$$

where D_{LSQ} , D_{RSQ} are vectors-rows, that are given in tables 1.6, 1.7.

$$v_0 = e^{-\delta_0}$$

$\frac{1}{1} v_0 (e^{0.01 \cdot 1} - 1)$	$\frac{1}{2} v_0 (e^{0.01 \cdot 2} - 1)$		$\frac{1}{n} v_0 (e^{0.01 \cdot n} - 1)$
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Table 1.6. $(1 \times n)$ – vector-row D_{LSQ} , denoted as left side integral-discount vector.

$\frac{1}{1} v_0 (1 - e^{0.01 \cdot 1})$	$\frac{1}{2} v_0 (1 - e^{0.01 \cdot 2})$		$\frac{1}{n} v_0 (1 - e^{0.01 \cdot n})$
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Table 1.7. $(1 \times n)$ – vector-row D_{RSQ} , denoted as right side integral-discount vector.

We determine frontier of the set

$$\{(LSQ(X), RSQ(X) \mid DB^T X = DL^T, X \geq 0\}.$$

Of course, we are in particular interested in Pareto frontier [4].

2. Management and protection of immunised fixed income securities portfolio.

The purpose of this study: to compare how efficient are the two immunisation methods in management and protection portfolio: the conventional – using immunisation by Taylor's formula, and the second proposed by the authors using integrals.

Both immunisation methods were tested by several examples. Examples for management and protection of security portfolios were formed selecting different scenarios of yield variations. Scenarios were modelled applying immunisation by duration and by immunisation maximising areas.

While making calculations, we study how to manage security portfolio so that the present value of the flow "assets minus liabilities" calculated with the existing yield is favourable for the portfolio manager in the course of time. We should ensure that it is possible to settle the undertaken liabilities.

Management and protection process for portfolios is performed in the following way.

In the very beginning the immunised according to the existing yield portfolio is bought.

At the end of every year the portfolio is sold according to the yield that has stabilised in the financial market at that moment. The liabilities are settled (if any present) and a new immunised portfolio is bought.

Applying the immunisation with integral we propose the so-called forecast-immunisation.

We choose a scenario of the yield change. Then we imitate the actions of the manager.

We consider two manager action scenarios. The first – the extremely optimistic: the investor always makes a correct prognosis about yield changes; the second – the extremely pessimistic: the prognoses of the investor are never true.

3. Example of portfolio management and protection with forecast-immunisation using integrals.

Example. $n = 10$, $m = 12$.

Immunisation research is done at the yield $\delta_0 = 0.12$; the respective discount factor is

$$v_0 = e^{-0.12}$$

Information in table 3.1:

(1×10) – matrix L – liability cash flow, (12×10) – matrix B – given cash flows for portfolio construction.

Duration and present values of the cash flows are calculated at the interest rate $\delta_0 = 0.12$.

Years	1	2	3	4	5	6	7	8	9	10	duration	value
L	0	50000	0	100000	0	300000	0	100000	0	0	5.28	285524.7
B1	1000	0	0	0	0	0	0	0	0	0	1.00	886.92
B2	20	1020	0	0	0	0	0	0	0	0	1.98	820.10
B3	25	25	1025	0	0	0	0	0	0	0	2.92	756.96
B4	27	27	1027	0	0	0	0	0	0	0	2.91	761.70
B5	30	30	30	1030	0	0	0	0	0	0	3.79	708.48
B6	35	35	35	35	1035	0	0	0	0	0	4.59	672.67
B7	40	40	40	40	40	1040	0	0	0	0	5.29	647.78
B8	45	45	45	45	45	45	1045	0	0	0	5.90	632.29
B9	50	50	50	50	50	50	50	1050	0	0	6.40	624.90
B10	53	53	53	53	53	53	53	1053	0	0	6.35	639.42
B11	55	55	55	55	55	55	55	55	1055	0	6.82	624.48
B12	60	60	60	60	60	60	60	60	60	1060	7.15	630.05

Table 3.1.

Let us consider some yield change scenario that is described in the table 3.2. The first row denotes number of years, second row denotes the respective yield δ .

Year	0	1	2	3	4	5	6	7	8
yield δ	0.12	0.13	0.12	0.11	0.10	0.11	0.12	0.13	0.13

Table 3.2. Yield change scenario.

The results of portfolio management and protection will be illustrated by the graph of present value NPV(δ) of the flow "assets minus liabilities". The broken line represents NPV(δ) graph at the moment of construction of the portfolio. The continuous line represents the same NPV(δ) after one year before the portfolio is sold. The continuous line is

always located above the broken line because the discount terms for the sums of cash have decreased by one year.

Let us study forecast-immunisation. We consider two scenarios of manager behavior. In the first scenario the manager has perfectly forecasted the yield change. If the rate grows the immunisation is done with the condition $RSQ = 2 \cdot LSQ$. If the rate decreases, immunisation is done with the condition $LSQ = 2 \cdot RSQ$. In this case the immunisation functions very efficiently and the manager receives profit.

In the second scenario manager's forecasts are always wrong. When he makes immunisation under the condition $RSQ = 2 \cdot LSQ$ forecasting increase of the rate, the rate actually decreases. If the manager makes the immunisation under the condition $LSQ = 2 \cdot RSQ$, the rate actually increase. However, also in this unfavourable situation the immunisation still works and the manager can settle liabilities even with a profit.

The process of portfolio management for the first manager behaviour scenario is shown in the figures 1, 2, 3, 4, 5, 6, 7

The process of portfolio management for the second manager's behaviour scenario is shown in the figures 8, 9, 10, 11, 12, 13, 14.

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Summary

- *Results of calculation show that both immunisation methods work well.*
- *The conventional immunisation that applies the concept of duration and is based on Taylor's formula is qualified as a special narrow case of immunisation methods by integral proposed by the authors.*
- *Immunisation method using integral is a flexible one. It can be varied in the forms of, for instance, $RSQ = 2 \cdot LSQ$ or $LSQ = 2 \cdot RSQ$. These immunisation forms can be adjusted to the forecasts on yield changes. Thus, immunisation with integral has advantages if one wants to perform the forecast-immunisation.*
- *The method of portfolio management and protection that is based on the concept of immunisation is such that fluctuations of yield are beneficial for the manager. The bigger are the fluctuations of yield, the bigger is the end value of the flow "assets minus liabilities". If the yield remains constant, the end value of the flow "assets minus liabilities" equals zero.*

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CORPORATE INTEREST RATE RISK EXPOSURE AND HEDGING MOTIVES

Riska izpausme parasti tiek novērota kā firmas vērtību samazināšanās saskaņā ar izmaiņām biznesa vidē. Raksturīgi, ka viens no vissvarīgākajiem avotiem firmu vērtību zudumiem tiek definēts kā finansu jeb tirgus risks. Šie finansu riski parasti ir procentu likmes, valūtas kurss, akciju un preču cenas u.c.

Risk is known as a volatility or uncertainty of risk resources. Risk exposure may be defined as reductions in firm value due to changes in the business environment. Typically, one of the most important sources of firm value loss is identified as (financial) market risks. These market risks are interest rates, exchange rates, equity prices and commodity prices. Current article is focused on interest rate risk exposure measurement and interest rate risk exposure hedging motives and activity in non-financial corporations. Interest rate risk management has been the subject of a number of recent empirical studies. Interest rate risk management in US firms has been examined with Block and Gallagher (1986), Dolde (1993), Nance et al. (1993), Bodnar et al. (1995) and Phillips (1995). Batten et al. (1994) studied interest rate risk management in Australian firms and Hakkarainen et al. (1997) studied it in Finnish firms (Hakkarainen et al. 1997).

Interest rate risk exposure

Interest rate risk exposure is sensitivity of firm value (performance) due to changes in interest rates. Changes in interest rates should have affect on firm value in 3 ways (assume that non-financial firm has not done financial investments):

1. Effect on costs of debt capital. Higher is the financial leverage (measured for example by debt ratio) of a firm the bigger should be the possible effect on firm value. Firms with higher financial leverage are more exposed to financial distress.

2. Effect on the required rate of return of shareholders. In case of increase in risk free interest rate shareholders the required rate of return increases and consequently has a negative effect on shareholder value (*stock price*).
3. Effect on operating profit (*earning before interest and taxes*) of the firm. Increase in interest rate usually diminishes the demand for products and services and therefore operating profit. Especially for real estate, cars and long term investment goods. Interest rate change can also affect on operating profit margin.

These 3 ways of effects may all together have a great economic effect on shareholder value of firm.

Interest rate risk exposure measurement

There are two commonly used principle approaches to interest rate risk exposure measurement:

- *Scenario analysis*
- *Value-at-risk (VaR) analysis*.

To the authors' opinion these methods can be implemented only in case of the first effect (on cost of debt capital). If we want to estimate total interest rate risk exposure of the firm we have to run a regression for evaluation interest risk change impact on shareholder value (return of stock), (see Sweeney and Warga model).

Scenario analysis: In scenario analysis the analyst postulates changes in interest rates and re-values the cost of debt capital or net profit of the firm under those changes. A typical procedure, often called *stress testing*, is to use a scenario based on a historically adverse market move. This approach has the advantage of not requiring a distributional assumption for the risk calculation. On the other hand, it is subjective and incorporates a strong assumption that future financial upsets will strongly resemble those of the past. Given the earlier discussion, it should be clear that stress testing can provide regulators with the desired lower tail estimates, but is of limited utility in day-to-day risk management.

Value-at-Risk analyses used asset return distributions and predicted return parameters to estimate potential portfolio losses. The specific measure used is the loss in value over X days that will not be exceeded more than Y% of the time. The standard in RiskMetrics™ (the J.P.

Morgan/Reuters VaR method) is 5% over a horizon sufficiently long for the position to be unwound which, in many cases, is 1 day.

There are two principle methods for estimating *VaR*:

- *The analytical method*
- *Monte Carlo simulation.*

There are implementation problems common to both methods, namely choosing appropriate return distributions for the instruments in the portfolio and obtaining good forecasts of their parameters.

Analytical *VaR* has a number of weaknesses. In its simplest form, options and other non-linear instruments are delta-approximated which is to say the representative cash flow vector is a linear approximation of position that is inherently non-linear.

Monte Carlo simulation of *VaR* begins with a random draw on all the distributions describing price and rate movements taking into account the correlations among these variations. Mark-to-model and maturation values for all portfolio components at the *VaR* horizon are determined based on that price/rate path. This process is repeated enough times to achieve significance in the resulting end-of-horizon portfolio values. Then the differences between the initial portfolio value and these end-of-horizon values are ranked and the loss level at the *Y*th centile is reported as the *VaR* of the portfolio.

The use of Monte Carlo simulation solves the problem of non-linearity though there are some technical difficulties such as how to deal with time-varying parameters and how to generate maturation values for instruments that mature before the *VaR* horizon. From the risk manager's viewpoint, the main problem is the cost of this method and the time it takes to get reliable estimates.

Sweeney ja Warga (1986) used the following model for measurement shareholder value *economic exposure* to interest rate risk (Smithson, et al 1995):

$$R_{it} = \alpha_i + \beta_i R_{mt} + \gamma_{ri} (\Delta r_t) + e_{it}$$

Δr – change in interest rate

β_i – firm *i* systematic risk, sensitivity of stock price to stock market fluctuations

γ_{ri} – stock *i* sensitivity (exposure) coefficient to changes in interest rate

e_{it} – error term

They included systematic risk component to the model for explicitly measures exposure to interest rate risk without market risk exposure. This model should measure exposure to interest rate risk including all 3 ways of effect to shareholder value.

Financial firms (commercial banks) use also duration gap methods and gap methods to evaluate economic interest rate risk exposure.

If we need to estimate firms' economic interest rate risk exposure to operating profit (EBIT) of the firm then we can run the following regression:

$$\text{Operating profit}_t = a_0 + \sum a_i(\text{interest rate})_{it} + e_{it}$$

That model estimates effect of interest rate change on operating profit which is one essential component of shareholder value creation. It is assumed that this relationship will hold in the future.

It is common practice that firms measure *accounting exposure to interest rate risks*. It is called also *translation exposure*. It is easier to implement than economic risk exposure. In this case information for estimation comes from financial reports (balance sheet). Translation exposure measures potential (unrealised, accounting) economic loss from interest rate changes. If firm will sell fixed rate obligations then it suffers a real economic loss, not only translation loss in balance sheet. Translation exposure has importance due to the firms' need to re-evaluate its assets at the end of economic year.

For example German firm is engaged in risk management for focusing more on accounting results (earnings) but U.S firms managing (with derivatives) more cash flows (Bodnar 1998, august). It needs therefore different risk exposure measurement methods. In Germany management decisions are focused on possible effect on earnings. Because dividends are paid on basis on earnings and firm has to consider it. In US model dividend payments are not so important. Shareholders can get value as capital gain in efficient stock market.

Interest rate risk exposure hedging

What is risk hedging? Hedging refers to activities undertaken by the firm in order to mitigate the impact of uncertainties (interest rate risk) on value (performance) of the firm (Mian 1996). Hedging activity depends on firms' risk policy. Usually in practise interest rate risk policy is risk

aversive and the aim is to minimise interest expenses (Hakkarainen 1997). It indicates that in practise firms measure and hedge only interest rate risk exposure which comes from cost of debt capital. They do not consider other 2 aspects of interest rate exposure. Interest rate hedging policy decisions are based on interest rate forecasts (*Ibid.*, 1997).

There are 2 ways to manage interest rate risk exposure in firm level:

1. Derivatives (swaps, forwards and options)
2. Strategic hedging with capital structure (financial leverage) and cost structure (operating leverage).

We consider more detailed practise of derivative use in current article. Study among US firms indicated that 76% of the non-financial firms using derivatives for risk management use it for interest rate risk management (Bodnar, *et al* 1998, July). In Germany 89% derivative users used them for interest rate risk management (Bodnar, *et al* 1998, August). Therefore we can conclude that interest rate risk is commonly managed risk with derivatives securities. In this study were also asked approaches to interest rate risk management. Is this centralised or non-centralised? They found out that centralised interest risk management practice was overwhelmingly most common (94% of firms). Only 6% of firms indicated to some degree of decentralised risk management structure.

76% of all firms that use interest rate derivatives reported using them to swap from floating rate debt to fixed rate debt. But only 10% of firms indicated that they do it frequently. In Germany these numbers were accordingly 89.3% and 31% (*Ibid.* 1998, August). Only 66% of firms swapped from fixed interest rate to floating rate. 10% of firms made it frequently. Most firms do it only sometimes (*Ibid.* 1998, July). In Germany – accordingly 66% and 5%.

In addition to swapping existing debt, interest rate derivatives are used by majority of firms to fix the rate or spread on new debt issues (55% of firms, in Germany 68%) as well as to take positions to reduce costs based upon a market view (54% of firms, in Germany 86%). Interest rate derivatives are usually associated with debt issues (*Ibid.*, 1998, August).

Among German and US firms swaps are most important derivative instruments for interest rate risk management. Nearly 100% of US firms and 80% German firms preferred swaps. 80% of US firms ranked swaps as the most important instruments. Howton *et al.* also came to this conclusion about US firms (Howton *et al.* 1998). According to preference

OTC forwards and OTC options were important interest rate risk management instruments in both countries. Exchange traded instruments were not popular among German and US firms (*Ibid.*, 1998, August). These findings are confirmed by Bank for International Settlements. Total amount of interest rate derivative market in June 2000 was 64.125 trillion US dollars. Interest rate derivatives form 65% of all OTC derivatives in the world and interest rate swaps contracts form 50% of all derivatives (74% of interest rate derivatives). The second place is taken by interest rate options (15% of interest rate derivatives) and the third by FRA (*Forward Rate Agreement*), (26% of interest rate derivatives), (Bank for International Settlements, www.bis.org). Study about interest rate risk management in Finnish firms confirmed that interest rate swaps and FRA are most popular interest rate risk hedging instruments in Finnish firms (Hakkarainen *et al.* 1997).

As a evidence of rapid growth of interest rate derivative market is a fact that when in 1990 amount of interest rate swap market was 2.3 trillion US dollars then for 2000 it has grown 28 times.

In US 47% of firms did not use benchmark for evaluation interest rate risk management. Of those who used benchmark 45% used realised cost of funds relative to market index (e.g., LIBOR), (Bodnar 1998, August).

Motives for interest rate risk exposure hedging

Now I will present an analysis of the different factors which influence corporate risk (including interest rate) policy. Interest rate risk policy had been accepted by the executive board or the board of directors in 47% of Finnish firms. Accepted by CFO or CEO was in 53% of firms (Hakkarainen *et al.* 1997).

According to the assumptions of Modigliani and Miller (Berkman, *et al* 1996), no financial contract can alter the firm value. Hedging has no impact on firm value. It only reallocates firm value between different claimholders. Hedging activities can only result in an increase in firm value if there are certain market imperfections. In case:

1. There are costs of financial distress,
2. The effective corporate tax rates are progressive,
3. There are conflicts of interest between equity holders and senior claim holders.

Below I will observe each of these arguments and other factors that could influence the corporate hedging policy.

Other determinants of hedging policy are scale of firm, competence of management in the field of derivatives, agency conflict between owners and management, liquidity of firm, level of internationalisation of the firm.

1. The impact of hedging on reduction expected financial distress costs

Hedging reduces probability that a firm will encounter financial distress. The benefits of hedging increase when the firm faces higher cost of financial distress. These are firms with high operation risk or high financial leverage. This motive for hedging is discussed in papers by Mayers ja Smith (1982) and Smith and Stulz (1985). Hedging reduces the variance of cash inflow from operating activity and lowers financial distress costs. This results in the firm higher optimal financial leverage. The firm is able to use more debt and can benefit from the tax shield. This has a positive effect on firm value.

The author of this article suggests to use as an estimate of financial distress costs in empirical study: EBITDA / interest payments and loan repayments. This estimate evaluates the firm ability to repay the debt-holders and the probability not to get financial distress. In case of low estimate it is very probable that the firm does not use its growth potential and pay dividends.

Nance, Smith and Smithson (1993) argued that due to the fixed part of financial distress costs, smaller firms tend to hedge more risk exposures and therefore they use more derivative instruments. However, this relationship was not proven. They found out that bigger firms tend to use more hedging. Mian also (1996) confirmed these results. It indicates that scale economy is more important motivator for hedging and for derivative use.

Berkman and Bradbury (1996) and Howton and Perfect (1998) proved the positive relationship between the derivative use (hedging) and firm financial distress costs and positive relationship between financial leverage and hedging activity.

2. Scale Economies

By means of empirical study Berkman and Bradbury (1996) proved that bigger firms tend to hedge and use derivatives more often. It is caused by relatively lower transaction and management costs for bigger firms.

Berkman, Bradbury ja Magan (1997) come to similar conclusion in their study. They compared the derivative use (hedging) among the firms in US and New Zealand. They found out that 65% of US firms, with market capitalisation more than 250 million dollars, used derivatives for hedging whereas in NZ the same applied to 100% of the firms. Among the firms with market capitalisation 50–250 million dollars these percentages were accordingly 30% and 70%. The market capitalisation was lower than 50 million dollars it was accordingly 12% and 36%.

Dolde's (1993) study indicated that 45% Fortune 500 firms used at least 1 professional full-time risk manager and 15% of the firms used more than 1 risk manager.

3. *Effective tax rate*

Smith and Stulz (1985) and Mayers and Smith (1982) argued that hedging can reduce the expected tax liability for a firm facing a progressive corporate tax structure over the range of possible income outcomes. This result follows from the convexity of the corporate tax schedule and from the observation that hedging reduces the volatility of the firm expected taxable income. In case of tax schedule progressiveness it is optimal for a firm to hedge risk exposure (Mian 1996). Effective tax rate can be progressive also in the case of tax-loss carry-forwards.

Berkman and Bradbury (1996) proved that firms having tax-loss carry-forwards used more derivatives for hedging. Mian reached the similar conclusion (Mian 1996).

Howton and Perfect (1998) studied the currency and interest rate derivative use among US firms and found strong positive correlation between progressive effective tax rate and hedging.

4. *Coordinating corporate investment and operating cash flows*

Hedging reduces external financing costs of the firm and therefore has a positive impact on firm value. External financing is more expensive than internal financing. This motive has been researched with Froot, Stein and Scharfstein (Froot, et al 1992). Therefore it is also optimal to hedge risk exposure. If the firm does not hedge, there will be the same variability in the cash flows generated by assets in place. This must result two, either: a) variability in the amount of money raised externally or b) variability in the investments. Variability in investments will be undesirable, to the extent that there are diminishing marginal returns to investment. Shortfall in cash

may result in some increase in outside financing, but it could also bring along some decrease in investments. Variability in cash flows disturbs both the investment and financing plans in a way that is costly to the firm. Therefore the purpose of the hedging is to co-ordinate corporate operating and investment cash flows (Froot, et al 1992). Additional external financing costs (*deadweight cost*) are (Froot et al., 1992):

- a. Larger amount of debt capital increase financial distress costs,
- b. Costs from information asymmetry between management and investors,
- c. Management motivation costs for preventing agency conflict between management and owners.

Lessard also (1990) argued that most compelling arguments for hedging lie in ensuring the firm ability to meet cash flow commitments. Lewent ja Kearny (1990) drew similar conclusions in their study. This motive refers to the fact that growing firms should hedge more their risk exposures. Froot, Stein and Scharfstein (1992) argued that firm has benefit only when marginal return on investments is diminishing.

This motive is in accordance with findings of Prevost et al. (2000) survey where they asked US firms to rank what they were trying to achieve from using derivatives. Single "most important" reason for hedging was to minimize fluctuations in real cash flow (67% of US firms), (Prevost et al. 2000).

5. Influence of agency conflicts to hedging

While risk management surely offers benefits, it may have costs as well. These costs are transaction costs and agency costs from conflict between shareholders and management. It means that risk hedging can be used to facilitate the protection of managers' "pet" projects that enhance their welfare but reduce shareholder value (Tufano, 1998).

This problem is discussed with Lessard (1991) and Froot, Stein and Scharfstein (Froot, et al 1993). By using risk management managers can avoid going to Wall Street when they are in trouble but still intend to invest into growth. The operating and investing activity of a management is badly monitored and controlled. They accept negative NPV projects that reduce the shareholder wealth.

There is another agency conflict between shareholders and creditors that has an influence on corporate hedging policy. This conflict was first discussed with Myers in 1977, who argued that agency conflict

determines under-investments (Tufano 1998). Shareholders have the incentive to under-invest (to forego positive net present value projects) if the gains accrue primarily to debt-holders. Corporate hedging reduces the incentive to under-invest by lowering the probability of financial distress (Myers, Smith 1987). Thus hedging reduces probability of conflict and the expected cost of under-investment.

Under the above-mentioned circumstances the effect of hedging is the greatest for growth firms and firms with high financial leverage. Positive correlation between financial leverage and hedging was proved with Howton and Perfect (1998).

6. *Corporate liquidity*

Berkman and Bradbury (1996) argued that liquidity is a substitute for hedging. Firms with more liquid assets are less likely to engage in risk management, since their financial buffer is larger. These firms do not need to hedge to co-ordinate cash inflows and outflows. Berkman and Bradbury tested the correlation between liquidity and the use of derivatives (hedging) and came to the conclusion that there exists a negative relationship. Howton and Perfect reached the similar results (1998).

7. *Degree of corporate internationalisation*

Berkman and Bradbury (1996) proved that firms with international scope hedge their risk exposures and use derivative products more frequently. Internationalisation means export, import and foreign assets (in foreign currency).

8. *Competence of management*

Dolde (1993) argued that the important factor which determines the hedge policy and derivative use is the management knowledge about derivatives and risk management.

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Summary

One of the most important financial risks is an interest rate risk. Every firm is exposed to this risk, even if it does not use debt capital. We discussed about interest rate risk exposure estimation, exposure hedging practise with derivatives and motives for (interest rate risk) hedging in firm. Finance theories suggest that hedging can increase firm value by reducing the uncertainty of expected taxable income, external financing costs, expected cost of financial distress and agency costs between shareholders and creditors. The choice of corporate hedging policy also depends on corporate liquidity, management competence, degree of corporate internationalisation, economies of scale and agency conflict between management and owners. I can conclude that there is no one optimal risk policy for all companies. I hope that the Baltic non-financial companies will become more aware of the benefits of risk management and derivatives and use it in its everyday activity.

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ANALYSIS OF RIGA STOCK EXCHANGE QUOTED COMPANIES STOCK PRICES

Autors savā darbā mēģina izdibināt Rīgas Fondu Biržā kotēto uzņēmumu akciju cenu stagnācijas iemeslus. Tiek apskatīta akciju cenu attīstība citu valstu fondu biržās. Autors analizē Rīgas Fondu Biržā kotēto uzņēmumu finansiālās darbības rezultātus un to maksāto dividenžu apjomus par laika periodu no 1996.gada līdz 2001.gadam un tiem pretstata investoru pieprasīto peļņas likmi ieguldījumiem Latvijas valsts parādzīmēs ar dzēšanas termiņu viens gads analogā laika periodā.

Not so long ago in 1997 Latvian stock market had it uplift. Riga Stock Exchange (RSE) stock's price index showed octuple rise compared to its introduction in April 1996. Unfortunately it has not lasted for a long time. Stock prices started to decline in 1998 and that process was accelerated by the Russian financial default in the autumn 1998 leading Latvian stock market towards absolute crush. Latvian stock market price index RSE dropped from approximately 800 to 160 during one year. It seemed that stock market is near the end of its existence however there were some GDP is vitally important. It seemed quite obvious at that time. But not all things turned out to be as simple. Now 2 years after Russian financial default when Latvian opinions inter alia the opinion of the author that for a stock market recovery the stabilization of Latvian macro economic situation is necessary and the growth of state macro economic situation is far more stable that it was at the end of 1998, when Latvian GDP is rising at approximately 5% pace the annual Latvian stock market price index stands in the same position where it was 2 years ago. Why is it so, and what are those factors, which don't allow the Latvian stock market to recover?

In the previous publication it was shown that RSE stock index movement is very similar to state GDP growth rate movements during the period from second quarter of 1996 till second quarter of 1999, the calculated correlation coefficient showed a very high correlation. But from Figure 1 you can see that this tight relationship is not so tight or is very weak during the period after the second quarter of 1999. The same issue we could apply to the

relationship between the growth of level of industrial production and RSE price index; that relationship has weakened in the past 2 years.

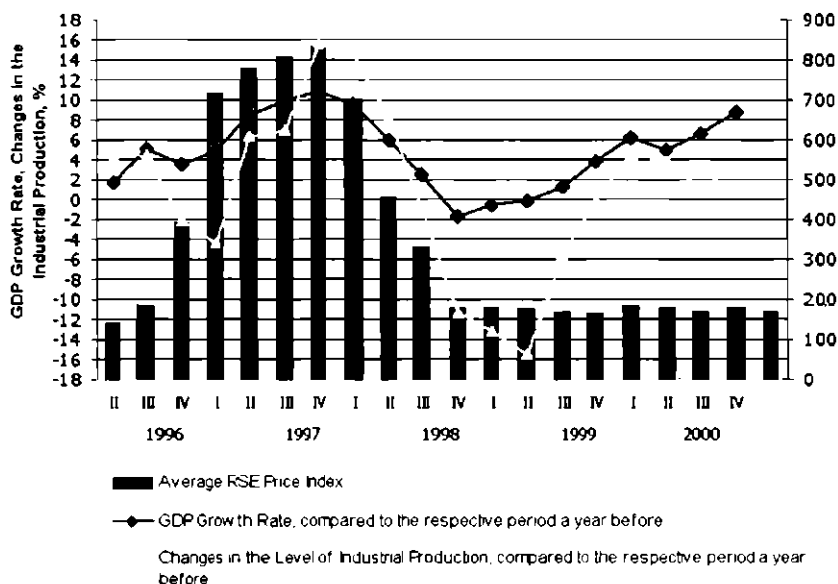


Fig. 1 GDP Growth Rate and Changes in the Level of Industrial Production both compared to the Respective period a Year Before and Average RSE Price Index [6;7;8]

If the correlation coefficient between RSE stock Index and GDP Growth rate during the period from the second quarter of 1996 to the second quarter of 1999 was 0.8875 then in the following period from the third quarter of 1999 to the fourth quarter of 2000 it is only 0.5543.

Why is it so, what are the factors, which are impacting stock market stagnation despite macroeconomic growth of the country and why isn't either GDP growth or the growth of the level of industrial production reflected in the growth of stock prices.

Let's have a look at stock index development in neighbouring countries.

As we can see from Figure 2 the trend of stock market development in all selected countries was similar. We know that in all selected countries GDP growth accelerated in 1999 – 2000 but as we can see from Figure 2 it has not been reflected in stock prices.

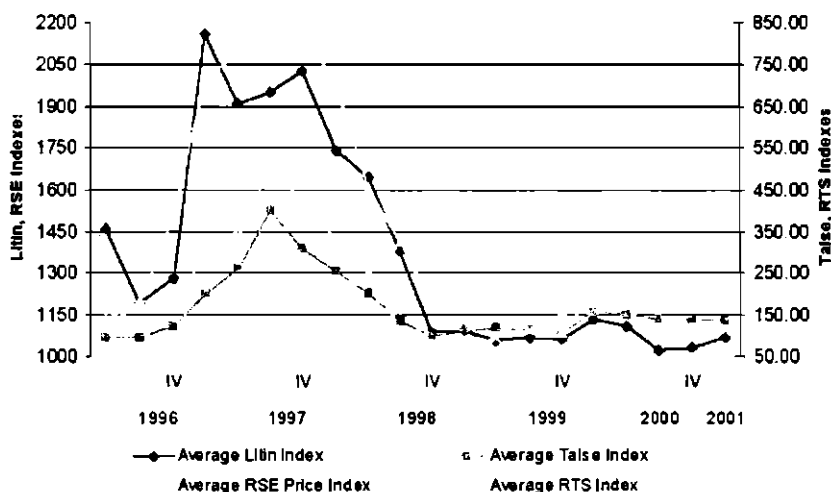


Fig. 2 Trend of Stock Indices of Baltic Countries and Russia, 2Q-1996 - 1Q-2001

As we can see from Figure 3 the world's leading stock indices do not show significant stock price drops during any period and they are almost continuously increasing.

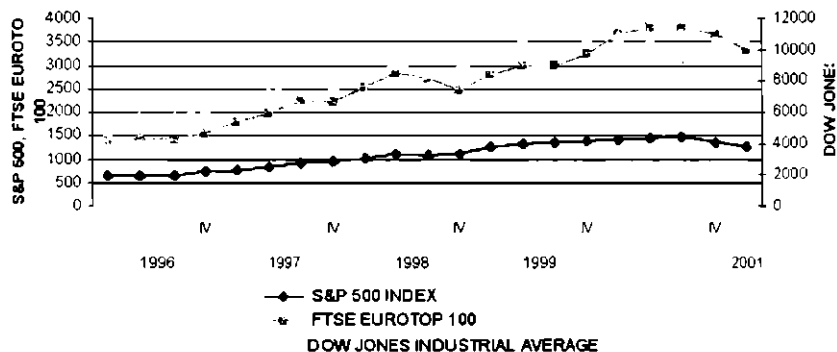


Fig. 3 Trend of World Stock Indices, 1Q-1996 - 1Q-2001

From the above mentioned we can conclude that Baltic region and Russia have their own specific risk factors that are influencing stock prices or they have the same factors but these factors are not giving

positive signals to investors to invest in those markets. Let's start a deeper analysis of Latvian stock market and let's, proceed further with the analysis of main financial indicators of RSE quoted companies.

As we can see from Table 1 during the period from 1996 to 2000 total profit of quoted companies has gradually decreased but invested capital (both equity capital and loans) in companies increased. That lead to a sharp drop in return on invested capital, if we calculate that just for the purpose of comparison in 1996 we get average return on invested capital was ~ 13.8% but in 1999 only ~ 4.3%. Estimated figures on 2000 show increase in the total profit amount but forecasted amount of paid dividends remains the same as in 1999. The increased amount of profit in 2000 could lead to price increase of particular stocks in 2001.

Table 1

Summary of key financial results of 14 companies¹ listed in RSE Official list and secondary list at the beginning of 2001, Mio Ls

	1996 ²	1997	1998	1999	2000 ³
Total profit	32.140	39.447	19.261	19.160	25.000
Total turnover	306.436	346.267	370.141	351.231	N/a
Paid dividends ⁴	5.369	5.281	6.579	5.481	5.500
Total Equity	215.047	352.411	373.706	392.728	N/a
Total Loans	17.346	30.555	34.083	46.787	N/a

¹ excluding financial intermediaries

² there aren't included data of Kvadrprint and Liepājas Jūras Medicīnas Centrs

³ provisional data

⁴ dividends paid for current year but actual payment takes place next year

But as we know RSE compared to world's leading stock exchanges is very small and few listed companies such as Ventspils Nafta, Latvijas Gāze contribute to the biggest part of every stock exchange indicator. To avoid discrepancies due to fluctuations of financial data of those two big companies look at Table 2.

Compared to Table 1 we can see substantial differences in financial results. We see that profit is not only decreased but actually has become loss in 1998 and 1999, also the total turnover beginning from 1997 almost has almost not changed but paid dividends have decreased substantially. It should also be noted that total amount of equity has decreased starting from 1997 but the amount of loans has substantially increased leading to higher financial leverage thus increasing the financial risk of potential

investments in these companies. Estimated profit of companies included in Table 2 shows an increase in 2000 but estimated amount of projected dividend payments for 2000 is 0, which is not the best thing to minority investors as well as to investors in general. The trend of decreasing dividend pay-off has reached its minimum point in 2000.

Table 2

Summary of key financial results of 12 companies¹ listed in Official list and secondary list on beginning of 2001 excluding Latvijas Gāze and Ventspils Nafta, Mio Ls

	1996 ²	1997	1998	1999	2000 ³
Total profit	6.877	14.049	-5.168	-4.804	4.300
Total turnover	151.634	191.255	202.829	191.562	N/a
Paid dividends ⁴	1.469	1.879	1.200	0.693	0
Total Equity	82.577	120.759	117.930	111.303	N/a
Total Loans	8.288	30.263	33.790	46.523	N/a
Loans/Equity	10.04%	25.06%	28.65%	41.80%	N/a

¹ excluding financial intermediaries

² there aren't included data of Kvadruprint and Liepājas Jūras Medicīnas Centrs

³ provisory data

⁴ dividends paid for current year but actual payment takes place next year

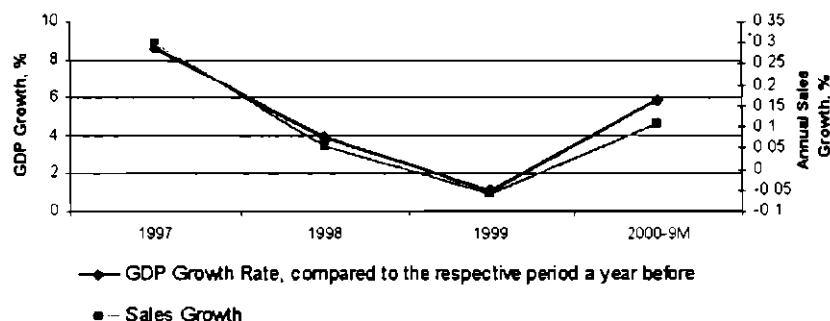


Fig. 4 GDP Annual Growth Rate and Annual Sales Growth of RSE Official and Secondary List quoted Companies, 1997-2000-9M

All the above concluded leads us to think that stock prices are reflecting financial data of the companies but why do the GDP growth rate loses correlation with RSE Stock Price Index? Let's check is the sales growth of the companies behaving in the same way as GDP Growth.

From Figure 4 we can see a very obvious sales growth rate of the companies behaving in the same way as state GDP growth rate, calculated correlation coefficient shows a very strong relationship ~ 0.98 .

As we know sales growth is not the main obstacle for an investor to make investment. The main objective for the investor is to get adequate return on his investment, so take a look at Figure 5 and Figure 6.

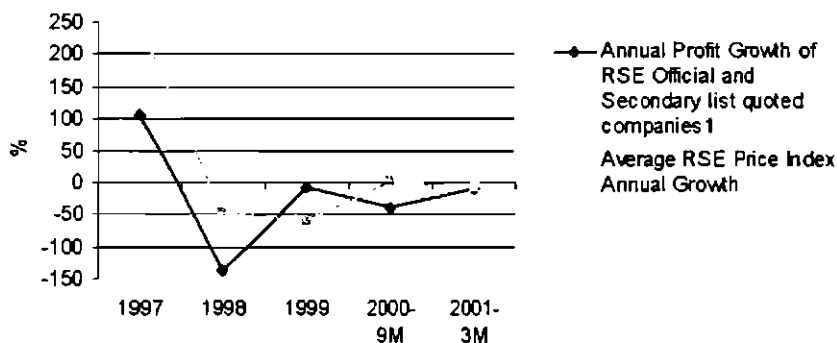


Fig. 5 Average Annual RSE Stock Price Index Growth Rate and Annual Profit Growth Rate of RSE Official and Secondary List quoted Companies, 1997-2001-3M

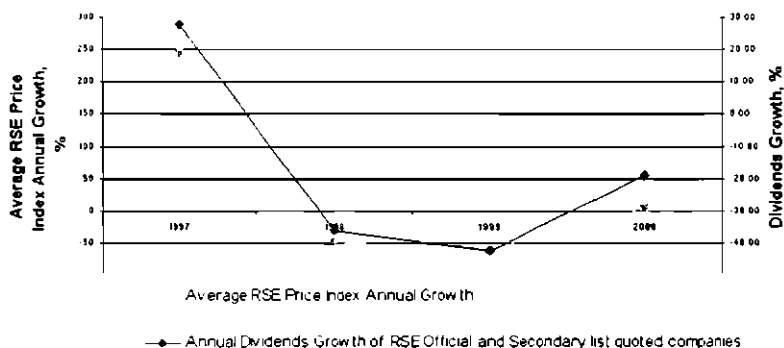


Fig. 6 Average Annual RSE Stock Price Index Growth Rate and Annual Dividends Growth Rate of RSE Official and Secondary List quoted Companies, 1997-2000

As we can see the annual profit growth and the annual paid off dividends growth have been behaving very similarly to the average annual RSE Price index growth, calculated correlation coefficients show us 0.809 and 0.992 respectively.

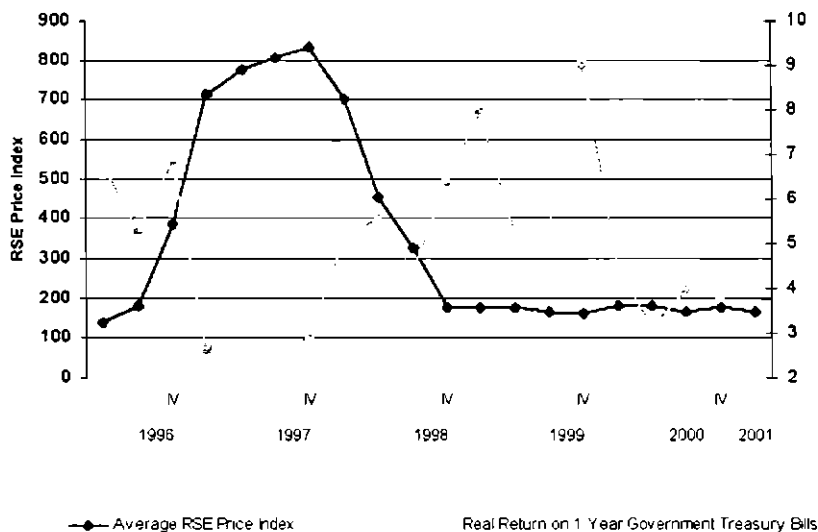


Fig. 7 Average Annual RSE Stock Price Index and Real Return on 1Y Government Treasury Bills Expected by Investors, 1996-2Q till 2001-1Q

From the above-mentioned we can conclude that GDP growth is not always the best indicator to forecast stock price index growth. GDP growth does not reflect required return on investment that investors demand. In order to get some overview what return on risk free investment investors demanded during the period from 1996 to 2001-1 quarter let's take a look at Figure 7. The real return on 1 Year government treasury bills was calculated assuming that investors knew what the inflation for the next period will be (investors forecasted inflation amount was replaced by real inflation of forthcoming period, inflation for 2001 was assumed to be 2%).

As we can see investors started to demand higher return on their investment starting from 3rd quarter of 1997 that is actually the same period when stock prices started to decline. After the 4th quarter of 1999 the investors' demanded return on their risk free investment in 1 Year-government treasury bills started to reduce. It could mean that at the time when investors started to demand lower return on their investment the stock prices could go up but it did not happen, why so? As we saw before in Figure 5 there did not take place the growth of profitability of the companies therefore it means that if there is no profitability growth then also lower demanded rate of return doesn't allow the stock prices to grow.

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Summary

Major world stock indices have shown significant increase in their values during 1999-2001 but the stock indices of Baltic countries and Russia remained almost the same as they were in 1999 despite significant improvement of macroeconomic situation of all selected countries. Following analysis of Riga Stock Exchange quoted companies showed very slow improvement of financial results of the companies on average during 1999 and 2000 compared to 1998. Besides the total volume of paid dividends still has negative trend and provisional results for the financial results of the companies for 2000 showed that dividend pay-off has reached its lowest level since foundation of Riga Stock Exchange. Meanwhile the rate of demanded return of Treasury Bills with maturity one year required by the investors increased in 1999 and 2000 compared to the levels of 1997 and 1998 which shows that investors were probably requiring higher return on their investments in stocks too.

All the above-mentioned lead us to think that a potential investors are not satisfied with the current financial results of Riga Stock Exchange quoted companies and that could be the reason why the stock prices remains so stagnant.

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FINANCIAL MARKETS VERSUS MACROECONOMICS

Savā darbā autors aplūko makroekonomikas pamatnostādnes saistībā ar finansu tirgu. Protams, makroekonomika nav homogēna, pastāv dažādi novirzieni, bet tomēr tiem piemīt kopējas iezīmes. Finansu tirgu makroekonomika uzskata kā pakārtotu reālajai ekonomikai un aplūko tikai dažus rādītājus – naudas masu, inflāciju, procentu likmes, ignorējot finansu tirgus attīstības tendences 20.gadsimtā. Kā makroekonomikas “vājos punktus” var minēt: ekonomisko lielumu agregāciju un nonivelēšanu; pamatrādītājs ir IKP, lai arī tas parāda tikai ienākuma un naudas plūsmas vienā gadā, tiek ignorēta visa nacionālā bagātība; koncentrēšanās uz līdzsvara punkta noteikšanu; asimetriskas informācijas neatzīšana un tikai loģiski-mehāniskas rīcības pastāvēšanas pieļaušana; nespēja definēt finansu un reālo aktīvu atšķirības, trenda neatzīšana.

First questions author would like to raise are as follows: “Are different schools of macroeconomics useful for economic analysis in leading world investment banks? Are financial decisions based on economic analysis?” Answer is not simple, but it is not pure “yes” J.Stiglitz, the former World Bank economist and critic, said that international organizations too much believe in economics’ textbooks, which are suitable for students not for economic consultation.

Classical school and Keynesian school look at financial markets as a mirror of real economy therefore main attention concentrates on non-financial developments [9, 483]. Monetarists prefer the opposite story – money supply can determine variables of real economy, not only inflation thus strengthening the role of government policy together with Keynesian’s approach.

Economists from financial community underline that financial markets and real economy are parallel systems with mutual interdependence. For example new credits increase investments and GDP, from the other hand credit decreases the availability of un-pledged assets and asset prices are going up without consideration of macroeconomics’ theory. Another example is USD and JPY exchange rate or nightmare for some currency

traders. In the last decade of the 20th century exchange rate fluctuated from 100 to 200 yens for dollar. How it could be explained by real economics? The import-export flows were not the cause of financial markets turbulences because of limits of government interventions in trade arrangements.

Author will emphasize some key points where the disagreement among macroeconomics and financial markets might exist – aggregation, GDP versus national wealth, equilibrium, information asymmetry and economic agents logic, asset classes, fundamental value of stocks, “trend” economy.

Macroeconomics uses aggregate variables, but in light of financial markets it uses “too aggregate” variables. If we take interest rate then there are many interest rates and sometimes they move in opposite directions. Textbooks suggest interest rate on government bonds, but in several countries (Estonia) there are no government bonds. Even interest rates on government bonds may act differently according to maturity. The maturity range in US is 3 month – 30 years. Another misleading assumption is that government bonds are risk free which demonstrated to be invalid argument in days of Russian crisis. Aggregate demand is not sufficient to analyze in stock market. Everyone wants to know what is behind the aggregation – what market forces creates demand (investment banks, non-financial institutions, private persons, pension funds, hedge funds) because it is so important.

Macroeconomics keynotes GDP as the main indicator of the state of economy but it shows only flow of wealth or money. Many financial economists more attention award to national wealth. National wealth is a long term indicator, GDP – a very short term. National wealth hints at all resources that exist in economy. Economy does not operate only with current GDP resources but can activate all available resources. Here is a strong relationship between national wealth and financial market as stocks and bonds are significant part of national wealth. At the same time stocks and bonds are liquid instruments that could be exchanged against money. Therefore in macroeconomics models national wealth (excluding natural resources) instead of GDP should be presented. Under the question are less liquid assets like land, real estate. One representative variable of wealth is stock market index.

Next controversial topic is equilibrium. Macroeconomics widely employs equilibrium models where the behavior of economic agents is analyzed. Author believes that equilibrium is too general and limited in explaining the true behavior of agents, but the main argument is usefulness. Is prevailing market interest rate the equilibrium rate or not, it

is not important to financial market altogether with shifts from equilibrium point because demand and supply lines in financial market changes every second and they are not static. The theory of dynamic equilibrium is more appropriate. Financial markets concentrate more on forecasting than on static analyses of macroeconomics fundamentals. In real economy GDP or employment embodies different magnitude of changes, but still equilibrium point is in movement. The processes in economics are very complex and many economic schools nowadays unite the macroeconomics, microeconomics and finance to explain distinct features of markets. These schools do not pretend to tell the unambiguous truth, but shows that there does not exist one meta-theory of economics due to complexity of subject.

Equilibrium theories are based on mathematics and logic. Infirm assumptions and logic determines the outcome of theory, which cannot be applied. Possibility that equilibrium does not exist or is moving every time we fix it does not embarrass theory. George Soros makes a comparison how do we feel about Euclid's geometry theorems were unstable meaning they will work properly only in some cases. Nobody will accept such theory as a theory.

Equilibrium models are approximations. For example, government spending increase what is very common in IS-LM examples – G can not increase beyond certain levels because financial market will stop investing in government due to credit risks.

Next author will look at logic of economic agents and asymmetric information. Households take part in financial markets lacking appropriate knowledge. Even great part of professionals face problem of asymmetric information. Labor market is different, households are more aware of price of their abilities at work and therefore wage is set in informative markets. One of the main assumptions in macroeconomics is assumption that economic agents maximize their utility functions – they are maximizing total income. In reality households in financial markets cannot maximize their utility because income comes together with risk. Nobody in macroeconomics consider that labor does not receive equilibrium wage in labor market. But if households invest money in junk bonds that carries 50% interest there is a great chance that bonds will be not redeemed and utility maximization of investor fails. The result is income minimization. After failure households cannot comment logically about their choice. In Latvia we remember times when small unknown limited liabilities companies could receive household deposits and offer unreasonably high

interest rates. These pyramids broke down disappearing very quickly and investors lost everything. Reality of financial markets does not fit properly in standard macroeconomics theory. Very often decisions of households are irrational and it is proved by many empirical studies [5, 24]. Sociology emphasizes importance of decision-making process but macroeconomics wants optimization of standard model of specific decision and the outcome is presented as a "theory" Sociology will say that model is not important because decision-making process cannot be standardized. Too many undefined factors are persistent which cannot be foreseen in model [2, 45]. Does the every individual choose one type of action in given macroeconomic conditions? Does the every individual choose the same type of action next time in the given macroeconomic conditions? Is this axiom or theorem or neither? Macroeconomists decided to make assumptions and simplifications to build formal models with strict answers. Opponents of macroeconomics in the center of attention place assumptions and are not so willing to struggle for strict outcomes, but widen the horizon of thinking. If there is no optimization different scenarios and inexplicable results exist.

Further author will examine the understanding of "assets" In financial markets dual accounting persists from one hand assets represent assets of real economy, from other hand assets are represented second time in financial markets as stocks and bonds. Macroeconomics does not see that dual accounting exists. It is not easy task to adapt some legal concepts of ownership (owner of stocks) and rights to use assets (management and employees of companies) in macroeconomics models. Financial market intermediates between these two groups. In standard economics textbooks assets are understood as money and government bonds. When macroeconomics will notice derivatives that are far distant from the real economy than stocks and bonds? Nowadays derivatives play an important role in financial markets and in real economy and interactions are important to ensure investment diversification (is that term in macroeconomics?), insurance, increases liquidity. Why this is not important for macroeconomics? Financial markets look at tradable assets with strict ownership rights, but economics consist of non-tradable assets where the ownership is not so strict.

In macroeconomics studies the relations between financial asset prices and real asset prices are not examined properly. Financial assets represent the real assets; their price might move in the same direction and at the same speed, in real life financial asset prices are very volatile [1, 1].

The problem appears from the fact that several financial assets can represent one real asset where each financial asset is in an isolated market where different demand-supply curves intersect. Another issue is that each type of financial assets has its own liquidity meaning own determination and movement of price [10, 1].

Relevant meaning in solving dualism of real and financial economy carries capital/output ratio. Studies show that financial markets generate 3 times more capital assets (stocks, bonds, derivatives) than is worth output. It means that labor productivity might not influence the level of capital for given level of GDP. In a case of full employment, there will be increase in demand of financial assets, but companies will not be able to increase production in extensive way. Will be increase in prices of financial assets or not? How the financial assets will represent the real assets?

From the point of view of macroeconomics the trading of stocks does not create capital, but only changes owner. Capital is originated by issuing new stocks [4, 284]. Secondary market plays a role of accelerator to assist in organizing new issues [7, 5].

Always there have been disputes about fundamental value of stocks. If macroeconomics says that stock market is overvalued for 30 years than it is movement away from reality and incapability to deal with concept of speculations and concept of discounting future profits today. Stock prices look in the future, but at the same time they reflects current supply-demand functions. Classical economists repudiate idea that investors activities can bias supply and demand curves in the market thus equilibrium price is changing every second. Macroeconomics treat supply and demand curves as given and fixed for reason to equilibrium price be secondary. Financial economists stress that price is very important for short-term supply and demand. In long-term macroeconomics postulates are right and price loses all its short-term importance, but who will partition long-term and short-term.

Unanswered questions in economics are:

- are prices adjusting to news or to surprises in news,
- how far investors look in future,
- how can we explain today stock prices if they reflects expected profits together with today's' situation?

Nobody can determine the fundamental price of stocks versus price at stock exchange. First of all there is disagreement about measurement units. One way could be profit from liquidation of company, but this will not consider future potential because company will not be liquidated and

even will discount today's' value. Macroeconomists acknowledge that long-term stock price reflects the fundamental value of stock thus stock exchange is not ignored at all. But many theoretical and empirical models suggest that stock prices do not reflect fundamental value, but reacts on news leading to conclusions information asymmetry, non-logic of investors, speculations.

Liquidity preference in macroeconomics sounds much different than liquidity as financial economists used to think [6, 5]. Investors in stocks do not bind themselves to hold stocks in long-term, but they will sell stocks for miserable price if hit by severe crises. In developed countries control of companies changes hands not once or twice, long-term assessments give up to short-term price advantages. Crowd effect turns to be vital feature of financial markets – another blank in macroeconomics thought. Crowd effect is now too important to ignore in macroeconomics.

In monetary economics open discussions are about adding stock price inflation to general price index. Stock price inflation or stock index for macroeconomics is too versatile to be considered as an important guide. In many countries the core inflation are calculated subtracting volatile items such energy prices, food, but... Nevertheless total consumer price inflation is important even central bank targets core inflation. Total consumption is function also from stock market index.

Next disapproved concept in macroeconomics is trend. Many financial people use technical analyses short-term predictions of movements in price of asset if the past data are known. It could be also called as “applied econometrics” Reliance on trend analyses is ignored in macroeconomics theory. Technical analysts from finance even forecast GDP and other macroeconomic variables using trend analyses and are successful. Macroeconomics denies scientific origin of such calculus, but technical analysts ignore fundamentals of macroeconomics being too simplified. Statistically it is proved that next data point verify the trend with great certainty.

Macroeconomics uses old traditions to focus very simple assumptions in monetary economics:

- households make decisions to hold money (currency) or to deposit money in a bank – in financial markets intermediates take care about main money flows and these to possibilities account only 5-15% of all investments due to small or no interest earned, the concept of holding money in financial asset should be introduced (without “I am going to bank every day”),

- macroeconomics books still stress liquidity issues of bonds and stocks resulting from selling price uncertainty, in fact no financial asset is guaranteed by some supreme asset currency is no exception due to devaluation possibilities [8, 826],
- ruling position of central bank in determining money demand, in practice that role decreases because growth of financial wealth continues to outperform central bank's asset growth and foreign money flows are unlimited.

Macroeconomics has incorporated rational expectations models where behavior of economic agents is rational and mechanic, usually linear, economic agents learn by doing, economic agents are unaffected by other economic agents behavior, sentiment is not important, but the given macroeconomic conditions. In financial markets it is quite clear that decision-making process is not isolated from other people decisions and history of such a behavior starts in the Middle Ages where some asset bubbles occurred. Crowd is following analysts in financial market with good reputations [3, 69].

Economics differs from natural sciences with a complexity that makes forecasting process difficult [2, 2]. Financial markets are the most dynamic element of economics.

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Summary

In the given paper the author analyses macroeconomics postulates versus financial markets. Author concentrates on aspects of macroeconomics, which are common in all schools that are not homogenous. First of all classical school and Keynesian school look at financial markets as a mirror of real economy, monetarists prefer the opposite story – money supply can determine variables of real economy. Financial market economists will be neutral – financial markets and real economy are two equal interdependent systems. There are many examples where equality is proved – both systems live their own life.

Author emphasizes some key points where the disagreement among macroeconomics and financial markets might exist aggregation, GDP versus national wealth, equilibrium, information asymmetry and economic agents logic, asset classes, fundamental value of stocks, "trend" economy. In aggregation macroeconomists have lost identity of constituents and identity in explaining what this variable represents. Macroeconomics primarily focus on GDP, but this is a measure of flow therefore financial analysts suggests the national wealth and one of representative – financial asset capitalization. Very important concept for macroeconomics is equilibrium, but in financial markets everything changes in seconds and equilibrium point is moving very fast therefore usefulness of this concept is much smaller. More important is forecasting of macroeconomic variables. In economics many assumptions are made which are never true and one of them is information symmetry, economic agents logic, linear and mechanic behavior of economic agents. There is no word of risk-return concept in macroeconomics textbooks unlike in finance. Macroeconomics understands financial assets mainly as money and government bonds, representation duality of financial market assets is not "discovered" It is one reason why fundamental value of stocks lacks of proofing. Why financial assets are so volatile and should be volatility included in economic models? Macroeconomics denies technical analyses – forecast of the given variable using previous time series data. Still is very unpopular and "unscientific" phrase the so-called "trend economy".

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DEVELOPMENT OF FISCAL MANAGEMENT IN LATVIA

Fiskālo pasākumu pārvaldība ir svarīgs instruments reālā sektora attīstībā. Šajā sakarā rakstā apskatītas problēmas, saistītas ar valsts lomu tirgus neveiksmju novēršanā un privātā sektora aktivitāšu atbalstīšanā. Autors atbalsta ideju par tādas nodokļu politikas veidošanu, kura nerada izkropļojumus tirgū, neietekmē tirgus dalībnieku uzvedību. Valdībai jāpastiprina nodokļu administrēšanas aktivitāšu uzlabošana. Savukārt, valsts izdevumu programmas jāvirza uz valsts iejaukšanās ekonomikā ierobežošanu.

Lai paaugstinātu līdzekļu izlietošanas efektivitāti un novērstu neproduktīvo izdevumu rašanos, valdībai jāpārskata valsts izdevumu struktūra un programmas, kā arī jāuzlabo kontroles mehānisms.

Latvia is in the process of completing and consolidating its transformation to a market economy. In this context, the primary objectives of Latvia's economic policy are: continuous and sustainable economic growth; balanced economic and social development; a gradual elimination of existing regional, social and other inequalities, such as differences in labour opportunities; protection of the environment and efficient utilisation of resources. If these goals are achieved, the foundations will be laid for improved living standards for the population, as well as for security and democracy in Latvia. Economic policy aiming to achieve these goals would also help to satisfy some of the conditions for entry by Latvia into the European Union. The goal of accession to the European Union should create a momentum for structural reforms, which irrespective of the prospect of membership of the European Union – are essential for the development of the Latvian economy.

To achieve these objectives, the Government has to pursue the following policies and reforms:

- to maintain sound macro-economic policy;
- to promote economic growth and to increase the competitiveness of the economy, allowing Latvia to meet some of the conditions for EU entry;

- the role of the State should be limited to correcting market failures and supporting private sector activities. Therefore, the State has to focus on the following areas: regulation of natural monopolies, environmental protection, education and culture, health care, research and supply of information, defence, public order and justice, and improvement of the country's infrastructure, including water supply, wastewater treatment and waste management;
- tax policy has to be designed to avoid creating unnecessary distortions in the economy, and the public expenditure programme has to be progressively reshaped to limit State intervention in the economy;
- to create an economic environment that will stimulate the private sector which means improvement of basic infrastructure, strengthening of the financial system and developing series of actions to support private sector activities.

The Latvian economy has strengths and comparative advantages, notably its geographical location and a well-educated and relatively inexpensive labour force. The transit vocation of the country is illustrated by the relative importance of services exports, which account for about one fifth of GDP. However, the legacy of the past and the difficulties of the transition period have not yet allowed Latvia to fully benefit from its strengths.

In these conditions the main objective of fiscal management is to encourage sustainable economic growth by creating a stable macroeconomic environment. To provide financial stability, it is necessary to control the increase in the current account deficit, to limit the fiscal deficit at 0.5% of GDP in the medium term and thus achieve balanced or surplus budget in the long term.

To control the increase in the current account deficit it is necessary to implement strict fiscal policy that will reduce the increase in the domestic demand and preclude the increase in imports. Such policy as well lowers inflation, thus limiting the increase in the real exchange rate and maintaining competitiveness, as provides low interest rates.

On the revenue side, the Government has to pursue its action plan to improve tax administration. Tax rates should not be increased so as to avoid any negative influence on economic activity. Some measures to improve tax collection are already implemented and should produce

visible results. Nevertheless, government revenues have to be reduced from 43% of GDP to 40% of GDP, due to further reductions of customs tariffs, the planned decrease in the rate of social insurance contributions from the year 2002, and a reduction in non-tax revenues once the privatisation process is completed.

On the expenditure side, the Government will have to finance increased public investment and the costs of economic reforms, including the social costs. It will have to increase the wages of government employees in order to hire and retain qualified staff. Nevertheless, the government is committed to reducing the current expenditure of the general government budget, from 41% of GDP in 1997 to less than 40% in 2003. In order to improve fiscal management the government has to carry forward the functions of the State and eliminate any duplication. The government has to finance its deficit on the domestic market through Treasury Bills (apart from expenditures financed by project loans). As a consequence, the ratio of public debt to GDP should decline from 7% of GDP in 1997 to 4% in 2003. Since current tax rates are already high, an important issue for fiscal stability is optimisation of the state budget structure.

Latvia's tax policy is aimed to establish a tax system that stimulates an efficient utilisation of resources and to collect taxes in the most cost-efficient way while preventing tax evasion. The harmonisation of tax legislation with the respective EU legislation will be completed by year 2003.

A tax reform was launched in 1995, which abolished numerous tax exemptions, unified the tax rates, and gave a clearer definition of the tax base. A value – added tax (VAT) replaced the old turnover tax. The standard rate of VAT is 18%. The VAT law meets the main requirements of the Sixth VAT directive of the EU (Council Directive 77/388/EEC). Since its introduction the VAT law has been changed several times including the introduction of a special scheme for second hand goods and the taxation of mass media, the introduction of a refund scheme for foreign tourists, and the abolition of some limitations in the right of deduction of input tax. The latest changes in Latvian legislation came into force on January 1, 2001. Nevertheless, the VAT law does not satisfy needs of the Latvia taxpayers. The author of this article recommends to introduce different VAT rates according to necessity of different groups of goods and services how it's done in many countries of the world. There should be three VAT rates: standard rate (at the 18% rate),

decreased and increased rate. VAT belongs to indirect taxes which are usually called socially more equal taxes in order to regulate consumption. Different VAT rates will give possibility to decrease tax burden for low income people.

Concerning excise taxes, the objective is to harmonise the excise tax regime with that of the EU, and to improve tax administration. The excise tax rates on oil products were increased in the period leading up to the year 2001 to meet the requirements of EU legislation. The excise tax rate for tobacco products is set at a lower level than required in the relevant EU directives. This is because of the Government fears that, in the present situation, higher rates would lead to an upswing in smuggling.

In conformity with trade policy, custom duties has decreased.

Tax administration is a main tool in a realisation of public policy. To increase revenue, tax administration has to be improved significantly, institutional reforms in the State Revenue Service has to be continued. To receive a positive outcome regarding the whole economy and budget, the effectiveness of tax administration should be improved with better audit, information of tax payers and processing of declarations.

To fight tax evasion and recover tax arrears, several measures already have been taken including, notably, an improved handling of goods and processing of customs documents, an enhanced control procedure for imports, the reorganisation of the State Revenue Service and the establishment of tax collection targets for its regional units.

Since January 1998, the SRS is responsible for collecting social insurance contributions. A joint collection of social insurance contributions and income tax was implemented from the beginning of 1999. A new system has declined tax arrears for about 10%.

The SRS has prepared a medium term computerisation strategy with the support of the World Bank and EU Phare. The full computerisation of the SRS will be completed by the year 2003.

Customs administration is being modernised, with the support of the EU PHARE Programme. In the modernisation programme special attention is devoted to the improvement of customs legislation and customs operations according to EU requirements, including the introduction of a guarantee system and the preparation for joining the Common Transit Act.

Tax revenues should be increased with reducing the share of shadow economy and removing tax relieves.

The further work of the State Revenue Service should be related to the agency's prime mission – to underpin the country's tax and customs policies, ensuring that tax income is collected properly, that the country's economic frontiers are protected with as little in the way of expenditures as possible, that the quality of the agency's services improves, and that the institution does work so as to earn the public's trust in its honesty, competence and fairness.

Strategic directions for the State Revenue Service should be:

- To satisfy tax and customs administration requirements related to Latvia's efforts to join the EU;
- To improve customs and tax obligation performance and monitoring;
- To set up a modern organisation with focus that is centred on the client;
- To improve work effectiveness and service quality;
- To ensure the protection of society and of Latvia's companies;
- To promote the professional growth of the agency's employees.

In order to allocate resources more efficiently and ensure conformity of the public expenditure programme with policy priorities, the Government is progressively changing the composition of the public expenditure programme, as well as it is improving expenditure management. The main priorities for the year 2001 are: education, national defence, increasing of the minimal wages and joining to EU.

In educational sector government plans to continue a reform of the teachers wages system. In addition to this government has to increase the share of expenditure for education and health care in total expenditure.

Expenditure on national defence will be increased along side with the foreign policy goal of joining NATO.

The low level of wages in the civil service and in the country in general does not favour efficiency in public services and makes it difficult to attract qualified workers. In order to improve the efficiency of the civil service, while keeping the wage bill under control, the Government intends to reorganise the public administration and carry out a civil service reform. Elimination of unnecessary jobs in the state sector will create room for wage increases for civil servants and other public employees and a performance-based remuneration scheme.

Important task of the fiscal management is reducing unproductive spending. Unproductive public expenditures are those public outlays that

can be reduced without affecting government outputs, such as the provision of law and order and basic education and health services. Such expenditures stem from a number of political and economic influences, including the pursuit of multiple objectives in public expenditure programs (for example, using the public sector as an employer of last resort, financing inefficient public enterprises, supporting low-quality investment projects, the absence of a well-trained and motivated civil service, corruption). Unproductive spending can trigger large fiscal deficits, a correspondingly lower level of public sector output, and a tax burden that is heavier than necessary. Reducing unproductive public expenditures is particularly important in countries burdened with low revenue and high spending.

In order to decrease unproductive spending the Government has to improve its public expenditure management system. A unified treasury system was introduced in 1996, which includes all extra-budgetary accounts. The budgetary process has been reformulated, in order to allow policy priorities to more effectively determine the composition of expenditure, whilst ensuring that financial constraints control expenditure. Further reforms in public expenditure management will concern the clarification of responsibilities of ministries and autonomous agencies along functional lines, and a review of reporting requirements in order to improve their accountability; and the reinforcement of the auditing system. Internal audits of ministries should be expanded to cover management and also external audits of each ministry must be undertaken.

At the same time as elaborating spending programmes, the government should concern with enhancing budget implementation procedures in order to improve expenditure control. As it was mentioned, government expenditure is constrained by the limited availability of government revenue; therefore a key operational goal of fiscal policy is the improvement of tax administration.

In order to improve fiscal management central government long-term liabilities came into force starting from 2001. Central government long-term liabilities are the projects and activities of unitary central government policy implementation. The period of implementation of those projects and activities is longer than the economic year. According to this budget institutions implement central government long term liabilities by entering into contracts with special implementation conditions and taking part in realisation of government decisions. The object of liabilities is commissions and essential

services of budget institutions. Implementation of commissions and services is planned with using Central Government Budget funds appropriation according to the annual Central Government Budget law.

The following significant improvements in the planning of liabilities are taking place:

- Saeima approves Central Government Budget for current economic year, at the same time approving long-term liabilities, thus ensuring financial resources for project implementation in advance.
- Departments will be able to develop and implement specific guidelines and priorities of their own sectors.
- Responsibility for target results of departments and respective budget institutions under supervision will increase.
- Use of central government funds will be planned continuously, for a long period of time.

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Summary

The main objective of fiscal management is to encourage sustainable economic growth by creating a stable macroeconomic environment. To provide financial stability, it is necessary to control the increase in the current account deficit, to limit the fiscal deficit and to implement strict fiscal policy that will reduce the increase in the domestic demand and preclude the increase in imports. On the revenue side, the tax rates should not be increased so as to avoid any negative influence on

economic activity. Tax administration has to be improved significantly with better audit, information of tax payers and processing of declarations. In order to improve fiscal management the government has to carry forward the functions of the State and eliminate any duplication. The government has to finance its deficit on the domestic market through Treasury Bills. Public expenditure management has to be improved with clarification of responsibilities of ministries and autonomous agencies along functional lines, and a review of reporting requirements in order to improve their accountability. Internal audit of ministries should be expanded to cover management and also external audits of each ministry must be undertaken.

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DERIVATIVES MARKETS AND EXCHANGE RATE RISK

Referāta mērķis ir izpētīt finansu derivatīvu izplatību pasaulē un Latvijā, un uzsvērt šo finansu instrumentu saistību ar riskiem, tajā skaitā tieši ar valūtas risku. Nepieciešamība pēc riska menedžmenta saistīta ar pieaugošo derivatīvu tirgu.

Finansu tirgus, tajā skaitā finansu derivatīvu tirgus ir strauji attīstīties pasaulē tieši pagājušā gadsimta pēdējā ceturksnī, pēdējos gados ir ienācis arī Latvijā. Svarīgākie finansu derivatīvu veidi "fjūčersi" opcijas un "swap" līgumi.

Valūtas riskam ir vairākas formas, tās ir jāizzina, un bankām ir jāveic pasākumi riska ierobežošanai.

Referātā ir klasificētas astoņas valūtas pozīcijas atvēršanas metodes, ar nosacījumu, ja valūtas pozīcija ir slēgta. Tas dod priekšstatu par valūtas riska veidošanos, veicot darījumus ārvalstu valūtā.

This publication introduces the major derivatives markets and looks at their use both in the protection of the end-users from the forex (exchange rate) risk, and in speculation. Conclusions are related with the considering the advances of derivatives markets and the dangers associated with them.

Derivative security. A security that is neither debt nor equity but derives its value from an underlying asset that is often another security; called "derivatives", for short.

Derivative instruments market. There has been a rapid growth in the markets for financial futures and options. Many of the markets are outside the USA. Many of the instruments are related to interest rates in, and currencies of, European countries. As well as this level of activity in organized derivative exchanges, there has been a rapid growth in activity in the over – the counter derivative markets.

Transactions in derivatives market are related to high risk.

Let me give an example. On February 27, 1995, Barings PLC, the oldest merchant bank in the United Kingdom, was placed in "administration" by the Bank of England because of the losses that

exceeded the bank's entire \$860 million in equity capital. The cause of these losses was a breakdown in Barings' risk – management system that allowed a single rogue trader to accumulate and conceal an un-hedged \$27 billion position in various exchange – traded futures and options contracts, primarily the Nikkei 225 stock index futures contract traded on the Singapore International Monetary Exchange. The losses occurred when the market moved unfavourably against the trader's speculative positions. The trader recently completed a prison term in Singapore for fraudulent trading. Baring was taken over by ING Group, the Dutch banking and insurance conglomerate.

As this story implies, futures and options contracts can be very risky investments, indeed, when used for speculative purposes. Nevertheless, they are also important risk management tools. In this talk I will focus attention on exchange-traded currency futures contracts, options contracts, and options on currency futures that are useful for both speculating on foreign exchange price movements and hedging exchange rate uncertainty.

I would like to begin by comparing forward and futures contracts, noting similarities and differences between the two. Next, the options contracts on foreign exchange are introduced, comparing and contrasting the options and the futures markets.

A forward contract was defined as a vehicle for buying or selling a stated amount of foreign exchange at a stated price per unit at a specified time in the future. Both forward and futures contracts are classified as **derivative** or **contingent claim securities** because their values are derived from or contingent upon the value of the underlying security. But while a futures contract is similar to a forward contract, there are many distinctions between the two. A forward exchange contract is tailor – made for a client by his international bank; in contrast, a futures contract has standardised features and is exchange-traded, that is, traded on organised exchanges rather than over the counter. A client desiring a position in futures contracts contacts his broker, who transmits the order to the exchange floor where it is transferred to the trading pit. In the trading pit, the price for the order is negotiated by open outcry between floor brokers or traders.

The major difference between a forward contract and a futures contract is the way the underlying asset is priced for future purchase or sale. A forward contract states a price for the future transaction. By contrast, a futures contract is **settled - up**, or **marked - to market**, daily at the

settlement price. The **settlement price** is a price representative of futures transaction prices at the close of daily trading on the exchange. A buyer of a futures contract (one who holds a **long position**) in which the settlement price is higher (lower) than the previous day's settlement price has a positive (negative) settlement for the day. Since a long position entitles the owner to purchase the underlying asset, a higher (lower) settlement price means the futures price of the underlying asset has increased (decreased). Consequently, a long position in the contract is worth more (less). The change in settlement prices from one day to the next determines the settlement amount. That is, the change in settlement prices per unit of the underlying asset, multiplied times the size of the contract, equals the size of the underlying asset, multiplied times the size of the contract, equals to the size of the daily settlement that is to be added to (or sub-traced from) the long margin account. Analogously, the seller of the futures contract (**short position**) will have his margin account increased (or decreased) by the amount the long margin account is decreased (or increased). Thus, futures trading between the long and the short are a zero – sum game; that is, the sum of the long and short daily settlement is zero. If the investor's margin account falls below a **maintenance margin** level, **variation margin** must be added to the account to bring it back to the initial margin level in order to keep the position open. An investor who suffers a liquidity crunch and cannot deposit additional margin money will have his position liquidated by his broker.

Two types of market participants are necessary for a derivatives market to operate: speculators and hedgers. A speculator attempts to profit from a change in the futures price. To do this, the speculator will take a long or short position in a futures contract depending upon his expectations of future price movement. A hedger, on the other hand, wants to avoid price variation by locking in a purchase price of the underlying asset through a long position in the futures contract or a sales price through a short position. In effect, the hedger passes off the risk of price variation to the speculator, who is better able, or at least more willing, to bear this risk.

Both forward and futures markets for foreign exchange is very liquid. A reversing trade can be made in either market that will close out, or neutralise, a position. In forwards market, approximately 90 percent of all contracts result in the short making delivery of the underlying asset to the long.

In futures market, a **clearinghouse** serves as the third party to all transactions. That is, the buyer of a futures contract effectively buys from the clearinghouse and the seller sells to the clearinghouse.

Frequently, a futures exchange may have a **daily price limit** on the futures price, that is, a limit as to how much the settlement price can increase or decrease from the previous day's settlement price. Forward markets do not have this.

Currency (exchange rate) risk. Risk of adverse fluctuations in the currency in a country where a foreign firm is doing business. Risk of the currency of a country where a firm is doing business will drop in value relative to its own currency. Companies doing business on an international basis have an exchange – risk exposure, and must deal with it if satisfactory financial decisions are to be made.

International business transactions are conducted in many different currencies. Suppose German exporter sells merchandise to an American importer. German company expects to be paid in deutsche marks (marks or DM), and the American company will want to pay in dollars. The foreign exchange market allows both buyer and seller to deal separately in its preferred currency.

Foreign exchange markets are marketplaces for currencies. The main participants are several dozen large commercial banks that transact business on behalf of customers such as the German exporter and American importer described above. The other major participants are brokers, several large international money centre banks, and central banks of the various countries, like the United States Federal Reserve Bank. The foreign exchange market is the world's largest market, with average daily trading of over \$500 billion by the end of the 1980s. London is the largest single market, with the United States the second and Japan – the third.

The foreign exchange rate between two currencies is simply the price of one currency in terms of the other. It can be expressed in two ways. The exchange rate between the US dollars (\$) and German marks (DM), for example, may be expressed from the US point of view as dollars per mark (\$/DM), the "direct" quotation, or marks per dollar (DM/\$), the "indirect" quotation.

Until relatively recently, the world monetary system was based on fixed exchange rates, where currency values were pegged to gold, and later to world currencies like the British pound and the US dollar. Central banks attempted to keep their exchange rates within "gilding bands".

Extreme currency problems led to devaluation, and very strong currency positions led to revaluation.

If exchange rates were constant, there would be no foreign exchange risk. Foreign exchange risk occurs whenever the firm's profitability, either current or future, can be adversely affected by changes in exchange rates. It is convenient to divide foreign exchange risks into economic (cash flow) risk and translations (accounting) risk.

8 methods of opening the position of foreign currency are classified in this publication. 4 methods of opening a short foreign currency position and 4 methods of opening a long foreign currency position have been described in this work.

There are given examples in order to prove this classification in this work. It is necessary to look through these examples on condition that the foreign currency position has been closed.

The objectives of this classification is to determine and classify the methods of opening the currency position that would assist in forming the understanding of the methods of currency position and the formation of the currency risk.

1st method

The transaction is carried out using only the active accounts from which one increases, but the other account in foreign currency decreases as the result of this change the short foreign currency position is formed.

For example, foreign currency in cash (e.g. USD) is sold and the national currency in cash (e.g. Ls) is bought.

D – cash Ls

K – position account Ls

D – position account USD

K – cash USD

2nd method

The transaction is carried out using one active account in foreign currency and the other passive account and both of them decrease. Thus the short foreign currency position is formed.

For example, according to the customer's request the national currency from the customer's deposit account is converted to the foreign currency (e.g. USD) and is paid out in cash.

- D – deposit Ls
- K – position account Ls
 - D – position account USD
 - K – cash USD

3rd method

The transaction is carried out using only the passive accounts from which one account in foreign currency increases, but the other decreases as the result of this change the short foreign currency position is formed.

For example, according to the customer's request national currency from the customer's deposit account (e.g. Ls) is sold and the foreign currency in customer's deposit account (e.g. USD) is bought.

- D – deposits Ls
- K – position account Ls
 - D – position account USD
 - K – deposits USD

4th method

The transaction is carried out using one active account and the other passive account in foreign currency and both of them increase. Thus the short foreign currency position is formed.

For example, to the customer's request the national currency in cash (e.g. Ls) is sold and converted to the foreign currency (e.g. USD) and is paid in the customer's deposit.

- D – cash Ls
- K – position account Ls
 - D – position account USD
 - K – deposits USD

5th method

The transaction is carried out using only the active accounts from which one account in foreign currency increases, but the other decreases as the result of this change the long foreign currency position is formed.

For example, national currency in cash (e.g. Ls) is sold and the foreign currency in cash (e.g. USD) is bought.

- D – cash USD
- K – position account USD
 - D – position account Ls
 - K – cash Ls

6th method

The transaction is carried out using one active account and the other passive account in foreign currency and both of them decrease. Thus the long foreign currency position is formed.

For example, according to the customer's request the foreign currency from the customer's deposit account is converted to the national currency (e.g. Ls) and is paid out in cash.

- D – deposit USD
- K – position account USD
 - D – position account Ls
 - K – cash Ls

7th method

The transaction is carried out using only the passive accounts from which one account increases, but the other in foreign currency decreases as the result of this change the long foreign currency position is formed.

For example, according to the customer's request foreign currency from deposit account (e.g. USD) is sold and the national currency in deposit account (e.g. Ls) is bought.

- D – deposits USD
- K – position account USD
 - D – position account Ls
 - K – deposits Ls

8th method

The transaction is carried out using one active account in foreign currency and the other passive account and both of them increase. Thus the long foreign currency position is formed.

For example, according to the customer's request the foreign currency in cash (e.g. USD) is bought and converted to the national currency (e.g. Ls) and is paid in to customer's deposit.

- D – cash USD
- K – position account USD
- D – position account Ls
- K – deposits Ls

In managing foreign exchange risk, we consider a wide range of actions open to the firm. Specifically, the firm can do the following:

1. Do nothing.
2. Attempt always to transact in the home currency.
3. Use foreign exchange markets.
4. Use currency swaps.
5. Maintain monetary balance.
6. Attempt funds flow adjustments.

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Summary

Summarizing the above-mentioned I would like to make the following conclusions:

- The currency risk appears in the transactions with foreign currencies.
- The expansion of the derivatives market both worldwide and in Latvia causes the increase of the currency risk.

The novelty of this work lies in the classification of eight methods of the determining the currency risk. Four of these methods refer to the formation of the short foreign currency position and the other four – with the formation of the long foreign currency position.

The accounting of financial instruments are regulated by SGS No 39 "Financial instruments, recognition and evaluation" which came into effect on January 1, 2001 and determined the procedure of indicating the financial instruments, including the financial contract, in the balance sheet. Up to now the financial instruments were mentioned only in the bank extra – balance.

However, it must be noted that the importance of the extra – balance accounting as regards the financial statements and the management of the currency risk has not decreased, but even could possibly increase because of the growing market of derivatives in the world and in Latvia.

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MORTGAGE LOAN AS FINANCING TOOL IN PRODUCTION SECTOR

Viens no priekšnosacījumiem ilglaicīgai ražošanas sektora attīstībai ir ilgtermiņa finansu resursu pieejamība uz adekvātiem nosacījumiem. Lai ražošanas uzņēmums spētu saglabāt konkurētspēju un paplašināt ražošanu, ir nepieciešams veikt kapitālieguldījumus. Ņemot vērā to, ka šādi ieguldījumi ir dārgi un atmaksājas ilgākā laika posmā, lielā mērā tiek izmantoti aizņemtie līdzekļi. Latvijā, gandrīz vienmēr tie ir banku aizdevumi. Savukārt, bankas aizdevuma piešķiršanā lielā mērā vadās pēc piedāvātās ķīlas vērtības. Lai palielinātu ilgtermiņa aizdevumu finansējuma apmērus, var tikt izmantots ķīlas vērtības nākotnes novērtējums.

Irrevocable processes have taken place in Latvia since the regaining of independence in 1991. In the result of a consistent economic policy in a relatively brief period of time the foundations for a market economy were laid and good macroeconomic preconditions for economic growth were created.

Compared with 1999, gross domestic product (GDP) in 2000 increased by 6.6% (8.7% in the fourth quarter), according to the Central Statistical Bureau. Meanwhile the increase in manufacturing was below the average 5.7%. Until Russian crises in 1998 (see Chart 1) the increase of industrial output outpaced average growth of Latvian economy. After crises the manufacturing sector has gradually recovered, however it's growth rate is still lagging behind average.

In 1999 production output decreased in nearly all sectors of industry with the exception of wood processing and metal production. The decline of output was the especially speedy in the chemical industry where exports were mainly linked with CIS markets and the share of exports in overall output equaled to almost 2/3.

Chart 1

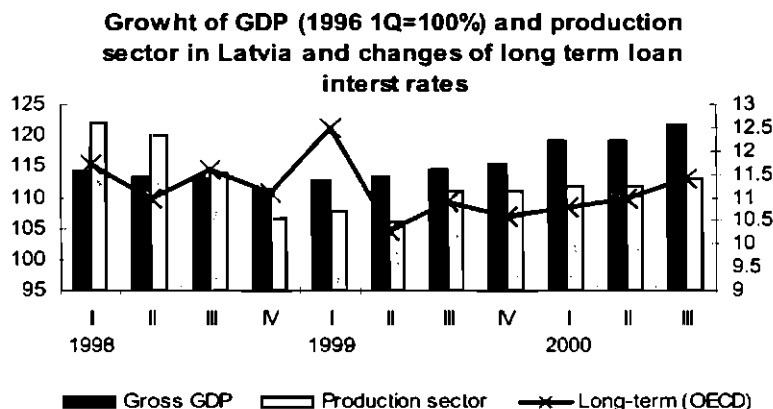


Table 1

Manufacturing Sectors*
(percentage)

	Manufacturing value-added			Growth rate			Share of exports in output
	1997	1998	1999	1997	1998	1999	1997 - 1999 (average)
Total	100	100	100	17.1	4.0	-9.8	45.8
Food products	37.3	35.4	32.1	13.6	1.5	-17.1	18.0
Light industry	11.5	11.8	12.5	9.9	1.1	-8.9	67.0
Wood and articles of wood	13.2	14.7	17.6	40.7	14.2	5.4	94.0
Paper industry, publishing and printing	5.7	6.6	7.0	20.9	22.5	-8.8	29.0
Chemical industry	6.9	6.2	4.4	16.5	-5.8	-36.6	65.0
Other non-metal mineral products	2.9	3.6	3.8	-6.7	31.3	-10.5	32.0
Metal and metal products	11.4	10.7	12.4	30.0	-1.3	12.0	41.0
Manufacturing of machinery and equipment	7.7	7.7	6.6	0.9	-3.8	-18.9	41.0
Other industries	3.4	3.3	3.5	8.8	-0.3	-5.0	86.0

* Estimated by the Ministry of Economy

In 9 months of 2000 manufacturing output was bigger 3.8% than in the respective period of 1999. Such growth was mainly achieved due to the

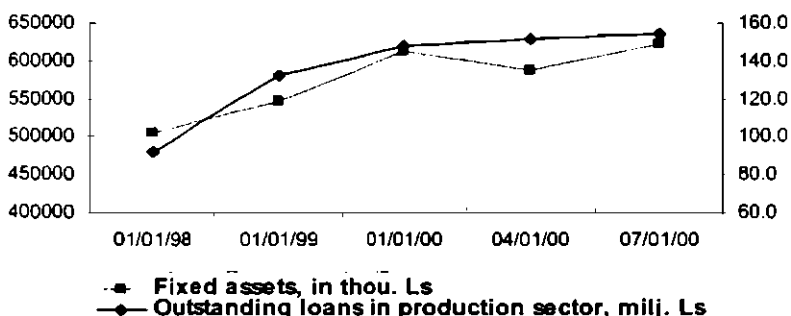
increase of output of wood processing and sectors of machine building. Output of food industry and chemical industry continued to decline.

The existing structure of industrial sectors does not allow fast recovery of the previous output levels. An essential modernization and restructuring of industry is required based on serious economic incentives. The future development of individual sectors to a great extent will be determined also by the ability to benefit from the comparative advantages.

The potential of economic growth may be best of all described by growth of investment.

Chart 2

Production sector in Latvia: outstanding loans and fixed assets



Since 1995 there is a dynamic growth of investment in Latvia. Average annual growth rates of investment¹ between 1995 and 1998 were 28.6% – almost 5 times higher than annual growth of GDP. Therefore already in 1998 the share of gross fixed capital formation in GDP reached 27 per cent.

The fast growth of investments was promoted by several factors: inflow of foreign investments mainly due to successful privatization, the high credit rating of Latvia awarded by international organizations, reduction of interest rates and stabilization of the banking sector, increase of total economic activity in all sectors and formation of positive future expectations, etc. The impact of interest rates on production sector is seen in Chart 1, when interest

¹ Investment into physical capital in the system of national accounts defined as “gross fixed capital formation”.

rates for long-term loans in Latvia (OECD currencies) dropped in the 2nd quarter of 1999 that have had a positive influence towards output of production sector afterwards.

Consequently, one of the most important preconditions for modernization and restructuring of manufacturing industry in Latvia is availability of long-term bank loans on acceptable terms. Due to Chart 2 there is a clear positive correlation between outstanding long-term loans and tangible fixed assets on production companies balance sheets. Although the proportion of short-term loans still is rather high there are some positive trends.

82.8% of total bank loans in 2000 was granted to domestic borrowers (loans to the government and local governments are not considered). The dominant sectors receiving domestic credit were trade (26.3%) and processing (22.6%), as well as transport, storage and communications 12.6% (combined).

Banks were mainly engaged in issuing loans to enterprises for the purpose of increasing their current funds. There were 38.7% commercial loans of total loans issued. The share of industrial loans for the purchase of fixed assets and financing of investment projects increased from 25.0% to 27.5% of the total loan portfolio. Mortgage lending became more vigorous in 2000. Total mortgage loans increased by 91%, while their share in the total credit portfolio grew from 7.2% to 10.9%.

Favorable trends were recorded in the term structure of loans. Loans with a maturity of over one-year increased by 44.5% (including long-term loans, which grew by 85.8%). At the end of 2000, these accounted for 73% of the total bank credit portfolio, up from the 64% recorded at the end of 1999 (Fig. 3.1). These changes show that banks are gradually shifting from short-term trade loans to loans for production and services and testify to the successful development of mortgage lending.

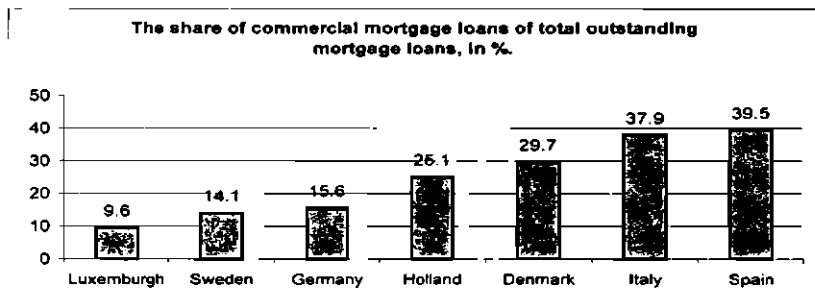
Commercial mortgage loan could be defined as long-term loan for business purposes, which is backed by pledged real estate (Mortgage) registered in the Land Book according to requirements of Civil Code.

In EU countries commercial mortgage loans make from 9% to 40% of total mortgage loans (see chart 3). The rest of loans are for residential housing purposes.

In Latvia the proportion of commercial mortgage loans at the end of 1999 was 49%, what seems to be a good result at the first glance. However several facts have to be kept in mind to judge correctly this figure. Firstly, there is a great difference between proportion of outstanding mortgage loans and GDP in Latvia and EU countries. In Latvia they make around 1.6% of

GDP whereas in EU countries this figure ranges from 25% to 88%. Secondly, GDP per capita in Latvia in 1999 was only 11% of average EU level. And, thirdly, the high proportion of commercial mortgage loans in Latvia is mostly due to small amounts of residential mortgage loans comparing to EU countries.

Chart 3



Manufacturing is traditionally capital-intensive sector, wherewith investments in fixed assets are relatively high that makes around 50 % from total assets. Specific of industry requires keeping relatively high stock volumes (raw materials + stocks in progress + ready products), which constantly are kept in range 2 – 2.5-month turnover. There is worth to mention tax liabilities burden, which in manufacturing has reached almost one-month turnover level. The reasons could be attributed to accumulate tax liabilities before privatisation and effect of Russian crises. Currently the situation is improving.

Manufacturing in Latvia is largely equity-financed equity making around 40 % of the balance sheet. Proportion of financial debt is increasing slowly. Total financial debt makes 21 % of the balance sheet. The share long-term bank loan in balance sheet makes around half of total financial debt and on 01.10.2000 it was 10%. Comparing, on 01.01.1998 it was just 7% what indicates to growing confidence towards production sector.

Leverage level between own and borrowed resources gives quite a good protection from minor market fluctuations and allows to sustain limited period of loses.

As a rule, Mortgage banks in developed countries do not issue loans for purposes of specific character. Using certain level of standardisation, they try to make additional security, so that in case of default of the borrower, there would be big number of potential buyers for pledged

property. Because of that, Mortgage banks offer financing only to all kinds of residential properties and some types of commercial property, like office buildings, hotels etc.

Financing, containing high-risk level, is subject to strict limitations in Western European countries. For example, in Germany mortgages on building sites and unfinished buildings (property development financing) should not exceed 10% of mortgage bank's loan portfolio. Loans secured with buildings under construction are issued in proportion with performed building works, so that along with outstanding balance of loan, the value of collateral also increases.

Default rate on mortgage loans is very small. The results of survey made by German Mortgage banks are given in table below.

Meanwhile, average default rate in German commercial banks is around 0.39%, or around 10 times higher.

As follows from Table 2, default rate of commercial mortgages was lower compared to residential mortgages. Partially this was because of more detailed and conservative analyses of commercial loan applications. This indicates that commercial mortgages have room for long term financing also in Latvia.

Table 2

Default rate on residential and commercial property mortgages as percentage of a respective loan portfolio, in Germany from 1989-1994.

Year	Commercial properties	Residential properties
1989	0.0572	0.1090
1990	0.0244	0.0719
1991	0.0115	0.0318
1992	0.0107	0.0172
1993	0.0150	0.0260
1994	0.0230	0.0269

One of the factors playing negative role in industrial sector financing is difficulties in determining correct value of pledged property, especially if the property is under development. In this case the future value of the property could be used.

The determined future value should be considered as market value of developed property under assumption that the development process has been accomplished and construction has been carried out within planned budget and time schedule. The main idea of future value is to provide bank

with collateral adequacy during the whole development process. When determining future value, the evaluator should ground his calculations on information which characterizes real estate market in longer term. Also the most effective and appropriate way of property use should be taken into account, so that the value of property would be adequate.

When determining the future value by method of comparable transactions (basic method), there should be comprised information on prices of analogue properties in certain period of time (also taking into consideration price fluctuations in longer run). These prices (C_i $i=1, \dots, n$), in turn, are influenced by another significant factors, among them the most significant are the sales prices on other analogue properties and their changes in longer run, future prospects of a respective type of properties (P), as well as development prospects of a respective area or region (A). Therefore, the most optimal sales price of analogue property could be expressed by the following function:

$$C_i = f(C_1, \dots, C_n; P; A; t_s) \quad (1)$$

Meanwhile, the correction of some differences of analogue properties ($SKOR_1, \dots, SKOR_n$) could be expressed as a function of price, property location and its functional suitability, the most effective way of its use, as well as factors related with sales conditions and available financing (FN):

$$SKOR_1, \dots, SKOR_n = f(C_1 \dots C_n; W; E; F; FN). \quad (2)$$

Consequently, according to the method of comparable sales transactions, the future value of onward developing property could be expressed as a function of the most optimal possible sales price of analogue property as well as correction regarding the above-mentioned differences of analogue properties:

$$FV = (C_i \pm (SKOR_1, \dots, SKOR_n)) = f(C_1, \dots, C_n; W; P; A; t_s; E; F; FN). \quad (3)$$

Taking into consideration the above-mentioned, the future value of the real estate could be determined as a function of many factors having influence on it. Therefore authors propose for calculation of real estate future value the following expression:

$$FV = f(C_1, \dots, C_n; t_s; P; A; E; F; L; FN), \quad (4)$$

where L is a factor reflecting the possible influence of legislation aspects to real estate future value.

If some of real estate segments has no active real estate market and transaction happens rear, then in this case instead of a long-term price trends data of transactions during the last 12-month should be analyzed. If in some real estate segments the market has been formed recently then in order to predict possible price trends for a longer term, only those transactions should be analyzed that has been done after the market has already matured.

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Summary

The existing structure of industrial sectors in Latvia does not allow fast recovery of the previous output levels. An essential modernization and restructuring of industry is required being based on serious economic incentives. The future development of individual sectors to a great extent will be determined also by the ability to benefit from the comparative advantages.

The fast growth of investments in Latvia was promoted by several factors: inflow of foreign investments mainly due to a successful ownership process, the high credit rating of Latvia awarded by international organizations, reduction of interest rates and stabilization of the banking sector, increase of total economic activity in all sectors and formation of positive future expectations, etc. The impact of interest rates on production sector is seen in Chart 1, when interest rates for long-term loans in Latvia (OECD currencies) dropped in the 2nd quarter of 1999 that had a positive influence upon output of production sector.

Consequently, one of the most important preconditions for modernization and restructuring of manufacturing industry in Latvia is availability of long-term bank loans on acceptable terms. As follows from Chart 2 there is a clear positive correlation between outstanding long-term loans and tangible fixed assets on production companies' balance sheets.

One of the factors playing negative role in industrial sector financing are difficulties in determining correct value of pledged property, especially if the property is under development. In this case the future value of the property could be used.

The determined future value should be considered as market value of developed property under assumption that the development process has been accomplished and construction has been carried out within planned budget and time schedule. The main idea of future value is to provide bank with collateral adequacy during the whole development process. When determining future value, the evaluator should ground his calculations on information, which characterize real estate market in a longer term. Also the most effective and appropriate way of property use should be taken into account, so that the value of property would be adequate (see formulas (3) and (4)).

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Rezekne Higher Education Institution

CREDITING OBSTACLES IN AGRICULTURE

Lauksaimniecība ir viena no galvenajām un senākajām tautsaimniecības nozarēm jebkurā valstī. Viena no galvenajām problēmām, kas traucē Latvijas lauksaimniecības nozares attīstību, ir zems lauksaimnieku ienākumu līmenis. Bankas kredīts ir viens no iespējamajiem lauksaimnieku ienākumu avotiem, bet bankas nepiešķir kredītus maksātnespējīgiem klientiem.

Autore darbā raksturo Latvijas lauksaimniecības ieņēmumu un izdevumu analīzē izmantojamās metodes, kā arī pašreizējos lauksaimniecības ieņēmumus un izdevumus.

One of the most important prerequisites for developing business activities is an opportunity to attract additional capital. That gives a possibility to extend production and to improve the product quality. Thus, implementing the business activities, an enterprise is able to ensure higher competition ability of its production and to increase its profit as a result.

The financial transaction has two sides: a creditor and a borrower. The creditor is an organiser of crediting process, he defends his interests therefore he wants to ensure repayment of the credit. The creditor has rights to get his credit (a debt) back in a certain period, if there are no different conditions in an agreement. An analysis of the borrower's current financial situation, including the comparison of incomes and costs of the previous period, allows determining the possible difficulties in receiving and repaying the credit.

In agriculture there are two methods for analysis the incomes and costs:

- 1) the data of Central Statistical Bureau (CSB) that is used for calculating the incomes and costs of farmsteads;
- 2) the total economical calculation in agriculture (ATEC) that is used for overall characteristic of the branch.

CSB and ATEC have different calculation methods and research objects. Thus, the final results can't be compared, but at the same time each result reflects the real situation in agriculture of Latvia.

According to CSB the incomes and costs of farmsteads (farmer's holdings, adjoined farm-houses and plots) are calculated per 1 ha of agriculturally used land (AUL) or per one farmstead on average.

According to CSB data in farmsteads, the total cash income from 1 ha of AUL is decreasing since 1997. In 1998 the total cash income has decreased from 78.63 lats per 1 ha of AUL down to 67.85 lats per 1 ha of AUL, or by 14% in comparison with 1997 (see table 1). In 1999 the total cash income has decreased from 67.85 lats per 1 ha of AUL down to 61.42 lats per 1 ha of AUL, or by 9% in comparison with 1998.

Table 1

The total cash incomes from 1 ha of agriculturally used land (AUL) in farmsteads [1]

	1996		1997		1998		1999	
	Lats from 1 ha of AUL	%	Lats from 1 ha of AUL	%	Lats from 1 ha of AUL	%	Lats from 1 ha of AUL	%
Total incomes from production and services	64.46	92.59	68.70	87.37	53.03	78.16	48.02	78.18
Bank credits	4.41	6.33	7.94	10.10	12.13	17.88	10.70	17.42
Attracted subsidies	0.75	1.08	1.99	2.53	2.69	3.96	2.70	4.40
Total:	69.62	100.00	78.63	100.00	67.85	100.00	61.42	100.00

The greatest part is made of the total incomes from the realised production and services. The incomes include sold and processed milk and meat, sold field-crop products, the other sold products, services and other incomes.

In 1996 the total incomes from the realised production and services compiled 92.59%, but during the next years their density was decreasing because of increasing bank credits and attracted subsidies. In 1998 the bank credits, as farmer's income source, compiled 17.88%, but the attracted subsidies compiled 3.96% of the total inhabitants' income per 1 ha of AUL. In 1999 the bank credits decreased from 12.13 lats per 1 ha of AUL to 10.70 lats per 1 ha of AUL, or by 12%; the total cash income decreased for 0.46% as well. In 1999 the amount of attracted subsidies had increased from 2.69 lats per 1 ha of AUL up to 2.70 lats per 1 ha of AUL, the total cash income per 1 ha had increased by 0.44% as well.

It is possible to conclude that in 1999 the amount of attracted subsidies increased in comparison with 1998, but the amount of bank credits decreased.

According to CSB data since 1997 the total amount of cash expenses per 1 ha of AUL is decreasing. In 1998 the total amount of cash expenses decreased from 80.43 lats per 1 ha of AUL down to 74.62 lats per 1 ha of AUL, or by 7% in comparison with 1997 (see table 2). In 1999 the total amount of cash expenses decreased from 74.62 lats per 1 ha of AUL down to 70.16 lats per 1 ha of AUL, or by 6% in comparison with 1998.

Table 2

Cash expenses of the farmsteads: per 1 ha of agriculturally used land (AUL) [1]

	1996		1997		1998		1999	
	Lats from 1 ha of AUL	%	Lats from 1 ha of AUL	%	Lats from 1 ha of AUL	%	Lats from 1 ha of AUL	%
Costs for the production needs	69.93	92.23	71.39	88.76	65.42	87.67	58.35	83.17
Taxes paid	1.57	2.07	3.56	4.43	2.95	3.95	3.09	4.40
Insurance	1.01	1.33	0.86	1.07	0.68	0.91	0.75	1.07
Repayment of credits	-	-	1.95	2.42	2.83	3.79	4.46	6.36
Repayment of credit interests	-	-	0.84	1.04	1.12	1.50	1.79	2.55
Rent, leasing payments	-	-	0.33	0.41	0.52	0.70	0.45	0.64
Workers' wages paid	3.31	4.37	1.50	1.87	1.10	1.48	1.27	1.81
Total:	75.82	100.00	80.43	100.00	74.62	100.00	70.16	100.00

Comparing the total cash incomes and costs (expenses) per 1 ha of AUL, it can be concluded that incomes are decreasing more rapidly than costs.

The greatest part of the expenses is divided to the production needs, which include costs on seeds, forage, fuel, bought equipment, etc.

In 1996 the expenses for the production needs compile 92.23%, but they are decreasing in the following years, while other expenses are increasing. In 1997 and 1998 the first place belongs to the paid taxes, the second place is devoted to the repayment of credits. In 1999 the greatest

part belongs to the repayment of credits, because in 1998 the bank credits had more important role in rural inhabitants' incomes than in 1997. It should be stressed that banks gave the short-term credits in that time.

The farmers' possibility to develop production and to attract additional credits depends on proportion of incomes and costs, so the potential creditor is interested in such figures that can promote the development of the branch.

In 1996-1999 the total incomes from realised production and services are smaller than the expenses for the production needs in the same period (see tables 1 and 2). The total cash income per 1 ha of AUL in farmsteads is smaller than the total cash expenses per 1 ha of AUL in farmsteads as well.

CSB calculates the cash incomes and expenses in average farmstead taking into account the former incomes and expenses.

In agriculture the main income source is production and selling of agricultural goods. The analysis of agricultural activities (correlation of separated branches and sub-branches) is based on total agricultural and economical calculation (ATEC) that is approved with EU and Latvia. The calculation method is used to determine the agricultural incomes. The information about EU has been analysed according ATEC method since 1964. In 1999 there were introduced changes in ATEC method. The first official results will be achieved in 2000. The ATEC results will be used in the analysis of agricultural sector. They will help to work out the agricultural policy.

According to ATEC method the farmers' incomes are influenced by:

- production value (the total production, the final production, non-agricultural activities);
- intermediate consumption;
- gross value-added;
- net value-added;
- other factors: rent, credit interests, taxes on income.

ATEC has two types of production: **the total production and final production.**

ATEC of Latvia calculates not only the final production but also the total production. This method differs from the methods used in EU.

The total production includes all the agricultural production manufactured in agricultural enterprises and farmstead holding, including also resources for other agricultural production (seeds, forage, etc). The value of the total

production can be derived multiplying all the production by the average suspended price according to the consumption.

The final production includes the sold and consumed production in the farmstead holding: difference between the production stock at the beginning and at the end of the year. Thus, the final production includes the realised production, the personal consumption and increase of the stocks. The value of the final production can be calculated multiplying its physical value by producer's price: the average price (without VAT) of the realised production (the price has been set by the farmers). Thus, the value of the final production characterises the result of agricultural activities – the real and potential gross incomes.

The results of ATEC calculation prove that the value of the total and final production is decreasing in 1995-2000. The rapid decrease of the total and final production started since 1997. In 1998 the value of the total production decreased from 420 million lats to 365 million lats, or by 13% in comparison with 1997. The value of the total production decreased from 365 million lats down to 306 million lats, or by 16% in 1999. The value of the total production is forecasted as 301 million lats in 2000: for 2% less than in 1999.

In 1998 the value of the final production decreased from 243 million lats to 210 million lats, or by 14% in comparison with 1997. The value of the final production decreased from 210 million lats to 179 million lats, or by 15% in 1999. In 2000 the final production will increase for 2%.

According to EU methodology, the final production will be analysed in details. As it was mentioned above, the final production characterises the results of the agricultural activities.

The field-crop and cattle-breeding products create the value of the final production as well. Since 1999 ATEC methodology includes non-agricultural activities: the activities that take place on a farmstead holding and consume its resources. The results of ATEC calculations show the decreasing value of the plant-growing and cattle-breeding products since 1997 (see Figure 1).

In 1998 the value of the cattle-breeding production decreased from 163.9 million lats to 151.1 million lats, or by 8% in comparison with 1997. The value of the plant-growing production decreased from 79.5 million lats to 58.8 million lats, or by 26% in 1998. In 1999 the value of the cattle-breeding production decreased from 151.1 million lats to 108.0 million lats, or by 29%, but the value of the field-crop production decreased from 58.8 million lats till 57.8 million lats, or by 2%.

In 2000 and 2001 there will be a small increase of the value of cattle-breeding and field-crop production because of the decreasing prices. In

1999 side activities compiled 13.3 million lats, or 7.4% of the value of the final production, but it will be 7.7% in 2000 and 7.8% in 2001.

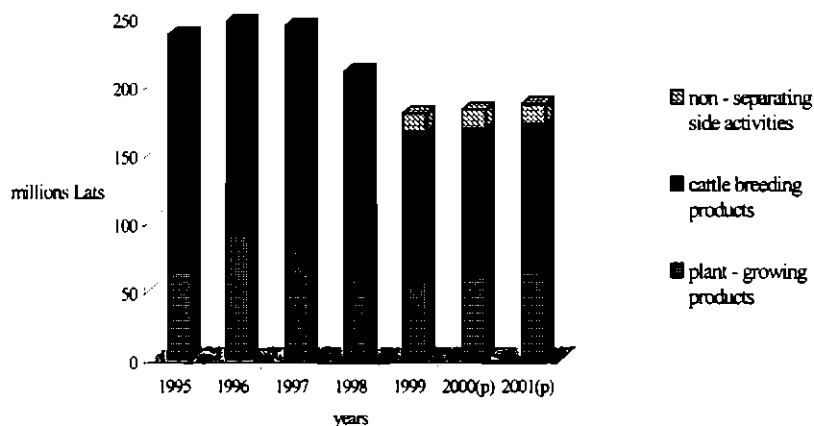


Figure 1. The structure of the final production in 1995-2001, in million lats [2]

Intermediate consumption is the costs of consumed resources and services that include all the necessary goods for agricultural production (seeds, forage, mineral fertilisers, chemical plant protection means, fuel etc.), which are bought outside agriculture. The intermediate consumption must be calculated using the net production approach, i.e. including all those products and services, which are bought in non-agricultural sectors.

The results of the ATEC calculation reflect the increase of intermediate consumption costs from 1995 until 1997. That could be explained by increase of the price of production resources. The significant price increase appeared for fuel, services and electricity. In 1998 the value of the intermediate consumption decreased from 114.4 million lats to 107.6 million lats, or by 6% in comparison with 1997. That could be explained by the rapid decrease of production amount (demand for resources and services) in agriculture or by the lack of assets in farmstead holdings. Decreasing price of the production resources or rapidly increasing effect of the agricultural production did not influence the decreasing value of the intermediate consumption. In 1999 the value of the intermediate consumption decreased from 107.6 million lats to 97.4

million lats, or by 10%. In 2000 and 2001 the value of the intermediate production will increase by 2% and 7% in comparison with 1999. The increase of the value of intermediate consumption will influence the increase of the fuel price and repair- maintenance expenses.

Gross value-added (GVA) in agricultural sector must be calculated as deduction of the intermediate consumption from the final production. GVA reflects the production results in a certain period. It is equal to the agriculture gross product according to the cost of the factors. GVA characterises the production results as a value – deduction between the production incomes and costs in a certain period.

The value of the agricultural final production decreased very rapidly in 1998-1999, but the decrease of intermediate consumption was going not so fast. It means that the decrease of GVA is the essential one. In 1998 GVA decreased by 21% in comparison with 1997, but in 1999 it decreased by 20% in comparison with 1998. In 2000 and 2001 GVA will be equal to the level of 1999: 100.9% and 100.2% of 1999 (see Figure 2).

It must be noted that every year GVA is decreasing in the value of the final production. It means that farmers always have a smaller part of realisation income after covering expenses for production resources and services.

In 1998 GVA decreased for 4.3% in the value of the final production in comparison with 1997, but in 1999 it had decreased for 3.1% in comparison with 1998.

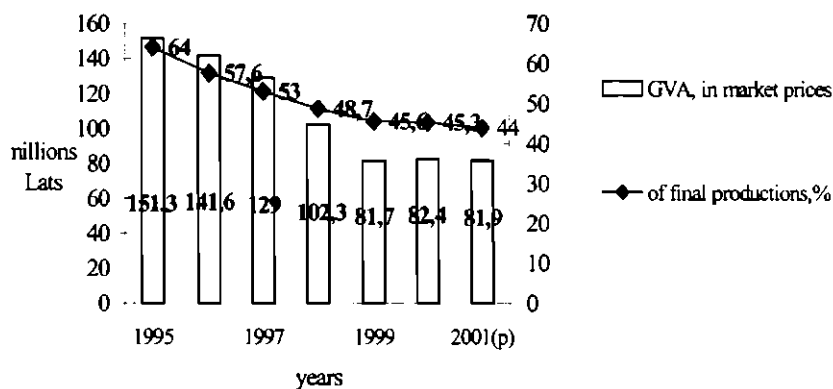


Figure 2. Changes and amount of GVA in the value of the final production in 1995-2001 [2]

It is possible to get net value-added (NVA) while correcting GVA, attracted subsidies and taxes paid and deducting depreciation as well.

$$\text{Net value-added (in factor costs)} = \text{Gross value-added (in market prices)} \\ + \text{subsidies} - \text{production related taxes} - \text{depreciation}$$

NVA is decreasing from 1995 until 2001. In 1998 NVA decreased from 101.5 million lats to 81.0 million lats, or by 20% in comparison with 1997. In 1999 NVA decrease is more rapid: 23%. For example, in 2000 the forecasted NVA compiles only 48.5% of the level of 1995. The value of the attracted subsidies has increased in that time, and as it is supposed that in 2000 and 2001 the subsidies could compile 13.8 million lats and 17.0 million lats; in comparison with 1995 the supposed increase could be 64.2 and 102.4%.

The value of the production-related taxes is not characterised by the rapid changes. According to ATEC methodology the production related taxes mean the taxes of the real estate (land), nature resources, property, and deduction between VAT paid and received 12% VAT compensation. From 1995 until 2001 the average value of production related taxes compiled 11.2 million lats per year.

Depreciation is calculated as necessary means for renewal of the existing fixed assets according to the renewal prices set for the certain period. In fact this amount is necessary to renovate all the fixed assets (machinery and equipment), although the real investment is essentially smaller. That could be explained by the lack of assets available for the farmers, by the low profitability of agricultural production and capital investments. These factors do not attract the necessary investments to agriculture.

The low farmers' incomes cause the problem circle:

Low inhabitants' incomes → low level of savings → low level of investments → out of date technologies → low level of work productivity → low level of incomes.

One of the most important problems of agriculture is connected with insufficient renewal of machinery and equipment. This problem will cause many inconveniences also in the future: there are many old buildings and out-of-date machinery. From 1995 until 2001 the average value of the depreciation compiles 25.6 millions lats per year, the bigger value of depreciation in 1997: 28 million lats and the smaller one in 1999: 23.3 million lats.

The income of the agricultural activities means the producers' gain from agriculture including the farmers' salary and the income taxes. In 2000-2001 the renting and leasing costs are supposed to be 7 times higher than in 1995. However, they will decrease by 22.2% in comparison with 1999 (see Figure 3).

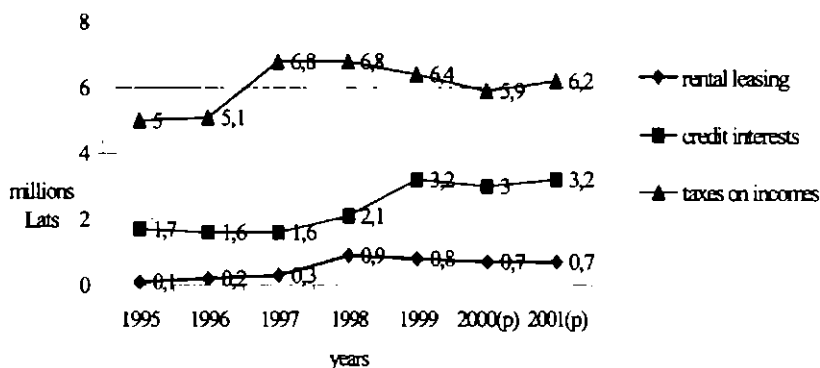


Figure 3. Changes of the value of the rent, credit interests and income taxes 1995-2001, million lats [2]

The credit interests or charges for the borrowed capital have increased since 1998. It is connected with increasing amount of investments in agriculture according the special program of subsidies. The repaid amount of credits and interests increased for 1.5 times in 1999. It is forecasted that the repaid amount of credit interests could compile 3.0 million lats and 3.2 million lats in 2000 and 2001: to preserve the level of 1999.

According to the data of Ministry of Agriculture in 1999 the total income from the agricultural activities decreased from 78 million lats to 58 million lats in comparison with 1998. In 2001 the income will decrease for 2% (56.9 million lats), but in 2001 it will increase for 2% (58.0 million lats) in comparison with 2000.

The income taxes (payment on social insurance and persons' income tax) are decreasing. They directly depend on incomes from the agricultural activities. For example, in 2000 income from the agricultural activities will decrease for 2%, but amount of income taxes will increase for 7.8%.

From the net income after the paid taxes it is possible to get the average income per one person employed in agriculture.

The average income per one person employed in agriculture, lats/per year = (net value-added (in factor costs) – rental costs – credit interests – taxes on incomes) / the number of persons employed in agriculture

The income per 1 person employed in agriculture is decreasing in comparison with the previous years. It is important to stress the fact that the income include not only the net agricultural activities, but also the side activities on the farmer's territory (for example, cutting the private forests). The side activities are an important source of the farmsteads' incomes, especially during the last years.

According to the ATEC results, the incomes per person employed in agriculture are decreasing rapidly. In 1998 the income per person employed in agriculture decreased from 538lats/per year to 435lats/per year, or by 19% in comparison with 1997. In 1999 the income per person employed in agriculture decreased from 435 lats/per year to 339 lats/per year, or by 22% in comparison with 1998. There are the following main causes of the decreasing incomes: decreasing purchasing price of agricultural production, decreasing crops, insufficient amount of the state subsidies and other payments that could compensate the decreasing incomes. In 2000 and 2001 the income per person employed in agriculture could increase for 7% and 18%. This increase is connected with the decreasing number of persons employed in agriculture.

One of the most important criteria that determine the existence of any activity is the possible income. Analysis and forecasts still reflect the farmers' insufficient incomes that prevent an optimum production level. Banks also are not interested in crediting insolvent clients.

The Latvian farmer incomes depend on fluctuation of the realisation prices, which also depend on fluctuation of the prices on foodstuffs in the world market, on people's purchasing power and on export of the agricultural products, because Latvia's market is limited.

Agriculture is one of the branches that need the planned support of the government: stating and carrying out the agricultural policy. Minister of Agriculture agrees that a part of regulations in agriculture remain just in the written way, but they are not used in real life. It is advised to work out the long-term development strategy for the agriculture of Latvia. The strategy could specify the possible support of the state, because the defending policy of the unstable internal market, lack of supply-related opportunities and information

create the chaotic production of agricultural goods. According to the strategy of agricultural development in EU countries, it is clear those only commercially strong farm holdings and modernisation of specialised farmstead holdings, their horizontal and vertical co-operation in production and sale, will make the agriculture more competitive than before.

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Summary

Agriculture is one of the most important and oldest branches of national economy in each country. There are the following main problems that prevent the development of agriculture: low-income level that doesn't allow using internal finance mechanism. Another problem is related to unclear situation concerning the agriculture policy and production markets in the future.

There is a concerning factor connected with bank credits. Banks don't give the credits to insolvent clients. Analysis of borrower's current financial situation, including the comparison of incomes and expenses of the previous years, allows determining the possible difficulties connected with repayment of the credit. The farmers' possibility to develop their production and to attract additional financial resources is closely related to the proportion between their incomes and expenses. The possible creditors are very interested in this data because it reflects the development possibility in agriculture.

In agriculture there are two methods for analysis the incomes and costs:

- 1) the data of Central Statistical Bureau (CSB) that is used for calculating the incomes and costs of farmsteads;*
- 2) the total economical calculation in agriculture (ATEC) that is used for overall characteristic of the branch.*

According to CSB data about farmsteads, the total cash income from 1 ha of AUL is decreasing since 1997.

Comparing the total cash incomes and costs (expenses) per 1 ha of AUL, it can be concluded that incomes are decreasing more rapidly than costs.

The analysis of agricultural activities (correlation of separated branches and sub-branches) is based on total agricultural and economical calculation (ATEC). According to the ATEC results, the incomes per person employed in agriculture are decreasing rapidly. In 2000 and 2001 the income per person employed in agriculture could increase for 7% and 18%. This increase is connected with the decreasing number of persons employed in agriculture.

Analysis and forecasts still reflect the farmers' insufficient incomes that prevent an optimum production level. Banks also are not interested in crediting insolvent clients.

Agriculture is one of the branches that need the planned support of the government: stating and carrying out the agricultural policy.

According to the strategy of agricultural development in EU countries, it is clear those only commercially strong farmer holdings and modernisation of specialised farm-stead holdings, their horizontal and vertical co-operation in production and sale, will make the agriculture more competitive than before.

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THE OPENNESS OF THE LATVIAN BANKING SYSTEM AND ITS CONFORMITY TO THE EUROPEAN UNION LEGISLATION

Latvia has declared that one of its main priorities is accession to the European Union. The accession means to become consistent part of the free movement of persons, capital, goods and services, which are fundamental parts of the single market. However, since an accession process can be measured by the so-called step by step approach, it is relevant to prepare various parts of an economy for full fledged participation in the single market. The purpose of this publication is to evaluate the development prospects of the Latvian banking system in the future.

A modern banking is closely related to the movement of capital, equity markets, it is expanding over borders and cross border transactions are an integral part of daily business. Therefore, it is crucial to follow a balanced development among various sectors of an economy. Moreover, related sectors should enjoy necessary magnitude of freedom.

Latvia pursues a strategy of an open market economy. It has a liberal regime for capital movements that may well be compared to the world's most liberal regimes. No restrictions on convertibility of national currency exist in Latvia both in respect to the current account and capital account transactions. Foreign investors can freely repatriate their investments and profits after paying due taxes. Both residents and non-residents are allowed to hold foreign currency in cash or open bank accounts in the Latvian or foreign currency without any restrictions. Every Latvian resident can use without any restrictions foreign financial services.

The banking system in Latvia is one of the most developed parts of the economy, which enjoys the highly open and developed legislative framework either for domestic clients or non-residents. European Commission as reached "an advanced stage" has been several times evaluated the Latvian banking sector or "In recent years, the Latvian banking sector has strengthened considerably, and has contributed positively to macroeconomic stability" It sounds plausible, but what about future prospects of the Latvian banking sector?

Author of this publication believes that future prospects will be determined by the following factors:

- development of the EU- consistent Regulatory Framework;
- banking sector performance and development.

Development of the EU- consistent Regulatory Framework

For Latvia the strategy for further development of the regulatory framework has been largely predetermined by the EU regulatory standards. With the view of accessing to full membership of the European Union the banking sector has to be able to follow the Community rules and to provide services at the same level of effectiveness and guarantees as in the EU. It has to be able to withstand the increasing competition that the integration process will inevitably lead to.

The Bank of Latvia, which is currently responsible for supervision of credit institutions, has devoted a lot of effort and recorded considerable progress in establishing EU-consistent regulatory framework so far. All main EU banking directives have been introduced into Latvian legislation including also sophisticated ones like *On the Supervision of Credit Institutions on a Consolidated Basis* and *Directive on Capital Adequacy of Investment Firms and Credit Institutions*.

The banks are required to have the minimum initial capital at 5 million EUR. The capital adequacy requirement was set at 10% - tighter than European Union requirement of only 8%, and the risk weighting of certain assets was higher than recommended by international guidelines taking into account less mature structure of the transition economy and more volatile environment. The restrictions on large exposures, on insider lending, on equity holdings, on open foreign exchange positions, as well as licensing requirements were all set in line with the respective European Union banking directives.

In addition, banks are forced to comply with a rather tight loan-loss provisioning scheme, thus revealing the realistic picture of banks' financial standing and ensuring credibility of their reports. Loan classification and provisioning requirements in Latvia are even more demanding than regular Western standards, and this is due to the higher degree of risk in bank lending in a transition economy. Now development of legislation in banking is expected to follow latest developments in the EU and may be called as fine-tuning process. The quality of banking legislation in Latvia has been proofed also by IMF assessment that *25 Basle Core Principles for effective banking supervision* almost fully comply with internationally recognised terminology.

However, for the year 2001 the major change is expected at the supervisory area for the whole financial sector. The new law has been adopted in Latvia on 1 June 2000 establishing a single financial supervisory authority. The newly established *Financial and Capital Markets Commission (FCMC)* will start their functions on July 1, 2001. Participants of financial and capital markets, such as broker companies, insurance companies, investment funds, private pension funds, credit institutions etc, will be regulated and supervised by a single authority – FCMC. This Commission will be the successor to the rights, obligations and liabilities of the existing supervisory authorities, i.e., the Credit Institutions Supervision Department of the Bank of Latvia, the Securities Market Commission and the Insurance Supervision Inspection. The independence of the Commission is guaranteed by using principles of independence of the European central banks.

Nowadays global capital tends to find ways for more efficient allocation of resources and one of the features is concentration of capital or mergers & acquisitions. Financial institutions are involved in many activities that can be found over whole financial sector and it is main reason forcing supervisors to respond on market activities. However, not all supervisors support establishment of unified supervisory bodies.

One can measure the establishment of such unified commission as a panacea or solution for all main problems in a supervisory field, but it should be noted that although it is so popular step in many countries nowadays, it has some advantages and disadvantages. According to some distinguished analysts (Goodhart and others 1997, Lannoo 1999) the main arguments for unified institution are:

- it facilitates the comprehensive assessment of risks and may generate economies of scope, by pooling the expertise of different functional supervisors and guaranteeing their co-operation;
- it would create a one-stop agency for authorisations and settlement of complaints, and may reduce transaction costs and supervisory fees;
- it may enhance transparency and accountability, to the extent that the allocation of responsibilities for supervision of financial conglomerates is clear and undivided;
- by reducing the number of authorities and homogenising their structure, it may facilitate co-operation among European supervisors.
- Arguments against a unified supervisory authority are:
- the risk profile and nature of business is substantially different across sectors, and excessive homogenisation across

heterogeneous activities may decrease the overall quality of supervision, casting doubts on the likelihood of achieving economies of scope from joint supervision;

- a very powerful supervisor could increase moral hazard if the public perceives the financial system to be under control, thereby reducing the incentive for financial institutions to prudently manage their own business;
- supervision is becoming increasingly specialised, especially as more emphasis is given to market discipline in risk control;
- a single authority would eliminate the potential benefits from regulatory competition.

Unfortunately, the experience so far with unified supervision is immature, as all of such kind agencies have been only recently created. Moreover, within the EU hot discussions are taking place about placement of supervisory authorities – should those operate under the auspices of the central bank or outside, having variety of institutional forms. Therefore, Latvian society should hope for the best and in case of successful performance it may create better conditions for healthy and prudent development of the whole financial sector.

In order to conclude this chapter, author found that enforced legislation in Latvian banking sector is almost fully recognised by international standards and corresponds to good practises of the best performers from CEEC. Relevant international institutions like European Commission and International Monetary Fund have stated similar opinions as well. Therefore, author believes that current legislative situation has reached high standards and gives good opportunities for development of the banking system in the future.

Banking sector performance and future prospects

The performance of the Latvian banking sector has been impressive last year. The Russian crisis has been fully overcome and banking sector has showed an increase in all main indicators (see Table 1).

With so rapid credit grows in Latvia, it may imply on overheating in economy and neglected credit quality. However, statistics show that still credit to GDP is only 25.1% and constitutes approximately 5 times lower level of credits than in EU. Also credit quality is improving, showing good developments for the future (see Table 2). As can be seen from the table,

credit quality is improving in all selected countries and on average as well. In Latvia non-performing loans at the end of 2000 constituted 5%.

Table 1

Latvian Banking Sector Performance (growth over the year (%))

Indicators	1997	1998	1999	2000
Assets	49	-10	16	39
Deposits	57	-10	24	44
Credits	74	46	16	28
Equity	47	-9	-2	18

Source: The Bank of Latvia

Table 2

Non-performing loans/total loans (%) in Latvia and selected EU member states

Non-performing loans	Latvia	FR	IT	ES	BE	FI	Average
1995	19	8.5	9.0	6.0	4.0	6.0	8.7
1998	6	6.3	8.9	1.7	3.2	1.8	4.6

Source: Bank of Latvia; Fitch IBCA; National Central Banks; the Banker

However, looking at performance of the banking sector, it should be taken into account that Latvia is approaching EU legislative and business standards and, therefore, economic conditions at the EU and in particular euro area will inevitably affect development conditions in Latvia. The question is only to what extent? With accession to the EU, the single European passport for banks will be enforced which implies on fierce competition among banks. The same is true not only for Latvia, but also for all Central and Eastern European Countries. On the other hand, European banks face increasing competition in EU and due to changes in their income structure those banks intensify their expansion plans in the other markets. Introduction of euro affects virtually all business activities of banks in the Euro area. The fact that prior to the launch of the EMU 40-80% of total income of European banks derived from those areas that are likely to be most affected (such as foreign exchange operations, corporate credit business, trading of government bonds), points to the scope for a considerable

adjustment in the European banking system (Speyer, 1998). Indicators of the degree of concentration in the banking sector in Europe point to a need for further consolidation in most European countries accompanied by an increase of profitability. Gradually, in search for higher profits and to explore their increased competitiveness, the banks from the euro zone will be motivated to compete internationally. Deregulation of the financial services industry in the euro area over the last 15 years has considerably increased competition in the banking sector and reduced the role of traditional intermediation activities as a source of income for banks. Between 1992 and 1998, net interest margins – the difference between banks' revenues from lending and the remuneration of deposits – have declined from 2 to 1.5% of banks assets (Belaisch 2001). Comparing return on assets and equity in selected EU member states and Latvia (see Table 3), the profitability of banks in Latvia is impressive. At the end of 2000, in Latvia ROA was 2% and ROE 19%. At this stage, markets in the CEEC are becoming an attractive target for many euro area banks because they will be more competitive than local banks in several respects.

Table 3

**Returns on Assets and Equity for Banking Systems
in Selected Countries**

Indicators	Latvia			DE			EU - 11		
	92	95	00	92	95	98	92	95	98
ROA	n.a	1	2	0.3	0.3	0.2	0.3	0.3	0.4
ROE	n.a	5	19	6.6	6.3	7.2	9.5	7.4	5.6

Sources: Bank of Latvia; Fitch IBCA; IMF

With the arrival of the euro, banks in the EMU area are likely to see their profits squeezed still further. Some studies have estimated that the disappearance of intra-European foreign exchange business will lead to a reduction of approximately 10% in banks net earnings from this area, corresponding to 1% of profits. The invasion of pan-European banks in the CEEC implies that not all domestic banks in these countries will be able to withstand the competition. Hence, one could expect to see accelerating M&A activities in countries where the process of foreign participation takes place most rapidly, and Latvia is no exception. Currently, banks in Latvia are small not only by global standards but also compared to European averages. At the same time, the number of banks in Latvia reached 22 at the end of 2000. This situation is likely to change,

however, as the banking sector in Latvia heads towards more consolidation. In fact, this process is already underway, with some banks already starting to increase their dominance in the domestic financial market (see Table 4).

Table 4

Banking sector concentration in Latvia

	Assets		Loans		Deposits	
	1997	2000	1997	2000	1997	2000
3 largest banks	40.5	60.6	47.6	61.9	42.5	67.8
5 largest banks	53.8	76.1	59.8	70.4	57.4	85.7

Source: The Bank of Latvia

At the same time, during the last year a mounting trend towards increased presence of foreign capital in the Latvian banking sector has been observed – foreigners now hold about 70% of total share capital. So far, Scandinavian banks have been the most active players: *Swedish Skandinaviska Enskilda Banken AB*, *Swedbank* and Finnish *Merita Bank Ltd.* have become major shareholders in Latvian banks. With rehabilitation of Pirmā Latvijas Komercbanka, which was sold to "*Norddeutsche Landesbank*" has been successfully completed the first successful recapitalisation case in transition economies. It brought necessary diversification of non-resident capital establishing strong German presence in Latvian banking system.

Although these activities can partly be explained by attractive share prices for Latvian banks, it can nevertheless be assumed that increasing pressures on profit margins for the banking sector in the EU countries and the expectations of fiercer competition as a result of launching the EMU also have added to incentives for the EU banks to enter Latvian market.

The presence of foreign capital in the Latvian banking sector will make it easier for those banks to obtain financing on global markets at more favourable prices. It will also increase the credibility of these banks in the eyes of the general public. As a result, local banks would be put at somewhat disadvantageous position. Since currently major banks in Latvia, except for "Parekss banka" which is seeking their strategic investor, are owned by highly rated banks from Scandinavia, Germany and those banks pursue an expansion policy to the CEEC markets, it is most likely that already acquired banks will play roles in the domestic market only. For sure there will be a fight for a better position in the

market and the main aim for those banks is to get substantial part of the Latvian universal banking.

What about for remaining banks in Latvia? Remaining banks are destined either to fulfil niches that were not taken by big players or to merge or be overtaken by bigger banks. This last possibility has been taking place and last case was recently when "Rietumu banka" bought "Saules banka". However, one should not underestimate role of Latvian banks to serve as a bridge between West and East. Traditionally, Latvian banks have been active internationally and in particular to the East (Russia and CIS). Many small and medium size banks provide services for their clients, are being inactive in domestic market and even at the time of turbulences successfully survive in changing economic conditions, have adequate profit and fulfil tight supervisory requirements.

5. Summary and Proposals

Finally, author concludes that:

- The banking legislation in Latvia is almost fully recognised by the best international standards, including EU ones. The Bank of Latvia is aware of the standards that the banking system must reach so as to serve the economy efficiently and to prepare Latvia for integration into the European Union. The recent developments show that Latvian banks are well on their way to meeting the rigid international standards. The adequate regulatory framework and supervisory practices established by the Bank of Latvia will provide for the further stability of the banking system.
- Despite to the uncompleted discussions about institutional placement of supervisory authorities within the EU, the newly established FCMC is going to start their activities taking over best supervisory practise and techniques from the Bank of Latvia. It is expected that the high level of supervision of banking will be maintained.
- Latvian banking has strong presence of non-resident capital, which is diversified by different countries and it is leading to increased competition in the market. Further consolidation process of banks is expected. Non-resident banks are established with the aim to become market makers in the domestic market and those banks will have good possibilities for development of the universal banking in Latvia due to better availability of cheap financing sources. Remaining banks are going to play traditional historically established intermediary role between East and West and take

remaining niches in the market. The number of banks in Latvia will decrease.

In order to maintain an advanced level of legislative framework and to improve future prospects of the banking in Latvia, author is setting up following proposals:

1. The Bank of Latvia and Government should follow the development of the newly established unified supervisory institution (FCMC) and be aware of supervisory quality. In case of necessity, measures should be taken protecting the high quality of supervision.
2. FCMC and Competition Council in Latvia should follow latest developments in banking sector, precluding possible distortions of competition due to consolidation process in the market.
3. Supervisory authority should not raise barriers to the business activities of small and medium size banks. Those banks should continue their business by filling market niches, which cannot be taken by big universal banks. The market forces should determine the existence of any bank in the market.

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EVALUATION METHODS OF FINANCIAL STABILITY OF COMMERCIAL BANKS

Komerčbanku stabilitāte ir visas valsts finanšu sistēmas attīstības svarīgs priekšnosacījums. Autore veic banku finanšu stabilitāti ietekmējošo faktoru klasifikāciju. Tiek piedāvāta pieeja banku stabilitātes novērtēšanai, par pamatu ņemot plecus svarīgākos finanšu stabilitātes novērtēšanai kritērijus: kapitāla pietiekamību, aktīvu kvalitāti, bankas darbības finansiālo rezultātu un likviditāti.

Banks form an integral part of the single financial mechanism that is one of the most significant fields of economy. Bankruptcy of a large commercial bank can cause dramatic consequences for the whole economy therefore the Latvian banking system is a subject to powerful control by a supervisory institution – the Bank of Latvia. According to classical theorists of bank management, "...shareholders, depositors, supervisions and control institutions have always focused attention on stability of commercial banks because bankrupt bank have far more negative impact on economy than any other bankrupt companies. Stability is important for shareholders since substantial bank losses can threaten their investments. Deposit losses affect savings of numerous depositors and working capital of several companies. Bank losses diminish reliability in banking system which has an immediate impact on all sectors of economy" [7; 190].

Stability of commercial banks does not mean only the capability of a bank to carry out its functions precisely and promptly in order to ensure safety of deposits and long term it also shows the quality level of the whole banking activities.

Absolutely stable banks do not exist, the level of bank stability depends on several external and internal factors.

By external factors of bank stability we mean overall economic conditions for banking activities, the environment where the bank operates. Such factors include the situation within national economy,

legal system of the residence country, legislation governing banking activities, bank role in international financial markets.

Internal factors of bank stability are connected with the policy pursued by the bank, quality of banking operations, technological equipment, performance of bank personnel and financial results of banking activities.

The author of the article shares G. Fetisov's approach to classification of bank stability factors into 3 categories:

- a) organizational factors,
- b) technological factors,
- c) economical factors [8; 20].

The first category includes the capability of bank personnel management, manager's ability to respond promptly to changes in financial markets, quality of banking operations, appropriate level of education for personnel, activities of internal audit. A well designed organizational structure of a bank and well – tried in administrative costs, highly professional level of employees enables the bank to prevent risks within banking operations.

The second category technological factors refer to the level of technical equipment. The use of advanced computer software facilitates the speed and quality of banking operations thus enhancing the total efficiency of a bank. Nowadays banks can carry out transactions on behalf of the client being far away by the use of telephone, telegraph and electronic means of communication. It means that a transition period from labour-consuming to capital-consuming technologies has started. These processes certainly extend the range of bank services and affect the results of banking activities.

The third category of factors is economic factors. They include assets and liabilities structure in bank's balance sheet, structure of bank incomes and expenses, adequacy of equity, risk management procedures. Eventually, both external and internal factors have an impact on financial results, thus affecting financial stability of a bank.

Viability in banking sector is maintained by system of support for banking activities. This system of support in Latvia is carried out in two ways:

- 1) In 1998 "Act on ensuring guarantees for physical persons" was adopted in Latvia. The law stipulates that indemnity to a depositor for his loss of savings in a bankrupt bank increases with each year and by year 2008 it should amount to Ls 13,000. Thus from 2008 Latvia will comply fully with the directives

laid down by the European Parliament and European Union Commission in 1994 on security of deposits. This Directive stipulates that in the Member State of the European Union the scheme of deposit guarantees should make at least EUR 20,000 to cover the total amount of insured savings of a depositor.

- 2) The provision of loans to commercial banks by the Bank of Latvia. Bank of Latvia offer loans in return of liquid debt securities (Latvian Government bonds, sector A Central government securities and corporate debt securities the rating of which is not lower than in the Republic of Latvia). Central banks are not allowed to give loans the repayment of which could be doubtful because the source of refinancing might be additional issue of money. The demand for loans from the Central bank increases especially during the periods of crises when banks suffer from scarcity of liquid funds. For instance, the problems of 1998 caused by the Russian financial crises stimulated the increase of loans provided by the Bank of Latvia by 8 – 10% from liabilities. During normal periods of banking activities the loans from the Bank of Latvia account for 2-4% of total liabilities.

The maintenance of financial stability is a major task of financial management in any bank. Financial management in commercial banks is a complicated process connected with raising equity and external funds as well as placement of these funds while carrying out various bank operations. The goal of bank's financial administration is profit making observing the restrictions set by supervisory institutions as well as bank procedures of its risk management.

External funds account for 90-95% of the bank assets they include customers deposits, borrowed finance in financial market in the form of loans and obtained funds from the issue of debt securities. As equity funds account for a relatively small proportion of total assets, even a loss of 7-8% of its assets can put the bank on the verge of insolvency. This condition in financial management stresses the importance of bank liquidity-the capability of a bank to meet its commitments against creditors in due time and to full extent. Bank liquidity is closely connected with bank capital. Liquidity problems and capital inadequacy are symptoms of the some disease. The interaction of these indicators is shown in the form of a bank reliability and stability pyramid designed by Uyemura D.G., Van Deventer

D.R that is based on US banking system. Adapted to the Latvian environment this pyramid can be illustrated in the following way:

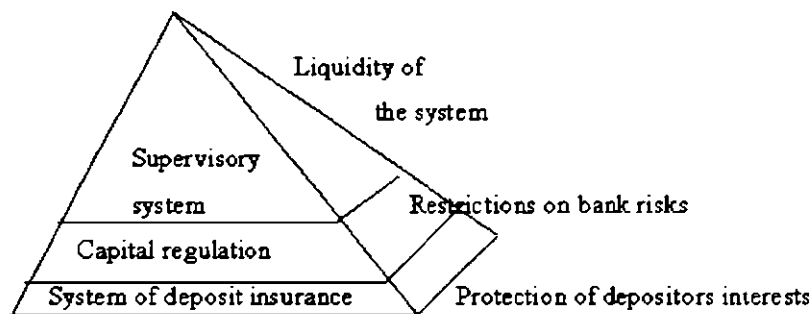


Fig 1. Fundamentals of reliability and stability for banking system

The maintenance of bank stability is possible only by providing effective system of bank risk management. Important step in risk management is measurement of Value at Risk.

The Value at Risk is the maximum loss at a given tolerance level. The tolerance level is the probability that the loss exceeds this maximum value. The Value at Risk becomes Capital at Risk. Capital at Risk is the capital required to absorb potential losses at given tolerance level. This tolerance level is the default probability of the bank [5;66].

Thus the system of bank financial management is directed to providing bank security and financial stability that according to the author of the article could be characterized by the following criteria:

- 1) Capital adequacy – capital assessment in order to determine bank capability to cover risks by its equity;
- 2) Quality of assets – assets portfolio is assessed according to the probability principle of defaulted funds, as well as the impact of doubtful funds on the bank overall financial situation;
- 3) Financial results of the banking operations – assessment of bank profitability and solvency in order to determine the adequacy of bank revenues for further expansion of banking activities;
- 4) Liquidity – capability of a bank to fulfil its commitments to its customers in conformity with the concluded agreements and in unexpected circumstances.

Characteristic criteria of the efficiency of the bank financial management will be considered more in detail.

Adequacy of bank capital has two aspects: statistic and dynamic. Statistic aspect is related the requirement of minimum amount of starting capital. In conformity with the directives of the EU the minimum amount of starting capital in Latvia is EUR 5m. Dynamic aspect of capital adequacy characterizes the level of risk coverage by bank equity capital. From January 1, 2001 "Rules of capital adequacy assessment" set by the Bank of Latvia came into effect. The rules stipulate that the amount of bank capital must provide coverage of bank and trading portfolio risks. The equity capital of a credit institution should always exceed or be equal to the total amount of bank portfolio capital requirements and market venture capital requirements [2; 5]. It means that the bank equity capital ratio against the total of risky transactions should be over 10%.

The indicators of bank capital adequacy for 5 major Latvian commercial banks were the following:

Parekss banka	12.2%
Latvijas Unibanka	16.6%
Hansabanka	13.3%
Latvijas Krājbanka	11.2%
Rietumu banka	16.2%

The second criterion of the bank financial stability is the **quality of its assets**. The quality of assets is determined by their liquidity, ratio of doubtful funds, of profitable assets amount. Bank liquid assets can be divided into two categories; liquid assets in cash and non-cash liquid assets. Liquid assets in cash are bank funds in cash, correspondent account with the Bank of Latvia and account balances in Nostro correspondent accounts. Cash balances at cash desks, ATMs, currency exchanger offices enable banks to provide withdrawals on behalf of their customers. The higher the liquid assets, the lower the bank income but it provides higher bank liquidity. According to the results of year 2000 liquid funds in banks amounted to the average of 6.73% of bank assets. Non-cash liquid funds are investments in securities if they have a permanent unlimited market, i.e. they can be sold in a short time without significant losses or used as collateral security for loans [3; 3]. The proportion of liquid securities in total assets in the year 2000 in Latvian banking systems accounted on average for 12.7. Most part of liquid securities portfolio consists of Latvian state securities. As of late year

2000 three Latvian commercial banks-Lateko banka, Latvijas Tirdzniecības banka and Saules banka – did not have liquid securities in bank assets. The above-mentioned banks provided their liquidity only by liquid funds in cash.

In order to characterize the quality of bank assets it is necessary to assess the total portfolio of bank securities. The portfolio of bank assets according to its nature can be classified as investment portfolio and trading portfolio. The first is made with the purpose of gaining control over other companies and pertains to small income. The liquidity of this part of portfolio is affected by the position of securities in stock market. The trading portfolio is made with the purpose of profit making and its securities are held for sale. This part of portfolio has a high degree of risk but it can gain a substantial profit for the bank. The bigger the part of trading portfolio which gives larger income from trading portfolio securities held in gross profit structure, the lower the quality of this source of income.

Advanced loans account for increasingly bigger part of total assets. Thus in 2000 advanced loans in Hipotēku banka accounted for 71% of total assets, Latvijas Unibanka – 63.5% of total assets, Hansabanka – 45.5% of total assets, Parekss banka – 38.61% of total assets, Latvijas Krājbanka – 25.37% of total assets, Rietumu banka – 22.65% of total assets.

Several analytical indicators can characterize the quality of credit portfolio. Let us calculate one indicator-ratio between special accruals for doubtful loans and total portfolio of loans-for five largest Latvian commercial banks. It is considered that bank accruals for doubtful loans reflect the amount of credit risk of bank credit portfolio.

Parekss banka	3.99%
Latvijas Unibanka	3.08%
Hansabanka	2.70%
Latvijas Krājbanka	4.53%
Rietumu banka	2.90%

The calculated ratios show that the quality of Latvijas Krājbanka credit portfolio is relatively low. The key managers of Krājbanka should revise the procedures of credit offering and supervision as well as pay more attention to upgrading the qualification of employees in the credit department.

Evaluating the assets quality we should also consider investments in real estate. These assets are not liquid, according to assets structure they have 100% risk degree. It is very expensive for the bank to maintain tangible assets and these costs can be covered only by non-interest income.

To sum up the assets quality evaluation techniques the author concludes that the bigger the proportion of bank cash assets and tangible assets in the structure of total assets, the higher the risk for bank profitable assets. The higher the risk the more pessimistic evaluation is the financial stability of the bank.

The third criterion of the bank financial stability is **assessment of financial results** of banking activities. The key indicators of the bank financial operations are its profit. If the bank is unable to make money its customers can consider its operation as inefficient and withdraws money from it. But banks should not gain profit with the assumption that profit making will lower their reliability and stability because risky transactions may lead to two alternatives-high income or heavy losses.

Financial viability of banking operations can be assessed in two ways: the first way – quantitative analysis of profitability and financial viability, the second way – qualitative analysis of profitability and financial viability. The quantitative analysis is based on calculation of two major financial ratios – ROE (return on equity) and ROA (return in assets). Analysing the indicators it is recommended to assess the dynamic changes of each ratio, to carry out analysis of determinants for each ratio and analyse ROA and ROE in comparison with competitive banks indices. Ratio ROE – bank net profit against its equity capital – allows bank shareholders to evaluate efficiency of bank management. Ratio ROE is based on price fluctuations in resource market determined by RIGI BOR rate with additional payment for risk that the shareholders have approved of. This ratio around the world varies from 6 to 8%. In 2000 ROE for five largest Latvian commercial banks were the following:

Parekss banka	33.42%
Latvijas Unibanka	25.40%
Hansabanka	19.96%
Latvijas Krājbanka	12.10%
Rietumu banka	22.45%

The conclusion after evaluating ROE ratios is that shareholders interests in all banks were taken into account. Latvian banking business is

more profitable than common in the world. This is due to gainful deals with higher risk level. Yield of the stock capital of the Parekss bank is the highest in Latvia.

Ration ROA – return on assets – characterizes overall effectiveness of bank management. The ratio is calculated by dividing bank net profit by average annual assets. The higher ROA, the higher profitability of the bank but higher profit accordingly increases the level of risk. In 2000 ROA for five largest Latvian commercial banks were the following:

Parekss banka	2.14%
Latvijas Unibanka	2.60%
Hansabanka	1.73%
Latvijas Krājbanka	0.66%
Rietumu banka	2.99%

Calculations show that overall return on assets is higher for Rietumu banka but lower for Latvijas Krājbanka.

Ratio ROE depends on return bank capital and bank financial leverage. Thus,

$$\text{ROE} = \frac{\text{Net profit}}{\text{Average value of assets}} \times \frac{\text{Average value of assets}}{\text{Share capital}} \quad \text{or}$$

$$\text{ROE} = \text{ROA} \cdot L_{\text{fin}}$$

The given equation shows that the higher capital profit margin, the higher profitability ratio ROA. Consequently, ROE will be higher if the financial leverage is higher. Increase in financial leverage means reduction of bank share capital amount in bank overall assets which leads to negative impact on bank reliability and stability.

Bank share capital part in bank overall assets is:

Parekss banka	5.62%
Latvijas Unibanka	8.18%
Hansabanka	7.79%
Latvijas Krājbanka	4.64%
Rietumu banka	11.62%

Qualitative analysis of bank financial results is based on structural analysis of bank income and expenses. When analysing the structure it is recommended to classify all income and expenses in three categories: interest income (expenses), commission income (expenses) and other income (expenses). All around the world there is increasing proportion of

commission income from total income. The same trend is characteristic for two largest Latvian banks.

Commercial banks	1999	2000
Parekss banka	36.68%	36.84%
Latvijas Unibanka	33.31%	35.83%
Hansabanka	36.69%	34.11%
Latvijas Krājbanka	43.75%	39.40%
Rietumu banka	36.22%	35.78%

Table 1. Proportion of commission income in total bank income [9-14]

Important indicator for the analysis of bank capability to make profit is interest and non-interest income margin. Banks should try to maintain the differences between interest income and expenses as well as non-interest income and expenses positive. If the bank maintains positive interest margin but non-interest margin is negative it means that the bank covers bank maintenance costs (salaries, fixed assets maintenance) not only by sources of irregular income but also interest income that shows inefficiency of bank financial management. Too high non-financial marginal ratio also signals about negative trends in banking because higher non-interest marginal ratio increases bank dependence on irregular income or lowers financial stability of a bank.

The fourth criterion that affects bank financial stability is its **liquidity**. Banks can provide liquidity by maintaining high level of cash or investing funds in high liquidity assets as well as providing possibility to raise funds in the market at a good price in order to meet obligations and customer demands for loans. Latvian banks according to the "Rules on maintenance of bank liquidity" set by the Bank of Latvia must work out policies of liquidity administration with clearly defined everyday control mechanism and arrangements for overcoming liquidity crisis. Thus, banks in addition to the techniques given by the Bank of Latvia work out their own liquidity administration system. The Bank of Latvia requires regular accounts from commercial banks on assets and liabilities by maturity structure as well as liquidity ratio calculation. Account on assets and liabilities with maturity structure enable us to carry out analysis of short-term and long-term liquidity positions. Liquidity ratio shows the relationship between liquid assets and current liabilities (up to 30 days). According to the results of the year 2000 liquidity ratios for the five largest Latvian commercial banks are the following:

Parekss banka	34.20%
Latvijas Unibanka	40.15%
Hansabanka	55.21%
Latvijas Krājbanka	61.43%
Rietumu banka	84.67%

The conclusion is that the given banks have sufficient amount of liquid assets to meet short-term liability obligations. Liquidity is a complex concept and its measurement is closely related to the above-mentioned criteria of bank stability and resources at its disposal.

The author has dealt with the most significant evaluation methods of bank stability. To carry out in-depth analysis of commercial bank stability each of the four criteria should be analysed with a wider range of ratios and determinants.

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Summary

Banks form an integral part of the single financial mechanism that is one of the most significant fields of economy. Shareholders, depositors, supervisions and control institutions have always focused attention on stability of commercial banks. Stability of commercial banks does not mean only the capability of a bank to carry out its functions precisely and promptly in order to ensure safety of deposits and long term it also shows the quality level of the whole banking activities.

Assets and liabilities structure in bank's balance sheet, structure of bank incomes and expenses, adequacy of equity, risk management procedures have an impact on financial results, thus affecting financial stability of a bank.

The maintenance of bank stability is possible only by providing effective system of bank risk management. Thus the system of bank financial management is directed to providing bank security and financial stability that according to the author of the article could be characterized by the following criteria:

- 1) *Capital adequacy – capital assessment in order to determine bank's capability to cover risks by its equity;*
- 2) *Quality of assets – assets portfolio is assessed according to the probability principle of defaulted funds, as well as the impact of doubtful funds on the bank's overall financial situation;*
- 3) *Financial results of the banking operations – assessment of bank's profitability and solvency in order to determine the adequacy of bank's revenues for further expansion of banking activities;*
- 4) *Liquidity – capability of a bank to fulfill its commitments to its customers in conformity with the concluded agreements and in unexpected circumstances.*

Author has evaluated characteristic criteria of the efficiency of the bank's financial management for five largest Latvian commercial banks.

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THE ECONOMY AND ECONOMICS

В статье автор обобщает свои мысли, которые были опубликованы в 1990-1991 г.г. в серии статей литовских журналов. Это мысли того периода, когда многим людям, связанным с экономикой и управлением, с консультированием организаций и с педагогической деятельностью в высшей школе, становилось ясно, что необходимо заново и иначе посмотреть на то, что казалось само собой понятным и заново оценить то, что было очевидным.

Автор не считает себя знатком экономических теорий, область его интересов более связана с управлением и развитием организаций. Но автор считает, что для того, чтобы увереннее чувствовать себя в пространстве управления, важно иметь определенную макроэкономическую платформу.

Поэтому, каждый раз отвечая на концептуальные вопросы по управлению организаций, прежде всего сделана попытка определиться с понятиями – хозяйственная система и экономическая система и их соотношением.

Автор, обобщая свои мысли, использует принципы системной мыследеятельностной методологии. Это системная логика, процессно-деятельностный подход, соотношение целого и части, понятие сферности, разделение внешних и внутренних функций объекта, принцип историзма.

In this article the author summarizes his thoughts, laid out in a set of articles, published in Lithuania in 1990-1991. These ideas are from the period when many people, related with economics and management, with consulting activity in organizations and pedagogical activity in universities, realized that it was necessity to take a new look at natural points again and anew, and try to re-estimate what seemed so obvious.

The author does not consider and has never considered himself as an expert of economic theories; his field of interests mostly limits itself in organizational management and development. Nevertheless, in order to

feel free in the field of management, it's important to have some macro economical basis.

Therefore, looking for answers to conceptual questions of organizational management, first of all it was attempted to understand more fundamental things – conceptions of economy and economics, and relations between them. The next step was to formulate maybe not traditional conception of business unit (the organization).

The author, forming his thoughts and expressing his understanding as possible, follows the main principles of systemic thought activity methodology. This is a systemic logic, processional activity's point of view, a relationship between the whole and the part, the spherical concept, the separation of external and internal functions of the subject, the principle of historicity.

The article's purpose is not a presentation of unquestionable things, simply the author presents here his point of view, which helped and helps him in the consulting and pedagogic practice. This practice is related to organizational management, systemic organization of activity, development of organization managers and organizations themselves.

It is said, the systems do not exist at all; simply people can perceive, see, and imagine the world – the processes, the phenomenon objects systemically and not systemically. The systemic point of view allows to perceive and to find out what is not reachable without using this point of view. Not going into presentation of wide systemic point of view, we will state the most important things only for further presentment of ideas. The first essential systemic concept point is that the system attributes some function (purpose) for its existence as a system for elements (parts), which make a system. From the point of elements they are the external functions, at the same time they have their internal functions themselves, which are created or are being created now for realization of the external function. If the element does not realize the external function, it is not necessary for the system; it simply falls out of the system.

From the other side, the system has such features, which do not have its elements. These features appear because of systemic relations, because of the existence of elements in the system.

From the third side, systemic point of view allows to understand some phenomenon as systems' systems in systems. It tells about smaller and bigger, external and internal, covering and covered systems. It is

always possible but not always so simple to define the external functions, which the covering system gives to the covered system. When it succeeds to name the external function (or functions), it becomes clear what is the purpose of an object and what the system “waits” from it, if this object is the part of the system.

However, we will not present widely the processional activity's point of view here, we will only mention some basic things. The processes are the space and the purpose of appearance of all possible changes everywhere; in other words, changes are born in the processes. They are natural and artificial. Natural are those, which take place, begin and finish without a man and influence of people. The artificial processes take place in a social area; their tool of starting up is man's activity. The man's activity is related to interests, aims, motives, activity's methods and means, knowing how to act, and on will of a man or people. The processes are needed “to see”, separate, project, regulate, they can be perceived and imagined, but they can't be touched, they can be shaped and governed.

The principle of sphericity means that the wholeness (the sphere) exists everywhere, and a man can see and perceive the phenomena and objects wholly or not, to see all spheres or only its smaller or bigger segment. To attain to see and make the spheres is always human and constructive, it is the dimension of development on the whole.

The System of the Economy

State economy system (economy) – it is the whole of business units, which live (function, grow and develop) as independent objects, according to their characteristic, functioning and development laws. The practice shows that the business units can exist, taking additional maintenance from the meta-system (the bigger external system). It means, from the state generally, or manages without additional maintenance or preferential conditions. Both, in the first and the second cases they exist following the laws of the meta-system, which describe the rights and the opportunities of business units, which establish their limits of growth and evolution.

Hence, perceiving the business unit as the whole of its elements – business units, it can be affirmed that the external function of business units, which their covering system attributes for them, is to create various results. The system of economy, as the area of man's (people) managing, has a purpose to get results, which naturally do not appear and exist. Generally, these results are products and services. Every business unit is

inasmuch the element of economic system as much it fulfils this function. Also, products and services have the external function of using, their purpose is to be used.

Using the conception of the field that is described by some area and its limits, or frame, it can be said that we have discussed two different fields (areas, frames) – production field and consumption field. Developing such a point of view, we can insist, that the production field is not edge or initial, he stands on the resources field (frame), where the natural resources change from the passive condition into the activated condition and become (raw) materials. In the production field (frame) those are transformed into results, which are consumed in the consumption field.

We have described three fields – fields of resources, production and consumption. We are not going to analyse the inside of these fields, only emphasize several moments about relations among these fields; it means intervals and connections among them. We begin with connection between fields of consumption and production. If we eliminate the natural economy, where the owner of resources, production and consumption fields is usually the only and the same subject or closed group of people, everywhere else the owners of fields are different subjects or their groups. The first of them have resources, the other produces, the third consumes. In this context we can talk about two basic connections between these fields types: market type and not market type. One of the not market type was well-known distribution type. Here only these, which got the right, could use the results of production. The prices and the payment of results (products and services) usually have not determinant importance to answer the question to consume something or not. It resembles the connections between the fields of resources and production. The producer could use the resources, which had been distributed for him. So, the type of connection between fields is distribution type here. It should be noted that, in this case, the position of distributors is very important. Otherwise, the subjective prices act there, subjective as they are settled with the subjects, who are not the straight owners of production or consumption, but simply they are the third persons.

The connection of market type with fields mentioned is free or regulated market. It is said, in these times the free market is only in two places – in old textbooks or in one of the Central or South America states. Elsewhere the market is more or less successfully regulated. The essence of this type of connections is that the production field results are spread (not distributed) in the market, where the objective (not subjective) prices are valid.

The objective prices – the prices, which essentially do not depend on any subject, but forms not subjectively – it depends on the balance of demand and supply in the concrete segment of market.

So, the state system of economy can be organized to act with existence of the market or without it, for example, in the conditions of distribution. In the first case, the business units exist in the environment, where the objective economic *laws* act (when the balance between supply and demand exist), in other case, in the environment, where the subjective *rules* of existence are valid.

It is possible to try to state that the ideal system of economy can be a spherical variety of sufficient by itself spherical phenomena, which are related to necessary and sufficient connections. This system can exist in the market (economic) environment – the experience of latter century shows that. It is no final answer, can it exist in not economic environment; the experiments were made, but they do not allow making final conclusions, the tried ways were unsuccessful...

But the system of economy is not the edge, comprehending the whole system; it is a part of internal component of bigger system – vital man activity system. So, the system of economy is the basic (but not the only one) man's life ensuring system in such a meta-system as reproduction of society.

By the way, historically, some more or less developed economy system always existed in all the times of man's vital activity. More or less spread and civilized. Consisting of more or less integrated economy units, more or less regulated and ruled by the state. Having a lot of social programs or not a lot, or managed without them. Acknowledging the economical laws in its activity or ignoring them.

The System of the Economics

Today it makes no sense to discuss what economics is. The man, who thinks that he knows, how everything is indeed, or believes that compilers of dictionaries and encyclopaedias know, how everything is. He will tell: "It has been everything clear about the economics a long time ago, and if it has not, you can look at a dictionary or an encyclopaedia and to read the definition of this word" But the meaning of "economics", as many of words, which have no equivalent, was differently formed in various stages of the historical society's evolution, was differently interpreted.

The primary meaning of the word "economics" is descended from the Greek word *oikonomikē* – the art of farming, managing. Later the additional (not primal) meanings appeared: economics – the whole of production relations of some economic society formation (for example, capitalism or socialism); economics – the economic condition, state of economy unit; economics – the science, which study the relations of production in some society's sphere of industry and exchange (for example, economics of industry), and other meanings. According to the dictionary of philosophy economics is the relations of production, it means the relations that appears among people because of material wealth, production, exchange, distribution and consumption.

Although the **economic system** will be discussed further, we began with the explanation of **economics'** definition. Where is the difference and is it at all between these two terms? Let's return one more time to "economics" Economics the relations, appearing among people because of If it is so, these relations among people can differ in various aspects. For example, they can be: civilized or not civilized, cultural or not cultural, formal – informal, legal – illegal, legitimate – illegitimate (do these relations correspond the economic laws, are they corresponding and subordinate to them), the same for all or not the same, taking account of the concrete work or taking account of the abstract work, and so on. In the Greek word's "economics" meaning (the art of managing) a hidden thought can be expressed so: if the economics exist you can and know how to manage, if it is not – you will not be able to manage the economy; if the economics is present- the conserving resources economy will exist, if it is not – the wasting resources economy will exist. Of course, in both cases the economy exist, but in the latter case it is different – it has poor results, it is ecologically and socially unsafe, it can raise negative consequences for the future generations.

After we have discussed the **economics** once more time, we will try to compare it with the **economic system**. If we look into something as a phenomenon, we can do it differently seeing different paradigms, having in mind not the same aspects, taking into account various positions, keeping to the principles of history and ontology etc. There are a lot of variants in this, but we examine them differently in two ways: systemically and not systemically. Namely in the first case using any not systemic features and estimations, and in the second case – using the systemic point of view.

Therefore we can examine the phenomenon as a system and as not a system. Applying the first method, we can discuss any phenomena, applying

the second – not every, but only those, which can be imagined as a system in the mind. It is possible to examine the economy as a phenomenon not systemically, we can systematically look into the economy as into the economic system, in which the business units are involved as subsystems, and this system is the component part of man's vital activity's meta-system (bigger external system). Besides, it seems, the **economics** as a phenomenon can be examined not systematically and as the **economic system** can be analysed systematically.

However, the different systematic evaluations should be used for systems of various types. The system of economy can be observed as a social-cultural system, which one of the main consisting parts is a man, who is a system of special kind himself (he has faith, will, possibility to self-determination, he is able to set goals). In one word, this analysis should be made according to some method and logic, which correspond to the system of mentioned kind, in this case, the social-cultural (unnatural, not technical) system.

Nevertheless, the economic system is not attributed to the social-cultural systems. It is not a social-cultural system, because a man is drawn in the economic system not as its component. It is not subjective; it functions without any concrete subject will but according to the objective economic laws. It functions as the gravitation – according to the law of attraction, in spite of the subject's aims. But the economic system, however, belongs to the kind of the social-cultural systems. It manages to exist, it can be described and understood in the historical current, based on some cultural norms and dealing with them. Here, it seems, it is worth to remember the concept of cultural norms and some commentaries about them.

As we know, man's vital activity processes take place in the historical time. In this run the new phenomena appear and form. Some of them go to the "bag of waste" (rejected phenomena); the others become cultural norms and go to the storage of such norms. Every man or generation meet the mentioned norms, the whole of cultural norms from this storage, using the methods of cultural norms transmission. Depending on the part of knowledge, the mastered cultural norms in the run of using and practicing, people live variously, the business units function differently, the systems of economy, the nations and the states reproduce not in the same way, the culture expands variously.

In the run of the history people, who use some optimal (in the respect of place and time) part of the cultural norms, have better status. Also those, who manage to create and use the special kind phenomenon

(phenomena), which do not become the cultural norm, belonging to the storage of common to all people norms, from the beginning (or generally). This is the unique phenomenon, which cannot immanently be the cultural norm for other people. Such cases give better chances for a man, nation and country to develop.

Sometimes the re-evaluations (revisions) of the cultural norms happen. One of them, after all, stay in the storage of the cultural norms, the other are re-evaluated and go to the cultural norms "dump" (not necessary for all time, maybe till the next revision). Various metamorphoses can happen with the least in the same storage of the norms.

This storage of the cultural norms is divided to various niches, sections and segments. But, first of all, three main sections are separated in this storage, but the limits among them somewhere are not very clear. There are cultural faith norms, activity norms and knowledge norms. The first are used trying to believe culturally, the second – act culturally, the third to knowledge, understand and increase the mind.

At the same time we should pay attention to these things: when the socialistic society has formed and originated, it was time to appear for special storage of the cultural norms, the other like common in the world. Something has been moved there from the storage of historically treated, common for all people norms, something has been thrown out into the "dump", and something has changed places, changing the purpose of norm. The younger generation of socialistic camp could be acquainted only with the new storage of the cultural norms. The transmission methods and transmitters were selected in a special way. They thought that it was the best for the youth to be acquainted only with the new storage of cultural norms, but the "storage" of the historically settled norms, common for all people was treated as if it was out of the new culture bounds. The inspectors and estimators, who knew what and how to do everything, were chosen especially carefully. The special order was followed, adding the norms of the first storage to the mentioned new storage. Something was allowed, something only with special comments (with the words of introduction and conclusion), and something from the old cultural norms wasn't let to enter on the whole. The taboo was declared to K. Jaspers, D. Orwell, B. Samuel son etc. (their works have not been translated on the whole).

Let's return to the economic system. The representatives of socialistic countries once declared that the economic system, which was in the developed Western countries, was out the culture bounds, exactly saying – out of the new culture bounds. The author, having this in his

mind, does not treat his conception as the final, but he tries to define the economics as the existence way of individuals, the business units and the economy system, according to the space and time. This way of existence, first of all, can be of two kinds – according to the economic laws or ignoring them. In the first case – one entity, in the second case – a lot of kinds of entity ways, we can ignore them variously.

The total revision and reorganization were done forming the new culture (of socialistic countries) in the new storage of the cultural norms, where the cultural norms, deciding the way of economy existence, were stored. The main historically formed norms were rejected – the place for them in the new storage wasn't planned and arranged (for example, objective prices, balance of demand and supply, market, law of value, free enterprise etc.).

But at the same time the new artificially in technical way created norms have appeared. They did not exist till then in the storage of the cultural norms, or if did, they had been treated and used in other way (for example, abstract work, distribution, subjective prices, economic effect, social economic effect and others). One more group of the storage's cultural norms had the titles, taken from the historical storage, but their content of the meaning (ontology) were totally different, new (for example, profit, economic interests, economic levers, economic relations, management, pay etc.).

The fact that exist the third group mentioned of the cultural norms nowadays (and always after, when this group of norms originate) hinders the new and the historic culture specialists to communicate properly (culturally), although they are representatives of the same field of the science.

Having in mind above propositions, the author comes to the conclusion, that the economics is the way of economy existence, the environment of economy development, its cause and consequence. Therefore, the economy can be developed in the economic environment (economically educated and organized) on the whole, but it can function in not the economic or quasi-economic environment too. The feudalism is not the economic environment, the socialism – a quasi-economic environment, the present economy of developed Western countries – this is the economic environment. Such a view appears looking at the economics from the ontological aspect. Examining it from the historical aspect, the view we get is: the feudalism – a pre-economic environment, if the market exists – the economic environment, socialism – a post-economic or anti-economic environment.

Historically the economic system (which fits the real meaning of this word) was found in natural (not artificial or technical) way, it means, not

in the way of programming and not without the initially created theory. This system was found as a mean of liberty for people, but not for all, only for those who produces goods. It means, that having such a system, everyone (or a group, or a collective) can produce everything they want, desire. In a word, the liberty for production, and no liberty for consumption, everyone can consume what and how much is available for him by his production system, which he has or other kinds of consumption possibilities. The production and the consumption grow, but the production must be productive, but not only useful.

So, **the economic system** is the market with all its system of goods and monetary relations, also the system of developing relations as well. The economic system function in automatic, not subjective way, abstracted from a man or any people group (for example, some party). It becomes the system of the automatic economy system, and, on the whole, man and society development management and regulation.

The market without any concrete subject or hierarchy will allow forming the objective instant price of every good, man's abilities and experience, every activity. The market is the mirror, and not curved, and not a collection of variously curved mirrors, this mirror is perfect and the only one for everyone. Everything reflects here by the price:

- 1) **Goods** – products, services, ideas, actions, knowledge etc.;
- 2) **People** – everyone; it depends on who he is and what can he do;
- 3) **Activities** turner's activity, plumber's activity, tailor's activity manager's activity, consultant's activity, teacher's activity and so on.

The price of the same thing can differ in every moment, but it is fixed in every moment.

So, the economic system of all the other systems are from the set of the cultural systems, from the subset of managing relations regulating systems; it exist when some naturally appeared cultural activities and knowledge norms act. By the way, the other relations systems also belong to this subset, for example, relationship, family, law, cult and other relations systems.

However, the economic system is not attributed to the subset of social-cultural systems. As it was mentioned above, because of no one man (the representative of society) is the organizer (creator) of this system acting process. There are no functional places, which would be taken by any functionary or specialist in this system. The economic

system acting process – the regulation of the economy system – is developing and maintaining automatically, in objective, but not subjective action; otherwise, this system acting process spokesman is a man, his economy activity. The economic system does not work in the Moon, because there are no people, no economy activity; this system will not work in the army as well – we have people, but the activity is not economy type, but something else here. The economic system also does not work properly in socialistic countries, in spite of being there both people and the economy activity.

Also it should be noted that if the market is regulated, it does not mean that a man becomes the component part of the economic system because of that. Of course, a man understands the work of this system and learned how to limit her influence, but these bounds are limited by their purpose and duration of functioning. They are not constant, they should be changing every time, if you want to avoid of system destruction. The work of the artificial technical limits, during too long, or the establishment of especially radical limits, which change the economic system purpose, can affect not predictable irreversible destructive changes of this system.

Besides, we can affirm that one of the main economic system work results are the natural resources economizing, immanently regulating itself in autopilot way, needs of people groups satisfying activities of economy. Also, the external function of economy system is to civilized satisfy the civilized needs of people groups, managing economically socially and ecologically. In our opinion, the civilized satisfaction of requirements means that people and people groups' requirements are satisfied in clean, social, economic, ecological and legal aspects.

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Summary

On the ground of the author's thoughts and reasoning, left out of the limits of this article, such theses can be formulated:

- 1. The economy system is attributed to the social-cultural systems. Here a man is an activator – the subject (active element of this system). This is the subjective system, the subjects, their aims and activity mean a lot here.*
- 2. The activity of economy can be developed according the economic laws and in many other ways, disregarding these laws.*
- 3. The economic system is the system of economy covering system, attributing for it the external function and making the civilized medium for the activity of economy.*
- 4. The economic system is the natural consequence of the economy system development, making the system of economy to develop.*
- 5. The economic system is attributed to the cultural systems; it's formed as the cultural norm layer.*
- 6. The economic system is not a subjective automatically working system.*
- 7. The systems of economy and economics are not only different, but also they are the systems of two various types.*
- 8. We need to **reform** the system of economy and to create the conditions for its development in the post-socialistic countries. It's necessary to prepare the programs of this system reformation and development.*
- 9. We need to **create**, to help the economic system appearance in the post-socialistic countries, but, first of all, the favourable conditions should be created. We need to prepare the program of this system creation.*
- 10. We have no time for natural reformation and development of the system of economy and for natural creation of the economic system. So, if it is possible, we should begin with reformation and development of the first system and help to create the second system. In one word, instead of natural not programming way, as it was in the Western world, we need to put into practice unnatural (artificial) managing program method of changes.*

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CONSEQUENCES OF STOCK MARKET CONVERGENCE IN EUROPE FOR THE LATVIA AND BALTIC STATES

Autors zinātniskajā referātā apskata pašreizējās tendences Eiropas Savienības vērtspapīru tirgū, izvērtējot tā priekšrocības kapitāla piesaistes nodrošināšanā. Autors secina, ka Latvijā ir nepieciešams pilnveidot gan ekonomiskos, gan juridiskos nosacījumus tieši potenciālo vērtspapīru emitentu ieinteresētības veicināšanā. Lai šo mērķi īstenotu, finansu tirgu regulējošai institūcijai ir veicama virkne neatliekamu pasākumu, kuru aktuāli īpaši pastiprina Latvijas vēlme kļūt par ES dalībvalsti jau tuvākajos gados.

Introduction

A dramatic movement is underway in the global picture of European financial and securities markets. The complexity of the forecasted changes is among the most revolutionary in the history of financial markets. There are different forces today like globalisation, progress in communication and information technologies, making internationalisation of markets and introduction of the euro. These processes are reshaping European securities markets, stock exchanges, market intermediaries and participants and pushing these markets towards integration.

It is becoming more and more obvious that the best way for companies to finance their business is through different securities market instruments instead of borrowing from banks. Europe are stepping in transformation of its stock markets based on the growing integration in order to enjoy more attractive business and investment opportunities. As Latvia and our neighbours – Estonia and Lithuania are on the accession to the European Union (EU) we should reconsider the latest developments in the European financial sector. That experience would show us the potential effects and consequences for the financial and investment services market in Latvia.

The latest trends in the world securities markets

During the 1990s, the Western World experienced what is known as the making security of finance. Money market instruments, corporate bond markets, venture capital, and publicly traded equity securities increased substantially and so replaced bank deposits as the only saving vehicle. Even the medium and small businesses realized that securities markets are becoming more cheap and open for their capital raising and borrowing needs. In 1999, traditional bank loans to U.S. companies fell to 12 percent of GDP, while stock and bond markets each soared to values of more than 150 percent of GDP. Over the last decade, the share of American household assets held in bank deposits dropped by half, from 25 percent in 1990 to 12 percent in 2000. At the same period the share of savings invested in mutual funds and individual stocks has doubled and is more than 40 percent today. The same trend we can see in Europe, particularly in United Kingdom, Germany and Scandinavian countries.

Within less than 5-year period, an Eastern European and Baltic States will join the 15 members of European Union, with their 375 million people and GDP more than 10 trillion Euro. Then the European market will comprise more than 520 million people. That will open the door for a huge financial services market, even the bigger than U.S. market today.

It is important to recognize and distinguish between two different issues when we are evaluating potential of our market. We need to discuss the securities market as such and the most important infrastructure element of that – the stock exchange.

At the same time it could be mentioned that a lot of academic works are debating on the established links between size of the financial and securities markets and growth of total production output. Number of economists have described and proved the positive influence of the developed financial sector to the level of growth of country per capita income. In early 1990s the increasing attention has been given to the examination the possible linkage between development of stock markets and long-term growth opportunities. It was concluded by many academics that the departure from traditional bank financing of businesses to securities instruments resulted not only to internationally integrated stock markets but also discovered more safe and high-return alternatives for investors.

The main theoretical findings in late 90s were the following:

The development of financial market plays a particularly beneficial role in the development of new firms;

Empirical finding by economists Raghuram G. Rajan and Luigi Zingales suggests that ex ante development of financial markets substantially facilitates the ex-post growth of sectors dependent on external finance;

The investigation of 47 countries from 1976 to 1993 by Levine, Ross and Zervos find that stock market liquidity, as measured both by the value of stock trading relative to the size of the economy, is positively and significantly correlated with current and future rates of economic growth, capital accumulation and productivity growth;

Development of financial intermediary shows positive link between real per capita GDP growth and total productivity growth.

The tendencies in the European Securities markets

It is widely accepted among professionals that the main task of the stock market is to transfer funds between savers and borrowers and redistribute the risks of different financial instruments. After reviewing the latest reports we can identify at least five important tendencies in the European financial and securities markets. These potential developments were stressed in the Final report of the Committee of Wise Men on The Regulation of European Securities Markets as well.

Tendency 1: Significant growth in securities business and increasing demand for equity capital.

Till 90s European companies has been more dependent on bank loans as a source of external finance than its U.S. counterpart as it was noted in the introductory part of this article. But in last five years there was strong progress. For example, growth rate of equity trades reached more than 30% per annum. Notable increase has been observed in fixed income securities like mortgage bond. The corporate bond issuance increased by 58% in 1999. New listings have been a significant component in the growth of stock market capitalization. In 1999, stock market capitalization of EU-15 markets reached 110% of GDP. This compares with cumulative total of 180% of U.S. GDP. (In Latvia – 8% in 2000.)

Table 1

Data on financial markets (as % of GDP, 1999)

	Euro-zone states	U.S.	Latvia (2000)
Bank loans to corporate sector	45.2	12.4	15.6
Fixed income securities:	96.8	166.2	
corporate	7.4	29.0	
finance institutions	36.4	46.8	0.2
public sector	54.9	48.4	4.4
Stock market capitalization	90.2	179.8	8.0

Table 2

Stock market capitalisation in different countries (as % of GDP, end-1999)

State	%
Belgium	74
Denmark	64
Germany	68
Greece	174
Spain	72
France	105
Ireland	75
Italy	62
Luxembourg	192
Netherlands	176
Austria	16
Portugal	62
Finland	272
Sweden	155
United Kingdom	206
EU - 11	85
Japan	102
United States	180
Latvia	11% -1999; 8% - 2000

The supply of new equity is matched by a greater appetite on part of European investors and households for securities-based investment. There are few signs that an equity culture is becoming more intense in the EU. In Germany, the number of shareholders directly owning shares climbed by 25% in 1999 and now is over 6 million. In the UK each one-third adult

owns shares. Stock exchanges and new trading systems are interested in serving the customer directly. Electronic brokerage has also driven down transaction costs.

Tendency 2: Internationalisation of securities markets.

There are slight changes in the investment horizons for investment funds and private investors. That means that portion of domestic securities in investment portfolios is declining with simultaneous increase of cross-border transactions. As competition among stock exchanges and new trading platforms is increasing these institutions are becoming more open to foreign intermediaries

Tendency 3: Cooperation and competition between stock exchanges.

Traditionally stock exchanges in the Europe were organized as national monopolies. Now these institutions are facing major changes mostly caused technology development that have lowered trade execution costs and allowed to increase market geographically. Technology did not facilitate only more efficient trading but even evolved to the functional trading systems without need for physical trading place or floor. Europe is following the U.S. trend, where Alternative Trading Systems (ATS) have taken more than 30% of NASDAQ trading volumes. The similar European ATS or trading platforms are becoming as very important market infrastructure elements for organized trading with fixed income securities and some derivative instruments, particularly in UK and Germany.

Tendency 4: Growing consolidation of securities clearing and settlement.

European clearing and settlement infrastructure up to date was less developed like in the U.S. markets. That causes under-performing and less efficient cross-border transactions. Therefore experts are looking for improvement and the idea of creation of the single European settlement entity is under evaluation now. Currently there are 26 existing settlement systems only in the EU.

Tendency 5: Increased volatility of asset prices.

The recent trends particularly relating to the new economy segment is showing increase in the volatility of stock prices around the world. It is

still unclear whether this volatility is along or short term phenomenon. On the one hand that is connected and reflects uncertainties regarding the difficulty to assess prospects of the new economy. On the other hand that may relate to the globalisation process and forces. Worldwide financial integration combined with the efficiency of communication mean that asset price changes are transmitted instantaneously across borders.

All these trends are having and will continue to have in the future a major impact on European securities markets. Therefore it is important for Latvian financial and securities market regulator to realize and follow these processes accordingly.

How to improve the domestic issuer's activity - tasks ahead

What could be the main short- and long-term tasks for market regulator in order to ensure macroeconomic efficiency? In general – every player, every investor should be ensured that there is stability for efficient allocation of capital. There are many important issues here among which author of this article would like to mention the most important ones.

If we are speaking about consistent development of domestic securities market it should be based on overall stability of financial sector. In connection with that we would observe:

That the significance of financial sector and relevant securities market for the economical development of a country is the topic of the highest priority;

That Riga Stock Exchange (RSE) and Latvian Central Depository (LCD) are exposed to the very fierce competition and should look for strategic partnership in the developed markets;

There is a strong reason to consider closer co-operation between our stock market and established financial centres in Europe;

Realizing that Latvia is expecting the capital demand in the near future it is important to attract international investors and increase their confidence.

In this paper author would like to make proposals for domestic financial market professionals and regulator in order to address the most urgent tasks for improvement the attractiveness of our stock market. With that idea underlying in previous paragraphs the latest trends and tendencies in European markets were analysed.

It is obvious that preparation for integration of Latvia's market into Pan-European securities market is an important issue because we need to:

Ensure potential investors (both domestic and international) that they enjoy an adequate and equivalent degree of protection irrespective which registered investment firm provides investment services;

Improve the scope and flow of financial services to the customers;

Foster mutual co-operation and understanding between Latvian Financial and Capital Market Commission (FCMC) and European supervisory authorities.

After comparison of latest data on our securities issuing activities we could discover that there is only few companies that have been raised their funds via securities market instruments. There are only three stock issuers (Balta – insurance, Pirma Banka – bank, Gutta – beverages) that are included in the Official and Second Lists of the Riga Stock Exchange not following the voucher privatisation process. The same situation is with the fixed income securities – only Nordic Investment Bank bond issue and mortgage bonds of Latvia's Hipoteku un Zemes Banka (Mortgage and Land Bank) are listed.

That situation raises many questions on the future of the Riga Stock Exchange and the borrowing capacities and demand for equity of the domestic companies. It is quite obvious that firms are in need of fresh capital and sophisticated investors in order to become more competitive and develop new products and markets. Therefore the main tasks on how to activate potential issuers falls to the stock exchange and market regulator.

At the first glance it is possible to discover at least most important bottlenecks that need an immediate solution and would help as for issuers as well for investors.

The main tasks in this matter could be the following:

- 1) To improve the issue prospectus approval and registration process. It is necessary to become to the solution that only one but professional level of "inspection" of issuer's documentation is needed. There are pros and cons in favour to the RSE and FCMC as main home country authority regarding review and registration of prospectus;
- 2) The lacking regulations should be elaborated in order to implement the "European Passport" principle. Once the prospectus has been approved by the home country competent

authority the issuer may make an offer or list its shares in the other European Economic Area (EEA) States by simply notifying its intention to the competent authorities of the countries where it is going to make the offer. That will increase the competitiveness of our companies and is an immediate task if Latvia becomes the EU member state;

- 3) To reconsider the offering procedure and disclosure standards for ordinary debt securities by taking into consideration the purpose of debt issue. Therefore issuer's solvency is becoming the most important instead of its economic value;
- 4) It is necessary to facilitate cross-border offers. Therefore it is appropriate if the same level of disclosure should be introduced for both domestic and non-domestic issuers. The concept of the "regulated market" must be accepted by FKTK and market participants instead of "stock exchange" or "market for listed securities";
- 5) The advanced tools for dissemination of the information should be facilitated (as in the U.S. with EDGAR system). Investor protection would benefit from easier access to information via Internet or other modern technologies;
- 6) Issue prospectus must be accepted by domestic authorities also in another language, i.e. English. If the prospectus is prepared in a language other than the investors' language, the competent authority may require a summary of the prospectus to be published in a Latvian. The summary should give in a few pages (limit might be indicated by the regulator) the most important information included in the prospectus, i.e. the information that enables investors to make an assessment on the issuer;
- 7) The clear list of exemptions when it is not necessary for issuer to draw a prospectus and to ask the Latvian authority for an approval must be elaborated.

The intention of this paper was not to cover all potential problem areas for Latvian securities market. It is necessary to follow and accept the latest developments within the EU and other developed financial markets. That could facilitate the more solid movements in our domestic stock market. At the same we need to take into account that no single template for each particular case or problem exists. Every step, every

solution by market regulator and professionals could be based on a long-term vision and professional projections. But it is indisputable that we need to find some medicine for improvement of the activity of the domestic equity and debt securities issuers. Hopefully this paper can assist to our experts via description of latest trends within EU and proposals how to make more easy life for capital raising companies at the same not limiting the rights and interests of the investors.

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Summary

The purpose of the report is to define the latest developments in the European capital markets and find out the potential effects and consequences hereof for the financial services market in Latvia and the neighbouring countries.

The author focuses on the securities market infrastructure, the impacts of the new economy to the financial services and potential evolution of the market regulatory and supervisory structures.

The author reaffirms the view that there are tremendous gains from integration of domestic financial market in the European but these benefits must be measured and compared in order to develop the medium and long-term strategy for integration and co-operation.

Jan Thomas Laub
Hamburg, Germany

CUSTOMER SERVICE: success in global competition

Autors savā rakstā izskata sekojošus jautājumus, kuri ir savstarpēji cieši saistīti, lai gūtu panākumus mūsdienu globālajā tirgū. Un konkrēti svarīgākie no tiem ir šādi:

- *Pircēja serviss;*
- *Serviss un cena, to savstarpējās saiknes noteicošie faktori;*
- *Jaunākās tehnoloģijas, to ieviešana, grūtības, ar kurām jāsaņem, kā arī šo tehnoloģiju nozīme;*
- *Informācijas tehnoloģiju izpratne u.c. jautājumi.*

In the unforgiving competitive environment of liberalizing markets, customer service often needs reinventing. An understanding of three different business streams:

Mass-market, packaged solutions and custom solutions
is generally required to meet the needs of all customers.

The degree to which services are used for revenue generation, on the one hand, and customer relationship building, on the other, must be balanced for the carrier to optimize its profitability.

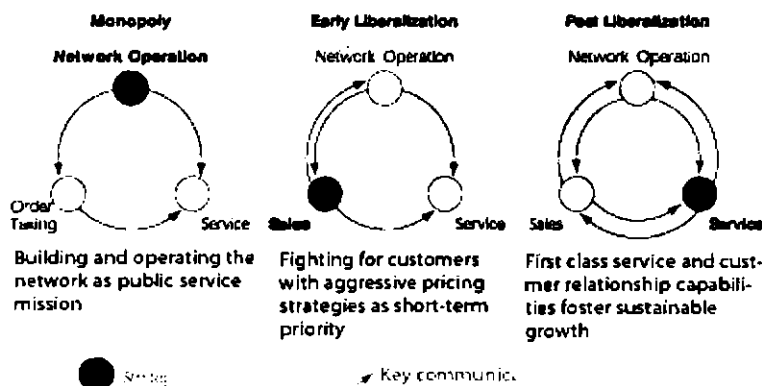
To reconfigure a carrier's operations along business streams requires sweeping changes in processes, organization and corporate culture. My extensive experience with dominant players in liberalizing markets has enabled me to identify critical success factors for such a transformation—helping carriers to reap cost savings of 20% to 40% and to markedly enhance customer satisfaction.

The battle has shifted from winning customers through sales to keeping them through service. First class service capabilities distinguish the winners in liberalizing markets such as telecommunications, airlines, banking or utilities. But what are first class service capabilities? And how do you acquire them? Such questions are particularly pressing for the incumbents. While they previously dominated their markets simply by making products available, they are now facing agile competitors who are playing by very different rules.

Battle is engaged on price

The liberalization of these markets is following a typical course illustrated in Exhibit 1. Historically, carriers' organizations revolved around network infrastructure as the critical asset. These technology-oriented monopolists are now being confronted with customer-focused alternative carriers. Initially the battle is engaged on price. However, this approach holds a limited appeal at best, as it begins to squeeze margins. The contest then shifts to differentiation via service. Customers are no longer so much won by sales as lost in the service field.

SHIFTING STRATEGIC FOCUS IN LIBERALIZING INDUSTRIES (EXHIBIT 1)



Customer service is currently the incumbent's Achilles' heel—but it is also a major opportunity for differentiation. In this situation, incumbents are discovering new twists to conventional wisdom in order to survive and prosper:

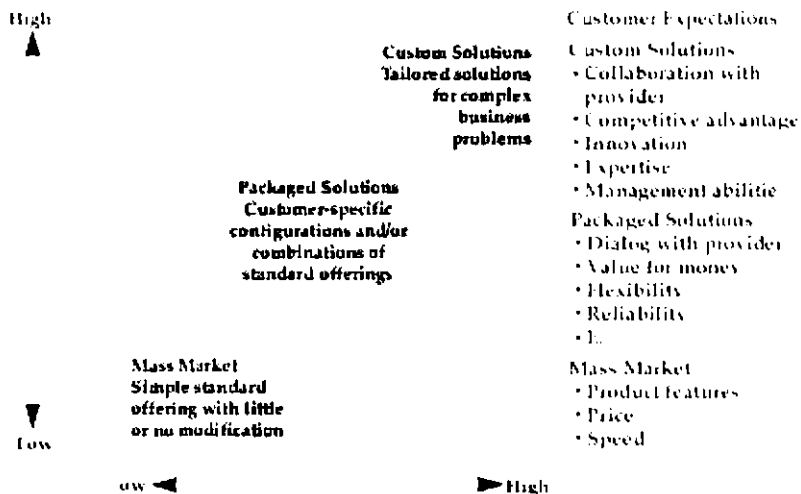
In the following discussion, we will look at customer service in the telecommunications industry as an example.

Reinventing Service

The competitive environment in liberalizing markets is confusing and unforgiving. Particularly for incumbents positioned like they are to serve all customer segments with the full product range, the list of customer expectations seems endless. Everything seems to have to be better, faster, and cheaper.

But, first class service does not always mean the same thing. What makes up first class service depends on what business you are in. The segmentation into mass market, packaged solutions and custom solutions shown in Exhibit 2 allows companies to generate differentiated value propositions.

BUSINESS STREAMS (EXHIBIT 2)



The distinctive customer expectations associated with each business stream are consistent across customer segments. For example, a global bank and the corner copy-shop both expect to get a standard ISDN line, quickly, cheaply and with a minimum of fuss—whether it is the bank's two thousandth or the copy shop's second line. On the other hand, even the same customer has fundamentally different expectations from a different type of order. The same global bank is willing to invest considerable time and effort working with a competent advisor to get the right solution for its call centers.

In the mass market value proposition, customer orders are composed of simple, standard products with features that also standard across the industry. Since the customer can essentially get the same product "off the shelf" from any competitor, he buys it where he can get it cheapest, fastest, and with least hassle. The challenge here is to have service capabilities that can deliver speed, convenience and consistency so efficiently that they are low cost and virtually invisible to the customer.

Customers looking for packaged solutions want the assurance of experience and practice combined with the fit of a tailored product. Packaged solutions bring together standard products in ways that address common business issues such as a retail call center, for example. Packages provide a framework and options that are then used to craft customer-specific combinations and configuration. Speed is less of an issue in this context. Flexibility, responsiveness to customer needs and reliable on-point delivery make the difference here.

Custom solutions result in greater interdependence of customer and carrier and require a different level of trust. This is a collaborative effort between customer and provider with an inherent degree of risk on both sides. As a result, customers seek out providers who have demonstrated that they can bring innovation and expertise to bear and successfully manage complex projects and processes.

The key to succeeding in all three businesses is managing the multiplicity of expectations by recognizing that they actually correspond to three distinct business streams with different value propositions. "Vision" in this case means seeing clearly what the customer wants, and then not confusing which expectations you are aiming to satisfy at any given time.

Service is never free, but not every element of service has a price tag on it either. Beyond its role in satisfying the customer's order-related expectations, service also plays a decisive role in supporting customer relationships. Being clear which service elements a carrier wants to use to generate revenue and which to secure relationships is a prerequisite for managing profitability. In this case, we can learn from an industry that has been in the throes of liberalization literally for decades—the airline industry. Airlines have developed a sophisticated matrix, illustrated in Exhibit 3, which positions service both for revenue—you get what you pay for—and for loyalty—you get what you are worth.

Service elements, such as seat comfort, involve substantial costs and must be paid for by the customer. Items such as waitlist priority are better suited to acknowledging a customer's overall value. There are no absolute rules on how to allocate these service elements. It is essential, however, to develop an explicit approach to using service as a source of revenue and of customer loyalty. By not doing so, companies risk either falling into a "give-away" mentality or not giving top customers their due. In the first case, they may initially halt the erosion of market share but they cause their cost-to-serve to explode; in the second case, they provide competitors with the opportunity to pick off their most attractive customers.

DIFFERENTIATING SERVICE ELEMENTS IN THE AIRLINE INDUSTRY (EXHIBIT 3)

Revenue ↑	First Class \$9x	<ul style="list-style-type: none"> • First check-in & lounges • 2.5m private seat/flat bed • Gourmet choices • 9 channels, 10 videos • Limousine, concierge services • 50% bonus on FFP miles 	+	+	+
			<ul style="list-style-type: none"> • Frequent flier service phone 	<ul style="list-style-type: none"> • Wait list priority 	<ul style="list-style-type: none"> • Guaranteed seat, even if fully booked
	Business Class \$4x	<ul style="list-style-type: none"> • Business check-in & lounges • 1.25 m space for wide seats • Meal choices, flexible snacks • Own monitor, 8 channels • Business center services • 25% bonus on FFP miles • ... 	<ul style="list-style-type: none"> • Miles for travel awards on most flights 	<ul style="list-style-type: none"> • Business check-in & lounges • Dedicated silver service phone 	<ul style="list-style-type: none"> • First check-in & lounges • Dedicated gold service phone
	Economy Class \$1x	<ul style="list-style-type: none"> • Check-in & waiting areas • 0.75m seat spacing • Special meals on request • Selected entertainment • Special offers for children • Conditional low-price offers • ... 		<ul style="list-style-type: none"> • Miles for travel awards on all flights 	<ul style="list-style-type: none"> • Miles for travel awards on all flights
	Non-Member	Basic 500 "miles"	Silver 50,000 "miles"	Gold 150,000 "miles"	
	Customer Relationship →				

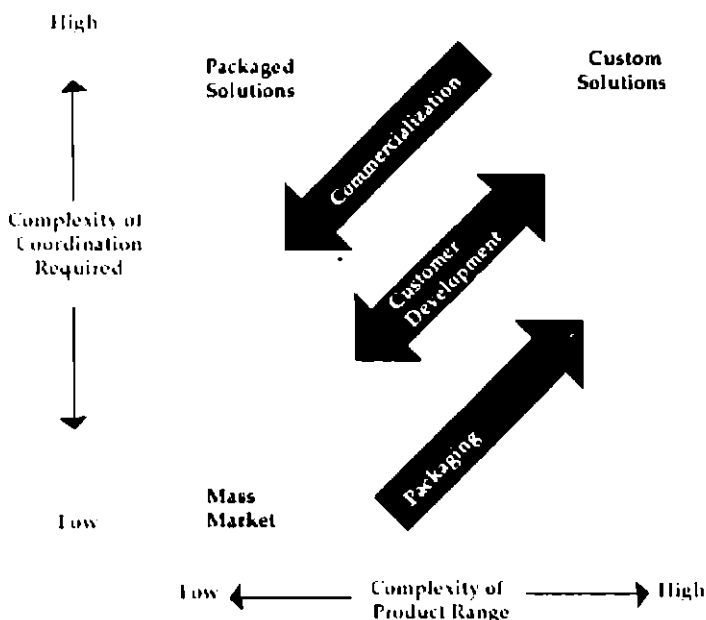
"Vision" in this respect means knowing the value of each of your service elements to customers and seeing clearly what you can expect to get for your efforts.

Synergies, as illustrated in Exhibit 4, make the prospect of working with all three value propositions in one organization very attractive. First, there is the opportunity for customer development that comes from serving a customer across all their needs. For example, access to the customer can be gained through the mass-market business and once the needs are better understood, leveraged into solutions.

Secondly, there are two opportunities for product development that continuously refresh the product portfolio. The more complex businesses serve as product R & D for the simpler ones. Custom solutions are de facto "beta tests" which can potentially be abstracted and successfully commercialized as packaged solutions. In addition, carriers can also bundle mass-market products and specific services to form new packages serving the needs of identified customer groups.

Finally, there is an overall economy of scale to be had across the three business streams, since individual products are not specific to one business stream. An ISDN line, for example, can be a mass market order or it can be integrated as a component in a call center package.

SYNERGIES BETWEEN BUSINESS STREAMS (EXHIBIT 4)



Having all three business-streams under one roof benefits the customer and enhances the quality and profitability of each individual business for the carrier.

From an operational point of view, delivering on the value propositions of the three business streams requires three distinct paradigms. As shown in Exhibit 5, these are simple models that become powerful guidelines for transforming processes, systems, organization and culture as we will see below. In the mass-market business, it is a relay race. The track is well marked; all the runners know what the baton looks like, where to get it and where to pass it on. Once that is set, the job is just to run as fast as possible and not drop anything. The task is simple; the execution is fast, efficient and low-cost.

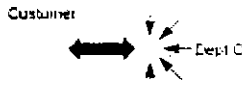
BUSINESS MODELS FOR THE DIFFERENT VALUE PROPOSITIONS (EXHIBIT 5)

Mass Mar.
Relay R:



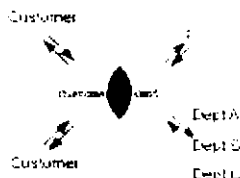
- Fast, efficient, low-cost execution
- Standardized and highly automated processes

Packaged Solutions
Capability Network



- Flexible, experienced, pragmatic configuration
- Cross-functional processes and virtual teams

Innovative Partnership



- Open, innovative, integrative design and development
- Collaboration with the customer

Delivering packaged solutions is more complex. Numerous skills are called for. From configuring the systems to installing in-house networks or preparing interim bills, meeting a customer's expectations means orchestrating the delivery across a network of capabilities.

For custom solutions, the desired results have to be integrated into the customer's operations so that it is a joint effort from the outset and no two custom solution projects are alike. Designing the communications network of a new clinic or managing a car manufacturer's virtual private network are innovative processes undertaken in partnership with the customer.

Reinventing Service: Transformation

Incumbents face an enormous challenge. They already have a legacy of processes, information systems, organizational structures and people that has the potential to be an asset or a liability. Various internal stakeholders—such as the sales departments, network operations and/or labor—must be considered. The challenge is to define a migration path that transforms service capabilities quickly, without sacrificing advantages such as the existing customer base, broad product offering and technical know-how.

Rethinking service is a far-reaching change and must be visibly led and actively managed. Both a shift in mindset and the development of

enabling information technology tools are prerequisites for a full transformation. Since neither can be secured overnight, transforming service capabilities can take two to four years.

This significant challenge generally involves thousands of employees and operations directly at the sensitive customer interface. To manage potential pitfalls and hurdles along the way, it is essential to

- **Think big:** define a comprehensive and ambitious vision early on with clear stretch-goals
- **Communicate clearly:** involve all stakeholders early, honestly and consistently to build momentum and stimulate input
- **Start small:** set multiple interim goals that can be realized along the way, allowing the transformation effort to gain momentum through progressive success stories
- **Act quickly:** embark boldly on the program once expectations have been set and the blueprint for the way forward has been articulated and verified.

Understanding Information Technology

A detailed assessment of corporate resources such as processes, information systems and organization forms the basis for a thorough understanding of the baseline. By identifying what kind of business (es) the company aspires to and placing this goal in the context discussed above, a vision of the future emerges. Nothing has changed at this point except the perspective: from segmenting the market by products or revenues to segmenting by customer expectations. At this critical juncture, top management's commitment to the vision—to service excellence—must be firm and visible. Comparing the current situation with the imperatives and models discussed above, key gaps come into focus. This phase surfaces not only hard facts (such as uncompetitive installation times) but also raises issues around leadership or misaligned incentive systems.

The operational paradigms are then used to develop the processes, organization, systems and corporate culture required to build the capability portfolio for each business model. For example:

In the mass-market business, integrated information systems are critical in order to arrive at highly automated and stable processes. In addition, fast lean logistics play a key role in the capability portfolio. This mandates a review of material planning policies and of transportation provider

qualifications. As a result of traditionally poor forecasting and a "better safe than sorry" mentality, savings can be upwards of 30%, with greatly improved reliability and shorter lead times.

Packaged solutions require a hybrid approach. A complex technical solution may involve a fair amount of simple work (for example, the installation of a high-end PBX with 500 lines). Therefore, projects must have access to the line organization to recruit flexible resources which can be released once a project is completed. Implementing such a network of temporary teams requires new thinking and skills from employees as well as support in the form of appropriate dispatching and accounting systems and institutionalized knowledge management.

In the custom solution business, in which carriers work in close collaboration with the customer on a project-by-project basis, the requirements are rather different. No two custom solution projects are alike, so one can hardly talk about standard processes. Instead, a common set of control points, such as the decision to tender an offer, must be defined. These provide the framework to ensure that projects stay on track. Specific activities to prepare for each control point, such as building a prototype or securing contractual commitments from other suppliers, are left up to the individual project managers.

The translation of these concepts into actionable precepts across the organization takes place in the form of "business rules." Business rules are agreements developed in cross-functional workshops. They specify mutual commitments and ensure the effective interaction of employees who are expected to make judgments in their daily responsibilities rather than follow prescribed procedures. Business rules comprise a formal framework for change and should be integrated into the appropriate incentive systems.

To ensure both the applicability of the envisioned changes and sufficient buy-in, the concepts are verified on carefully chosen test sites. In this environment, the robustness of the proposed concepts is examined under working conditions and necessary revisions can be made swiftly. The carrier's organization is a valuable source of experience and pragmatic knowledge that is indispensable for the success of the transformation.

Incumbents in particular, with their large regionalized organizations, benefit from such testing and refinement on a smaller scale. Pilot sites provide showcase success stories for the rest of the organization. The employees involved at the pilot sites become powerful protagonists in the rollout.

Best Practice Implementation at AT&T

The key to implementation is inexorable progress towards the holistic vision in discreet modules. For instance, truly integrated information systems require years to put in place. Other measures such as faster logistics, improved call handling, or the introduction of team structures, do not have to wait for all the pieces to be in place to start having an impact:

With fifteen thousand AT&T operators handling six to seven million calls per day, AT&T has quickly recognized that complaint-handling excellence is important to developing and maintaining customer loyalty. Moreover, it understands that the experience of leading companies in other industries might hold valuable lessons for AT&T's operator services. Dedicated to improving its complaint handling process, AT&T's operator services benchmarked three companies from other industries. All are highly effective at complaint handling.

Consequently, a team of four complaint-handling experts and one benchmarking manager set out to examine AT&T's complaint handling process and to improve it by identifying best practices among leading companies from several industries. The team began by brainstorming problem areas that might help them focus their benchmarking and improvement efforts. Establishing high priority problem areas also helped the team determine the scope and goals of the study. These included setting reasonable time frames for handling complaints, developing flexible methods and procedures for complaint handling, providing statistical information for reports to management, tracking complaint status and following-up after complaint handling to ensure customer satisfaction. The AT&T team assessed its findings from the benchmarking initiative and identified the following critical success factors to improve customer complaint handling in operator services:

AT&T's Critical Success Factors for Customer Complaint Handling:

1. *The manager who is champion of the complaint handling process must participate in and provide financial support to the complaint-handling group.*
2. *The company vision for the future, company culture, company attitude and policy toward its customers must be understood with all complaint representatives.*
3. *The complaint-handling job requires full-time dedicated employees whose sole responsibility is to process customer*

- complaints, manage the day-to-day operation, and report customer information to the rest of the company.*
4. *Each complaint representative must be connected to the computerized complaint tracking system for easy access to past and present customer data.*
 5. *The complaint handling group's organization reporting level must be closely tied to the process champion, (i.e., there should be limited management levels between the two).*
 6. *The complaint handling group must be centralized to prevent breaks in the process flow allow easy access to complaint information, create a family atmosphere and prevent burnout, eliminate duplication, centralize data collection and reporting, and keep communication flowing.*
 7. *Each member of the complaint-handling group must be empowered to satisfy a customer within reason and according to AT&T policy.*
 8. *Strong employee commitment is necessary to: create team spirit and a family atmosphere, and encourage peer support.*
 9. *Measurements and metrics are compiled with the complaint-handling group to ensure quality.*
 10. *A formal training program must be in place. A buddy system should be created to connect new employees with more experienced representatives until the new employee has reached a designated confidence level.*
 11. *Customers must have easy access to the complaint-handling group, via phone, mail, or computer.*
 12. *Well-established methods and procedures must be in place describing an organized flow of the complaint process (from complaint inception through customer satisfaction.)*

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Summary

In the unforgiving competitive environment of liberalizing markets, customer service often needs reinventing. An understanding of three different business streams: mass market, packaged solutions and custom solutions is generally required to meet the needs of all customers. The degree to which services are used for revenue generation, on the one hand, and customer relationship building, on the other, must be balanced for the carrier to optimize its profitability. To reconfigure a carrier's operations along business streams requires sweeping changes in processes, organization and corporate culture.

Customers looking for packaged solutions want the assurance of experience and practice combined with the fit of a tailored product. Packaged solutions bring together standard products in ways that address common business issues such as a retail call center, for example. Packaged solutions require a hybrid approach. No two custom solution projects are alike, so one can hardly talk about standard processes. Instead, a common set of control points, such as the decision to tender an offer, must be defined.

Establishing high priority problem areas also helped to determine the scope and goals of the study. This included setting reasonable time frames for handling complaints, developing flexible methods and procedures for complaint handling. The AT&T team assessed its findings from the benchmarking initiative and identified the following critical success factors to improve customer complaint handling in operator services.

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STRATEGIES FOR TRANSFER PRICING

Multinacionālām kompānijām, neskatoties uz viņu spējām kontaktēties ar lielāko pasaules daļu un ietekmi uz to, nav balsstiesības citās valstīs. Autors savā rakstā izskata ekonomikā ļoti svarīgu jautājumu – transfertcenu veidošanu un ar to saistītās problēmas.

Multinational companies despite conducting a large proportion of the world's trade, have no votes in any country. It is unfortunate that **Transfer Pricing** is often seen as abusive or manipulative, rather than being simply the process by which prices between affiliates have to be set, using the internationally agreed **arms length standard**. There is the common refrain from tax authorities of "just collecting their fair share", which normally means rather more than their fair share. In looking to the future for **Transfer Pricing** it is important to be realistic. Disputes are inevitable, and key point is how to **resolve** them.

Introduction – The global revenue race

Transfer pricing is a term used to describe all aspects of inter-company pricing arrangements between related business entities, and commonly applies to intercompany transfers of tangible and intangible property. Inter-company transactions across borders are growing rapidly and are becoming much more complex. Global integration and new business practices challenge multinational corporations to find innovative transfer pricing solutions.

Transfer prices may be used to achieve entirely independent aims depending on the various views needed for the organization.

For example, the central controlling department of the group might have aims and information requirements that differ completely from those of the controlling departments for the individual divisions or companies.

These aims may sometimes even conflict with one another. Transfer prices are often used to represent profits optimally in annual reports for tax or other external reporting reasons. The managers of individual divisions are interested in determining profits and profit margins of their own areas of responsibility and coordinating their activities accordingly. Strategic decisions for the whole group are often made based on the assumption that the group acts as a single company. Since the transfers between member companies include internal profits, these need to be eliminated in order to provide a sound basis for decisions for the group as a whole and value business transactions using corporate-wide costs of goods manufactured.

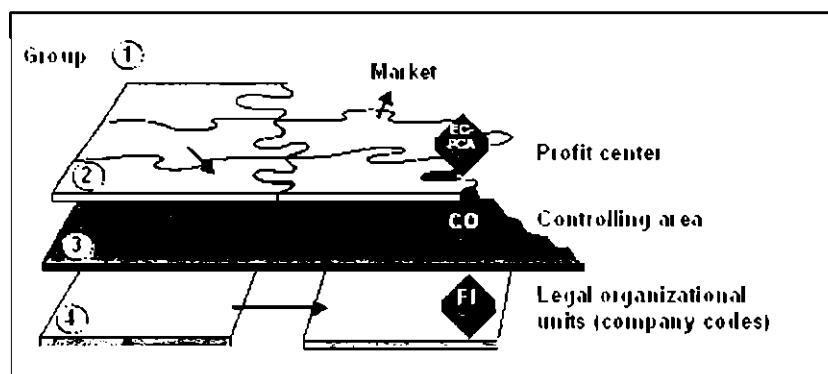


Figure 1. Value business transactions using corporate-wide costs of goods manufactured.

A **transfer price** is a price used to value the transfer of a good or service between independently operating units of a corporate group. Our system supports three types of transfer prices to represent the three primary views of goods movements within a corporate group.

1. In the **legal** view, transfer prices represent the value (sales price) of goods or services transferred between legally independent member companies in the group. These values are reflected in the individual financial statements of these companies.
2. In the **corporate** view, the goods and services are valued using the corporate cost of goods manufactured. For these prices, internal profits are eliminated from the prices of the legal view.
3. In the **profit center** view, transfer prices are the prices negotiated for goods and services exchanged between areas of responsibility (profit centers) and used to determine their internal profitability.

The Governments in the EU

The view of the individual company and the valuation according to legal reporting requirements only represents one of several possible perspectives on the economic reality. Balance sheet and tax considerations play an important role in the financial statements of the individual companies. In addition to this legal view, though, a successful corporate and group management needs other information that shows business activities from the point of view of the whole group or of individual profit centers.

Stricter penalties, new documentation requirements, increased information exchange, improved training and specialization are some of the tools used by tax authorities in this global "revenue race." In looking to the future for transfer pricing it is important to be realistic. Disputes are inevitable, and the key point is how to resolve them not stimulate yet longer sagas of disagreement. As there are two sides here, it makes sense to look at them separately.

A) Firstly, Governments are short of money. Many are still running budget deficits. Also multinational companies despite conducting a large proportion of the world's trade and creating significant prosperity, have no votes in any country. It is also unfortunate that transfer pricing is often seen as abusive or manipulative, rather than being simply the process by which prices between affiliates have to be set, using the internationally agreed arms length standard. There is also the common refrain from tax authorities of "just collecting their fair share", which normally means rather more than their fair share if they can get it. As against this Governments, and particularly their tax authorities are subject to some constraints. Firstly, there are principles of domestic tax law, plus in many countries a plethora of precedents and public rulings, which they have to abide by. There are also typically in developed legal systems, rules regarding equality of treatment according to law, and the increasingly wide-ranging jurisprudence of the European Court of Justice in the EU. In many countries administrative law remedies are also becoming stronger and more frequently used. In part this may reflect the increased intrusion of Governments into private affairs and the response of companies to ensure they act in a proper fashion only according to the law. Finally, there are the OECD Guidelines from July 1995, and the monitoring that is taking place involving the international business community, particularly the Business and Industry Advisory Committee (BIAC).

The Taxpayer in the EU

B) On the other side, there are taxpayers' wishes, typically to pay less tax rather than more. It is now generally accepted that tax is a cost of doing business, and should be controlled and managed just like any other cost. Taxpayers also wish to close out issues and years to avoid continuing uncertainty in the transfer pricing area. This "no surprises" objective for internal management and the overview of Audit Committees on the corporate governance side are major factors. In addition there are, of course, the market expectations. A big rise in tax rates or bad news on a major transfer pricing issue could upset the share price as with any other bad news. Also managing a sustained long-term lower tax rate brings obvious benefits to earnings per share in the profit and loss account, and conserves cash thus improving economic value added.

The problems for taxpayers in this area revolve around the huge sums at stake, and the uncertainty for the past, the present, and indeed the future. The future can possibly be mitigated with an Advance Pricing Agreement if appropriate. There is also the public and political image to think of, particularly in regulated industries that have numerous other interfaces with Governments. Lastly there is the economic concern for taxpayers of being subject to double taxation, and certainly with two high rate countries involved, ending up as the meat in the sandwich. While many countries have double tax treaties, Germany foremost amongst them with over 100, there are some unsatisfactory features of the mutual agreement procedure (MAP).

These unsatisfactory features revolve round the cost in terms of time and money, and the fact that typically there is no mandatory referral, the result is not binding on the fiscs, and there is no timetable. Equally there is no taxpayer representation. It is a surprising thought that a taxpayer in dispute with its domestic fisc one day, may the very next day be asking that same fisc to represent it against another country in these sensitive and high value areas. There is also the suspicion, possibly unworthy, that occasionally the MAP system can give rise to a straightforward carve up between the two fiscs.

This leads one to the conclusion that things can only get better! The aim should be to focus on resolution, not disagreement. Also good behavior should be encouraged, with published best practice, and fiscs being held to their fair share mantra. Equally multi-nationals must behave

in a sensible fashion, and make sure that their operations in low tax jurisdictions have real economic substance to justify their profits.

It would also help if there were less derogatory language from tax authorities. An example is the Inland Revenue Press Release following the German Budget in November 1996 on the Spend to Save initiative talking about avoidance and evasion as if they were the same; and also linking large companies, international transactions and tax fraud. It was suggested that Germany should establish a "Transferpreise Aufsicht", and that all future double tax agreements should include an arbitration option. This would be open to taxpayers, who are not satisfied with a mutual agreement procedure, and would have defined time limits. (It is worthy of note that the United States has five double tax treaties including an arbitration clause, though not as strong as one might wish. The countries are Canada, Mexico, the Netherlands, UK, and France.)

The Transfer Pricing Agreements in the US

It is also instructive to look at the US experience in transfer pricing cases, which has been unhelpful in jurisprudence terms. The Tax Court judges have now sent off transfer pricing cases to arbitration to get them off their own dockets. There is also the Appeals Renewal Initiative in Canada, which focuses on how disputes that are inevitable between taxpayers and the fisc may be agreed. It also bravely mentions ADR including mediation, the most popular technique.

The way forward therefore is by way of a "recognized, credible, independent, binding arbitration tribunal." This would give the taxpayer a right to appear and provide evidence, possibly taking the EU arbitration convention as a starting point. Also under OECD auspices it would be possible to enforce awards by way of peer group pressure even if not legally enforceable. Such arbitration would also send a strong message to non-members of the arm's length system working, and how fiscs should behave sensibly. This is particularly relevant given the recent changes in transfer pricing introduced by countries – some new OECD members.

One should not be narrow-minded in the tax world. In most trade agreements and other commercial agreements, arbitration is common – as indeed in the OECD Multilateral Agreement on Investment currently being negotiated. It is also likely that arbitration would encourage settlement without resort to litigation or proceedings, i.e. there would be fewer cases not more.

Technical Transfer Pricing Concepts

Transfer prices let organizations that divide tasks among different organizational units to value the goods and services exchanged between these units. Particularly large corporations are often divided into a number of independently operating divisions or companies that exchange large quantities of goods and services with one another. Transfer prices are becoming an increasingly critical method for controlling corporate units as the division of labor between internationally operating unit's increases, value-added chains become more complex and responsibilities become more decentralized.

By valuating the exchange of goods and services using transfer prices, the actual success of the corporate divisions or profit centers can be significantly influenced. Especially in this context, today's accounting systems need to be able to provide decision support that represents operational results from different points of views and using different currencies.

The following example shows how this looks in reality:

Company A sells a product to Company B, thereby realizing a profit that must be shown in its balance sheet (corporate and tax balance sheets). Because Company A and Company B both belong to the same group, this sale is merely as an internal stock transfer when looked at from the point of view of the group. Thus no group (internal) profits can be realized as a result of this transfer. Such internal profits can also arise when the exchange is between two profit centers instead of two independent companies of the group.

Valuation Approach

The concepts are of importance for an understanding of transfer pricing in the R/3 System: The three different views of business transactions – those of the individual company, the group as a whole and the profit center – are referred to as valuation views. In the R/3 System, each valuation view always uses its own currency type, like EURO, USD or CHF. The combination of currency type and valuation view is referred to as the **valuation approach**.

In a currency and valuation profile, are specified up to three valuation approaches that can be stored in parallel in a system. This ensures that these approaches are updated consistently throughout all the affected application

components. Technically speaking is the use of multiple valuation methods in the SAP R/3 System based on the same principle by which multiple currencies were used in earlier times. The meaning of the currency fields has merely been extended to include the dimension "Valuation method", so that the content of these fields can be interpreted as valuation approaches (combination of currency and valuation method). For transfer prices to be consistent, it is needed that they are used throughout one entire system.

The currency and valuation profile determines which valuation views can be stored in which currencies. The combination of currency and valuation view – for example, group currency and profit center view – is referred to as a **valuation approach** or **valuation method**.

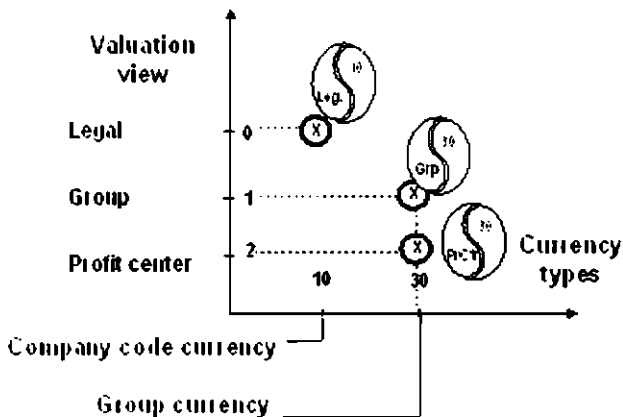


Figure 2. The use of Valuation method's example: currency and valuation profile.

The above graphic shows the three different views:

Group view, in which business transactions within the group are represented using group-wide cost rates

Profit center view, in which business transactions between profit centers are valued using managerial or controlling rates

View in which activities between cost centers are valued using internal activity prices

Legal view, in which business transactions between affiliated companies are valued using external sales prices

Consistency of the Valuation of Inventory: the material ledger

The material ledger forms the basis for storing multiple valuation approaches for material inventories. The material ledger can be seen as a material sub-ledger that stores material stocks according to different valuation approaches according to the legal, group and profit center viewpoints. These valuation approaches are applied and integrated throughout the system for all **business processes** that are relevant for valuation. That means that multiple values are stored in real-time from material costing to the procurement processes and on to the production processes. For the Financial Accounting and controlling application components, using transfer prices makes it possible to work with multiple valuation approaches in the documents in all areas of accounting.

Business Processes for a Parallel Valuation Approaches

As a subsidiary ledger for materials, the material ledger is of fundamental significance for storing multiple valuation methods for material stocks. In the material ledger, is a combination of the dimensions **currency** and **valuation** defined, which is referred to as **valuation approach**? Up to three valuation approaches are stored in the material ledger. These are stored throughout the system according to the settings made in the currency and valuation profile. This means, for example, that the material costing can be used to calculate three standard prices for the material stocks – one from the legal view, plus additional standard prices from the group view and the profit center view.

These multiple valuation approaches are then available for all business transactions involving stock valuation (goods receipt, goods issue, stock transfers) and procurement, which means that stock values are constantly being updated. As with products that are procured externally, multiple valuation approaches for products produced internal need to be used in cost object controlling.

Effects of Transfer Prices on Cost Element Accounting in CO

One basic principle of the Controlling applications in the R/3 System is that all the quantity flows in the Logistics applications are reflected in

real-time as value flows in financials. In Release 3.0, these value flows corresponded to valuation from the legal view of a group company. If transfer prices based on group or profit center valuation are used, one needs to store parallel sets of data according to multiple valuation approaches in Cost Element Accounting. Cost Element Accounting provides the infrastructure necessary to represent these multiple value flows by allowing the company to store multiple actual versions in parallel.

This means that, for **example**, when a material for a production order is used, separate goods usage postings are stored in parallel according to the different valuations. Of the actual version that is defined in Controlling, one of these as the **operational version** can be specified. This version reflects the organization's basic managerial accounting philosophy as the primary valuation method, and must be defined in the system as version 000.

In addition to this version, it can be also **other actual versions** defined to reflect the other two valuation methods. The legal valuation method must be represented in CO by at least one of the actual versions in the company accounting system. Up to two other versions can be specified by using these in the currency and valuation profile.

Multiple Value Flows in Overhead Cost Controlling

Overhead Cost Controlling also stores multiple valuation approaches according to the settings made for Cost Element Accounting. This means that materials usage to cost centers using different valuation approaches can be posted.

Up to three actual prices in parallel can be calculated. Thus valuation can be carried out in all three valuation approaches. If three actual price determination are not used, the system uses the plan price to value actual data.

Do not see the multiple actual prices as transfer prices for activities.

Actual price determination only takes into account the different primary costs that arise as a result of transfer pricing for goods movements. Multiple valuation approaches are supported for all secondary allocations, thus ensuring that the value flows are complete.

Multiple Valuation Approaches in Cost Object Controlling

Cost Object Controlling has the task of making multiple valuation approaches available for the settlement production variances to Financial

Accounting and the material ledger. This applies to those cost objects that are settled to material stock -- production orders, process orders and run schedule headers. The controlling functions in Cost Object Controlling, such as variance calculation, are still limited to one valuation approach. This applies to the calculation of overhead, variances, and variance categories. Only goods movements are posted using multiple valuation approaches. Consequently, the actual costs for a single valuation approach are always taken from the material costs in that view plus the activities and overhead costs from the operative version. Before costs for the three valuation views can be settled, one needs to calculate work in process for each approach (WIP). For this purpose the valuation approach stored in the currency and valuation profile needs to be copied to the results analysis version. This makes it possible to use multiple valuation approaches for posting the work in process to FI and for settling the production variances. The production variances in this case are the difference between the actual costs, inward stock movements, and work in process using each valuation approach.

Finally what can be done in this area?

The first thing is to lobby hard for a more rational system. The new social **democratic** government in Germany has constantly spoken of consultation in the corporate tax sphere and one should take them up on this. Equally examples should be given to industry groups and professional tax committees of untoward behavior by fiscs, and challenge their approach. Examples of difficult situations should be sent and also how the guidelines should work in practice to OECD via BIAC or any other business grouping.

Explanations and Terms

Advance Pricing Agreements

(APAs) are advance agreements on transfer pricing methodologies, entered into by a multinational taxpayer and at least one government's tax administration. Although APAs are styled as "advance" agreements, in fact APAs often are coupled with resolutions of pending transfer pricing issues of prior years. Therefore, APA proceedings can provide the opportunity to resolve transfer pricing issues for the past five years or more, as well as those of future years.

Advance Rulings Provided

Tax authority agrees to the application of a specified transfer pricing method for a fixed term.

Arm's Length Standard

Tax authority requires that prices charged for goods or services between related parties be consistent with the amounts that would have been charged if uncontrolled taxpayers had engaged in the same transaction under the same circumstances.

Explicit TP Rules

Transfer Pricing regulatory provisions exist; current rules are effective on the date identified in the column. (TLS).

Follows OECD TP Guidelines

Tax authority adopts the arm's length principle and various transfer pricing methodologies recommended in the 1979 and 1995 Organization for Economic Co-operation and Development (OECD) Transfer Pricing Guidelines.

Formal TP Documentation Rules

Governing tax authority requires or recommends that taxpayers prepare and maintain written documentation to confirm that the amounts charged in related party transactions are consistent with the arm's length standard. The effective date for which these rules are enforced is identified on the grid.

Formal TP Documentation

Rules Governing tax authority requires or recommends that taxpayers prepare and maintain written documentation to confirm that the amounts charged in related party transactions are consistent with the arm's length standard. The effective date for which these rules are enforced is identified on the grid.

Transfer Pricing Penalties

Tax authority will impose a transfer pricing specific penalty if the taxpayer is found not to be in compliance with the transfer pricing rules imposed by that country. Penalties are enforced beginning with the effective date provided on the grid.

Important Regulations:

The 1980s brought increased confrontation between taxpayers and tax administrators and between jurisdictions implementing and enforcing diverging transfer pricing legislation. The author analyses the legal

characteristics of APAs; practical problems regarding their implementation; and the benefits, drawbacks, and alternatives confronted by the parties to such agreements.

This study is in large measure based on the US procedures on APAs that make up the most advanced regulation in this field. In addition, the work describes the worldwide practice on APAs, the OECD guidelines, and the APA procedures of other jurisdictions which basically follow US legislation. Its informativeness and extent of coverage make this work essential reading for practitioners, in-house counsel, and academics active in the area of international taxation.

Section 482. Allocation of Income and Deductions among Taxpayers

In any case of two or more organizations, trades, or businesses (whether or not incorporated, whether or not organized in the United States, and whether or not affiliated) owned or controlled directly or indirectly by the same interests, the Secretary may distribute, apportion, or allocate gross income, deductions, credits, or allowances between or among such organizations, trades, or businesses, if he determines that such distribution, apportionment, or allocation is necessary in order to prevent evasion of taxes or clearly to reflect the income of any of such organizations, trades, or businesses. In the case of any transfer (or license) of intangible property (within the meaning of section 936(h)(3)(B)), the income with respect to such transfer or license shall be commensurate with the income attributable to the intangible.

Section 982. Admissibility of Documentation Maintained in Foreign Countries

(a) General rule

If the taxpayer fails to substantially comply with any formal document request arising out of the examination of the tax treatment of any item (hereinafter in this section referred to as the "examined item") before the 90th day after the date of the mailing of such request on motion by the Secretary, any court having jurisdiction of a civil proceeding in which the tax treatment of the examined item is an issue shall prohibit the introduction by the taxpayer of any foreign-based documentation covered by such request.

Section 1059A. Limitation on Taxpayer's Basis**(a) In general**

If any property is imported into the United States in a transaction (directly or indirectly) between related persons (within the meaning of section 482), the amount of any costs –

- (1) which are taken into account in computing the basis or inventory cost of such property by the purchaser, and
- (2) which are also taken into account in computing the customs value of such property, shall not, for purposes of computing such basis or inventory cost for purposes of this chapter, be greater than the amount of such costs taken into account in computing such customs value.

(b) Customs value; import

For purposes of this section –

(1) Customs value

The term "customs value" means the value taken into account for purposes of determining the amount of any customs duties or any other duties which may be imposed on the importation of any property.

(2) Import

Except as provided in regulations, the term "import" means the entering, or withdrawal from warehouse, for consumption.

Section 7456. Administration of Oaths and Procurement of Testimony**(a) [omitted]****(b) Production of records in the case of foreign corporations, foreign trusts or estates and non-resident alien individuals**

The Tax Court or any division thereof, upon motion and notice by the Secretary, and upon good cause shown therefore, shall order any foreign corporation, foreign trust or estate, or non-resident alien individual, who has filed a petition with the Tax Court, to produce, or, upon satisfactory proof to the Tax Court or any of its divisions, that the petitioner is unable to produce, to make available to the Secretary, and, in either case, to permit the inspection, copying, or photographing of, such books, records, documents, memoranda, correspondence and other papers, wherever situated, as the Tax Court or any division thereof, may deem relevant to the proceedings and

which are in the possession, custody or control of the petitioner, or of any person directly or indirectly under his control or having control over him or subject to the same common control. If the petitioner fails or refuses to comply with any of the provisions of such order, after reasonable time for compliance has been afforded to him, the Tax Court or any division thereof, upon motion, shall make an order striking out pleadings or parts thereof, or dismissing the proceeding or any part thereof, or rendering a judgment by default against the petitioner. For the purpose of this subsection, the term "foreign trust or estate" includes an estate or trust, any fiduciary of which is a foreign corporation or nonresident alien individual; and the term "control" is not limited to legal control.

Section 7602. Examination of Books and Witnesses

(a) Authority to summon, etc.

For the purpose of ascertaining the correctness of any return, making a return where none has been made, determining the liability of any person for any internal revenue tax or the liability at law or in equity of any transferee or fiduciary of any person in respect of any internal revenue tax, or collecting any such liability, the Secretary is authorized--

- (1) To examine any books, papers, records, or other data which may be relevant or material to such inquiry;
- (2) To summon the person liable for tax or required to perform the act, or any officer or employee of such person, or any person having possession, custody, or care of books of account containing entries relating to the business of the person liable for tax or required to perform the act, or any other person the Secretary may deem proper, to appear before the Secretary at a time and place named in the summons and to produce such books, papers, records, or other data, and to give such testimony, under oath, as may be relevant or material to such inquiry; and
- (3) To take such testimony of the person concerned, under oath, as may be relevant or material to such inquiry.

(b) Purpose may include inquiry into offense

The purposes for which the Secretary may take any action described in paragraph (1), (2), or (3) of subsection (a) include the purpose of

inquiring into any offense connected with the administration or enforcement of the internal revenue laws.

(c) No administrative summons when there is Justice Department referral

Section 7603. Service of Summons

(a) In general

A summons issued under section 6420(e)(2), 6421(g)(2), 6427(j)(2), or 7602 shall be served by the Secretary, by an attested copy delivered in hand to the person to whom it is directed, or left at his last and usual place of abode; and the certificate of service signed by the person serving the summons shall be evidence of the facts it states on the hearing of an application for the enforcement of the summons. When the summons requires the production of books, papers, records, or other data, it shall be sufficient if such books, papers, records, or other data are described with reasonable certainty.

(b) Service by mail to third-party record-keepers

(1) In general

A summons referred to in subsection (a) for the production of books, papers, records, or other data by a third-party record-keeper may also be served by certified or registered mail to the last known address of such record keeper.

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INTELLECTUAL CAPITAL: IMPACT ON THE DEVELOPMENT OF ACCOUNTING PRACTICE

Текущие методы бухгалтерского учета являются результатом длительного процесса развития. Однако, изменения условий предпринимательства, увеличение роли нематериальных ценностей и ориентация на увеличение рыночной стоимости компании ставят под вопрос полноту и исчерываемость информации, собираемой и представляемой бухгалтерским учетом. Нематериальные ценности, еще называемые интеллектуальным капиталом, играют все большую роль в бизнесе и могут представлять значительную часть рыночной стоимости компании. До сегодняшнего дня такие источники ценностей не учитывались в финансовых отчетах.

Данная статья дает понимание роли интеллектуального капитала в современном бизнесе, обсуждает вопросы учета интеллектуального капитала в бухгалтерской практике и наиболее приемлемые методы учета такого капитала.

Current financial and management accounting theory and practice are results of a long development process. Accounting is also known to be a conservative science, which hardly accepts any innovations. However changing business conditions, increasing role of intangibles, and the emphasis on the corporate value creation questions the completeness of the business data gathered and presented by accounting systems.

Up to date intangibles also called intellectual capital (such as brand names, employees competence and experience, customer relations) are non-captured resources, which means that although having something of value to companies, they are not presented anywhere on the financial statements. Moreover, IC is increasingly regarded as an essential business and its value growth factors and can represent a substantial portion of the market value

of the companies¹ While easier known to company insiders, IC is not systematically (if at all) communicated to investors. When investors appear to disregard a company's historical performance at some unexpected news release moments they are often reacting to the so-called information asymmetry. One of the major reasons for such asymmetry to occur might be because traditional financial reporting methods – audited financial statements, analysts' reports and press releases – disclose only a fraction of the relevant and important information, while making decisions investors are interested to receive a full picture of companies' performance and future perspectives. Therefore the author concludes that *lack to provide information on an important part of companies' assets is a significant factor to re-examine current financial accounting theory and practice.*

Not only financial but *also management accounting has to be reconsidered.* Requirement to create value for shareholders is one of the major goals set for corporate managers nowadays. If tangible assets (represented by book value) make only a fraction of shareholders value, then attention has to be placed increasingly on intangibles. In order to manage, managers have to be able to identify and measure intangibles that are used by their companies.

Research problem: Growing interest in intellectual capital and existing need to provide all interested parties with relevant information indicates shortcomings of current accounting practice and sets requirements to develop standards and practices to account for intellectual capital.

The goal of this paper is to analyse issues related with the accounting for intellectual capital and to evaluate possible and reasonably acceptable ways for further development of the accounting practice.

Intellectual capital defined

The concept of intellectual capital (IC) emerged in 1980's in the United States. Later it gained enormous popularity throughout the Europe, especially in the United Kingdom and the Scandinavian countries. However the concept of the IC is still under development and

¹ In 1998 in the USA companies' book value on average presented less than 30 % of market value. Even though those two measures serve different purpose and are derived in altogether different ways; the gap between them is instructive to require further analysis. (Source: R.Boulton, B.Libert, S.Samek (2000) Cracking the value code. Harper Business, New York.)

has many questions not yet answered (such as accounting, valuation, management and other interrelated issues.)

IC could be defined as “combined intangible assets which enable the company to function” An author of this definition A. Brooking sees the enterprise as the sum of all its assets – tangible and intangible and presents that by the following formulae $Business\ enterprise = Tangible\ assets + Intellectual\ capital$.

Even though uniform definition of IC is still not developed, it is commonly agreed that three major groups of components constitute IC. This increasingly popular classification identifies that IC comprises all the following:

Human capital: the capabilities of the company's employees necessary to provide solutions to customers, to innovate and to renew. In addition to individual capabilities, human capital includes the dynamics of a learning organization in changing environment, its creativity and innovativeness.

Structural capital: the infrastructure of human capital, including the organizational capabilities to meet market requirements. Infrastructure includes the quality and reach of information systems, company images, organizational concepts and databases.

Customer capital: the relationship with people and organizations with which a company does business. Most commonly it means clients and customers, but it also may represent suppliers.

Issues of accounting for IC

Contemporary accounting practice is deficient in measuring and reporting data on IC. More and more analysts point out this as a major shortcoming. However, accounting systems and standards in place actually are not designed to account and measure for such information.

Currently international standards set certain rules how intangible assets (not resources used by companies) have to be accounted and reported. However such treatment does not accommodate IC as it is was defined earlier in this paper. According to the recently released IAS 38, an intangible asset should be recognized initially, at cost, in the financial statements, if, and only if (according to the IASC comments to IAS 38):

- An asset meets the definition of an intangible asset. Particularly, there should be an identifiable asset that is

controlled and clearly distinguishable from an enterprise's goodwill;

- It is probable that the future economic benefits that are attributable to the asset will flow to the enterprise; and
- The cost of the asset can be measured reliably.

If an intangible item does not meet both the definition, and the criteria for the recognition of an intangible asset, IAS 38 requires the expenditure on this item to be recognized as an expense when it is incurred. An enterprise is not permitted to include this expenditure in the cost of an intangible asset at a later date. Such treatment applies to expenditure on research, start-up costs, training costs and advertising costs. IAS 38 also specifically prohibits the recognition as assets of internally generated goodwill, brands, mastheads, publishing titles, customer lists and items similar in substance (which actually are the components of IC).

Based on the analysis of current international and also national accounting standards the author concludes that *traditional accounting principles and systems are deficient in accounting for a full set of IC components, and measures only a fraction of such capital*. Moreover the author suggests that current procedures for intangible assets accounting are not exactly adequate if such intangibles were treated as a part of IC. Standards and practices for IC accounting are not in place yet, but if such intangibles cannot be measured, so how can they be managed? Corporations, accounting companies and various professional organizations are taking this issue seriously and have been working to develop systems to identify, value and manage IC. Major results of such efforts will be presented later in this paper.

Based on the analysis of various sources as well as author's own research and conclusions, current problems related to the IC accounting could be divided into two groups:

1. ***Problems connected with measurement for IC:***

a. **What accounting system has to account for IC:**

In general a company's accounting system consists of two separate or integrated parts: financial and managerial (also called cost) accounting. Newly emerging need to account for IC requires making a decision upon the further development of the accounting system. Analysis of literature indicated that three alternative IC accounting

systems are discussed: 1) adoption of existing financial accounting; 2) adoption of managerial accounting, or 3) use of separate newly defined and created accounting system. Up to date all three alternatives are still treated equally and surprisingly some professional bodies stand for the first alternative. However the author stands for the third alternative and suggests that a separate but integrated accounting for IC system has to be adopted.

b. Are intellectual resources true assets of a company?

Analysis of literature showed that there is an open argument whether parallel accounting treatment of intellectual resources and tangible assets is fundamentally acceptable. It has been argued that such treatment is unacceptable because in most cases IC: 1) Does not have physical form 2) Is not appropriable 3) Is immeasurable or does not have measurement basis in place. In accounting asset is defined by three-part definition: it must be an economic resource; the resource must be controlled by the entity; cost at the time of acquisition must be objectively measurable. The author suggests that discussing IC accounting this question is one of the major issues and has to be further, seriously examined.

c. Measurement basis for IC.

Measurement basis or price is a matter of value. The valuation is a subjective process – especially for intangible assets, when there is often no active open market. Moreover at present some parts of IC have no value identified at all. Most probably there will be a need to create a separate set of rules for each type of intellectual resource, which may vary based on the companies' needs. Researches also argue which of acquisition cost; market value; replacement or any other value is the best measurement basis for IC.

d. Lack of accounting methods and procedures.

The three above mentioned problems are directly related with the development of new methods and procedures to account for IC. Such tools are not in place yet and need to be established. However the author thinks, that the first three problems have to be solved first.

2. Problems related to the reporting of intellectual capital

In order to be available to the outsiders, information on the IC has to be publicly presented. In connection to this issue, there are three decisions to be made are 1) what form should such reports have, 2) should they be

compulsory and 3) what should be the optimal level of information included in such statements.

In the past, every company, which decided to publish some information on IC, used its own format of IC statement. Variety of such statements and different set of rules used in their creation, made it challenging to understand, compare and interpret the data on IC (especially in the different countries and industries.) At present three possible forms of IC reports are discussed: 1) a part of financial statements in the form similar to the balance sheet, 2) an additional part of to the balance sheet, and 3) a descriptive supplement to the financial statements.

Based on the current practice the author suggests that reporting for IC information should take two steps: 1) companies should use the supplement form before IC accounting system is developed and implemented, and 2) afterwards a single financial IC report should be used, but the form of it has to be discussed later.

Attempts to account for IC

While national and international accounting bodies are still considering how IC has to be accounted for and reported, there are a number of pioneering companies that have already developed some methods and measures and are using them for both: 1) to reach internal goals (manage IC and increase shareholder value), and 2) to provide outsiders with useful information about all company's assets: tangible and intangible. Past experience indicated that benefits associated with disclosing information on IC are significant enough that some companies have begun to do so voluntarily. Examples of such companies include (but are not limited to) Scandia AFS (Denmark), Southern California Edison, Dow Chemicals, and Glaxo Wellcome (all USA).

Conducted analysis indicated, that a variety of tools, methods and measurement systems are used by companies or analysts to identify and evaluate size of IC. In this paper all the methods are classified into three groups presented below. Similar (slightly improved) classifications were suggested in studies conducted by Stewart (1997) and Arthur Andersen (2000).

- **Methods using economic-based information**
These methods are simple to use and information is readily available in historical financial statements. The economic-based methods include net cash flow/earnings, brand contribution, royalty, ROA and other methods. However most of them provide

with single IC measure and do not separate value of IC components.

- **Methods using market-based information**
Such methods provide with market value of IC and are based on the capital markets premiums. Examples of so-called market capitalization methods include Market-Value Added, Tobins'Q, Economic Value-Added, etc. In such methods company's capitalization is compared with some accounting value of its assets (book value, replacement value, etc.)
- **Direct IC methods**
This group of methods is based on measuring the value of IC by first identifying its various components, and then separately evaluating each of them. Such methods are most complex, but also the most accurate means of measuring IC. Scandia navigator and Balanced scorecard are two examples of successfully implemented direct IC methods.

Analysis of literature has showed that, although primarily created for valuation purposes, most of such methods are also treated as emerging tools to measure IC for accounting purposes. However (based on the authors opinion), all the IC valuation methods (shortly presented above) have significant shortcomings (limitations) for using them as IC accounting tool. Among them the author points out:

- Most of the methods are created to *evaluate IC (make assumptions about the structure and size)*, but do not provide qualitative and reliably measurable information, which could be directly used in accounting (as it is currently defined).
- Results of valuation are *static measures* and do not identify the underlying causes or effects. Most of the frequently used methods calculate just a single result and do not separate it between various IC categories.
- Methods are either 1) created based on the situation and needs of a *single company* and have to be conceptually re-examined before adapting to the other company, or 2) were created to fulfil needs of other kind of analysis and now are being adopted to measure for IC. However the author suggests that conceptual assumptions behind such methods are hardly transferable to this new field.

Towards accounting for IC – decisions to be made

Based on the analysis conducted in this paper, the author concludes that accounting for IC is an important and urgent issue. Companies need financial information on IC for internal management purposes as well as for external reporting in order to present a full picture of their assets and resources. To fulfil such needs companies require a new accounting system. Based on the development of current accounting practice, the author suggest to consider *four new important roles of accounting*:

1. To design new systems to account for, manage and control IC;
2. To develop new generally accepted national and international accounting standards;
3. To formalize and certify audit of IC;
4. To inform and teach users of substance, use and forms of presentation of financial and non-financial information about IC.

The author suggests that the process of developing and implementing new tools and methods to account for IC might be time and resources consuming, mainly due to the conservatism of accounting profession. Analysis shows that IC requires many changes in current accounting practice and most of them are the conceptual ones. Moreover the author suggests, that a single company could hardly make a difference, if decision to account for IC by financial accounting system was made. In such case, the process would need national legislators and professionals as well as international accounting bodies involved. Therefore, it is suggested that development of a new accounting for IC practice should take at least two steps:

- 1) First of all, companies should *internally* gather, analyse and interpret information on their IC and report such information to the external interested parties. Such processes could be conducted by internal, management accounting system. The results, problems and limitations of internal accounting for IC practice should be communicated to each other as well as professional bodies. Results of the first step should be used for development of a single and compulsory accounting for IC practice.
- 2) At some point after the first step has been introduced, a single and compulsory for all companies accounting for IC practice should be created and introduced.

Research and analysis presented in this paper pointed out that IC accounting requires further analysis. All the questions asked in this paper have to be analysed in depth and could be a topic of the other research

papers. The author predicts that accounting for IC most probably will be developed in two ways: either analysing it from accounting practice standpoint, or some issues might be answered in process of IC concept development.

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Summary

Current accounting practice is a result of long development process. However changing business conditions, increasing role of intangibles, and the emphasis on the corporate value creation questions the completeness of the business data gathered and presented by accounting systems. Intangibles also called intellectual capital are increasingly regarded as an essential business and its value growth factors. It can also represent a substantial portion of the market value of the companies. Up to date such sources of value are not recorded on financial statements.

This paper gives the insights on the role of the intellectual capital, presents issues of accounting for the intellectual capital, and questions the acceptable ways to account for such capital.

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ENERGETIC AND NATIONAL DEVELOPMENTAL PROBLEMS OF ECONOMY IN LATVIA

Rakstā analizēta enerģētikas un tautsaimniecības mijiedarbība, kura attīstās, savstarpēji viena otru papildinot un ietekmējot. Īpaša vērība tiek veltīta makroekonomiskajiem procesiem valstī, i.e. IKP pieaugumam, investīcijām, bezdarba problēmām u.c. jautājumiem.

There is showed and analysed the interaction of the energetic and national economy, which grows like mutual complementary and both sided influencing factors And with that in work attention is paid to Latvian macroeconomical processes, like gross domestic product (GDP), investment, unemployment, but these indicators are analysed through energetic prism, summarizing the problems, which are in the energetic branch and the national economy. In work is inspected also the questions of the tax politics, which in reality influences energetic enterprises development as well as the national economy.

In work is analysed the main developmental problems, factors, As well is expressed the conclusion about the national economy and energetic development at present and in future, as well as is expressed the precondition of the questions of developments solution.

Energetic is one of the important national economic branches, which is in the same time dependent on national economy's advance as well as itself causes its growth. With the integration on the way to the European Union also in the view of the energetic branch just like in the national economy in whole there is an identified a row of problems, which have to be solved. In a big part of states energetic sector attract large participation, which grows like states energetic politics. At the same time, energy payment can noticeably attract state finance resources and also influence the international exports concurrency ability.

First of all, let's pay attention to the states national economy development analysis where, it should be said, the primary thing is to define – Latvia average term in the priority of economical politics calibrated with ES context, at the same time also looking at the more important structural reforms fair, which is

in contact with the strengthening of the Latvian national economy and in the European Market.

Since the middle of the year 1999 Latvian economy has overcome the influence of the Russian economic crisis and afterwards have started in the row of the branch of the increment. About the improvement of the economical situation proves the increase of investment and low inflation level. Step by step is also done the decrement of the state budget fiscal deficit, but new tax and not increasing them. As one of the important problems should be considered the relative high following account deficit and high unemployment level in separate regions, which however altogether in the Latvian territory has the tendency to decrease. The mentioned problem influences also the energetically branch project's realization, because at the standard time there is the unemployment, inhabitants low life, standard and demand not only for the energetically branches service but also for product and service. Analysis of the economical development in Latvia can be seen in Table 1. Year 1998 and year 1999 can be noted as the difficult economical situation in the world, especially in Russia. As a result of the situation in the second half of the year 1998 and the beginning of the year 1999 this difficult economical situation in the world and especially in Russia influenced the development rate of the Latvian national economy. In the influence of the Russian economical crisis in Latvia decreased the production spheres, increased the unemployment, also decreased the bank work indicators/observations. However the decrement of the production in the industries was compensated by the active increment in construction and various other services, but in the energetically branches development with the decrement of the activity of the industries decreased. However GDP continued to increase, even though the increment rate in 1998 and year 1999 were low – accordingly 3.9% and 1.1%. Let us have a look at Table 1.

Table shows, that the increment of the price of consumption continues to decrease the existing tendency, in the year 1999 prices increased only by 2.4% (Avg. in year) but the 12-month inflation in December was 3%. In the year 2000 Avg. increment was for 2.6% (12-month inflation was 1.8%). In the year 2000 GDP comparative prices increased for 6.6%. The greatest influence on the consumption price level during this period was in the administrative regulatory price rise, which is in particularly formed by the energy resources appointed tariffs about electrical energy and heat energy. Economical advance in the year 2000 was noticed in all branches. The increment in the domestic co-product in the year 2000 mainly influenced the successful development of the service sector. In the year 2000, comparing with the year 1999 the increment in the service sector was 7.1%, its weight

age in the GDP structure have increased for 1.7 percentage points and reaching 70.2 percent. At the same time the service sector increment mainly influenced the increment of the size in the business branch. (Weight age in the GDP structure 18.1%) for 9.6% in transport, in saving and communication branch (16.2%) – for 7.2%, in the sphere of commerce service (10.5%) – for 13.6%, as well as in the banking sector (4.9%) – for 9.6 percent.

Table 1**Average term development in Latvia**

	1998	1999	2000	2001	2002	2003	2004	2005
				<i>Prognosis</i>				
Increment rate % against the earlier period								
GDP	3.9	1.1	6.6	5.5	5.5	5.8	5.9	5.9
Inflation	4.7	2.4	2.6	2.0	2.9	3.0	3.0	3.0
Employment	0.6	-0.5	0.0	0.1	0.1	0.1	0.1	0.1
Real work payment	6.1	3.3	3.4	4.8	4.9	5.1	5.2	5.2
<i>% from GDP</i>								
Following account deficit	-10.6	-9.6	-6.8	-6.4	-6.1	-5.8	-5.2	-4.6

Actual problem is the high unemployment level in several regions. The highest unemployment level was in the year 1999, 9.7%, in year 2000 unemployment level was 8.4%, in year 2001 the planned unemployment level would be 7.9%, but in the future years till year 2006 it is being planned to decrease the unemployment level till 6.9% from economical active inhabitants. Unemployment level is noticeably different in state regions and towns/cities—the most difficult situation still continues to be in Latgale, in which in the separate regions exceeds 20% from the economical active inhabitants. It should be concluded that the energetic service demand insures the inhabitants and if the inhabitants have lower income the smaller is product and service consumption. That is why it can be said directly that energetic development is also dependent on the unemployment level of the state.

Negatively should be calculated the following high account deficit. In short the end of the year 1998 export, the payment balance for the following account deficit rapidly increased. In the year 1999 the business deficit noticeably lessened, import sphere decreasing more rapidly than the export sphere. However the following account deficit decreased comparatively, in correspondence to the decrement of the investment balance, the Latvian investment from the portfolio investment in the foreign countries. That is

why in the year 1999 the following account deficit was 9.6% from GDP. Step by step there is observed the improvement of the external economical situation, the payment balance for the following account in the year 2000 decreased till 6.8% from GDP.

Analysing the distribution of the GDP according to the branches, it should be concluded, that the development for various branches is different. This can be seen in Table 2.

Table 2

GDP distribution according to branch (increment rate in the year 1995 price, % against the earlier period)

	1997	1998	1999	2000	2001	2002-2005
	Fact				Prognosis	
GDP	8.6	3.9	1.1	6.6	5.5	5.8
Agriculture, hunting, forestry and fishery	3.4	-5.3	-7.3	9.2	3.3	3.3
Industry	16.7	4.0	-5.8	5.8	6.1	6.9
Electro-energy, gas and water supply	-1.0	1.7	-5.3	-3.1	0.5	0.9
Construction	7.9	16.9	8.1	8.4	7.9	7.8
Social service	2.8	0.6	0.4	0.4	1.0	1.0
Private service	8.7	5.6	6.5	8.9	6.8	6.7

In the year 2000 the GDP increment was achieved also by the increment of the economical activation in the industrial branch. The increment of the size in the production industry comparing with year 1999 was 5.8% which mainly influenced the increment of the in the wood processing branch, paper and paper outputs, also the textile and textile production outputs. Developed the forestry, however in the separate industry branches (food/product, chemical industry), there is still no noticeable development and with that it is explainable the low level of the demand of the energetically resources. Positively, the GDP development was influenced by the increment of the investment. In the year 1997, in Latvia this increased for 20.7% annually, but in the year 1998 – for 44 percent. Yearly investment, average increment rate from year 1995 till year 1998 was 28.6%, which is nearly 5 times greater than the yearly GDP increment rate. That is why, in the year 1998, total principal capital formations issue's weight age GDP reached 27 percent. It can be forecasted that the rapid investment increment was as a result of various factors: flow

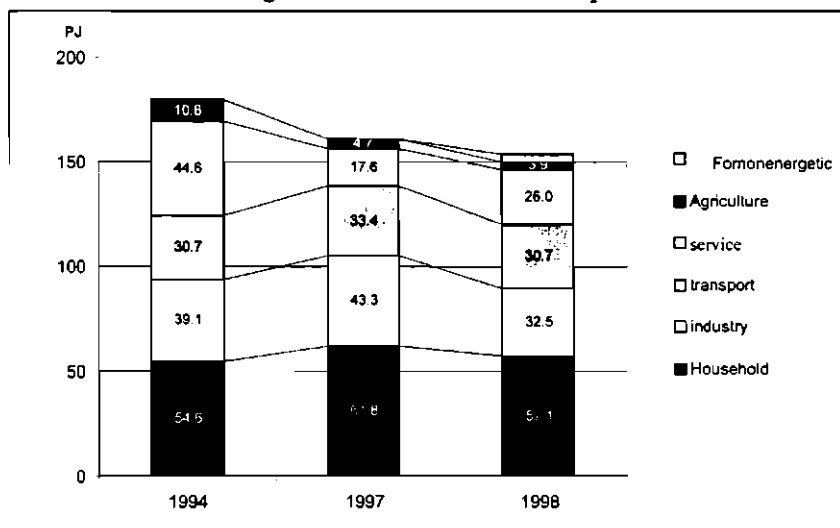
of foreign countries investment, mainly as a result of privatisation process procedure, independent international credit agencies recognized high Latvian credit rating, credit percent's interest rate decrement and stabilization of the bank sectors.

Evaluating the state investment program from year 1995-2000 energetically branches from the entire total programs amount is directed in year 1998 – 10.3%, in the year 1999 – 9.2%, but in the year 2000 – 19% and in the year 2001 – 8.9%.

Now let's pay more attention to the analysis of the energetically branch and effectiveness/efficiency of energy. Investing resources in the energetically sector, attention has to be paid to the energy efficiency, and the higher it is for the concerned / related project, the more positively the project is valued, however these are the problems that the Commerce bank does not pay a lot of attention to such indicators, and along with the increment of the energy efficiency, decreases the consumed energy resource amount. In Latvia, just like in the other Central and Eastern European states energy consumption on the national co-product comparatively with the developed states is very high. The same is to be said about the heat energy consumption for the heating of the building and the electrical energy consumption on the production union. Special primary energy consumption USD1000 for the national co-product production in Latvia in accordance with the data of the international energy agencies (See Table 3) has 0.41 tons appointed for the heating, while, e.g in Denmark, Germany, Norway this count is 0.18, 0.24, 0.33 respectively, but the average in the OECD states is 0.27. Separate branches total weight age in the energetically resources end consumption, as well as primary energy resource structure can be seen in Tables 3, 4, 5.

Table 3

Energetic resources and consumption



All sort of energy resource, heat, electricity and gas—consumption decrement negatively influenced Latvian energy system's economical indicator, Electricity and natural gases main net is anticipated for greater consumption. For the increment of the effectively of the energy supply production and for the transportation system insufficient amount of the required sources because the primary recourses price from the regulated and artificially decreased increase till the price of the World's market. Also the users orders main stress was kept on the decrement of the issue, often putting in stake the comfort, quality as well as the surroundings security indicator. At the same time leaving the natural increment the effectively, which usually spends in production increment and increment of the energy. That is why, in year 1991-1994, decrement of the national product and the total energy consumption, energy intensity or energy consumption but afterwards showing the tendency to decrease, this can be seen in Table 6. Only those enterprises, which had gone through the concurrency market, were able in the result of reconstruction to do technical modernization events, which showed increment of the energy efficiency. In the commercial and the domestic sector were noticed similar tendencies—wealth is the symbol in the increment of the energy affectivity. Insufficiency of the investment shows noticeable efficiency backwardness in the transport sector. Result

is discomfort, pollution of the surrounding and negative influence on the states economical ability of concurrency.

Table 4

Energy indicators year 1997

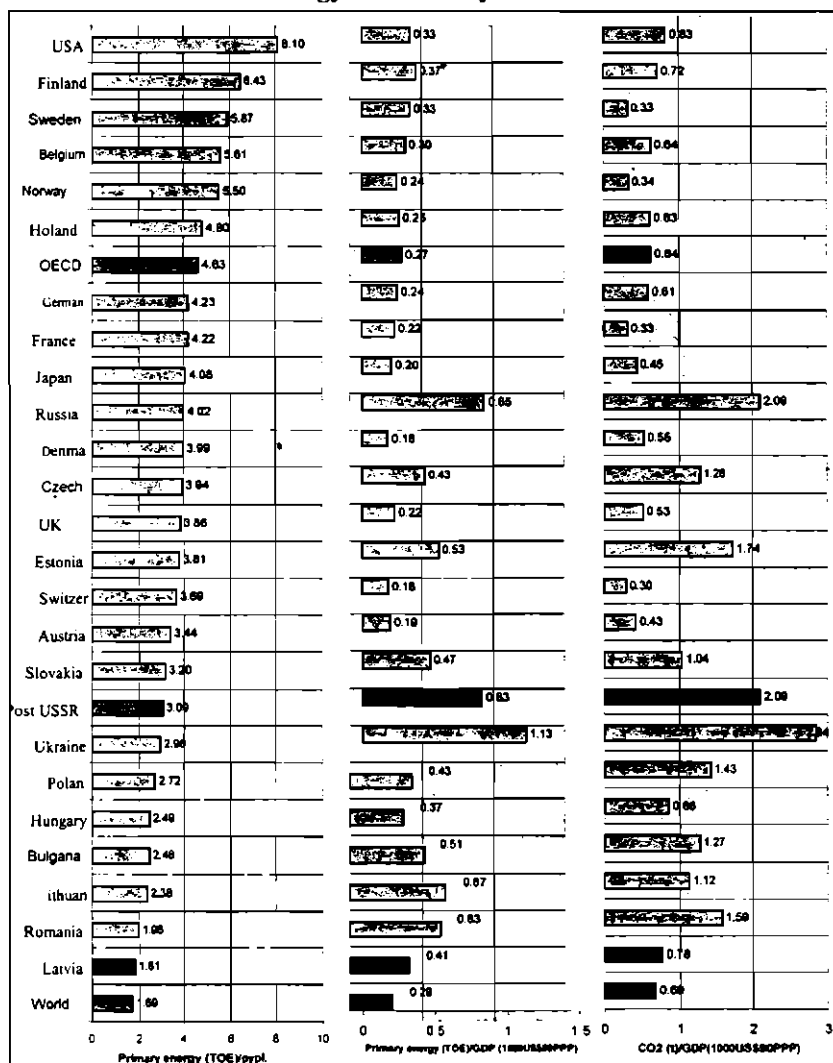
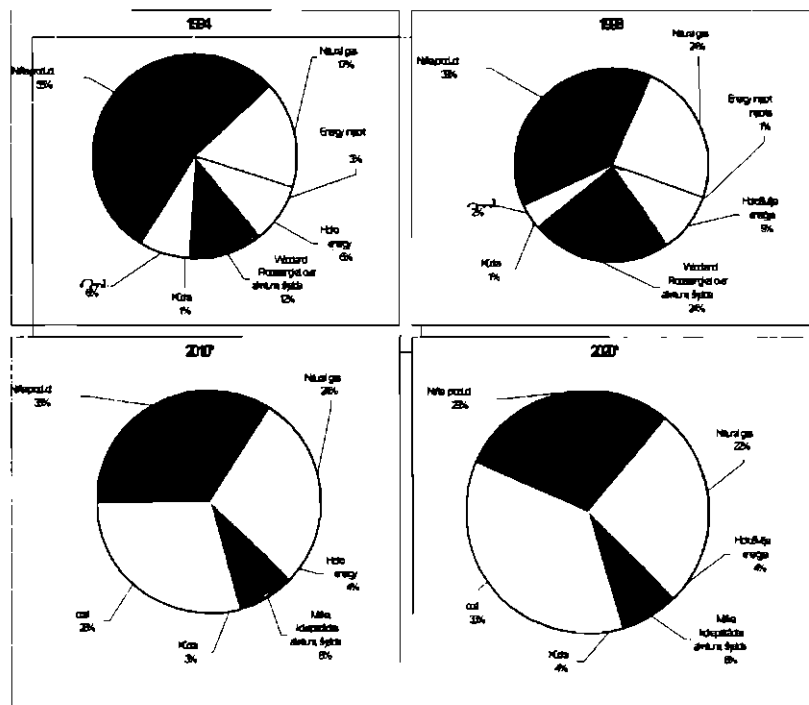


Table 5

Primary energy resource consumption about separate years



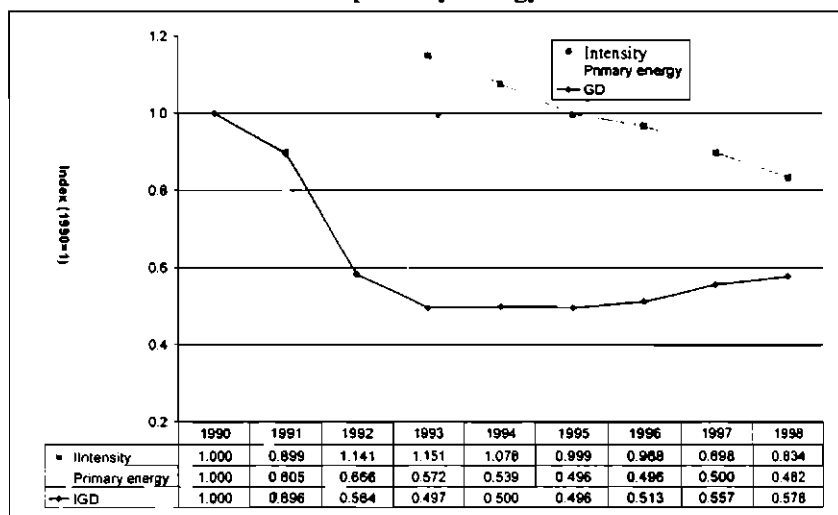
*Energy resource consumption in Latvia for 2000-2018. Data from Eurostat. National Accounts: Main Results and Explanatory Notes. Green Chapter. Eurostat, Page 188

Succession of the accurate minimum energy efficiency, for the indicator guarantee is asked by the European Union instructions—in refer of the central Heating system, household appliance energy consumption, heat insulator of the building, building and the enterprise's energy web. The fulfilment of this instruction is one of the preconditions, evaluating the Latvian compliance in the criterion admission in refer to ES on the legislation of energetic.

For the realization of energy affectivity event, as the main obstacle should be mentioned shortage of the credit resource, energy effectively norm and the delay of the standard planned rate of the output, as well as the shortage of the economical motivation for the realization of the energy affectivity event.

Table 6

GDP and primary energy index



As the grounding on the development plan of the national economy and the existing tendencies, in the near five years there is no prognosis of the noticeable increment of the energy consumption or the actual changes in the balance of the energy resources, the increment of the energy affectivity is one of the important sources, as how to decrease the pollution of the surrounding, in the time period, if the events for the security of the surrounding is not done, then is asked big finance source already.

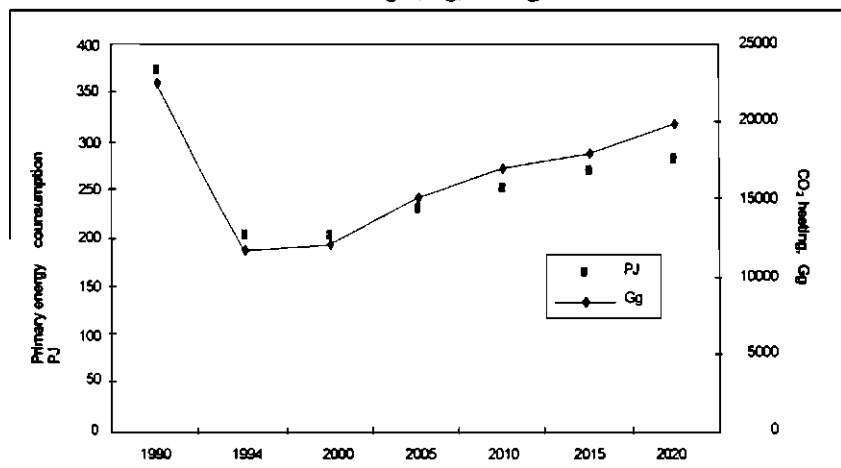
The ineffective usage of the energy resource leaves destructive opinion on the surrounding whose decline falls on the states, in the form of the extra economical weight age. This is showed by the separate enterprises observed the near effect of neutralization in the national level, how—the extra payment for the inhabitants' health rehabilitation, cleaning of water etc.

Latvia has also ratified UNO Convention About The Climate change, as well as has signed Kyoto protocol, undertaking contact, like green house effect on the gas emission in year 2008-2012 will not overcome 92% from the year 1990 level. The increment of the wide usage of the resource is main sources for the realization of the target.

In reference to the prognosis of the development of the National Economy, Latvia has no particular problems in the Kyoto contracts required target realization, because according to the optimistic prognosis in year 2010, CO₂ from energetic sources could be only approx.75-80% from the level of the year 1990 (Table 7).

Table 7

**Primary energy resource supplement (PJ)
and CO₂ heating (Gg) energetic sector**



Targets:

As already earlier mentioned, that energy efficiency is the usefulness of the usage of energies, which distributes in the end-product form and comparatively in quality with energy consumption/expenditure, and that the increment is one of the effectiveness form, as how to maximize restrict industrialization harmful influence on the surrounding, decreasing the energy system consumption on the side of the used energy system and loss of energy in the production, in transmission and in distribution. This gives the opportunity to lessen the green house effect indicated global climatic change, limiting emissions that are harmful on surrounding and on human health. Energy efficiency increment improves also the state's economical indicator, decreasing the fossil fuel import and promoting modernization in production and energy transmission.

The target of this strategy is to appoint the events total energy efficiency increment, so that in Latvia till year 2010 to achieve the primary energy consumption/expenditure decrement on the national co-product union for 25%.

Though the investment in the energy efficiency could give rapid economical effect, should be realized the actual opportunity in Latvian state's to change the priority from social to economical, directing the finance resource towards energy production or consumption sectors. Mainly, it is thought to use the administrative methods—in the price regulation of the social sector and adequate investment in the infrastructure enterprises.

It will be difficult to ascertain society about the requirement of the special new taxes energy efficiency financing. States' energy efficiency base is information of the society, corresponding normative introduction and economical motivation, supporting the increment of the self-paid energy efficiency.

In the completion of the work, I'd like to pay attention to the questions of the tax politics, it would be required to accomplish with the taxes help, small and average energetic enterprises work, which is directed on the increment of the energy efficiency.

Summarizing, it can be said that the Latvian national economy actually has such type of problems, like unemployment problems, low inhabitants income level, which influences the demand after the energetically branch services. Although the investment in the increment of the energy efficiency give rapid economical effect, however with the energy efficiency has not used all the opportunities of realizing the target, where its usage would reach powerful economical push, which is explainable by the role of the social priority. As problems can be considered, that there are insufficient of the institutes and mechanisms, which wish to share energetically branch's project risk. In Latvia for the realization of the energetic projects are not use such types of finance instruments like obligation's promissory note taking into consideration future national economy development opportunities and the present tendency can forecast about 1%, which is a low level. But the natural economy's development rate and communication is taken in consideration. In the near future the national economy growing can be considered problematic because of the lot of decisions that are required for Latvian national economy and it will be subordinated primarily by the EU demands.

The following suggestions are offered: accomplishment in the energetic branches, development of concurrences, at the same time in the energetic cycle stage, where it is possible to achieve the development, which is one of the energy efficiency in the possible variation, in the state's accomplishment of the energy efficiency, in the following state's payments balance and in the following account conditions improvement on the energy resources imports decrement bill. At the same time enterprise increment and the production concurrency, achieving with the tax assistance small and average energetic enterprise work, which is directed towards energy efficiency. It is required an energy efficiency co-ordination, and also there should be paid a careful attention to the regions with unemployment problems where the situation is below an average standard.

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PRIVATISATION PROCESS IN LITHUANIA: THE PROCESS AND THE CONSEQUENCES

Динамический рост частного сектора в Литве является одним из самых важных процессов, имеющих большое влияние на развитие страны в течении нескольких последних лет. Цель данной статьи состоит в раскрытии особенностей, применения и проблем процесса приватизации в Литве.

Данное исследование охватывает анализ развития, темпов и методов приватизации в Литве в сравнении с другими странами и определение основных проблем вместе с обсуждением причин искажений результатов приватизации в сравнении с целями. Анализируются специфические условия и правовая среда процесса приватизации в Литве и раскрываются возможности, связанные с использованием разных методов приватизации.

Представляются результаты моделирования влияния процесса приватизации на изменения в разных сферах жизни государства и общества в краткосрочном, среднесрочном и долгосрочном периодах.

The dynamic growth of private sector in Lithuania is one of the most important processes that influenced the development of the country in recent years. The aim of this article is to disclose the peculiarities, application and problems of privatisation process in Lithuania carried out from the standpoint of the state.

The study includes investigation of privatisation development and speed in Lithuania and other countries and ascertainment of the main privatisation problems together with theoretical decisions implementation in privatisation process. The specific conditions and the legal environment of privatisation process in Lithuania is analysed and realisation of opportunities of different privatisation methods are defined.

Finally, the results of modelling the influence of privatisation in different stages of systematic changes in the country are presented.

Introduction

The term “privatisation” embraces a wide range of meanings. This is why R.Ruozi and L.Anderloni (1998) defines the privatisation as “an umbrella term for many different policies loosely inked by the way in which they are taken to mean a strengthening of the market at the expenses of the state” Apart from the traditional meaning of the sell-off of state companies, a number of differing definitions have been put forward for this term, such as: the change to a new legal status that governed by private law; the offer to the private sector of certain state activities or state functions; the change to private and profit-oriented way of management; the levelling the playing field for state and private companies; the promotion of a competitive environment; the unilateral reduction in state services based on their nature and importance; the internationalisation of state company activities and others. All these definitions are close by related with the main objectives of privatisation. Almost all of those definitions could be used to characterise the privatisation in Lithuania, but of course, in the short-term period fast sale of the state property and creation of the conditions for competition and market-oriented economy could be the most important.

Different countries follow different approaches choosing the ways for the implementation and realisation of privatisation process. Which of the ways was more efficient? Has Lithuania chosen the right way for privatisation? What are the results of it ? The aim of this investigation was to analyse and to disclose the peculiarities, application and problems of privatisation process in Lithuania. Special attention has been carried out to investigate the influence of privatisation process on the changes in different areas of public life and further development of the country.

The historical statistical data used for the analysis covered the period of 1991-2000 and represents the results of the privatisation process in Lithuania from the very beginning to the latest stage. The sources of the information were Lithuanian State Property Fund and Department of Statistics of Lithuania.

Objectives and Methods of Privatisation: Theoretical Concepts

Privatisation may be carried out to meet various objectives. These objectives may not always be consistent and thus cannot all be pursued at the same time. This mix of objectives often leads the relevant authorities to take precise steps that will influence the technical methods used to bring about the process.

In general terms, **five different categories of objectives** are put forward (OECD, 1996): systemic, macroeconomic, industry (micro-economic), political and social.

The *first category* of objectives **the systemic objectives** particularly concern the economies experimenting transition. The change from a centralised economy to a market economy may be pursued by carrying out a privatisation programme, in certain cases even a massive privatisation programme. The sale of state companies represents a fundamental step forward to the achievement of competition between companies, to promote a better understanding and attitude towards risks, to drive for production and managerial innovations and, finally, to enhance the development of the new management class voted to production efficiency. Privatisation does not represent the only way to reach the aspired results; it is however one of the mandatory paths to reaching the systemic changes.

The *second category* of objectives, i.e. the **macroeconomic** ones, are common to all the privatisation processes carried out, both in transition economies and in the industrialised countries. The main reasons are to adjust the public accounts, to reduce the public debt and to balance foreign trade. The goal to improve state finances has been a goal of almost all the privatisation policies set by the governments. However, in the mid/long term it seems that this goal has not met. In general terms, this goal can be reached only if the expected net present value of the privatised company exceeds the expected present value of the state company (R.Ruozi, L.Anderloni, 1998). So, the privatisation in itself does not help to reduce the public debt. In fact if the reduction in the stock of public debt stock is due to a reduction in the stock of public assets, that implies no change in the dynamics of the state debt in relation to the structure of the wealth of nation, that is, in relation to the ability to bear the public debt.

The *third category* of objectives focusses on the industry level, more generally on microeconomic impacts, determined by the sale of the state company. These objectives apparently have fewer impact on the whole economy and welfare than the others, though of no less importance. The **microeconomic** impacts of the sale policy may be more localised but they are just as important for the welfare. This is why politicians always mention them when presenting their privatisation programmes. Among the most important microeconomic reasons very often authors (Tanzi, Schuknecht (2000), Mygind (1999), others) mention, on the one hand, the improvement of efficiency and, on the other, the increase in the role of the market (for

countries whose economy is undergoing transition it may be called as genesis of the role of the market). Privatisation may improve production efficiency if the following conditions are met: industry are competitive; external "watchdogs" where required; private owners are able to apply better managerial systems than those used under state ownership. The third condition is close related with the agency problems, discussed in management theory, and bankruptcy risk. From the theoretical point of view the agency problems in the state company are no different to those in a private company. The problem of efficiency arises when due to conflicting objectives the use of resources is not optimal. Though similar in both state and private companies agency problems are more severe in state companies. Wide-base ownership characteristic of state companies cannot generate the necessary incentives to apply control. Also, often the number of controlling bodies that make up the owner-principal of the state companies can lead to complicated and contrasting objectives for the managers. And finally, usually the lack of market forces, such as the threat of a take-over or the risk of bankruptcy pit the less pressure on the managers to control the results, thus dragging them towards moral hazard. In term of microeconomic objectives, many governments consider privatisation programmes a tool for the development of capital markets. The privatisation process helps the stock market to develop and to improve its allocable efficiency. As a consequence investors are more willing to place their capital in the companies. In this case the central theme is that the sale process can turn investors towards the stock market. When the government's objective is to improve the functioning of capital markets often the sale processes accompanied by other measures that are more directly aimed at this market, such as the change in regulations, the opening up of the markets to foreign investors, et. It is important to mention, that the lack of the developed financial market may be significant obstacle to achieving privatisation. The improvement in how the market works is a fundamental prerequisite rather than privatisation objective.

The *other objectives* for privatisation belong to the **political-ideological** area. Here the distinction between goals of the governments of countries with different economies is important. Of course, the political objectives of governments in transition economies would differ from the objectives of governments in market economies. It is clear how the privatisation process in the former planned economies countries is a mandatory step towards the creation of a market system based on private ownership. Privatisation represents the de-nationalisation and the return of assets to their old and rightful owners. The State's power in choosing corporate management is reduced if not

eliminated altogether. This reduces the State's power to control the economy. It is more difficult to grasp the political reasons that drive the privatisation process in countries with a market economy or mixed economy. The rethinking of the State's role in the economy, which is at the base of this process, may stem from very different conditions and situations. Each country has its own historical-contingent reasons that make the country unique and impossible to clone. The important and fundamental explanations for the entity of the privatisation process and the choice of the companies to be sold off are to be found in the most widely upheld political ideology in the country.

The *last category of objectives* regards the **social impacts**. It is important to underline once again the difference between the countries with transition economies and countries with market economies. In the first case the process of privatisation is related with the redistribution the wealth among the citizens and this usually occurs trough allocation of free shares of the company to be privatised. In the market economies the enlargement of the body of shareholders is consistent with the following intentions: strengthen demand of financial markets, reduce current state concentrations and lastly transform the concept of state ownership into private ownership or, in its wider sense, collective ownership.

In many countries, laws and regulations that define the privatisation programme also indicate **the methods** by which shares are transferred to the private sector. Often a range of choices is offered together with the following criteria for identifying the most appropriate: transparency, flexibility or the adaptability of the procedure to the characteristics and requirements of individual cases. Normally, large scale privatisation operations aimed at different target investors make joint use of different methods in order to satisfy a range of objectives. The methods of privatisation are defined along with the target investors – domestic or international, the timing of the operation and the degree of control (in the broad sense)that disposing state or public body wants to maintain. The main sales techniques (methods) used in the privatisation process are public offer with auction, public offer for subscription, private placement trough direct negotiations, et. But these methods of privatisation refer to countries traditionally with market economies. In contrast, in countries with transition economies other methods are adapted, like the distribution of vouchers offering the right to convert into shares in the privatised companies, or forms of worker participation and others. Brodman (1997) and some other authors indicated three main methods used in the countries with transition economies: privatisation for vouchers, MEBO (management and employees buy outs) and case-by-case

privatisation. The first two were defined as methods of mass privatisation and the last one represents privatisation for cash. The necessities and the shortcomings of the mentioned methods are presented in Table 1.

Table 1. The Necessities and the Shortcomings of the Different Methods of Privatisation

Method	Objectives				
	Enlargement of the efficiency of company's management	Speed and realisation	The best access to capital and experience	Enlargement of the revenues of State budget	Fair method
Case-by-case	+		+		
MEBO	-	+	-	-	-
Privatisation for vouchers					+

Countries of Central and Eastern Europe developed and implemented both mass and a case-by-case privatisation using the stages. Table 2 presents the case-by-case privatisation in different countries of Central and Eastern Europe. Some countries (Hungary, Estonia, Poland) in the first stage used privatisation for cash and selling of companies for employees and management, the others (Czech Rep., Latvia, Lithuania, Russia) started from privatisation for vouchers.

Table 2. Stages of Privatisation in Central and Eastern Europe

Country	% of GDP, created in private sector (1999)	Privatisation for cash	Privatisation for vouchers	MEBO
Czech Rep.	75	The second	The first	The first
Estonia	70	The first	The second	The first
Hungary	85	The first	-	The second
Latvia	65	The second	The first	The first
Lithuania	70	The second	The first	-
Poland	65	The first	-	The second
Russia	70	The second	The first	The first

Peculiarities of the Privatisation Process in Lithuania

In Lithuania the first stage of privatisation started in 1991 with the implementation of comprehensive LIPSP (Law on Initial Privatisation of State Property) program. The LIPSP program was to a high degree based on vouchers. That meant that residents got a strong role in the privatisation of not only the small, but also most of the medium and larger enterprises. Vouchers were exchanged for shares in state-owned enterprises. The largest enterprises including most utilities were only to a limited extent included in the LIPSP privatisation. In Lithuania 65 percent of the vouchers were used in enterprise privatisation. In Lithuania vouchers could only be used in the LIPSP program. Often majority shareholdings were bought mainly for vouchers. In the later stages of privatisation minority shareholdings were sold for cash. In this way Lithuania had an opposite way of using vouchers for majority/minority shares compared to the two other Baltic countries (Table 2).

Privatisation in Lithuania was a combination of a political and economic process. On political grounds, there was little criticism of the concept of handing out for free state property in the form of vouchers. But when the privatisation process was underway, substantial procedural problems began to show. The method of using voucher-based rather than cash-based system has been strongly criticised for having provided the way for criminal groups and for being economically inefficient. Huge shareholdings ended up under the control of voucher funds that, looking for the short-term gain, started to asset strip many companies. Despite the government's and industry's desperate need for investment funding, only a little cash was raised. But the voucher-based first stage of privatisation allowed to implement a fast sale of state property, particularly small and medium size enterprises. The results and dynamics of privatisation process in Lithuania are presented in the Table 3.

Table 3. The Dynamics of Privatisation Process in Lithuania

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Number of privatised enterprises	846	2224	1257	1071	566	47	272	345	242	313
Capital privatised, mill. Lt	121	1047	1238	821	451	3	81	2329	470	540

With the implementation of LIPSP-program, Lithuania had a peak of privatisation already in 1993. Larger enterprises were privatised by 1994. Note, however, that in most companies some shares remained state owned, and especially in some large companies only around 10% of the shares were privatised, so in total only around 50% of the capital were privatised in the involved companies. The process of privatisation of the largest enterprises in utilities and infrastructure in Lithuania has been relatively slow. This has also been the case for the sale of residual state shareholdings in companies already included in the LIPSP privatisation. So, while being quite fast in the first round Lithuania is the slowest in the last round of privatisation (in comparing with Estonia and Latvia).

Privatisation Programme for Lithuania prepared by the Government included period from 1997 to 2000. The privatisation of energy, communications, transport and other large enterprises was included in this program. The list of major enterprises for sale included Lithuanian Telecom, Lithuanian Oil, Lithuanian Airlines and others. The second stage of privatisation began in 1996. Because only few of the sales was for vouchers, the second stage could be referred to as "privatisation for cash" In the second stage of privatisation in many cases strategic investors had the priority by the government over other buyers. The widespread view is that a strategic investor will bring capital, technology and know-how into the country, as well as restructuring and holding the enterprises purchased over many decades (Kim, 1998). In addition, it is unlikely that any fund manager would be willing to offer a higher price than a strategic investor, given the relative lack of development of the Lithuanian equity market. Some changes in the legislation concerning the privatisation were implemented in Lithuania in the period of ongoing second stage of privatisation. The State Property Fund Law determined one entity responsible for privatisation in Lithuania: the State Property Fund. SPF is considered to be a far less bureaucratic and far more efficient. SPF is given the power to take over the ownership rights to government buildings, structures, shares and equipment. The SPF is mandated to represent the interests of the state in transferring the ownership of such property. These changes in legislation and management of the privatisation process may be evaluated as positive factor for the speeding the privatisation of largest enterprises of infrastructure.

The following methods of privatisation were used in Lithuania (according to the Law on the Privatisation of State and Municipal Property, which came into force in 1995):

Public subscription for shares. The price is determined by interaction of supply and demand. Shares can be sold on the National Stock Exchange of Lithuania, through a state brokerage company, or at a sale organised by the State Property Fund (SPF).

Public auction. Assets are sold to the bidder that has offered the highest price at a public auction.

Public tender. Assets are sold to the bidder that offers the best proposal in written tender, taking into account all the conditions of the business plan, including offer price, track record in the industry and commitment to develop the firm.

Sale by direct negotiations. If only one bidder takes part in an auction or tender, or if no other bidders meet the criteria set by privatisation plan, the assets may be sold by direct negotiations between the SPF and the bidder. "Mazeikiu nafta" oil refinery was sold in this manner to William Petroleum of the United States in 1999.

Lease with option to buy. A public tender can be held for bids to lease assets up to 25 years. The annual lease payment is determined by the privatisation agreement.

Table 4 indicates how the above mentioned methods of privatisation were used in the first stage of privatisation in Lithuania. More than 51 percent of objects privatised during this period was using public subscription of shares (more than 75 percent of total capital privatised) which was related with the voucher system. Selling for foreign currency consists only 0.8 percent of objects in this stage.

The methods of privatisation used in the second stage of privatisation in Lithuania are presented in Table 5. It is interesting to observe how virtually the structure of the used methods changed depending on the basis of comparisons: by the number of objects privatised the public auction was without doubt the main method (1920 enterprises of 2060 in total). But by both the nominal value of state property and especially by price of objects sold the main method was of course sale by direct negotiations, inspire of only 4 objects sold in this way. The largest company sold was Lithuanian Telecom in 1998. Amber Teleholding purchased 60 percent of the shares for 510 mill. USD in cash.

Table 4. Methods of Privatisation Used in Lithuania
in the First Stage (1991-1995)

Method	Number of objects	% of total number of objects	Capital privatised, mill. Lt	% of total capital privatised
Public subscription of shares	2928	51.23	2629.4	75.60
Public auction	2726	47.70	80.0	2.30
Public tender	12	0.21	486.9	14.00
Selling for foreign currency	48	0.84	27.8	0.80
State property sold in privatised companies	1	0.02	253.9	7.30
Total	5715	100.00	3478.0	100.00

Table 5. Methods of Privatisation Used in Lithuania in the Second Stage (1996-2000)

Method	Number of objects	% of total number of objects	Nominal value of state property, mill.Lt	% of total nominal value of state property	Price of objects sold, mill.Lt	% of total price of objects sold
Public auction	1920	93.20	311.81	15.87	320.54	8.32
Public subscription for shares	52	2.52	230.49	11.73	660.06	17.14
Public tenders	56	2.72	752.65	38.31	465.57	12.09
Sale by direct negotiations	4	0.19	618.15	31.46	2356.43	61.20
Lease with the option to buy	18	0.87	7.11	0.36	4.62	0.12
Sale of shares for employees of the company	2	0.10	40.46	2.06	40.63	1.06
Other methods included in Law	8	0.40	4.12	0.21	2.56	0.07
Total	2060	100.00	1964.79	100.00	3850.41	100.00

Some additional remarks related with the privatisation process in Lithuania could be done.

In Lithuania around 3-400 investment funds were started in relation to the LIPSP program. Most of them were used as leverage for a group of residents to take control with their companies, but only a few developed to investment funds representing a high number of investors and diversified portfolio in a large number of companies. However, when the regulation of such funds was tightened in 1997 most of the investment funds were dissolved.

Foreign investors played only a minor role in the privatisation of small enterprises. For Lithuania foreigners had a very weak position in the LIPSP-privatisation. Only 4 enterprises out of 46 were taken by foreign investors in the privatisation for hard currency up to 1995. After LIPSP followed the period of stagnation and not before 1998 did foreign capital start to play an important role in privatisation in Lithuania. However, just the single foreign investment in Lithuanian Telecom of more than 2 billion. Lt implies that privatisation revenue makes up a very big part of total foreign direct investment stock in Lithuania.

The methods of privatisation have had a great impact on the ownership structure in Lithuania, as well as in the other countries. However, privatisation can only be considered to be the initial stage of developing the ownership and corporate governance system. Especially in the cases where special groups have been given specific advantages to acquire the assets, it can be expected that they have not got the preferred portfolio-combination through the privatisation process. Many new owners were interested in selling their shares and some other groups might want take-over. Quite intense trading in the period after privatisation is expected. However, in the transitional economies the system for trading shares- the market for ownership- is not highly developed and lack of transparency, uncertainty about registration and implementation of ownership rights might be important barrier for the post-privatisation dynamics (Mygind, 1999).

The National Stock Exchange of Lithuania (NSEL) was established already in 1993. The early start is closely connected to the high speed of privatisation in the early years of transition in Lithuania. Many of the enterprises involved in large privatisation were listed on the Lithuanian Stock Exchange, so the number of enterprises listed has been much higher than in the other Baltic countries. In the second stage of privatisation many of the minority state holdings were sold directly on the exchange. However, most of the companies have been relatively small compared to the listed companies, for example, in Estonia. Only a few companies were listed on the main list (Official List) in Lithuania. Even, including the more than 600 enterprises

listed in Lithuania, the capitalisation in relation to GDP was lower than in Estonia. The main problem in Lithuania, however, has been very thin trading, so the price set at exchange has not been a good indicator for the market value of the shares in most of the listed companies.

Evaluation of the Consequences of the Privatisation in Lithuania

The evaluation of the results of privatisation in Lithuania was based on the methodology, adapted from Waddel (1996). The consequences and the results of privatisation in the country were evaluated through the influence of privatisation in the different stages of systematic changes, such as: political influence, ideological influence, economical influence, social influence, institutional influence, legal influence, psychological influence, as well as the other influences. Each of the influences is characterised by specific indicators, but only economical influence has the quantitative indicators, majority of the others are qualitative. This is why it is quite difficult to receive the objective results of such evaluation. In addition, it is difficult to evaluate still ongoing process: privatisation in Lithuania isn't finished yet. So, for those reasons only the tendencies and anticipated results of privatisation, especially in long-term period, were presented. The results of evaluation for short-term period and mid-term period are based on the analyses of the tendencies and changes in the various fields of the state and society. Table 6 presents the structure and the results of such evaluation. Basic Economic Indicators are presented in Annex 1. On the bases of these indicators the influence of the privatisation on the economy was evaluated. Two of the indicators – percent of GDP in private sector and employment in private sector as percent of total employment are directly related with the privatisation process. As it is seen from the Annex 1, growth of the private sector during 1994-1999 (second stage of privatisation) was only for 10 percent (from 60 to 70), employment in private sector – from 61 to 68 percent in total employment. During this period there were the remarkable changes in some indicators: the GDP was growing sustainable until 1998 (the main reason for further negative changes was more external factors than internal – crises in Russia). Foreign direct investments were growing to. But some negative tendencies could be noticed to: the unemployment in the country was growing; growth in export was lower than in import and the foreign trade balance deficit reached quite a high level; public foreign debt increased from 1995 to 1999 by 3 times. On the bases of this analyses we can't make the conclusion that the Lithuanian economy was only positively influenced by privatisation process, especially in the second stage.

Table 6. Influence of Privatisation in Different Stages of Systematic Changes

Criteria of influence	Short-term period	Mid-term period	Long-term period
• Political influence			
Possibility to return the previous political and economical system	+/-	-	-
Development of democracy in the country	-/+	+/-	+
• Ideological influence			
- Recognition of private property	+/-	+	+
- Recognition of capitalism	+/-	-	+/-
• Economical influence			
Microeconomic efficiency	-	+/-	+
Macroeconomic efficiency	-	-	+
- Financial stability	-	-	nn.
Reorganisation of economy	-	+/-	+
Assurance of the conditions for competition	-	-/+	+
- Attraction of the investments	-	+/-	+
• Social influence			
- Probability of social conflicts	-/+	-	-
Variety of the forms of property	+	+	+
Level of unemployment	+/-	+	-/+
- Growth in wages	-	+/-	+
- Size of middle class in society	-	+/-	+
• Institutional influence			
- Private sector in economy	+	+	+
Mature system of corporate governance	-	-/+	+
Infrastructure of stock exchange	-/+	+/-	+
System of institutional investors	-/+	+/-	+
Role of state as effective owner	-	+/-	+
• Legal influence			
- Formal distribution of property rights	+	nn.	nn.
- Redistribution of property rights	-	+	nn.
- Protection of property rights	-	-/+	+
Quality of legislation	-	-/+	+
• Psychological influence			
Recognition of new stages of development and new stereotypes	-/+	+/-	+
• Ecological influence	-	-	+
• Criminal influence			
Corruption	+	+/-	-/+
- "Laundering of money" of shadow economy	+	+/-	-/+

"+" – heavy influence; "-" – no influence; "+/-" – higher possibility of existing influence; "-/+" – higher possibility of no influence; "nn." – not necessary: influence may be or may be not.

Annex 1. Basic Economic and Social Indicators in Lithuania

Indicators	1994	1995	1996	1997	1998	1999
Nominal GDP (mill. LT)	16.904	24.103	31.569	38.340	42.990	42.597
Growth of GDP (%)	(9.8)	3.3	4.7	7.3	5.1	(4.1)
% of GDP in private sector	60	65	68	70	70	70
Employment (thous.)	1.675	1.644	1.659	1.669	1.656	1.648
- in public sector as % of total	39	37	33	32	31	32
- in private sector as % of total	61	63	67	68	69	68
Unemployment (%)	3.8	6.1	7.1	5.9	6.4	8.0
Average Monthly Wage of Employees in Economy (Lt)	325	481	618	778	930	1.013
Inflation (%)	45.1	35.7	13.1	8.4	2.4	0.3
Exports (mill. Lt)	8.077	10.820	13.420	15.441	14.842	11.983
Imports (mill. Lt)	9.355	14.594	18.235	22.577	23.174	19.163
Foreign Trade Balance (mill. Lt)	(1.278)	(3.774)	(4.815)	(7.136)	(8.332)	(7.180)
Foreign Direct Investment (mill. USD)	-	1.406	2.801	4.163	6.501	8.252
Foreign Debt (mill. USD)	-	840	1.203	1.403	1.682	2.405

Source: Department of Statistics of Lithuania

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Summary

Different countries follow different approaches choosing the ways for the implementation and realisation of privatisation process. Privatisation may be carried out to meet various objectives. Five different categories of objectives are put forward: systemic, macroeconomic, industry (microeconomic), political and social. These objectives may not always be consistent and thus cannot all be pursued at the same time. This mix of objectives often leads the relevant authorities to take precise steps that will influence the methods used to bring about the process.

In the countries with transition economies three main methods of privatisation were used: privatisation for vouchers, MEBO and case-by-case privatisation. The first two were defined as methods of mass privatisation and the last one represents privatisation for cash. Countries of Central and Eastern Europe developed and implemented both mass and case-by-case privatisation using the stages.

Lithuania chose the opposite way of using vouchers for majority/minority shares compared to the two other Baltic countries: the first stage of privatisation was for vouchers and only the second one – for cash. The method of using voucher-based rather than cash-based system could be evaluated as being economically inefficient. But the voucher-based first stage of privatisation allowed to implement a fast sale of state property, particularly small and medium size enterprises.

The second stage of privatisation in Lithuania could be referred to as "privatisation for cash" In this stage in many cases foreign strategic investors had the priority by the government over other buyers. The widespread view was that a strategic investor will bring capital, technology and by the number of objects privatised the public auction was the main method during second stage. But by both the nominal value

of state property and especially by price of objects sold the main method was the sale by direct negotiations.

The early start of National Stock Exchange of Lithuania (NSEL) was closely connected to the high speed of privatisation in Lithuania. Many of the enterprises involved in large privatisation were listed on the Lithuanian Stock Exchange. In the second stage of privatisation many of the minority state holdings were sold directly on the exchange. However, the main problem in Lithuania, has been very thin trading, so the price set at exchange has not been a good indicator for the market value of the shares in most of the listed companies.

The consequences and the results of privatisation in the country could be evaluated through the influence of privatisation in the different stages of systematic changes, such as: political ideological, economical, social, institutional, legal, psychological as well as the other influences. Each of the influences is characterised by specific indicators, but only economical influence has the quantitative indicators, majority of the others are qualitative. This is why it is quite difficult to receive the objective results of such evaluation. In addition, it is difficult to evaluate still ongoing process: privatisation in Lithuania isn't finished yet. On the bases of this analyses we can't go to the conclusion that the Lithuanian economy was only positively influenced by privatisation process, especially in the second stage.

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THE ROLE OF INVESTMENTS IN DEVELOPMENT OF THE SPECIALLY SUPPORTED REGIONS

Latvijas Republikas īpaši atbalstāmo reģionu attīstība kopš 1998. gada tiek veicināta ar Reģionālā fonda līdzekļiem, kurus veido valsts budžeta līdzekļi, ārvalstu dāvinājumi, juridisko un fizisko personu līdzekļi un citi ienākumi.

Referātā dots īpaši atbalstāmā reģiona statusa izmantošanas novērtējums, analizēts reālais ieguvums no projektiem, raksturotas reģiona ekonomiskās attīstības problēmas un izstrādāti ieteikumi uzņēmējdarbības veicināšanai un infrastruktūras attīstībai, kā arī finansu līdzekļi efektīvākai koordinēšanai.

Referātā pamatots īpaši atbalstāmā reģiona statusa nepārtrauktības princips un valsts atbalsta nepieciešamība šī reģiona izstrādāto attīstības programmu realizēšanā.

The political concept of regional development is the main document of the regional development in Latvia. The Cabinet of Ministers accepted the document on the 3rd of December 1996.

The country has set up the following objectives of the regional development policy:

- To provide the necessary circumstances for favourable and equal environmental, living and working conditions in all the regions of Latvia;
- To decrease and prevent unfavourable regional disproportion; to support the favourable differences of the regions;
- To promote sustainable and balanced development in Latvia and its regions; to co-ordinate economic activities with preserving and enhancing natural and cultural inheritance;
- To secure preconditions for Latvia's integration into EU and its processes of regional development.

The development objectives highlight the main goals of the regional development policy:

- To secure the regional overview in all the decisions, action programs and other documents concerning the development of the state or branch;
- To promote the self development processes of the townships, towns, districts and regional unions of the municipalities; to motivate the independence of the local economic and social processes;
- To support the united development strategy of the municipalities, regions and state; to ensure the continuous process of planning the necessary strategy;
- To promote the development of the necessary infrastructure within the state taking into account the regional differences;
- To secure the structural changes in national economy creating the supportive environment for entrepreneurship activities in all the regions of the state; to develop the many-sided structure of the national economy;
- To ensure the collaboration of the states located at the Baltic Sea, integration of the Baltic States and their development possibilities according the political and economic processes in Europe and regional development policy of EU.

At present the regional development policy is carried out with the state financial tools (ear marked subsidies for the development plans of the territory, State Investment program, etc.), by support of EU, PHARE, etc. The investments should mostly support the program, not separate projects. The national and regional programs should be based on the principle of regional development. It is connected with lessening the unfavourable regional differences between more or less developed regions and with preserving and developing the environmental and cultural peculiarities of every region. It is necessary to follow the EU standards and correct the social and economical differences between the regions of Latvia (for example, GDP equals 16 % in Latgale, but it is 37% of the average GDP of EU), between Latvia and EU member countries. It is important to increase the investments that promote the regional development. The regional development investments will be devoted to the important regional projects that will be connected with development programs of macro regions, their

strategies, plans and development priorities. The investments will solve the prior sustainable development programs of every region.

The regional investment strategy will be carried out in co-operation with "National Program of Regional Development" that will unite the existing planning process in the state, national, regional (NUTS III, in future NUTS II) and self-government levels.

The working group of the Ministry of Economics worked out the promoting project of the regional development. The Cabinet of Ministers accepted the project on the 3rd of December. It had happened together with working out the Conception of Regional Development. The promoting project helped to solve the economic problems of the specially supported regions. The project covered the following most important problems:

- Identifying the specially supported regions according the certain criteria;
- Identification of economic tools that develop the particular regions and provide favourable conditions for the entrepreneurship activities;
- Developing the legislative acts or their amendments that promote the development of the specially supported regions.

There were the following economic tools in the project:

- A special crediting policy;
- Tax allowances;
- Investments in the infrastructure;
- Involvement of the state and self-governments (municipalities) in the statute capital;
- Free and special economic zones.

The state had to work out the regional policy of economic development, a legislative basis and financial mechanism that could promote the development of entrepreneurship activities and competitiveness ability in the economically undeveloped regions.

The state should provide the financial help for the projects that create the new working places and improve the people's living conditions therefore there was founded the Regional Fund in 1997.

Now the Regional Fund is based on the state budget. Anyway, it can attract the legal and physical persons' purpose payments and donations, credits of the international institutions and other income sources.

The Fund can be used as the contribution in the statute capital of the enterprise, payment of the credit interests, investment in the local development funds of the region and ensuring the funds' operation. In some cases the Fund finances the development of the region's infrastructure and entrepreneurship activities of the municipalities. The Fund is administered by the non-government organisation state enterprise with limited liabilities (SELL) "Development of the Regions". Its purpose is connected with carrying out the tasks of the Regional Fund. SELL attracts the resources, uses and controls them, collaborates with the local development funds of the specially supported regions.

The self-governments (municipalities) have an important role in the managerial structure of the program. The municipalities with effective social and economic development plans could receive the status of the specially supported region. The local municipality is the first institution that informs the businessmen about the possibilities of the Regional Fund. It analyses if the project application answers the necessary priorities. The implementation of the program allows the municipalities to carry out the functions that promote the entrepreneurship activities in the municipalities. The municipality receives the businessman's reports about the project activities twice a year. The municipalities can estimate the efficiency of the project that has been supported also by the Regional Fund.

There was founded the Consulting Committee of the Regional Fund that evaluates the project applications of the specially supported regions.

The Cabinet regulations intend to develop also the councils of the local development funds and specially supported regions. The funds will guarantee more flexible and effective state support in the beneficiary regions. It is supposed that the local funds will promote the entrepreneurship activities not only in the small and medium enterprises, but also the activities that develop the infrastructure of the region. The councils manage and co-ordinate the development issues of the specially supported regions.

Three years have passed since the identification of the specially supported regions. Many regions have successfully used that status: they have handed in the projects, started project implementation activities that include innovative ideas, production extension and creating the new working places that will help the population to get new income sources.

The Regional Fund has invested about 1.3 million LVL during the last 3 years. Of course, this amount cannot completely change the economic situation in the specially supported regions. Anyway, there appeared a

belief that it is possible to get the state support in solving the problems connected with employment, investments and GDP. In some regions the regional differences have not declined. However, these differences would be bigger without the support of the Regional Fund.

In 2000 there was the identification of the possible new specially supported regions. There were the following territories included in this list: 5 districts (Balvi, Kraslava, Preili, Ludza, and Rezekne, without Veremi and Griskani townships), 20 towns and 118 townships.

The identification of the new specially supported regions was carried out taking into account the development index of the territory. The index was calculated using the most important figures (for example, unemployment level, income tax per one resident, demographic burden, changes of the permanent inhabitants' number, population density per 1 sq. km, etc) that describe the economic and social development of the territory. The district have 8 figures, townships: 6, towns: 4. The municipalities can be listed according the value of the index. This method allows determining the most and less economically and socially developed territories. After getting the status of the specially supported region the municipalities and businessmen start carrying out the program, write the project applications for attracting the financial resources of the Regional Fund. The projects are connected with creating 3452 new working places, i.e. 8 new working places in one project during the following 2-3 years. The Regional Fund has provided LVL 1351 per every new working place. The working places are more expensive in the projects of the farmsteads: 1576. The cost of the working places in different enterprises is LVL 962.

The municipalities of the specially supported regions have submitted more than 760 project applications from 85.5% municipalities located in these regions. The most active municipalities are situated in the district of Madona, Preili, Jēkabpils and Kraslava.

Unfortunately there were no project applications from the municipalities of the following districts: Ludza (Brigi, Goliseva, Lidumnieki, Merdzene, Miglinieki, Nuksa, Pilda, Rundeni, Salnava townships and Zilupe town); Rezekne (Cornaja, Feimani, Ilzeskalns, Vectilza and Viksna townships); Kraslava (Asune, Kraslava, Kepova townships); Daugavpils (Ambeli and Bikernieki townships); Preili (Varkava township); Ventspils (Targale township).

The greatest number of project applications (70 %) belongs to farmsteads. The municipalities have handed in 126 projects or 16 % of all

the projects that suppose to improve infrastructure and promote business activities (see Table 1).

Table 1

**Division of RF resources (according to the activities)
in the accepted projects**

	In all regions		According to economical criteria		According to EPRDM advise	
	Ths. lats	Number of projects	Ths. lats	Number of projects	Ths. lats	Number of projects
Farmsteads	2 540	294	2 210	250	331	44
Others kinds of economic management	1 627	82	1 409	60	218	22
Municipalities and their enterprises	497	45	275	22	222	23
All the projects	4 664	421	3893	332	771	89

The full or partial compensation of purpose credit interests is demanded very often. The Fund uses about $\frac{3}{4}$ of financial resources for the compensation needs. There are fewer applications that intend to develop infrastructure and promote business activities administered by the region municipalities. There are not so many projects about investment in the basic capital of the enterprise.

Until the end of 1999 there were 421 projects that were accepted by the Regional Fund (4.6 mill. LVL in total). The projects will be carried out during two or three years. Of course, there are some projects that need 5 and more years.

The average project contribution covers LVL 11,000. The main support is connected with full or partial repayment of credit interest rate (85 % from the Regional Fund). The second financing way (co-investment in the basic capital) appears only in one project. The third financing way is connected with partial compensation of capital investments in the municipality projects that are connected with developing the infrastructure and promoting the business activities: founding different information centres.

The regions that had got the status of specially supported regions because of different economic criteria submitted almost $\frac{4}{5}$ of the

accepted projects. More than $\frac{3}{4}$ of the projects were submitted by the farmsteads because this is the most popular way of economic management in these regions.

The farmsteads had submitted rather small projects: 8.6 thousand lats from the Regional Fund. About LVL 22,000 were devoted to different business activities.

About 56% of the farmsteads' projects were related to agriculture. Other projects were connected with services (26%), timber cutting and wood processing (10%), tourism (5%), industry (without wood processing 1.5%) and a very small part was devoted to other branches. The relationships between farmsteads and different other branches answer the strategy of specially supported regions: to develop different branches and promote the alternative development possibilities of the region.

About $\frac{1}{4}$ of the enterprises have made timber cutting and wood-processing projects. Other projects are devoted to services, industry and agriculture.

There are only a few projects about developing industry. The existing ones are connected with wood processing.

The Regional Fund activates the local businessmen and attracts the private capital. Each lat of the Regional Fund covers the project executor's 10 lats; it is even more than it was supposed to be at the beginning. The smallest part of co-financing was necessary in timber cutting and wood-processing projects. The greatest part of co-financing was necessary in the projects connected with developing infrastructure and business environment.

During the project the amount of the paid taxes to the budget more than twice exceeds the invested resources of the Regional Fund (2 mill. lats of taxes in comparison with 0.9 mill. invested lats).

The Regional Fund has worked a short time therefore it is difficult to estimate its efficiency. Anyway, it is possible to have some conclusions about attracted investments, promoted employment and GDP in the specially supported regions of Latgale (see Table 2). There are available macroeconomic figures in the appropriate regions.

The data of Table 2 reflect the greatest influence of the realised projects in Kraslava district, but the smallest one in Balvi district. In Kraslava district the number of the employed persons has increased for 2.3%, but in Balvi district for 0.6%; in Kraslava district the number of investments has increased for 69%; in Balvi district for 22%; in Kraslava district GDP has increased for 3.6%; in Balvi district for 0.7%. Rezekne

district has got the third place: the number of employed persons has increased for 0.9%; the amount of investments has increased for 37% (the second place among 5 districts of Latgale); GDP has increased for 1.3%. RF covers 1/5 of all the investments in the districts. It means that a great part of businessmen use the support of RF.

Table 2

Impact of the realised projects on employment, investments and GDP in the specially supported regions (changes in %: in comparison with the possible situation if there were no realised projects)

	Employment	Investments	GDP
Balvi district	0.6	22	0.7
Krāslava district	2.3	69	3.6
Ludza district	0.6	21	1.0
Preili district	1.2	30	1.7
Rēzekne district	0.9	37	1.3

It is possible to conclude that the smallest expenses for founding one working place (see Table 3) were in Kraslava and Rezekne districts. It means that these regions have used the resources of the Regional Fund (RF) more effectively than other 3 districts.

Table 3

Founding expenses for 1 working place (in lats)

	From RF resources	From all attracted resources
Balvi district	1 176	13 778
Krāslava district	640	10 384
Ludza district	743	17 812
Preili district	789	8 750
Rēzekne district	658	12 080
In 5 districts on average	738	11 395
In all the districts on average	710	8 935

In 2000 the RF signed about 300 agreements about using the RF resources for businessmen and municipality projects in the specially supported regions. The Fund has allocated 1.2 mill. LVL for their needs. The beneficiaries have invested for 30 mill. LVL themselves.

In 2000 there appeared 840 new permanent and 1000 seasonal working places. It was possible to preserve 1200 existing working places.

The state and municipality budgets received 3mill.LVL in taxes. The state has invested, e.g. one lat but received back much more.

Since 1998 the RF has received 2.75 mill. LVL. In 2001 the state will provide 0.8 mill. LVL for the fund. In total there are 500 agreements about the awarding the financial resources. Hundred new agreements will be signed in the nearest future. There were 180 unaccepted projects. There are more than 200 projects that cannot be supported because of the lack of financial resources. The assigned financial resources can cover only the existing projects. It is necessary to have 0.5 mill. lats for the new 200 projects.

There appeared 2000 new permanent and seasonal working places. It was possible to preserve about 3000 existing working places. The beneficiaries have invested about 50 mill. LVL. The amount of paid taxes equals 5 mill. LVL.

All the accepted projects follow the priorities determined by the development plans of the municipalities. The municipal staff and businessmen have mentioned the following advantages of the RF:

- The possibility to increase the amount of the investments;
- The new working places;
- The possibility to carry out the educational activities connected with adults' economic training and to improve the suitable environment for business activities;
- The gained experience while working out the business plans.

Since November of 2000 Preili and Kraslava districts and some more municipalities may not submit the projects because the districts have lost the status of the specially supported region. The specialists of the District Councils tried to prolong the status but Riga authorities did not support them.

The accepted budget of 2001 provides only LVL 500,000 for the needs of the specially supported regions: it is only a part of the previous year. Already in 2000 the RF had received only 1 mill. LVL instead of the necessary 1.5 mill. LVL. This amount creates a disaster in the depressive regions because the beneficiaries will have problems with finishing the started projects.

However, the state should provide a long-term support for the development of entrepreneur strip activities and infrastructure in the specially supported regions.

In 1998 and 1999 the State Privatising Fund was the main income source of RF. During this time the RF did not get the financial resources from the state basic budget and other sources. Therefore in 1999 the RF had got only 60% of the planned financial resources.

The State Privatising Fund (SPF) supports the entrepreneurship activities, private sector and private enterprises. In 1994 there was founded the Privatising Agency. The Privatising Fund has got more than 96.7 mill. LVL until the end of 2000. The Fund has got almost 115 mill. LVL since founding the Privatising Agency in 1993. The greatest part of this money had to be transferred to the development of entrepreneur strip and private business activities.

However, there is different data about using the SPF resources. There is an empty line opposite the aisle "The State supported private business activities" in the table about usage the SPF resources. It means that the Fund has received 2.98 mill. LVL but has not spent any lat for supporting the private business activities.

During 7 years the Fund has awarded 16.7 mill. LVL (approx. 15% from its financial resources) to support the private business activities.

The amount of financial resources gained from privatisation is bigger than the amount of other attracted resources. At the end of the last year the Privatising Agency has attracted more than 209.78 mill. lats. The significant part of the money was transferred to the state basic budget therefore the SPF has not received the entire amount.

The data of the Ministry of Economics prove that the greatest part of the Fund is driven to the needs of the state basic budget, different projects and activities as well.

At present there are very many positive development trends. However, the program of the specially supported regions still should be improved in future:

- financing of the program should be persistent, sustainable and protected against the rapid government changes; the special law should guarantee the financial attachment to GDP;
- RF should support the entrepreneurship activities by repaying the credit interests. In future it is necessary to widen and variegate the direct and indirect support of the entrepreneurship activities: investment in the basic capital of the enterprise, grants for fixed assets (equipment), additional payment for creating the new working places, investments in the local funds of specially supported regions, etc;

- distribution process of the financial resources should be simplified; the Regional Development Agencies should have the full responsibility for project approval and control;
- the program of the specially supported regions proved that the state can support the small and medium enterprises. However, the Ministry of Economics should provide the sustainable support for the specially supported regions. It will help to flatten the social and economic differences in the regions of Latvia.
- It is important to find the necessary resources for continuing the RF activities. It will promote the revising of submitted projects in the following years.

If Latgale does not get the prolonged status of the specially supported region, if the RF does not get more financial resources, it can cause the following problems:

- 1) The businessmen will not be able to carry out the started projects and to submit the new ones (the businessmen are afraid of the high interest rate if the RF does not repay it). This will increase the unemployment rate in Latgale (at present it is still one of the highest in Latvia).
- 2) The living standards will worsen for a part of population. It will sharpen the social stress;
- 3) The university alumna will avoid returning back to the native region. There will be a lack of skilled specialists;
- 4) The businessmen will lose a belief in the state's promises about the support of the small and medium enterprises;
- 5) The infrastructure will worsen;
- 6) The society will ignore the problems about environmental protection, wastes management, air, land and water pollution;
- 7) Population will flow from the rural to the urban areas;
- 8) Several businessmen will not be able to stand up the tension. Usage of the alcohol will increase. Family stability will be endangered;
- 9) The people will loose a belief in Latvia.

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Summary

At present the regional development policy is being carried out with the state financial tools (ear marked subsidies for the development plans of the territory, State Investment program, etc), by support of EU, PHARE, etc. The investments should mostly support the program, not separate projects. The national and regional programs should be based on the principle of regional development. It is connected with lessening the unfavourable regional differences between more or less developed regions and with preserving and developing the environmental and cultural peculiarities of every region. It is necessary to follow the EU standards and correct the social and economical differences between the regions of Latvia (for example, GDP equals 16% in Latgale, but it is 37% of the average GDP of EU), between Latvia and EU member countries. It is important to increase the investments that promote the regional development.

Three years have passed since the identification of the specially supported regions. Many regions have successfully used that status: they have handed in the projects, started project implementation activities that include innovative ideas, production extension and creating the new working places that will help the population to get new income sources.

The Regional Fund has invested about 1.3 mill. LVL during the last 3 years. Of course, this amount cannot completely change the economic situation in the specially supported regions. Anyway, there appeared a belief that it is possible to get the state support in solving the problems connected with employment, investments and GDP. In some regions the regional differences have not declined. However, these differences would be bigger without the support of the Regional Fund.

The average project contribution covers LVL 11,000. The main support is connected with full or partial repayment of credit interest rate (85 % from the Regional Fund). The second financing way (co-investment in the basic capital) appears only in one project. The third financing way

is connected with partial compensation of capital investments in the municipality projects that are connected with developing the infrastructure and promoting the business activities: founding different information centres.

The Regional Fund activates the local businessmen and attracts the private capital. Each lat of the Regional Fund covers the project executor's 10 LVL; it is even more than it was supposed to be in the beginning. The smallest part of co-financing was necessary in timber cutting and wood-processing projects. The greatest part of co-financing was necessary in the projects connected with developing infrastructure and business environment.

During the project the amount of the paid taxes to the budget more than twice exceeds the invested resources of the Regional Fund (2mill.LVL of taxes in comparison with 0,9 mill. invested LVL).

There appeared 2000 new permanent and seasonal working places. It was possible to preserve about 3000 existing working places. The beneficiaries have invested about 5 mill. LVL. The amount of the paid taxes equals 5 mill. LVL.

All the accepted projects follow the priorities determined by the development plans of the municipalities. The municipal staff and businessmen have mentioned the following advantages of the RF:

- The possibility to increase the amount of the investments;
- The new working places;
- The possibility to carry out the educational activities connected with adults' economic training and to improve the suitable environment for business activities;
- The gained experience while working out the business plans.

At present there are very many positive development trends. However, the program of the specially supported regions still should be improved in future.

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CREATION AND DEVELOPMENT OF THE TWO-WAY SYSTEM OF THE HIGHER EDUCATION IN LITHUANIA

Система высшего образования является важнейшей частью развития обучения, науки, культуры и экономики в каждой стране. На это нацелена и миссия высшего образования – создавать, накапливать и распространять научные знания и ценности культуры, утверждать национальное своеобразие страны, развивать общество и личность. Общество отвечает за то, чтобы были созданы необходимые условия для осуществления этой миссии.

Высшие учебные заведения, в свою очередь, должны реагировать на меняющиеся потребности общества и приспособлять свою деятельность к интересам государства. Поэтому рациональная политика создания прогрессивной системы высшего образования должна сочетать в себе автономию высших учебных заведений с отчетностью перед обществом.

В Литве с 1 сентября 2000 года действует бинарная система высшего образования, сочетающая совместную деятельность университетов и колледжей. Надо признать, что с точки зрения организации и материального обеспечения этот процесс является достаточно сложным, требующим больших финансовых средств и времени.

В статье представлены те проблемы, с которыми сталкивается Литва, создавая интегрированное и тем самым разное обучение в университетах и колледжах.

The system of higher education is the most significant part of educational, scientific and cultural, social and economic development in every country. The mission of higher education – creation, accumulation and dissemination of scientific knowledge and of cultural values, strengthening of the national singularity of the country, raising individual and public awareness – is also directed towards achievement of this goal.

The society undertakes responsibility of creating indispensable conditions for this mission to be accomplished.

The institutions of higher education in their turn must respond to the changing needs of the society and adjust their activities to the state interests. This is why the rational policy for the modern higher education system development should find the balance between autonomy of the higher education institutions and accountability for the society.

From September 21st 2001, there is the two-way system of higher education institutions universities and colleges legitimated in Lithuania. Transition from the one-way to the two-way system conforms to the goals of European integration; it is essential for the countries' economy and society. However this process is fairly complex in organisational and material terms, it requires high-volume of time and financial investments.

The report will present the problems that arose in Lithuania while creating integrated and at the same time diversified university and non-university programmes of studies.

Introduction

Life-long education is one of the most important features in a developing modern society. The education acquired in early youth becomes only a precondition for joining professional activities. Continual education ensures both successful personal activities in the society and successful integration of the country into the European and World community under equal rights. Motivated needs to extend one's knowledge, the ability to evaluate one's knowledge and skills, to take responsibility for the education, and to avail oneself of all afforded possibilities by new informational and telecommunication technologies is becoming an urgent necessity for a member of a modern society in order to keep abreast of and not to lag behind of a rapidly developing society.

The participants of the system of higher education, scientists and politicians as well as businessmen have to co-operate all their knowledge, efforts and capital means in support of the strategy of perspective higher education development. The state has to take the responsibility and render actual priority to the development of science and education, provide every kind of assistance and encouragement and provide as favourable as possible conditions for higher schools to realise their potential in favour of the society. Financial investment for the education and science is the

most sensible life-long investment into the constantly developing economics and improving social structure of the country aiming at harmonious and educated society. This investment is constantly returned back to the state and the society.

1. Preconditions for the Development of the Two-Way Higher Education System in Lithuania

The main function of higher education schools is to prepare students for future work, to train their creative potential, critical thinking and skills for problem solution and professional communication. Utilitarian significance of science and education should not be overestimated. Materiality is far from the main purport of science. Education is significant for its creative spirit in the process of studies resulting in scientific research or art creation, which in their turn, mould an active and curious for knowledge personality as well as dynamic and impetuous society. Peaceful future, mutual understanding among nations and cultures and fruitful international integration depend on humanistic views that have to prevail at all levels of studies.

The necessity of various types of higher schools is determined by the variety of purposes of higher education. The system of university level and non-university level higher schools in Lithuania, i.e. the system of universities and colleges, is closely related to this necessity. Universities and colleges, though having many common features peculiar to higher schools, perform quite different missions.

The mission of universities is commonly based on the following regulations:

- to create conditions for all capable of acquiring higher education and professional qualification based on scientific research and conformed to the level of modern science and technology;
- to create conditions for further and long-life improvement of acquired education and professional qualification;
- to prepare scientists, to strengthen the influence of research and studies on the Lithuanian economy and culture, and to educate democratic and civic society;
- to educate the society open to education and culture, capable of efficient employment of all scientific achievements and competent in the market of high level technologies, products and services;
- to encourage positive regional and state development with the help of scientific, educational and cultural activities;

- ❑ to develop studies and scientific research aiming at humanitarian, informational and technological culture and necessary for the international co-operation of science and economy.

The mission of colleges would be as follows:

- ❑ to create conditions for all capable of acquiring higher education and professional education conforming to the level of needs of the Lithuanian economy and modern science and technology;
- ❑ to perform applied research necessary for the regional development and transactions of science and technology; to become regional centres of intellectual and educational activities;
- ❑ to create conditions for continual studies, to help economic structures organise the improvement of employer qualification, and to educate social resolution for life-long studies;
- ❑ to educate (together with universities and other educational institutions) the society open to education and culture and prepared to function under conditions of rapid technological changes.

The reform of the system of Lithuanian higher education has been from the very beginning a very complicated and contradictory. Alongside with evident positive changes there are phenomena that are to be improved in the process of introduction of higher school self-adjustment mechanism and state regulation. Having taken its first steps towards the reform, the system of Lithuanian higher education has faced a lot of problems inherited from the past. Moreover, not only academic, but also the problems of social system have emerged. The latter could be enumerated as follows:

- irrational, rather spontaneous development of higher education (hasty introduction of badly prepared education programmes, their groundless reduction into smaller units, the extension of study length, violation of the unity of research and studies, poor regulation of provided qualifications, etc.;
- poor academic competition, an important propeller of novelties, existing due to unmodified professional relations in the system of higher education;
- poor influence of social partners on the processes of higher education system;
- decreased social student security existing due to a newly introduced principle of rotation in some schools;
- irrational system of financing and support for scientific work and studies.

Objective and subjective reasons have determined this controversial and uneven course of the reform. One of the objective reasons to be mentioned is the scope and the complexity of the reform introduced. Moreover, the reform has been introduced under difficult political, social and economic conditions. The main subjective obstacle for the reform has been the major part of the academic society poorly prepared to accept the novelties of the so rapidly introduced reform.

The above mentioned objective and subjective reasons prevent us from suppositions that the reform has already been accomplished and has left no problems to be solved. The most important and the most difficult problem to be solved in the system of Lithuanian higher education could be defined as follows: having liberated itself from the clutches of the state and political-ideological control, this system has become more effective, however, its capacity is far from the satisfaction of actual society and State needs. This is determined by inefficient state regulation of higher education system, vague differentiation of self-government matters from the matters of state government, deficiency in effective interaction between state government and self-government.

The analysis of Lithuanian social, demographic and economic situation has revealed that in the process of specialist training the following social and economic factors should be taken into account: rapid restructuring of enterprises and growth of small and medium scale business, implantation of modern technologies (including informational technologies), growth of foreign capital investment and integration into international economic structures, tendencies of demographic and economic development, co-ordination of programs for regional development and local population employment. Dynamic economic changes in Lithuania require rapid training of new specialists of various qualifications to satisfy the needs of employers.

The reconstruction of enterprises and the growth of small and medium scale business predetermine the need from high qualification specialists' of deep theoretical knowledge, not to mention practical skills. At present the problem of employment of specialists with higher education lies mainly in the deficiency of practical skills but not theoretical knowledge.

On the other hand, under conditions of competition growth and increase of enterprise specialisation, small enterprises will find unprofitable to have specialists unable to create a product. For this purpose, a part of the functions of an enterprise will be handled over to

the exterior, i. e. the sector of services, that will provide services in the spheres of law, finance, tax, marketing, specialist selection, introduction of standards, creation and implantation of business plans, service on book-keeping, work security, planning, etc. This will stimulate the creation of specialised service enterprises. They will need specialists of a very high qualification and a very specific specialisation that can be trained and educated in colleges.

The estimation of Lithuanian situation and world-wide experience have allowed to formulate the following conditions that predetermine the reform of Lithuanian education system:

- The system of education in Lithuania has to be reformed according to the system of education in the countries of EU. The structure of financing to high schools has little difference from the analogous one in European countries.
- The part of NDP expenses for education in Lithuania is quite stable. The part of NDP allotted for every student (including all studying at ISCED 0/1/2/3/4/5/6/7 levels) is, however, unstable and has the tendency to decrease.
- The finance given to state high schools in Lithuania reach 1.1% of national budget, i.e. 5% of all education expenses. In 1998 there were 22· 623 students in high schools, thus the actual expenses totalled 90 118 thousand litas.
- According to the ratio of all students and teachers at all stages of teaching Lithuania lags behind from OECD countries. The ratio of high school students and teachers was 8.24 in 1998. The increase of this ratio is one of other important possibilities to improve the parameters of high schools in order to reform them into colleges.
- Great difference in factual budget expenses for one student a year among different schools is noteworthy. Even in schools of the same profile factual budget expenses for one student a year vary up to 50% and more. In this case the quantity of investment for one student is not a guarantee of quality. A 'cheaper' school may as well have a much higher rating than an 'expensive' school according to other indices.
- Evident general tendency in the sector of high schools is that the growth of the number of students in a school decreases annual expenses for one student and increases the ratio between students and teachers. This regularity is general for all high schools despite great difference in expenses allotted for separate programs of studies.

- In the process of reform of high schools into non-university higher schools, the structure of expenses as well as parts of special expenses and teacher salaries have to be modified as well.

2. Sector of Higher Non-University Education Abroad

Many acknowledge the necessity of non-university education sector in Lithuania; however, the ways of achieving this aim have constantly been under discussion. The analysis of experience in European and some major countries of the world which have or are developing the sector of non-university education has been performed in pursue to optimise the solutions and decrease the possibility of mistakes. According to the data of European Education Informational Net EURIDIKE in November 1998 only two out of 20 European Union and EFTA/EEA countries do not have the sector of non-university higher education. These countries are Sweden and Liechtenstein. The structure of educational systems, the variety of study trends, different terms have caused many problems for the analysis of the material collected, therefore, further analysis has been aimed at the countries similar to Lithuania in size and the ones which have different experience in originating the sector of non-university education. The countries that have been chosen are Czech Republic, Ireland, Belgium, Holland and Finland (see Figure 1).

Figure 1

The comparison of high non-university education in foreign countries

Indices	Countries				
	Belgium	The Netherlands	Finland	Ireland	Czech Republic
1. Legitimate regulation (general or separate law)	Separate	General	Separate (1993)	General	Separate
2. Number of colleges	29 (1997)	73 (1998)	32 (1998)	45 (1998)	15 (1992) 49 (1995) 167 (1996)
3. Number of students	98000 (1997)	270000 (1994)	66000 (1998)	22300 (92/93)	1035 (1992) 6223 (1995)
4. The ratio of university/non-university schools	8/29	13/73	20/32	5/45	27/49
5. The length of studies (in years)	4	4-5	3.5-4	1-5	3-4
6. The expenses of student preparation	215000 BF	45000 GULD	27000 FIN	not found	not found
7. The number of university students	61231 (1992)	152 000 (1992)	142818 (1992)	121 700 (1995)	136 600 (1995)

The goal of the analysis of the above mentioned countries has been to reveal the aims of higher non-university education institutions and find out how the reform is introduced and what is expected in the future.

The analysis of experience in the process of introducing the reforms in the sector of non-university higher education in the latter European countries allows drawing the following conclusions:

1. The sector of non-university higher education is characteristic for the majority of developed European countries.
2. The purpose of non-university higher education is to satisfy the needs of rapidly growing and changing economy for specialists with high qualification and to consolidate economic competitiveness in the country.
3. The introduction of the sector of non-university higher education affords the possibility for the broader strata of society to acquire higher education under the conditions of limited budget for education and constantly increasing number of people striving for higher education.
4. The introduction of the sector of non-university higher education makes the international recognition of specialist qualifications easier, facilitates the co-ordination of the study programs in different countries and increases the mobility of students and teachers.
5. Non-university higher schools allow creating a flexible and grounded on scientific knowledge study system that is orientated to moulding high professional skills. A very important sphere of such institutions is adult training and organisation of qualification refresher courses.
6. Enlarged schools allow creation of multi-branch educational institutions and rational employment of means allotted for education.
7. There have been no strict requirements concerning the number of teachers with scientific degree in the process of introduction of non-university higher schools. Thus, the requirement for teachers to have higher education, practical experience and qualification refreshment is emphasised. All teachers are required to acquire pedagogical education.
8. Non-university higher schools are recommended to implement applied research for the development of close connections with the world of business and perfection of the educational contents.

9. The introduction of non-university higher schools induces regional economic and social development and increases the prestige of schools.

2. The Purposes and Requirements for Colleges in Lithuania

A completely new sector of education is being introduced in Lithuania. The analysis of economical and social needs shows evident need of such a sector. This need becomes even more evident after the Lithuanian system of education is compared to the systems of education in other countries. The purposes of introducing colleges in Lithuania are the following:

1. To create conditions for all capable of acquiring higher education and professional qualification conforming to the needs of Lithuanian economy and the level of modern technology.
2. To approximate the system of Lithuanian higher education to the systems of higher education in other European countries and, in this way, to facilitate international recognition of our diplomas and degrees and seek for conformity of professional qualifications.
3. To create conditions for further more even development of Lithuanian regional economy and culture.
4. To create centres that perform applied research necessary for regional development, disseminate new technological knowledge and serve as centres of culture.
5. To create a sector of higher education that would be able and have to react effectively to the needs of rapidly changing economy and would prepare specialists capable of translating new technologies into reality.
6. To make higher education accessible for people of all the social layers and for people living in remote areas.
7. To create a more flexible and variable study system for people of various age groups, and to create more favourable conditions for realisation of life-long education concept in regions.
8. To satisfy an increased will in people to acquire higher education and to achieve this purpose by rational employment of budget means.

9. To reform the system of specialist training so that the level of education rendered by higher institutions correspond to the requirements of existing work places in the system of our economy.

In the process of introduction of colleges it is important to establish the most important indices of their activities, to provide the procedures of supervision and boundaries of independence. Further, proposals for the most important and most frequently discussed indices of college activities are presented.

The size of colleges. The experience of foreign countries and the analysis of financial activities in high schools have revealed the fact that only large colleges can ensure effective functioning and high quality of training. The restrictions to minimum number of students in non-state schools should be avoided as the founders themselves decide the questions of efficiency of their work. The role of state in such schools would cover only the control of study programmes quality of their realisation and appreciation of study results (conferment of qualification).

The length of studies. The existing international requirements for the recognition of higher education diplomas and degrees determine a sufficient length of high studies of three years. The latter length was prevalent at the beginning stage of introduction of higher non-university sector in many countries. At present a tendency to prolong studies up to four years has appeared. Lithuania is in search for compromise decision between two terms: the higher education requirements for better satisfaction of which the studies need to be prolonged and the possibilities of state to provide this sector with financial support which are rather limited. Apparently, the length of non-university higher studies will depend upon the specific features of every separate study trend and will fluctuate from 3 to 4 years.

Study programmes. The sector of colleges has to have a resilient connection with employment market and, in addition to the variety of programmes, to ensure constant renovation of their contents and addition of the newest technological data to them. The purposes of study programmes are no longer formulated as detailed description of knowledge rendered but rather as a detailed enumeration of qualifications provided. Therefore, the research of qualifications is necessary according to which the purposes of study programmes will be defined.

College study programmes, if compared to the programmes of high studies, will have to strengthen the teaching of fundamental subjects, allot enough of time for the humanitarian, social, natural, mathematical and computer science studies. It will be important not to reduce the time allotted for practical studies and to create more possibilities for the students to choose subjects according to their choice. These are very complicated tasks to achieve especially if we have in mind the length of studies that is rather limited. These contradictory requirements are only possible to be reconciled with the help of increased load of independent student work and integration of theoretical and practical modules.

Teachers. On the grounds of experience in other countries and recommendations of experts of European Commission it is possible to affirm that establishment of strict requirements for the number of teachers with scientific degrees is not purposeful. Such requirement would only burden the development of the sector of non-university higher education because the number of teachers capable of working in the sector of non-university education is not sufficient. Together with the development of colleges the requirements for teachers should be raised, at the same time, however, social questions and questions of payment should be discussed and possibilities to enter doctoral studies by correspondence for working teachers should be created.

In the process of introduction the requirement for the scientific degree should be established in the study programmes. This concerns theoretical subjects in the first place. Minimum requirement for the college teacher should be a Master degree.

Scientific research. Universities and colleges should have different requirements for carrying out the research. Colleges should necessarily have the right to carry out applied research, have the right to give consultations and earn their own money for this. Under existing economic conditions the most promising research for colleges would be to start various educational research, to create new study methodologies and to prepare study materials for students. Research methodology should be included into the study programmes. These would be project tasks, course papers and diploma projects.

Study base. The introduction of modern technologies will require specialists of corresponding qualifications. Consequently, a corresponding technique and technological base is necessary for training such specialists. It is very expensive to create such a base; thus, many educational institutions will not have enough capacity to do this. The

solution of the problem can only be found in close co-operation with future employers. The importance of library increases together with the increase of the load of independent student work. One of the most important requirements for colleges should be a well-supplied library, equipped with computers and INTERNET, and available for students at any convenient time.

International co-operation. Activity of colleges in international co-operation should be treated as a necessary condition of their introduction. It should include both the exchanges of teachers and students. This is an important factor for the improvement of training quality, and later, after the consolidation of schools, a source of complementary investment.

Guarantee of study quality. Every college should create such an internal system of quality guarantee that would warrant the realisation of study purposes. Together with the establishment of colleges, an external mechanism of quality guarantee should be created as well.

College net. Many local factors and the experience of Western countries should be taken into consideration in the process of college net planning. The following criteria for establishing a college net could be fixed (the fact that colleges are introduced on the basis of high schools is taken into account):

- **Regionalism:** (in this case region is considered to be a county) College should have a close relation with the economy of the region and should help to solve local problems.
- **Conformity with economical needs:** the qualification and number of specialists educated at colleges should satisfy the needs of Lithuanian economy including all the fields of activities.
- **Variety of fields:** a college has to prepare specialists for many fields of economy. From the point of view of study programmes this means that a narrow specialisation in colleges should be avoided and one college should provide programmes of several study fields.
- **Efficient employment of means:** the buildings of presently working high schools, technical base and existing intellectual potential should be employed in the process of college introduction.
- **Conformity with social needs:** colleges aim at making studies closer to the student living place in order to ensure the number of places at school directly proportional to the number of

inhabitants in the given region. Accordingly, the professions suggested at colleges should conform to the structure of work places in the given region.

- **Financial efficiency:** only large, having various forms of teaching colleges can work efficiently and ensure high quality of training.

A principal of equal possibilities should be taken into account in the process of college introduction: every high school has the right to seek for the status of college.

According to the criteria of regionalism and variety of fields every county should have a college. Therefore, Lithuania should have 10 colleges. Strategically it might be fair. However, in the first stage of college net creation we may face a lot of problems and difficulties. According to other criteria, there have been suggestions to refuse college introduction in the first stage in some counties and to introduce only partly specialised colleges in the rest counties.

3. The Procedures and Steps of College Introduction

The following procedures of college introduction in Lithuania can be distinguished:

A. Two main institutions co-ordinating the introduction of colleges have been formed in the first place:

1. *College Constituent Council.* This council considers all the questions connected to the introduction of colleges and gives recommendations to the Minister of Education and Science. This Council is functioning during the transitional period up to the introduction of colleges. The Council discusses prepared document projects, directs schools, claiming to become colleges, towards the way of purposeful work. The members of the Council are recommended by the Lithuanian Professional Training Council, which is formed on the principle of three parts: agreement of The Conference of Lithuanian Rectors, Association of High School Directors and Minister of Education and Science. After the transitional period is finished, the functions of this Council are taken over by the Council of Higher Education (the Law of Lithuanian Higher Education provides for such a Council).

2. *College Appreciation Service.* This service is functioning in the transitional period with the Centre of Professional Training Methods. The service organises the activities of experts who estimate schools claiming to become colleges and newly prepared programmes of non-university studies.

B. The Minister ratifies the plan of college development and general requirements for the programmes of non-university studies.

C. The Minister, having taken into account the conclusions of College Constituent Council, obligates schools to prepare the project of college introduction and the plan of realisation means for this project, and ratifies the personnel in work groups preparing the projects.

D. The schools claiming to become colleges prepare study programmes conforming to the general requirements of higher non-university study programmes.

E. The project of introduction plans and study programmes are estimated by the experts. The conclusions are presented for the College Constituent Council.

F. The Minister, having taken into account the recommendations of the College Constituent Council, presents the projects of college introduction for the Government to be ratified.

G. Having the plan of college introduction been ratified by the Government, the Minister ratifies the constituent college council, provisional statute of the college, provisional director and sets the conditions that have to be carried out up to the beginning of college work. The Minister also provides the need of state budget means for the activities of colleges.

H. Transitional period of 3 – 4 years is proclaimed. During this period all the schools claiming to become colleges are estimated; they are created a possibility to enter the experiment. Only those colleges that are included into the program of development can become newly created colleges. High schools prepared for the reform can be appended to the colleges already founded.

Prevision steps for college introduction:

1. **The introduction of first experimental colleges.** The first colleges were introduced in the year 2000. Selection procedures were carried out according to the Law of Higher Education (or its project regulations) and the experience of the reform programme of PHARE Higher Education. The possibilities of schools claiming to become colleges were considered in the first place.

2. **Transitional period.** During this period a net of colleges is formed. After taking into account the experience of introduction of the first colleges, the following steps are taken: a) standard regulation acts of college introduction and activities are proof-read; b) applications from schools to estimate the programmes of non-university studies prepared for creation of colleges or adjunction to already existing experimental colleges are accepted. The schools rejected are allowed to apply repeatedly in a year's time, however, not more than two times during a transitional period; c) only those colleges are introduced that are provided for creation in the Long-Term Plan of College Net Development; d) at the end of transitional period a decision on further employment of means allotted for high schools that failed to become colleges is accepted. The prognosis of the length of transitional period is from 3 to 5 years after the first experimental colleges are created. The status of a college acquired during the process of introduction has to be ratified during the period of accreditation.
3. **Accreditation of colleges.** Accreditation begins after the college has accomplished the programme of non-university higher studies and has prepared the first group of graduates not later than during the period of four years from the beginning of college existence. The accreditation of colleges is performed by the Institution of Study Quality Estimation authorised by the Government.

5. The Estimation Course of High Schools Having Claimed to Become Colleges in the Year 2000

The estimation of high schools having claimed to become colleges in the year 2000 took place in three stages:

In the I stage the analysis of data given in the questionnaires in 1998, applications and appendices was performed.

In the II stage the programmes of non-university studies were estimated.

In the III stage the external estimation of schools selected in the I and II stages was performed.

Estimation Council and Central Committee of Experts were formed for the estimation of schools, and *Estimation Service* was formed for the organisation of estimation.

The presentation and analysis of applications and data from schools. All high schools received the following package of documents in December 1999:

- 'Regulations of readiness to create colleges' and 'Regulations of programme preparation for non-university studies' ratified by the decree of the Minister of Lithuanian Higher Education and Science.
- The forms of a document describing the programme of non-university studies.
- The questionnaire 'Information about High School'
- Methodical recommendations for the work group that creates the standards of professional training.

All high schools could apply and claim to be selected and given the status of a college up to January 21, 2000. The data about the number of applications and their selection are given in Figure 2.

Figure 2

**The number of applications from high schools
and the results of their selection**

Types of schools	Number of applications	Number of refused applications	Reasons for refused applications
State schools	15	2	The number of students in the programme of high studies did not reach 800
Non-state schools	6	0	
Total	21	2	-

Some schools presented joint applications with the intention to create one college (see data in Figure 3).

Figure 3

Schools having presented an application to create one college

County	Names of high schools
Kaunas	Kaunas High School of Food Industry Kaunas High School of Technology
Utena	Utena High School of Medicine Utena High School of Business
Vilnius	Vilnius High School of Electronics Vilnius High School of Commerce

A work group was formed to estimate the data presented by schools. The achievements of high schools were estimated according to 11 criteria. Data about students, qualification of teachers, material bases, the system of study quality guarantee, the structure of management, participation of schools in international programmes, etc. Furthermore, the progress of schools after their estimation in 1998 was analysed. Quantitative indices were estimated by numerical data taken from accounts and the experts estimated qualitative indices. The Minister, having received recommendation prepared by the analysis group and approved by the Council, ratified a list of institutions to take part in the second stage (a list of 7 state high schools and 4 non-state schools was ratified). These schools were asked to present study programmes prepared according to the Regulations of Programme Preparation of Non-University Studies ratified by the Minister of Lithuanian Higher Education and Science up to February 11, 2000. One school refused to take part in further contest as it was afforded the status of a private university.

Estimation of study programmes. Schools claiming for the status of a college prepared study programmes according to the Regulations of Non-University Study Programmes ratified by the Minister of Lithuanian Higher Education and Science and according to the Recommendations of Professional Training Standards for Study Programme Preparation. 11 high schools (8 state schools and 3 non-state schools) presented 41 study programmes for the estimation.

2 reviewers of a corresponding field estimated every study programme: a university representative and a representative of social partners. The Central Expert Committee and Quality Evaluation Service examined their recommendations. The Central Expert Committee evaluated every study programme separately. A very important purpose of this estimation was to encourage schools, their branches and all teachers to understand Lithuanian needs and the purposes and tasks of schools connected to those needs, to help to reveal the drawbacks and merits and help it work better. Therefore, a preparation group of a study programme and representatives of administration of a corresponding school were invited to the meetings of the Central Expert Committee.

Having discussed 41 study programme, the Central Expert Committee recommended the following: to reject 1 study programme, to improve 18 study programmes according to the given suggestions and to improve 22 programmes according to the given suggestions by the reviewers and the Central Expert Committee.

External estimation of the institution. External estimation was performed in 8 state and 3 private schools claiming for the status of a college. The group of experts comprising 5 members visited these educational institutions. The estimators were chosen so that they comprise the representatives of a university and social partners. A group administrator, a representative from the Department of Study and Education Quality Estimation, helped the experts during the period of external estimation.

External estimation in the selected schools took place in March-April 2000. One visit of external estimation in a school lasted for two and a half days. A uniform procedure of estimation was applied to every visited school. During the visits the meetings with the authorities of schools, teachers, students, social partners, library workers, technical personnel and other workers were organised. The following questions were discussed: the purposes and tasks of educational institution, non-university study programmes, personnel, material and financial means, and the guarantee of study programmes. The visits were followed by the accounts of results of external estimation.

The expert groups, having visited 8 state and 3 non-state schools, came to the conclusion that all educational institutions have many things to be improved, however, these schools can organise non-university studies. The experts came to the following conclusions:

all prospective purposes and tasks in schools conform to the requirements of non-university higher school;

all study programmes prepared in schools have things to be reformed, however, if reformed, the study programmes would conform to the requirements of non-university study programmes;

non-state schools have competent teachers. The qualification of personnel in state schools is proper, however, efficient ways of improving it should be foreseen;

material and technical bases in schools is good and well-cared of; schools take care of the system of study programme guarantee.

The experts of external estimation presented every school with the recommendations of improvement of their activities. After the visits of external estimation, the meetings of Study Quality Estimation Council (consequently Council) were organised in schools claiming to become colleges. Council members decided to assent to the conclusions and

recommendations given by the expert groups for the organisation of non-university studies in the above-mentioned high schools.

Final estimation of study programmes. Final estimation of study programmes took place in May 2000 that was carried out by the Central Expert Committee and Quality Estimation Service. 38 study programmes, reformed according to the recommendations of experts, were presented for the estimation. The meeting of Central Expert Committee decided that they conform to the Preparation Regulations of Non-University Study Programmes. It was resolved to start non-university studies in 4 state and 3 private colleges.

Conclusions

1. History of Lithuanian high school development. In 1989-1991 the concept of high school was prepared. In 1991 the Law of Education was accepted and High Education was legitimated. In that year high schools were founded.

In 1991 only art type schools and special secondary schools within the jurisdiction of union (Klaipėda Nautical School and Vilnius Technical School of Railroad Transport) were not reformed. They were reformed and changed their status in 1992-1993.

The programmes of high studies are prepared for the graduates from secondary schools. The length of studies, most frequently, takes 3 years. The graduates acquire high education and professional qualification. The students who entered technical schools before their reorganisation were created conditions to graduate schools according the programmes of special secondary education.

Figure 4

The change of education institutions and the number of students in Lithuania

	1990	1991	1995	1999	2000
Technical schools	65s	11s	-	-	-
High schools	-	38s+1n	52s+15n	51s+18n	43s+14n
Colleges	-	-	-	-	4s+3n
Total number of students:	46000	37000	24000	38000	40000

s – state school

n – non-state school

2. The new Law of Higher Education is accepted and two-way system of higher education is legitimated in 2000. First colleges are founded in Lithuania. 2972 students entered the study programmes of non-university education in state colleges and 441 student in private colleges in 2000. 4330 students out of total 40000 students of high schools study in private educational institutions.

3. The perspective of Lithuanian high school development. In 2001 there were 20 applications from high schools (12 state and 8 non-state schools) asking for permission to establish colleges. After the estimation carried out by the Ministry only 16 schools (9 state and 7 private) take part in the procedure of establishment. According to the prognosis 3 new state colleges may be established in 2001. The rest state high school will join the already existing colleges.

Until 2003 all the possibilities for all high schools to reform into non-university studies will be estimated. State high schools, having failed to become colleges or their faculties will be reorganised into institutions of professional training and non-state schools will be deprived of the licence to function.

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Summary

Lithuanian education system, including higher education is compelled to reforms by the rapid changes in Lithuanian society, processes of European integration, market economy, creation of informational society, progress of science and technology. Higher education becomes universal, thus, there appears the need to have a flexible, the so-called two-way system of higher education, when, alongside with traditional university (academic) education, a non-university (oriented to the acquisition of a profession) higher education appears. This system in Lithuania is created on the grounds of experience of European countries. The two-way system of education has to make studies cheaper and create possibilities for the youth to seek for higher education. On the other hand, it is necessary to reform university higher education as well.

One of the most essential tasks in the reform of Lithuanian Higher Education is to create a clear and harmonious system of higher education institutions that allows, in addition to distinguishing higher education from the education of a lower level, such reforms in the system of higher education that, alongside with the sector of traditional university studies, the sector of non-university studies appears and creates the opportunity for more people to acquire a valuable higher education. The place of high education provided in Lithuania is not clear in the hierarchy of education levels in the international context. The two-way system of higher education – the system of colleges and universities – will have to solve these problems. It is necessary to avoid the danger that many presently existing Lithuanian high schools with no intellectual and material background may acquire the status of a college only on formal grounds. The creation of colleges is a progressive novelty that approximates the system of Lithuanian higher education to the Western models. In order to avoid the discredit of the idea it is important to give strict definitions of conditions for college creation and to determine high requirements for qualifications.

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PERSPECTIVES OF "VAR"-METHODOLOGY OF RISK-MANAGEMENT IN LATVIA FINANCIAL MARKET

Rakstā ir aplūkotas Bāzeles komitejas rekomendāciju ieviešanas iespējas pilnā apjomā Latvijas Bankas komercbanku kapitāla pietiekamības kontroles praksē, kuras ir pamatotas uz banku aktīvu tirgus risku iekšējiem modeļiem. Modeļu bāze ir VAR (Value-at-Risk) metodoloģija. Tiek analizēti tās vispārējo teorētisko nolikumu un Bāzeles standartos realizētās metodoloģijas versijas novērtējumi, kā arī tiek novērtēta Latvijas finansu tirgus īpatnību ietekme uz tās izmantošanas perspektīvām.

The introduction of *Basel Committee* recommendations in full volume in the practice of commercial banks' control by the Bank of Latvia concerning capital adequacy suggests the use of banks' internal models for the evaluation of market risks of financial assets on the base of "VAR"-conception.

At the same time both its general theoretical basis and the version that has been realized in international banking practice still remain the points for discussion.

Particularly the use of "VAR" hasn't provided investors with security against big losses on Russia financial market.

Therefore the analysis of the possibilities of the given approach considering a sufficient level of development of Latvia financial market is essential.

Thus one of the most important tasks of perfecting the management of Latvia financial system is the adaptation of modern risk-management methods to its conditions.

The leading conception of modern risk-management of the last ten years is "VAR"-conception, which is based on the evaluation of the maximal losses of an assets portfolio for a certain time horizon with a given probability.

"VAR" methodology for market risk management was worked out in the middle 90s. Market risk characterizes the uncertainty of money flows

under the influence of assets prices volatility, interest rates, currency rates or the changes of market liquidity.

For the first time the concept Value at Risk was used in the well-known *RiskMetrics* system, worked out by *J.P. Morgan Bank*. The theoretical bases of "VAR" are the standard error of normal distribution and *Optimal Portfolio Theory* of *G.Markovets*.

The methodology has found its application in the practice of commercial banks, corporations and investment funds. It has been officially recognized when adopted by regulating bank organizations – *Basel Committee on Banking Supervision (Bank for International Settlement (BIS))*.

Value at Risk is the evaluation of the amount of losses, which are connected with the maintenance of the position on a given time horizon, in a certain trust interval.

Historical statistics of the profitability of the assets of the portfolio is used for making a prognosis of volatility and correlation.

It is assumed, that the prices and the long-term profitability of financial instruments are normally distributed.

The risk of losses for a given level of probability is evaluated with the multiplication of standard deviation (σ) and quantil of normal distribution (t). So, for example, for 99% trust interval the value of t will make 2.326347, but for 95% trust interval – 1.65.

The consequences of such an approach are the underestimation of the real volatility of an asset on 1 day from 100 with a 99% probability and on 1 day from 20 with a 95% probability in case of the realization of the worse events scenario.

The conclusion is the necessity of "stress-testing" – the analysis of potential variants of losses of a portfolio, considering the changes in market trends of the past.

The main reasons of market "shocks" are the move of yield curve or the change of its form, national currency devaluation, a sharp change of derivatives' liquidity, change of market liquidity, the influence of shocks in mutually connected financial markets and other reasons.

The biggest part of profitability distributions has a high probability of deviations from its normal middle value, which demands a daily re-evaluation of volatility.

The historical database from one year to several years must be renewed periodically (for example, one time every 10 trade days, according to *BIS* standards).

When calculating *VAR*, both the parameters of each financial instrument from assets portfolio and the mutual correlation of their changes are taken into account.

There are significant differences in the versions of *VAR* realization, adopted in *RiskMetrics*, and in banks capital standards of *BIS*.

So, in *BIS* version a 99% probability level is used, but in *RiskMetrics* – a 95% probability; in *BIS* version it is forbidden to take into account the correlation between the groups of assets, which makes risk overestimated; a number of *BIS* adopted parameters remains discussable (the length of the historical selection, 10-days-long time horizon, the multiplier of capital and *VAR* evaluations and so on).

From the point of view of the criticizers of *BIS* version, the result can be a re-evaluation of market risks and, relatively, "re-capitalization" of banks.

The integration of Latvia financial system into the world financial system and a consequent introduction of *Basel standards* of commercial banks' capital by the Bank of Latvia make the evaluation of the possibilities of *VAR*-methodology when applying in Latvia conditions.

The analysis of the experience of the use of *VAR* in Russia financial market has shown an insufficient level of its efficiency in the conditions of transitional economy.

The main reasons were a much lower level of liquidity of the financial market, which doesn't enable its participants to react operatively to new information and to change position.

This drawback exists also in Latvia financial market. At the same time, there are significant differences: the stability of LVL rate, a bigger stability of banking system and a less depth of financial reactions to the world financial crisis.

International diversification of the investment portfolios of Latvia commercial banks widens the possibilities of position regulation and betters the perspectives of a successful use of *VAR* in market risks management.

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Summary

The integration of Latvia financial market into the unified world financial market and the rise of the portion of foreign assets in Latvia banks' portfolios make market risks management on the base of the leading risk-management conception – VAR methodology – actual.

VAR version, realized in Basel Standards of Bank Capital, is the most rigid one, for example, in comparison with the world widely used Risk-Metrics version, that stimulates banks' re-capitalization.

In developing markets the VAR use efficiency reduces due to the insufficient liquidity of the markets and a higher political and economic non-stability.

The insufficient liquidity of Latvia financial market is compensated, in a definite measure, with the stability of national currency and banking system, the lower dependence on world financial crisis and a wide international diversification of banks' investment portfolios.

These particularities of Latvia transition economy growth are the perspectives of a successful use of VAR.

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CREDIT UNION AS A TOOL FOR COMMUNITY FINANCING

Jebkura valsts ir ieinteresēta vienmērīgā visu reģionu attīstībā, bet vienmēr pastāv atšķirība starp pilsētām un laukiem. Latvijā šī atšķirība ir vēl lielāka, jo viena trešdaļa visu iedzīvotāju dzīvo Rīgā, kur arī dzīves līmenis ir daudz augstāks.

Par lauku attīstību ir daudz runāts, sevišķi par nepietiekošām subsīdijām un valsts atbalsta trūkumu. Savā referātā "Krājaizdevu sabiedrība kā lauku finansēšanas instruments" autore piedāvā lauku attīstības problēmu risinājumu, iesaistot iedzīvotājus pašu labklājības uzlabošanā.

Pastāvīga pieeja drošiem finansu resursiem, ko nodrošina krājaizdevu sabiedrība saviem biedriem, ir dzinējs vietējās sabiedrības attīstībai. Uzticība finansu kooperatīvam, kur paši biedri ir gan īpašnieki, gan klienti, ir ļoti liela. Tā nodrošina brīvo resursu, kas parasti paliek ārpus apgrozības, akumulēšanu. Rezultātā palielinās kreditēšanas resursi, vairāk cilvēku var aizņemties saviem mērķiem, proti, lauksaimniecībai, mežizstrādei, tirdzniecībai, kā arī lieliem pirkumiem, mācībām un ceļojumiem. Rezultātā viņi uzlabo savus dzīves apstākļus, attīsta savas spējas, kļūst par aktīviem savas sabiedrības dalībniekiem. Un tas jau ir svarīgs nosacījums pilsoniskās sabiedrības veidošanai valstī.

Since regaining its independence in 1991, Latvia has struggled to free itself from the state ownership and centralized support system to all sectors of national economy. It has resulted in establishment of relationships oriented towards free market economy, destruction of previous system and transition to a new economic model. Financial market was not an exception and can be described as the following:

- Financial system was oriented almost exclusively to serving large-scale entrepreneurs and state owned companies.
- At the same time commercial banks took deposits from anyone, including small depositors. The average citizen had great difficulty and quite often even no possibility in accessing personal, small business or agricultural credit services.

- At the same time general population had very little understanding about the basic mechanism of why and how the financial institution works.

All that had resulted in too optimistic forecasts for development and financial strengths of newly established institutions, population's unreasonable trust in institutions offering extremely high interest rates for deposits, but later fraud in financial market and plenty of malicious and inevitable bankruptcies. Individuals also have had very little or no role in determining or evaluating the services provided by the financial sector. As a result, there existed very little social, political and economic volunteer efforts in the financial arena that are so common in a democratic society. Only crisis in financial sector has raised some activity in general public.

One more weak side of this time should be mentioned inappropriate and conflicting legislation. Since 1991 hundreds of laws have been passed. Many of them have been amended for several times and even reworked completely. At the same time some of the laws were conflicting in-between themselves and with each other. This situation severely constrained progress towards development of enabling versus controlling legislation and protection of individuals was needed to ensure continued democratic reform.

Summarising this information, it becomes clear that one of the priorities of this time was to develop a system of commercial banks, able to provide loans for big business, deal with services of transit of capital and participate in greater investment projects. But this kind of financial and crediting system did not comply with the needs of small depositors. One of the solutions was to develop another type of financial institution that would be able to meet interests of natural persons with small income and possible deposits, thus really supporting the Latvian population to solve their personal financial matters. So, development of credit unions was considered as one of the most prospective possibilities to solve the problems mentioned above.

Credit unions are co-operative, democratic and self-financing institutions. They provide consumers and small producers and traders with competitively priced, market-driven savings and credit services by using internal financial resources (people's savings) which quite often are not utilized otherwise or are being invested into economies of other countries by attracting deposits through commercial banks and lending mobilized savings to the offshore companies.

Credit unions serve as models of private, member-owned, democratic institutions. Membership is voluntary and open to anyone within the common bond. Everyone participates in decision-making. This ensures membership control and sound performance over the long term. Credit unions operate at low cost, returning profit to their members after expenses and reserve requirements are met. They help to improve living standards by lending for household purchases, housing, health care, education for consumers and working capital improvement to small and micro entrepreneurs and farmers.

Rural development is one of the most actual problems in nowadays Latvia. Administrative division of the country causes it. There are 552 self-governments, which are 7 major cities, including Riga, 26 counties and 519 communities. Total population of the country is ~ 2.4 million people. 32% of them lives in Riga, 15% lives in other 6 major cities and 53% lives in countryside. This data shows, that 1/3 of the population lives in the capital and a half – in countryside. At the same time, Riga has higher level of life, while some rural regions are considered as depressed economic areas. If average unemployment rate in the country is ~ 8%, in some rural regions it is up to 18%. If average gross monthly wage, salary in Riga is ~ 260 USD, in some rural regions it starts from 80 USD [3]. Talking about living standards, disposable income of the top 10% of the most prosperous households is 8.6 times higher than that of the lowest 10%. Likewise, for the top 20% it is 4.7 times higher than for the lowest 20%. The majority of the poorest households live in the countryside and depressed economic areas [4, 7]. From this data becomes obvious, that a significant segment of the population still lives in rural areas and at below subsistence level. But at the same time, the main goals of each society are the following:

- Lower poverty rate,
- Better health and education,
- Social and environmental sustainability for present and future generation.

How to achieve these strategic goals show the following objectives of each country:

- Development of middle class;
- Support to small business;
- Empowering people with small incomes to participate in economical and social activities;
- Development of human resources;
- Building the climate for investments, new job opportunities.

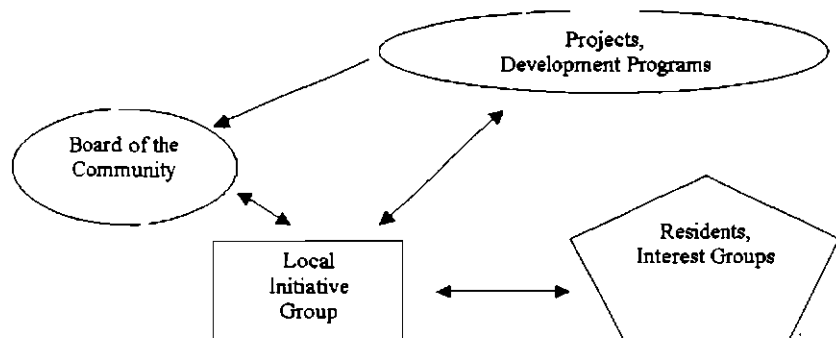
Of course, it is one of the government functions to struggle for welfare of the population, but usually there are no funds for these purposes. The better model is that government ensures favourable circumstances for development, but people are able and willing to use all the given opportunities. Credit union with its peculiarities is one of the tools how to achieve it.

Small incomes, lack of free funds, seasonal needs - are just few words to describe life in countryside. As a result, people are depressed and inactive, they are afraid of initiative and prefer not to undertake any liabilities, because they are not sure that they will be able to pay for them. But, in those areas, where credit unions are organized, these financial cooperatives help to overcome these psychological difficulties. How it is happen can be seen in the following functions of a credit union in rural regions:

- New opportunities access to small loans on easy and profitable terms;
- Entrepreneurship – one of the most popular purposes of loans is starting of a new business;
- Stability – constant access to financial services is a guarantee that member s can use them any time they need;
- Flexibility – members are both owners and clients of a credit union; so, they take all the decisions considering operation of their credit union themselves;
- Safety – members are dealing with their own money;
- Good tradition – it becomes normal for people to take loans, improve their business or household, to save money for definite purposes;
- Member education – credit union is a good school for credit union members; as elected bodies they study on practice financial management, loan administration, strategic planning; as members they learn how to save, plan their expenses;
- Communication, social activities – credit unions usually become a social centre of community; people like to come to a credit union, because they are also a part of this small society.

To start a credit union in community, first of all there should be a group of people, so-called Initiative Group, which will deal with development of licensing documents and become founders of the credit union. Role of Initiative Groups in community development is shown on the Scheme 1.

Role of Initiative Groups in Local Community [6, 8]



Today a lot of projects and development programs are announced, but because of lack of people, willing to undertake these activities, very often these funds are not used there, where they are necessary. Initiative Group usually consists of people with excellent leadership skills, who know very well both local society and community managers. These people have knowledge and skills to start a new project, which is necessary for community. These active people are the target group for implementation of new ideas. The same way rural credit union is organized and usually has great support from other members of community.

The best way how to prove the idea is to try it on practice. Fast development of credit unions in rural regions of Latvia is the best example that people have accepted idea of mutual co-operation, promoted by credit unions.

First savings and credit cooperatives appeared in Latvia at the end of the 19-th century. In 1939, there were 464 credit unions in Latvia with total membership of 205 000 people and 52.3 million Lats in shares and deposits. In 1940, credit unions have ceased their operation because of new requirements in legislation. The first credit union in independent Latvia was registered in 1995 and this date seems to be the day of rebirth of credit union movement in Latvia. This first credit union "Railroad CU" was organized by Trade Union of Latvian Railroad Employees and today is the biggest credit union in Latvia. Soon rural communities undertook this idea too. Step by step rural credit unions have proved that they are trust-worthy, profitable and are able to satisfy needs of people with small incomes [7].

Development of Latvian credit union movement in 1995-2000 can be seen in Table 1.

Table 1

Growth of Latvian credit union movement 1995-2000 [7]

(Data from Latvian Cooperative Credit Union Association's statistics reports)

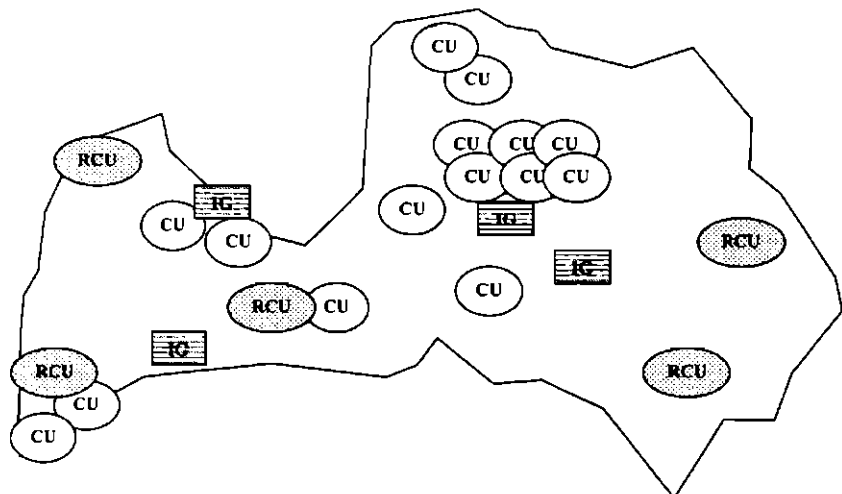
Indicator	31-Dec-95	31-Dec-96	31-Dec-97	31-Dec-98	31-Dec-99	31-Dec-00
Number of CUs	1	4	4	7	10	15
Members	283	1031	3088	5554	7894	9533
Assets (Ls)	33418	139961	328641	542525	680152	1026151
Shares (Ls)	7485	52775	77282	126367	155278	287534
Savings (Ls)	19345	58540	186875	315792	376300	555929
Loans (Ls)	25474	94596	298307	485556	569532	833502

In 2001, four more credit unions have received licenses for banking operations. In April 2001 total membership of Latvian CUs was 10086 people, total assets 1.9 million USD, total outstanding loans 1.4 million USD and total savings 1,1 million USD. Only 4 credit unions of 19 existing are operating in Riga. Railroad CU, which is registered in Riga, unites more than 8000 members, but only 48% of them lives in Riga. Scheme 2 shows availability of cooperative financial services all around the Latvia.

As it is shown on the Scheme 2, credit union services are available all around the country, but there is also big difference between the regions. Some kind of link can be mentioned between establishing of a credit union and total economical growth of the county. Credit unions have a fast growth in counties where people are more active and self-governments are more flexible. For example, Council of Cesis region has included credit unions in region development program and assists start-ups with a part of initial capital. As a result, during five years 6 credit unions have been organized and now one initiative group develops documents to receive a license. Support from self-government is very important for a credit union, because financial cooperative is not a kind of private organization, but a part of the local society. The common bond is defined by place of living (territory-based credit unions), place of work (enterprise-based credit union) or belonging to the same organization (trade union- or non-government organization- based credit unions). In rural region all the members live, work in the same community and access to safe financial services at the same place helps to satisfy their needs. Growth of credit unions in countryside is shown on Diagrams 1-3 [7].

Scheme 2

Cooperative Financial Services in Countryside [7]



		Number	Assets USD	Members
CU	Credit Unions in countryside	15	328 307	1248
IG	Initiative Groups in countryside	4	14 667	80
RCU	Railroad CU'members in countryside			4079

Diagram 1

Growth of membership In CUs outside Riga

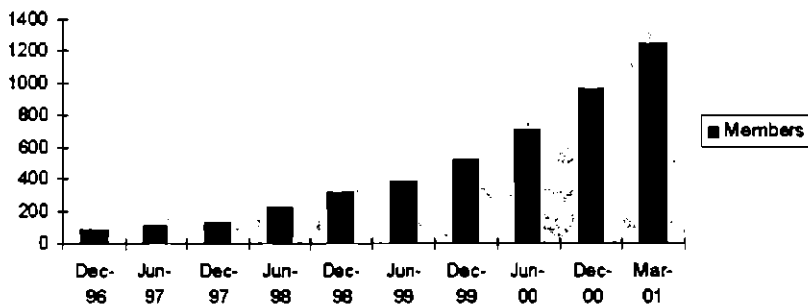
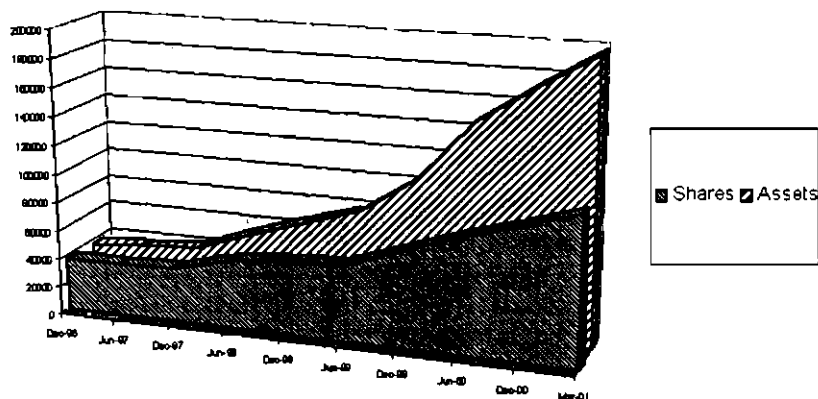


Diagram 2

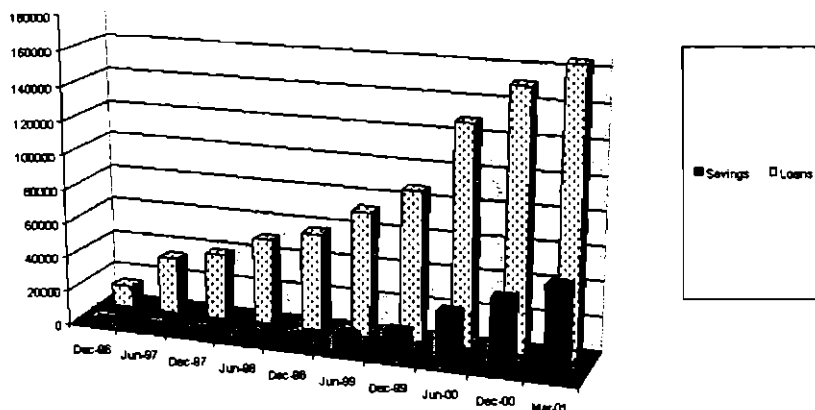
Growth of shares and assets in rural CUs



Only in 2000, membership in countryside credit unions increased by 85%, assets – by 66%, share capital – by 39%, savings – by 14% and outstanding loans – by 73%.

Diagram 3

Growth of Loans and Savings in rural CUs

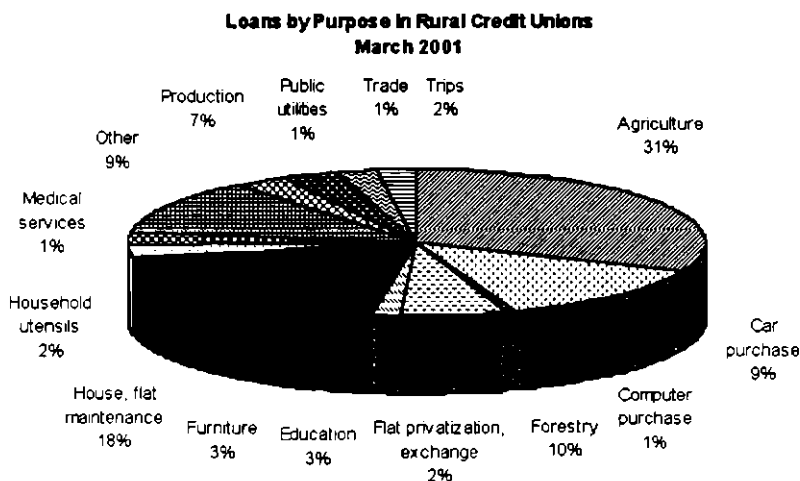


Credit unions operate also with small amounts. It is possible to save starting with 5 USD. Loan amounts are from 60 USD to 2000 USD.

Belonging to the common bond makes loan-issuing process much easier. Members have close connection with each other; they live in neighbourhood or work together, so evaluation of borrower is easy and less costly.

In rural regions, there is a very high demand for loans. Some rural credit unions have borrowers' wait-lists for the next 6-10 months. Because of this, credit unions usually lend small amounts for the period up to one year, to be sure, that more members will receive some money. The main purposes of loans are shown on the Diagram 4 [7].

Diagram 4



There is a big difference between Riga and rural credit unions. In the capital, the most popular purposes of loans are consumer needs, public utilities, flat privatisation and maintenance. In rural areas loans are mostly used for productive needs. As it is shown on Diagram 4, the most popular are agriculture, forestry, production and house and flat maintenance. But personal needs, such as medical services, education and training, as also big purchases (furniture, cars, computers, household utensils) also can be satisfied, taking loan or saving money in credit union. Savings are growing too, but not as fast as loans do.

Constant growth of all the operation indicators of credit unions shows, that there is a high demand for cooperative financial services in Latvia and in six years of operation, Latvian credit unions have proved, that they are trust-worthy credit institutions, which can provide satisfactory and competitive services to their members. But it does not

mean, that everything is achieved. The following SWOT analysis shows what is positive and what is negative in both internal and external environments of Latvian credit unions in countryside:

❖ **STRENGTHS** of rural credit unions:

Low loan delinquency;

Good reputation in community – safe, member-controlled;

Leadership of elected bodies;

Support from the Boards of local communities;

“Member brings member” – members are satisfied with services quality;

Easier lending process, than in commercial banks;

Close connection between the members – credit union becomes a social centre of the community;

❖ **WEAKNESSES** of rural credit unions: Lack of lending resources (wait-list for loans);

Small salaries of credit union employees;

Small incomes of members – nothing to save;

Some communities are very small and there is no potential for further growth;

Lack of support from the local self-government;

Lack of funds for marketing campaigns;

Lack of funds for investment into new technologies.

❖ **THREATS:**

Inactiveness of people;

Latvian Cooperative Credit Union Association is not self-sustainable;

Credit Unions cannot lend to each other;

Commercial banks offer much bigger choice of services (credit cards, tele-banking, internet banking), but credit unions cannot afford it.

❖ **OPPORTUNITIES:**

Separate Law on Credit Unions, which was accepted by Saeima on 29 of March 2001. The Law comes to force on 1 of January 2001. The new Law allows self-governments to become members of their credit unions and also neighbourhood communities, which have cooperation agreements, will be able to have one credit union for all of them. It will help to increase lending resources of rural credit unions.

Reform of administrative division of the country: some small communities will be united; and it means bigger potential for credit union growth.

Latvian Cooperative Credit Union Association (LKKSS) and Development International Desjardins Credit Union Strengthening Project in Latvia. LKKSS has been formed in 1997 to represent credit unions at the national and international levels. In December 1998 it has signed cooperation agreement with Desjardins movement, the biggest credit union movement in Quebec. This agreement is a very important step in development of credit union network in Latvia. The main goals of the Desjardins project are 1) to expand the existing credit union network in Latvia through human resource development, promotional and marketing activities; 2) to develop the capacity of LKKSS to operate strategically and to increase the profile of the credit union network through work at the national level for legislative reform.

Cooperation Memorandum between LKKSS and Latvian Mortgage and Land Bank (100% state-owned bank) on development of rural regions through cooperative financial services provided through credit unions. This agreement helps to solve the problem of lack of lending resources in rural credit unions. The Bank provides loans both to credit unions as legal entities and to credit union members through their credit unions. In the second way, the Bank issues loans to members, who are recommended by their credit unions. These loans stay on Bank's balance, but credit union receives agent fee for evaluation of a borrower. Cooperation with partner self-governments abroad. Usually there are some funds, which must be used for definite purposes connected with regional development, and credit union, as a tool for community development, can be the one, who will manage this grant.

Amendments to the Law on Guarantees of Savings and Deposits of Individuals. At the moment credit unions are not included in this Law, but in the draft of amendments it is foreseen, that this Law will guarantee that also savings and deposits in credit unions.

To follow up development results of credit unions in Latvia, it can be seen, that in 1995 there was only idea and the first few enthusiasts. In 2001 there are 19 credit unions in Latvia, separate Law accepted and high interest about cooperative financial services. In those rural regions, where credit unions are operating, these cooperatives help to change people mind, that it is not enough to wait for help, but there are a lot of things, which can

be done by people themselves. Involvement of people in solving their own financial problems shows both economical and social role of credit unions in community development.

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BALANCE SHEET ANALYSIS WITH THE HELP OF MULTI-DIMENSIONAL ANALYSIS TOOL – CLUSTER ANALYSIS

Analizējot uzņēmējdarbību, viens no pamata analīzes posmiem ir "Balances pārskata" analīze. Analīzes procesa laikā tiek aprēķināti vairāki rādītāji, t.i., likviditātes, kapitāla pietiekamības, rentabilitātes koeficienti u.c. Analizējot "Balances pārskatu", var spriest par kredībspēju, kā arī noteikt izvēlēta uzņēmuma riskus. Lai noskaidrotu situāciju, kādā atrodas uzņēmums, ir jāveic divu veidu pasākumi:

- 1) jānoskaidro bilances struktūra;*
- 2) pamatojoties uz izejas datiem, jāmēģina klasificēt uzņēmumu (piem., kā kredībspējīgu vai kredītnespējīgu).*

Šī referāta mērķis ir aprakstīt metodiku, saskaņā ar kuru, lietojot klāsteru analīzi, var noskaidrot, kādās stabilās grupās var iedalīt "Balances pārskata" posteņus, no vienas puses, un noskaidrot, kādās grupās var iedalīt gada laika periodu, no otras puses. Rakstā ir parādīts, kādus secinājumus ir iespējams saņemt analīzes procesā.

History of Cluster Analysis

Object classification is one of the most important functions of human brains and eyesight. Children start classifying object in early age by giving name to the found classes. Classification is a fundamental process of the science, as the classification systems contain terms necessary for building a theory in a science.

Cluster analysis is an overall title for various computational procedures used during the classification process. As the result of this procedures clusters are formed or groups of very similar objects. Cluster methodology can be defined also differently as multidimensional statistical procedure, which performs data collection in selected objects and afterwards defines them in object groups so that the differences within a group are considerably less than differences among other groups.

First publications on cluster analysis appeared already in 60ies. Most of publications on cluster analysis were during 70ies and 80ies. The book "The

"Start of Numerical Taxonomy" by two biologists served as the driving force for the development of cluster analysis methodology. This book was written by Sokol and Snit in 1963. Sokol and Snit both claimed that the efficient classification procedures of biological object groups had to ensure complex information collection about the organisms under interest, had to evaluate the similarity level among these organisms and to apply one of the clustering methods to allocate all sufficiently similar organisms in one group. After this process the composition of each group is possible to take under analysis and to draw conclusions whether the group of organisms belongs to different families. Actually Sokol and Snit believed that «the structure depicts the process», i.e., the structure of visible differences among organisms could serve as the base for the comprehension of evolution process.

Following the beliefs of the authors there can be two reasons for such a drastic increase in interest about cluster analysis [14, 42]

- 1) production of extremely high speed computers,
- 2) fundamental classification as the tool for scientific development.

By the introduction of computers, the application of cluster analysis method was almost impossible. In order to classify a group of objects that comprises 200 units, it is necessary to define the matrix for object similarity (distance matrix), which consists of $[(N * N - N) / 2]$ 19.900 unique values. The definition of such a matrix is a long and tiresome process. There will be a few scientists who have courage enough to define such a matrix. With the popularity of computers the definition of such matrices has turned into a rather simple process.

The second reason for increase of interest is the fact that classification science is based upon the methods of cluster analysis, which brings in order in the results of a scientific research. Classification includes basic terms used in the science. For example, classification of chemical elements is the base for inorganic chemistry and atom theory; classification of illnesses is the structural base in medicine. With regard to that cluster analysis methodology is believed to be objective and easily comprehensive tools of classification; they are used by great number of scientists.

Scientists use cluster analysis since the beginning of 20th century. Pioneers in this research were the papers by anthropologists, in which there was a trial to define uniform cultural regions with the help of matrix methodology (Zekanovsky 1911, Drivers 1965, Johanston 1972). In psychology the cluster analysis has been used as «analysis of poverty factors» [18, 142], Specialists of other scientific fields, especially those of

legal governmental rights, participated in the early investigations of clustering methodology in social science. Irregardless of the fact that many sciences have denied and ceased to use cluster analysis, all the histories of social science contain samples of cluster analysis.

Application of Cluster Analysis Techniques

Cluster analysis is widely used in so-called rating awarding business. This business means that a certain activity-performing subject (either a bank, a company or a state) is assessed and afterwards granted with a rating of a certain level. This issue has become popular for both Latvian and foreign banks after the Russian financial crisis, since the banking security is a part of the system under free market conditions. On the other hand it is very vital for an entrepreneur to choose such a bank, which is specialized exactly in such operations (or provides exactly those services) that are significant for the entrepreneur. Nowadays securities are easily available, which offer for the customer him/herself to determine the security of the chosen bank in comparison with the remaining banking sector. Rating agencies do not try to forecast solvency of a bank or a detailed strategy of a bank. Most of rating agencies specialize in the sales of their own developed unique rating assessments. Reliability of these ratings depends upon the reputation of a given agency. Usually the reputation is an indefinable and incalculable ratio, however, it proportionally depends upon investments of a rating agency in its rating publications, advertising and promotion. Usually scientific doctors, working at rating agencies, claim cluster analysis as their favourite instrument, and in some cases discriminating analysis. As there are rather many clustering analysis techniques (further in the paper their characteristics will be described) and there is no global best way in assessment, each rating user has a free choice in rating agencies and decide, whether to buy the rating or to make it itself. Each analyst of a rating agency brings in an aspect of subjectivity in the assessment of banking security by applying mathematical techniques.

Description of Clustering Analysis

Now by taking a real life samples we can describe clustering analysis techniques.

Following the development of the Latvian national economy we can observe that companies are offering wider and wider product and service range. Finally a question becomes acute in a company: "What's going on with the product range? In what groups can we assemble the to-be-sold goods?"

Economists had been working on answers for these questions in late 60ies and 70ies in the USA as well as European Union. The procedure for the problem solution was the following: At first information was collected about goods classifications sales volumes. And with reference to the type of classification the company offers, the classification can be characterized by three or more ratios. For example, if the number of characteristic ratios is 50, but the classification itself consists of 100 titles, the characteristic table is formed out of 100 rows and 50 columns. It can be easily recognized that it is very difficult to digest such a volume of data. Exactly the volume of this information is the reason to use untraditional analysis techniques in businesses. In order to depict one of untraditional analysis variants, we can draft a table consisting of four characteristic features: 1) classification name of the good, 2) selling price of the classification name of the good, 3) coverage price, 4) sales volume of the classification name of the good at the reporting period). E.g.:

Table 1

Characteristic indicators of the goods classification offered by
"XXX" Ltd. as at 01/01/2000 up to 31/01/2000.

Classification name of the good	X_{ik}	Selling price (LVL) $k=1$	Coverage price (LVL/DV) 2	Sales volume 3
Fat milk 2.5% 1litre	l	0.28	0.06	1500
Nails 50mm 1kg	j	0.28	0.06	1490
Soap	z	0.20	0.04	1300
Juice	d	0.21	0.04	1310
Tile glue 25 kg	e	2.00	0.10	50
Washing detergent	f	2.50	0.11	50

When this task is performed, we can conclude that goods classification can be characterized by quite different features of different measures, i.e. kilograms, litres, pieces, and as it can be easily recognized, there is no chance to perform mathematical computations with these measures. In order to solve this inconsistency and to go to the next stage of analysis, we will make a short lyrical look at something else. It is all the same for any person in business either to improve his/her welfare by selling 1KG nails or 1L milk, or selling one book. As we can derive from this statement, the measure of the classification name in this stage of analysis is of little importance. That consequently means that we can look at it officially and compare the names of the classification in terms of how

big the figures are. Finally we can pass to the most complex stage and define groups of goods.

Definition of groups of goods implies that it is necessary to find such groups, which elements were very similar in their characteristics and at the same time contained an obvious difference among the groups. Group similarity measure in other terms could be defined as the distance between group objects. Definition of the group implies that it is necessary to find all the objects, which are very similar with one another. In order to determine whether the chosen classification names are very similar, it is necessary to find a mathematical tool with the help of which we could fit the names of the classification. In other words, to define the distance between the names of classification. With the help of distance measures we could compare the entire classification to see how many and what kind of groups the classification has got. Distance between the objects can be measured after 20-30 different formulas, but most widely used is the following:

$$d_{ij} = \left(\sum_{k=1}^v (x_{ik} - x_{jk})^2 \right)^{\frac{1}{2}}$$

Where

x_{ik} x_{jk} – measures of k characteristic features of goods classification names i and j .

v – total amount of characteristics.

By applying this distance definition formula in our sample, we can derive the following distance matrix:

Table 2

Distance matrix characteristic for goods classification offered by "XXX" Ltd. as at 01/01/2000 up to 31/01/2000.

Classification name of the good	Fat milk 2.5% 1litre	Nails 50mm 1kg	Soap	Juice	Tile glue 25 kg	Washing detergent
Fat milk 2.5% 1 liter		10	200	190	1.450	1.445
Nails 50 mm 1 kg	10		190	180	1.440	1.435
Soap	200	190		10	1.250	1.245
Juice	190	180	10		1.260	1.255
Tile glue 25 kg	1.450	1.440	1.250	1.260		5
Washing detergent	1.445	1.435	1.245	1.255	5	-

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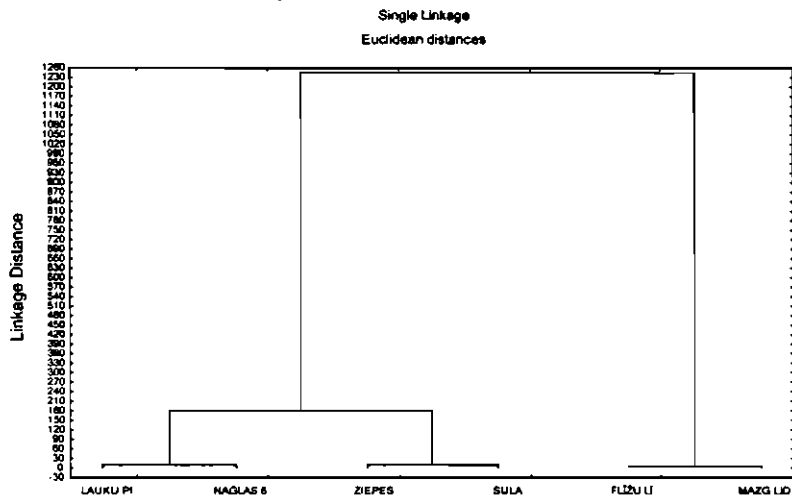


Figure 1.

Two objects with least distance are considered as very similar and joined in one group. For example: is all the same for the company manager whether to sell one kilogram of “Tile glue” or one litre of “Washing detergent” After the definition of distance matrix, we can see that distance matrix is formed out of six rows and six columns. When starting to analyse fifty and more classification names of goods, we will come to the matrix 50×50 and, the more of goods classification names are classified, the bigger the matrix. This, of course, is a disadvantage, as a man with his/her abilities is not able to successfully grasp that huge amount of numbers. Not speaking even about sense decisions. In order to avoid this deficiency, we can depict the distance matrix graphically with the help of the tree diagram. Depiction is performed with applying some of agglomeration techniques. Nowadays there are about 20 agglomeration techniques. In our example we have applied “Single linkage” The agglomeration technique “Single linkage” means that the distance among the groups is defined as the distance between the closest two objects of these different groups.

Let's look at the picture and try to explain its meaning. X axes values include the shortened names of goods classification with the minor unit of 1. Y-axis values include distances among classification names (objects). Now we can insert the values of the distance between “FAT MILK” and

"NAILS" The distance between these classification names equals to 10. It means that we have to count 10 units on Y-axis and we have to draw a horizontal line between "FAT MILK" and "NAILS" In the result we have depicted, that the distance between "FAT MILK" and "NAILS" equals 10. Now we can depict the next group, i.e. "SOAP" and "JUICE" The distance between these two classification names also equals to 10. It means that we have to draw a horizontal line on Y-axis at 10 linking "SOAP" and "JUICE" Similarly we will depict the distance between "TILE GLUE" and "WASHING DETERGENT" Distance between these two classification names is 5. Now we have got three object pairs, which we can define as three groups. Now we have to determine how far the groups are from one another. In this case "Single linkage" has been chosen as agglomeration technique. It means that we have to find closest in characteristics in the first and second group. The smallest distance is 180 between "NAILS" and "JUICE" It means that we draw a horizontal line on Y-axis at 180, joining the centres of the first and second groups. Now we have merged the first two groups in one in respect to the third group. In order to join the third group with the first two, we have to find the closest two names in the third group and first and second group. From the distance matrix we can see, that the smallest distance is 1245 between "SOAP" and "WASHING DETERGENT" It means that we draw a horizontal line on Y-axis at 1245 joining the centre of the third group from one side and the centre of the first and second groups. Now we have depicted graphically (in a very comprehensive manner) the complex distance matrix and now we can start its economic interpretation.

By looking at the picture we can draw the following conclusion: "Goods classification names "FAT MILK" and "NAILS" are similar with one another. Both they are of the same price per number of units, of the same coverage sum and rather similar sales volumes. From the picture we can see the distance at 10. It means that it does not matter for the management of the company either to sell "FAT MILK" or "NAILS" and the buyers of this company usually buy "FAT MILK" as well as "NAILS" in equal volumes. If the company sold only two from the classification names, the most efficient advertising campaign would be that promoting the name of the company, but not separate classification names of goods.

Second classification group is "SOAP" and "JUICE" We could characterize this group as having rather similar price, equal coverage sum and rather similar sales volumes. Consequently we can be sure about the first group that is all the same for the management of the company either to sell "SOAP" or "JUICE".

The third group consisting of "TILE GLUE" and "WASHING DETERGENT" is considerably further from the other two groups. The third group can be characterized as having considerably higher sales price in comparison with other goods classification names, a little higher coverage sum and very small sales volumes.

When having compiled group descriptions, we can draw several conclusions:

- Basic goods classification of the given companies is focused on low sales price, good coverage sum (rather high coverage ratio in sales price, for example, "FAT MILK" $\frac{0,06}{0,28} \approx 21,4\%$) and big sales volumes. It means that most of goods classification names do not include warehouse maintenance costs, as the classification names stay in a warehouse for a very short time.
- The given companies have also the goods classification names such as "TILE GLUE" and "WASHING DETERGENT" having little sales volumes. It means that exactly these goods are accumulating all the warehouse maintenance costs. With regard to the fact that exactly these goods classification names have higher sales price (in comparison with other classification names) and smaller sales volumes, a decision can be reviewed related to deletion of these goods classification names or offering these goods classification names only after they have been ordered.

Defining Groups for Balance Sheet Positions

The objective of this part is to define, what groups could be determined for balance sheet positions of the branch No. 00 of JSC «Latvijas Krajbanka» at a certain reporting period. The objective is not only looked at balance sheet positions, but also is looked at reporting periods and defined in what periods the reporting period could be divided. In other words it is necessary to find those balance sheet positions and time period groups being very similar with one another and very different in comparison with other groups.

In order to ensure information for the process of analysis, balance sheet data had been acquired for the period of 01.01.1999 to 31.12.1999 according to International Accounting Standards (IAS). Balance sheet positions were analyzed in two detailed levels. First detail level is such a detail level focusing

In Figure 2 we can see that considerable changes have taken place. We can see that 1st quarter of 1999 is very different from the figures of other periods in the year. Figures of the first year are different from the next five months, but there is a very big difference between the above mentioned two periods and the last four months of the year. As we have discovered during the application of cluster analysis that the volume and structure of balance sheet positions have considerably changed during the year, we can describe changes in economic categories. Deposit balance in first three months has grown gradually and as the result the total amount of the balance sheet also gradually changed. A comparable stability has been recognized after the first quarter, when all the balance sheet positions practically do not change or fluctuate around a certain value. In the last four months, first of all, there has been a quick growth; second, substantial loan repayments had been performed. With regard to the fact that deposits are increasing on one hand and change in the structure of assets (increase in loan repayments and growth in correspondent account balance) from one group to another, we can distinguish periods of three years.

Conclusion: in terms of economics, such a division of years means that spring and summer months of the year are a stable and constant period in banking business, but bigger changes are happening during autumn and winter periods.

Analysis of Balance Sheet Positions via Cluster Analysis Technique

Now we can look at balance sheet position groups. These data are processed with hierarchical agglomeration technique City-block (Manhattan) agglomeration law and two distance definition techniques: word and complete link techniques. In Figure 3 we can see the result when applying hierarchical agglomeration technique.

We can see in this graph that balance sheet positions can be divided in two groups. In terms of economics it means that there are groups of big and small indicators. This is a trivial conclusion and does not give any economic meaning.

Let's look at the second level of detail consisting of 40 balance sheet positions. We can apply hierarchical agglomeration technique in the analysis of these positions, City block (Manhattan) agglomeration law and two distance determination techniques: word and complete link distance measures. Word distance technique has delivered better results. As the result of calculations we have derived Figure 4.

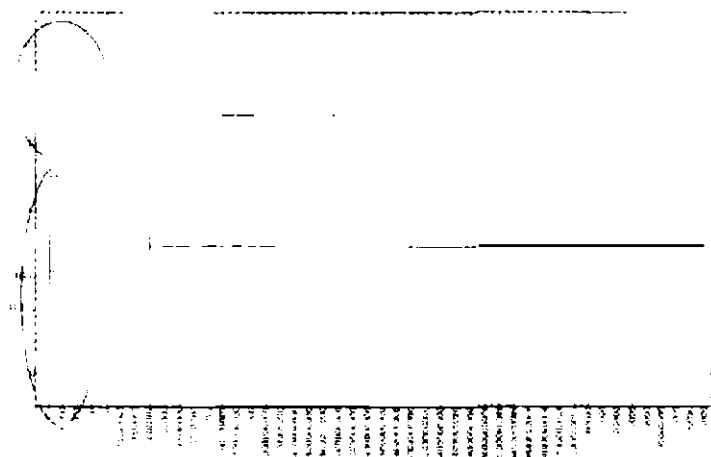


Figure 3. JSC "Latvijas Krajbanka" Branch No. 00 balance sheet positions at first detail level during 01/01/1999 - 31/12/1999, when applying City-block (Manhattan) word distance technique of the agglomeration law.

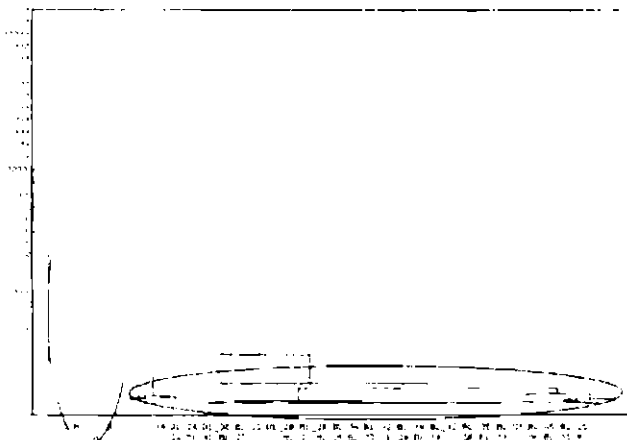


Figure 4. JSC "Latvijas Krajbanka" Branch No. 00 Balance sheet positions at second level of detail during 01/01/1999 - 31/12/1999 by applying City-block (Manhattan) word distance technique of the agglomeration law.

We can see in this graph that balance sheet positions are divided in two groups. It means that the same conclusion remains in force that was done during previous detail level.

Conclusion: we can find two groups of balance sheet positions during two detail levels. It means that there are groups of big and small balance sheet position groups. In terms of economics we can state that there is no meaning for such a conclusion, as the group of big positions consists of five positions, but the small group of positions – of 35 positions. Finally we can say that application of clustering analysis technique in the analysis of groups of balance sheet positions has not given any suitable economic conclusions.

Taking into account the above-mentioned, we can say that:

1. the reporting year at the Bank can be divided in three periods:

- Growth period at the 1st Quarter of 1999;
- Stability period (4-8 months) when there are almost no changes in balance sheet positions;
- Period of sharp growth and changes in the structure of balance sheet (9-12 months), when considerable increases in deposit balances and substantial loan repayments are happening.

2. During both detail levels balance sheet positions can be divided in two groups: balance sheet positions with substantial balance and positions with small balances. In terms of economics this is a trivial conclusion, as there are always few big positions and the remaining usually are rather small. As the result of analysis we have acquire such conclusions.

Proposal: With regard to the fact that spring and summer months are in the period of stability, it is not useful to implement the same advertising activities with the purpose to attract new customers and offer new services. However, autumn and winter months are characteristic with fast changes in the performance of the Bank, and it means that big advertising campaigns have to be implemented during this period and new customers attracted.

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Summary

In this report the author described the methodology via cluster analysis with the help of which we can find out the clusters to be grouped from the positions of the balance sheet on one hand and stable grouping of the yearly periods on the other hand. During the report we found out the conclusions that are possible to derive during the process of the analysis.

With regard to the above-mentioned, we can say as follows:

1. the reporting year at the Bank can be divided in three periods:

- *Growth period at the 1st quarter of 1999;*
- *Stability period (4-8 months) when there are almost no changes in balance sheet positions;*

- *Period of sharp growth and changes in the structure of balance sheet (9-12 months), when considerable increases in deposit balances and substantial loan repayments are happening.*

2. During both detail levels balance sheet positions can be divided in two groups: balance sheet positions with substantial balance and positions with small balances. In terms of economics this is a trivial conclusion, as there are always a few big positions and the remaining usually are rather small. Due to the result of analysis we have acquired such conclusions.

Proposal: *Taking into account the fact that spring and summer months are in the period of stability, it is not useful to implement the same advertising activities with the purpose to attract new customers and offer new services. However, autumn and winter months are characteristic with fast changes in the performance of the Bank, and it means that big advertising campaigns have to be implemented during this period and new customers attracted.*

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CAREER AND POWER DYNAMICS IN ORGANIZATIONS

Много людей в начале своей карьеры становятся циничными, когда сталкиваются с реалиями управления. Конечно, существуют некоторые организации с нездоровым политическим климатом, где некомпетентные личности и люди, с отсутствием этики, продвигаются вперёд. Негативный взгляд на влияние делает это явление как бы "коррумпированным". Влияние должно быть умеренным и оптимальным и во многом зависит от того как менеджеры понимают смысл карьеры динамику влияния. Менеджеры в своей работе должны уметь оценить ситуацию и применять соответственно подходящую модель влияния.

В тексте описано понятие персональной карьеры: определены источники менеджерского влияния и предложена модель оценки возможного персонального влияния в менеджерской деятельности.

The term career suffers from surplus meaning. If career was used in a free association test it would undoubtedly elicit an impressive range of meanings and feelings. There are four distinct meanings in which career is used. First two meanings of career are likely to be found in popular writings;

Career as advancement means vertical mobility – moving upward in an organisation's hierarchy. By this definition career represents the sequence of promotions and other upward moves in a work-related hierarchy during the course of a person's work life. It is not necessary that the person remain in one single occupation in order to 'advance'

Career as profession, that means 'career ladder' – specific series of jobs or experiences necessary to advance in an organisation (Northcraft, Neale, 1990).

The next two are more representative of behavioural science writings on the subject.

Career as lifelong sequence of jobs. By this definition the person's career is his particular job history – the series of positions held, regardless of occupation or level, during the course of his work life.

According to this definition, all people who work-all people with work histories- have careers. No value judgement is made about the type of occupation or the direction of movement. Career here is a more neutral, less value-laden term than it is under our first two definitions.

Career as a lifelong sequence of role-related experiences. By this definition, career represents the way the person experiences the sequence of jobs and activities that constitute his work history. This is the subjective career – the changing aspirations, satisfactions, self-conceptions and other attitudes of the person toward his work and life.

There are some assumptions:

- career per se does not imply success or failure, 'fast' advancement or 'slow' advancement;
- career success or failure is best assessed by the person whose career is being considered, rather than by other interested parties, such as researchers, employers, spouses or friends;
- the career is made up of both behaviours and attitudes, things the person does and feels;
- the career is a process, a sequence of work-related experiences.

Putting all these assumptions together the following definition of career emerges:

The personal career is the individually perceived sequence of attitudes and behaviours associated with work-related experiences and activities over the span of the person's life (Hall, 1976). This definition includes both the subjective and the objective aspects of the career.

The right understanding of personal career is very important for managers. There is some relation between manager's career and understanding and assessing power dynamics in organisation.

Work organisations are not only systems of hierarchical structure, they are also systems of social relationships, status and power. Power is a complex and dynamic concept and difficult to define easily. At the broader level, power can be interpreted in terms of control or influence over the behaviour of other people with or without their consent.

Power can be inferred and measured by its consequences rather than by direct observation. This gives us one of most popular definitions of power, provided by Robert Dahl "A has power over B to the extent that he can get B to do something B would not otherwise do."(Dahl, 1957). Power is the

ability to change another's behaviour. It is easier to change behaviour than attitudes, and in turn, attitudes than values.

A more specific definition is given by Morgan, who sees power as "the medium through which conflicts of interest are ultimately resolved. Power influences who gets what, when, and how" (Morgan, 1986). Also, power is therefore a capacity or a potential. The most important aspect of power is probably dependency. "A person can have power over you only if he or she controls something you desire" (Robbins, 2000).

Power can be a positive source of motivation for some people. McClelland has examined the motivational need for power and believes that there are two major types of power: positive /social/ power; and negative /personal/ power. He suggests that the effective manager should possess a high need for social power directed towards the organisation, concern for group goals and helping members to achieve those goals, and exercised on behalf of people. Social power should be distinguished from the negative personal power which is characterised by satisfaction from exercising tight control over other people, and personal prestige and aggrandisement /McClelland, Burnham, 1976/.

We define power as the potential of an individual to influence another individual or group.

Political processes involve efforts by members of the organisation to increase their power or protect existing power sources (Pfeffer, 1981). Managers use their existing position power to transform and magnify the initial basis of power in unique ways. Managers sometimes see themselves as involved in a continuous struggle to maintain their power and authority, and there is often competition between managers. In order to influence those over whom they have no formal authority, the managers find themselves having to develop other sources of power. What first time managers soon discover is that being a manager is not only a position of authority, but also a position of interdependence, with people both inside and outside the organisation.

It is interesting to study power and diagnostic skills – manager's ability to assess the power dynamics. The distribution of power and influence in organisations is generally aligned with the realities they face. An individual's power and influence can extend far beyond the original or legitimate bases that created it.

Many people become disillusioned and cynical early in their careers about the realities of managerial life. There are organisations with poisonous political climates filled with plotters and schemers who have little regard for the harm they do. Negative attitudes about power are fuelled by such

examples and contribute to the belief that “power corrupts” But, however, powerlessness also corrupts and often creates ineffective, desultory management and petty, dictatorial, rules-minded managerial styles. The success of a manager depends greatly on the manner in which power is exercised.

Where clear goals and consensus do not exist, damaging conflict may result. It is very important, that power influences behaviour. Until a decade or so ago power was frequently neglected by behaviour scientists, particularly those belonging to the human relations school of organisational behaviour. Power was seen as a rather unpleasant feature of life that was not the province of the psychologist operating in a nicely detached and balanced scientific manner, and besides, it was a factor that is hard to define and measure in precise terms. The same fact was no true of the sociologist, who despite his limitations, recognised from the outset that power was a critical variable in the analysis of society and its institutions.

We all know of incompetent and unethical people who get ahead because they are “masters at playing the game”

“It is powerlessness that often creates ineffective, desultory management and petty, dictatorial, rules-minded managerial styles” /Kanter, 1983/. People with power can manage their career better and shape their environment, whereas the powerless are destined to be moulded and constrained by theirs. How often have we heard of people who believed they had “no choice” but to engage in some unethical act because they did not have the “power to change the way things were usually done”?

In the process of evaluating an individual’s exercise of power and influence, there should be three interrelated criteria:

Is it effective for the individual?

Is it effective for the organisation?

Is it ethical?

Also power has own dynamic: if the context changes, other things being equal, the individual’s power and influence will change. Indeed, a person’s power is determined by two sets of factors: *positional power and personal characteristics*.

Sources of positional power:

Formal authority – it is a person’s rights, privileges and responsibilities in the organisation.

Relevance – people engaged in activities that are closely aligned with corporate priorities will be more powerful than those whose activities are not.

Centrality – a person's position in the workflow network can be as his or her position in the information network. People who are central can act as conduits for exchanging and integrating the resources and contributions of others who are not directly connected. Indeed, considerable power is often associated with such boundary-spanning position in which an individual serves as the bridge or broker who mediates relationships between groups or organisations.

Autonomy – the more autonomy – discretion or freedom to exercise judgement – associated with the positions managers hold, the more power they will have.

Visibility – managers whose performance is visible to powerful people in the organisation tend to have more power than those in jobs where their performance is less obvious.

Sources of personal power:

Expertise – the more unique and critical a person's expertise, the more important it will be as a source of power. While many people tend to focus on technical expertise, in managerial work, expertise in the human /ability to manage work relationships/ and conceptual /ability to see an enterprise as a whole/ arenas can be of even greater import.

Track record – refer to managers task and organisationally relevant experience and accomplishments. It is not just what they have done, but how they have done it. Those who have a positive track record have more power than those who do not. It is as a key predictor of manager's potential. Sometimes there is used Halo effect – perception of a person's track record may not always reflect reality.

Attractiveness – people who are viewed as possessing attributes that others find attractive, identify with, and would like to emulate tend to be more powerful than those that do not. Research suggests that individuals who are perceived as attractive are also perceived, rightly or wrongly, to be effective and ethical. But, what is considered attractive in one organisational context may not "fit" another. In a consulting firm where analysis is valued, the person who always "shoots from the hip" may not have much influence. In the fashion industry where "looking the part" matters. Power may come to the designer who carefully maintains the "casual, yet chic image" with which his or her customers like to be associated.

Effort – real situation is, that those people who devote higher than expected effort to their work obtain more power than those who do not. Individuals who work hard tend to be viewed as more committed. Many people equate, often accurately, extraordinary effort with expertise and contribution to the organisation.

Research suggests, that an individual's power results from an interrelated set of positional and personal characteristics. Which of these will prove most important is context-dependent. In practice, a manager may be able to draw on a number of sources of power simultaneously; a subordinate might obey an order for a combination of the reasons listed above. Arising from social change, these sources of power are also changing. Legislation and bureaucratisation have noticeably constrained the power sources such as, financial rewards; non-financial rewards; punishment and physical coercion.

It was observed, that power dynamics work in organisations and it is important to assess it. Also it is interesting, what are of the implications for a manager on the job? There can be some steps in managing power dynamics productively.

The first step in managing power dynamics productively is *analysing* them in particular situation. It will help to understand and predict how people will think and act in response to some decisions and actions.

In making sense of situations in which there are perceived conflicts of interest, most people have a tendency to view their own behaviour as reflecting honourable motives and rigorous analysis, and others behaviour as evidence of self-interested motivation, excessive personal ambition, or irrationality. Careful diagnosis can keep managers from attributing malicious motives to those opposing managers in an honest conflict, especially when "they win" It will encourage managers to test their assumptions and adopt a more objective perspective – a critical ingredient for successful win-win negotiations.

Sometimes in assessing the power dynamics in a given situation, manager needs:

- to identify the interdependencies among the relevant parties;
- to determine the sources of power of the relevant parties;
- to analyse the relevant differences among them;
- to analyse the broader context for manager's job and career;
- periodically update own diagnosis.

Manager has to think of himself as a detective or anthropologist, eagerly collecting, sifting through, and evaluating tangible and intangible clues about who really has power and how things really get done in the organisation. He has observe and listen carefully. Power dynamics are part the very fabric of the organisation, which is frequently taken for granted. Managers often must “read between the lines” of the explicit formal structure, policies and procedures to discover their informal counterparts. The truth is often in the detail; the more complex and in-depth their research and analysis, the more revealing it will be.

Once managers understand the power dynamics in some particular situation, what are the implications for action? How can they acquire power and exercise influence so that they can build partnerships with those on whom they depend and get things done?

All influential managers have power, but not all powerful managers have influence. Managers who want convert their power into influence need to be willing and able to empower those on whom they are dependant. Also they need to be willing and able to cultivate networks, mutually beneficial relationships with those on whom they are dependent.

Thinking about power and influence as exchange can engender an instrumental, impersonal, and perhaps cynical view of relationships with others at work. We are all familiar with the more cynical exchange strategies implicit in the saying ‘what goes around comes around’ It can be all too easy to exploit those who need the ‘currencies’ only you have to offer. However, it is important to remember that networks are *mutually beneficial relationships*. Over time managers exchanges with others should be fair and equitable. Of course it is a subjective judgement. One of the more common mistakes managers make in determining what is ‘fair and equitable’ is relying on the golden rule for guidance – ‘do unto others as you would want others to do unto you’ However, others may not want what you want, or need what you need. As discussed above, managers should ‘climb into others shoes’ to understand their specific desires and needs. Although it may seem counterintuitive, to treat people fairly is to treat them differently.

For most new managers, the decision to pursue a managerial career is a carefully considered one, yet their expectations of this new role often turn out to be incomplete and overly simplistic. New managers are blinded to the realities of management by their personal motivation and ambitions. In their initial conception of what it means to be a manager, they tend think of the rights and privileges associated with the managerial role – the formal

authority rather than duties and obligations. It is usually the power of position that attracts them to management. New managers erroneously believe that their formal authority will be the primary source of power on which they will rely to influence others.

There are some myths and realities of being a manager.

Authority versus Interdependence.

Key players – subordinates versus those outside their formal authority.

Key competencies – technical versus technical, human, conceptual negotiating and integrating their unit's interests those of others.

Desired outcomes control, compliance versus commitment, empowerment.

To be competitive in a global economy, companies are breaking down traditional boundaries to create lean, adaptive, fast-moving, entrepreneurial organisations. They are forming strategic alliances with suppliers, customers and even competitors, and they are replacing pyramid structures with 'cluster organisations' in which groups of people from different functional areas are arranged like bunches of grapes on a corporate vine (Mills, 1991). Thus, in contemporary organisations, network-building skills have become a prerequisite for managerial effectiveness.

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Summary

Too many people become disillusioned and cynical in their careers getting in touch with the realities of managerial life. There are organisations with poorly political climates filled with plotters and schemers who have little regard for the harm they do. Negative attitudes about power are fuelled by bad examples and contribute to the belief that 'power corrupts'

It is important, that managers in organisations were able to evaluate and to feel their personal career and assess the power dynamics in each situation. Also, managers need to know the myths and realities of the managers job.

An individual's power results from an interrelated set of positional and personal characteristics. Which of these will prove most important is context-dependent.

All influential managers have power, but not all powerful managers have an influence. Managers who want convert their power into influence need to be willing and able to empower those on whom they are dependant. Also they need to be willing and able to cultivate networks, mutually beneficial relationships with those on whom they are dependent.

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EUROPEAN UNION (EU) CORPORATE TAX HARMONISATION: NEW CHALLENGES AND INSTRUMENTS OF CHANGE

Korporatīvā nodokļu reforma Eiropas Savienībā ir ārkārtīgi sarežģīta un tā prasa praktisku analīzi, pamatojoties uz teorētisko bāzi.

Īpaši apstākļi nosaka, ka starptautiskās tirdzniecības kustības faktors un ražošanas izvietošana nebūtu nosakāmi pēc nodokļu apsvērumiem. Rakstā tiek analizēts, ka šajā sakarā starpvalstu fiskālie darījumi būtu bāzēti uz nodokļu neitralitāti. Nodokļu politikas koordinācija nav tas pats, piemēram, kā visu lēmumu par nodokļiem centralizācija.

Corporate tax reform in the EU is uneasy and requires practical analyses, based on theoretical background. Optimality requires that international trade factor movements and the location of the production should not be guided by tax considerations. It is argued, that for this reason inter-country fiscal affairs should be based on tax neutrality. Corporate tax harmonisation aims the integration of capital markets, therefore the optimisation in allocating capital and investment as well as encourage the interplay of competition in such a way that integration and economic growth may be achieved simultaneously and gradually. Coordination of the tax policies is not the same thing, of course, as centralisation of all tax decisions. Full harmonisation produces identical tax bases, rates, systems etc., partial harmonisation or approximation involves something less: minimum or maximum taxes, the elimination of double taxation, etc. Today EU has chosen less complicated way towards the partial harmonisation. In the long run, the member states may have to adopt a closely integrated tax system that can reach by centrally coordinated action among member states and by market process.

Introduction

Abolition of trade barriers among the members of the customs union does not necessarily mean that a common perfectly competitive market has been completed. Impediments to smooth functioning of competitive markets for commodities, services and factors of production are still many. Differences among the tax systems of the member states are one of the most important of these impediments and one of the most difficult to alleviate. Still little attention is paid to this problem in EU. There is a lack of detailed analysis about the perspectives of profit tax in member states. And there are only few issues that give the analysis of EU corporate taxation system, its harmonization. There is a limit to the amount of detailed information which can be conveyed in these ways and there is no substitute in practice.

Corporate tax harmonization process in the EU started 30 years ago but during the last decade it has been started to treat harmonization taxation system in a more serious way. Back in 1975, the Commission had aimed to harmonize corporate taxes, almost with no success. Direct taxation is one of the core elements in the policies of each Member State. That is why completion of the European Union internal market harmonizing companies' taxation and increasing internationalisation of economic activity more generally is a very hard task. Clearly, the business environment in Europe is changing more rapidly and more dramatically than at any time in history. Much still remains to be decided in European fiscal policy. Many European companies are of course already competing throughout the European market despite the fiscal differences, which remain between the various member states. It is vital also EU companies make effort to understand, influence and benefit from this. EU must avoid "harmonization for harmonization's sake" In this context it is important for companies to realize they do not only have react to what politicians decide, they also need to make their views known in Brussels and throughout Europe, in order to influence decisions important to their businesses.

1. Differences of Corporate Tax within the European Union

At the moment, among the EU countries there are many differences in corporation tax. The most important of these concern the following:

- 1) The scope of the tax – that is liability to corporation tax. All limited companies are subject to corporate tax, but sole proprietors usually are not liable to it. With partnerships the situation varies from one member state to another;

- 2) The basis of assessment – the regulations and extent of exemptions, incentives, etc.
- 3) The tax rate;
- 4) The system of taxation (depending on the extent to which corporation income tax and shareholders' personal income tax are integrated):
 - The classical system;
 - The split rate or two rate system (a lower tax rate applies on corporate distributions than on retain profits);
 - The tax credit or partial imputation system (it is designed to avoid the double taxation on dividends by imputing part of corporate profit tax to the personal tax liability of shareholders);
 - The full integration system. In contrast to classical system, the corporation is not seen as a separate entity, but as a partnership of shareholders. In essence, under this scheme corporation tax does not exist and the shareholders are taxed under their personal income tax liability).

Many of EU states (Germany, France, Finland, Italy, Ireland, UK) operate the tax credit or partial imputation system at a moment. The Commission produced a draft directive in 1988 on harmonization of the tax base, which attracted little notice by the member states. Differences among the member states that apply the partial imputation system exist in following: the rates of imputation between corporations and shareholders; the tax rates themselves; the basis of assessment of corporation tax, definition of taxable profits and use tax incentives.

Member states differ on points of law about how they define and treat the concepts of the depreciation, capital gain and losses, reserves and provisions, valuation of assets and liabilities, stock valuation, taxation under inflation, etc., all of which determine taxable of net income. Certain countries (Ireland) also use tax incentives as an instrument of economic policy.

Another issue of contention is the question of incentives provided by corporate tax. These incentives are introduced with the aim of encouraging investment on a nationwide scale or in certain less developed or problem areas (e.g. of high unemployment), and sectors (e.g. energy conservation). Incentives take various forms: accelerated depreciation, tax relief on investment, tax exemptions on profits, tax concessions on modernization, etc. and differ in degree from one country to another. An outcome of these

differences is that the capital markets of the Community are compartmentalized and therefore, the allocation of resources within the greater area of the common market is sub-optimal. Harmonisation of corporation tax is the first step towards restoring optimality.

Common tax system. The Commission's program for the harmonization of direct taxes, envisaged a general system of taxation of company profits, having the same rate of structure throughout the Community and based upon broadly similar methods of assessment and rates. Harmonisation of corporate system was considered desirable or necessary for three main reasons:

- 1) National rules of taxing corporate profits and distributions tend to discriminate against foreign investors and investment abroad;
- 2) Differences between national systems, even when not discriminatory, present obstacles to cross-border investment;
- 3) Differences between the tax burdens imposed by corporate taxation affect the relative cost of capital and may thus distort the conditions of competition between enterprises.

At present three member states the Netherlands, Luxembourg and Spain have classical tax system, two have partial integration with respect to dividends at the corporate level – Greece and Portugal, and remaining states provide relief for dividends at the shareholder level under some form imputation system or tax credit system. The Commission in its 'Proposed Directive concerning the harmonization of the systems of company taxation and of withholding taxes on dividends' studied the merits of the two systems:

- The classical system, which preserves full economic double taxation of dividends;
- The imputation system, which relieves this double taxation by granting a tax credit to the recipient of the dividends. This credit, which represents part of the corporation tax, can be deducted from the recipient's tax liability.

The Proposed Directive was issued in 1975. The member states have still, however to agree on a single common tax system. The harmonization of the tax base, together with the tax rates, will, it is believed, highlight the need for the member states to adopt common imputation system. A common system is essential if true harmonization of direct taxation is to be achieved.

Harmonisation of tax rates. The current position is that each member state is responsible for deciding both what should be included in the tax base in

calculating the taxable profits of companies liable to tax in their country and what the tax rate to be applied to those profits should be. As a result, each country has different tax rates, which depend principally on revenue required by particular country and domestic political considerations.

Table 1

Corporate income Tax rates at central governmental level in the EU countries, 2000

Country	Company profit tax: total rate
Austria	34
Belgium	28/41
Germany	30/45
Denmark	34
Spain	30/35
France	33.3
Finland	29
Greece	35/40
Italy	37
Ireland	24 (In 2001 – 21)
Luxembourg	30
Netherlands	35/36
Portugal	34
Sweden	28
United Kingdom (UK)	21/33.5

Course: Eurostat, 2000.

Moreover there are various different types of taxes. The main taxes are as follows:

- National or federal taxes – all member states levy a national tax on the profits of companies. The central rates vary in European countries between 28%(Sweden) to 37% (Italy). In Belgium, Ireland, Netherlands and UK, rates are progressive, the maximum rate being 45% in Germany, and minimum rate 21% in UK.
- Local taxes – five of the member states: Germany, Austria, Italy, Luxembourg and Portugal levy local tax on companies' profits in addition to a national tax. These rates vary between 6% and 20%, and in most of these countries the rates at the local level vary from region to region.

- Net asset tax – only Germany levies a national net asset tax based on the value of the business assets, although other member states do levy local taxes on net wealth or immovable fixed taxes.

As can be seen, taxes and rates applied vary greatly throughout the member states and obtaining agreement between all the countries on a specific rate or range of rates will be difficult. There is now a general worldwide movement for countries to reduce corporate tax rates, which may assist the Commission obtaining an acceptable overall rate, while leaving it to each individual country to decide how to levy the tax.

Harmonisation of the tax base. The Preliminary Proposal for the Directive in March 1988 is to apply undertakings, whatever their legal status, that are required to calculate their taxable profits on the basis of balance sheet and a profit and loss account. All undertakings in the retail trade or craft industry sector, which do not as rule, engage in international trade, are excluded from the scope of the Directive. The aim to harmonise the rules for determining the taxable profits of an undertakings is so as to make for transparency of the systems of company taxation throughout the member states. It is intended that, once the Proposal has been adopted, member states will not longer be able to introduce incentives by way of the tax base, since that would run counter to the objectives of transparency and simplification. Member states will still be free to provide state aids such as grants, tax credits etc.

Obtaining harmonisation of the tax base for direct taxes throughout all member states of the EU will be difficult to achieve, even through corporation taxes in the EU are not a major source of revenue to the individual member states. Each member state will doubtless have negotiation process and, invariably, local or regional issues will be high on each country's agenda. An agreement to a common tax rate band, as is the aim for WAT, will be at least as hard to achieve, since each member state will wish to maintain its right to rise and lower tax rates depending on the economic circumstances of each country.

2. New Challenges and Remaining Obstacles

The focus of action in the field of tax policy is now one of the central elements in establishing the European economic and monetary union. The main target is the creation of the conditions similar to those existing in an economically unified area in the tax and public expense

sectors. The special regional and sectorial regimes, mainly deregulatory and temporary, must be re-examined in the light of the guidelines of Code of Conduct. This Code to end “unfair tax competition” even asserts that coordination of some Europe’s tax systems is not about harmonisation, and not about rising taxes, but about reducing them. This work should and will continue “this body is too big to bury” (Economist, 11.27.99, Vol.353 Issue 8147, p.77) and EU countries have invested too much in the project to let it go.

In the EU, discussions in the tax field in the last four years have taken place with three main objectives: halting the erosion of the certain tax bases, removing the fiscal barriers to the smooth functioning of the internal market and making tax systems more employment-friendly. The erosion of revenues through harmful tax competition imposes another restriction on Member States – ability to reform their tax systems and fund public expenditure as they choose. The particular focus on safeguarding tax revenues has often been criticised as representing a cartel of tax administrations and Finance Ministers. Taxation systems in the EU now face several **challenges**:

- 1) taxation levels tend to be high. Compared to the USA and Japan, effective levels of taxation are particularly high. According to a recent OECD publication, tax as percentage of GNP was 29.7% in USA and 28.8 in Japan in 1997, in the EU average it was 42.5%. While in overall terms high taxes may not be a deterrent to foreign investment if combined with a high level of provision of public service, high taxes on labour can certainly drive jobs away.
- 2) If private individuals and businesses are to be able to work and operate freely in the Internal Market, tax obstacles to such activity must be eliminated.
- 3) With EMU differences in national tax systems are becoming increasingly evident and are therefore having an increasing influence on economic decisions concerning investment, saving, employment and consumption. The economic and structural reforms launched by the Cardiff European Council of June 1998 are designed to ensure that the differences between systems that have become even more apparent since the introduction of the Euro do not hamper trade, result in fragmentation of the single market or prevent the efficient allocation of resources. Closer coordination of national tax policies can balance between the diversity of member states’ tax and social

contribution systems and the right to untrammelled freedom of establishment and movement throughout the EU.

- 4) EU countries has a particular difficulty with the Code of Conduct for business taxation: as one-sided focus on the concerns of tax administrations, when there is no progress on eliminating tax obstacles for businesses. There is also a concern that certain corporate tax regimes, by providing for different rates without objective justification, constitute infringements of State aid rules. The less attractive alternative is to wait for the Court of Justice to cancel the measures of the basis of state aid rules and require their immediate elimination.
- 5) There is the increasing globalisation of economies. The free movement of capital and freedom of financial services, combined with the new opportunities of information technology are likely to effect the EU 's competitive strength and make the conduct of national tax policies more difficult. Bilateral agreements between member states are not enough to ensure co-ordination between tax systems. Only an approach co-ordinated at Community level and carried through on a broader international arena can be effective. The action plan for single financial market presented in May 1999, calling for further progress on tax co-ordination to remove distortions in the taxation of cross-border financial products. The important factor which contributed the 15 member states of EU to agree on a number of principles through the tax package is under the helpful influence on the efforts being made at the international level. The OECD has already adopted a Code of Conduct on businesses taxation, which is closely follows that of the EU.
- 6) Improvements in communication and transport, the development of e-commerce and above all the rise of Internet, are creating great new opportunities for businesses but also complex challenges for taxation systems. It is becoming increasingly easy to evade tax by moving mobile capital to low tax jurisdictions or tax havens. Commission communication calls for e-commerce to be taxed neutrally in relation to traditional commerce (electronic transmissions would be taxed as services). New technology such encryption, can make it easier to keep financial transactions secret. The Commission is discussing these issues with the Member States and business to find appropriate solutions; it may be necessary to change the law.
- 7) European tax authorities are already using new technology to improve their own efficiency and their interaction with taxpayers. The next step making the tax authorities more efficient is to allow

taxpayer to make their declarations on line giving taxpayer the right to access official databases.

- 8) Enlargement of the EU requires to take over the whole body of EU law (the 'acquis') and to refrain from introducing any measures which conflict with that law. The current 'candidate countries' are continuing the work of adapting to EU law and ensuring that any new tax measures they introduce are compatible with Community rules on business taxation. The partnership arrangements adopted by EU help these countries prepare for future accession. The Commission has drawn up a detailed strategy, including analysis and monitoring of changes to the prospective members' tax systems and administrations, and assistance with training for their officials. The EU is preparing the authorities of these future member states for the new responsibilities they will take on once they join by working with them on projects under the PHARE programme, involving tax officials in its *Fiscalis* programme, and organising joint activities between the administration.

There is also an agreement among most member states to discuss tax policy and the need for further coordination and harmonisation in tax policy, and notably company taxation. In order to start work the Commission has created two panels of experts the academic and business community. A list of obstacles has already been compiled and it is very important for pre-accession countries:

- compliance cost of 15 different tax systems;
- transfer pricing;
- group taxation(cross-border losses etc.);
- tax framework for reorganisation of companies;
- tax related labour costs(e.g. treatment of stock options and pensions);
- double tax treaties.

The new approach might be advisable to address unresolved issues and would also include a look into practically possible solutions to specific tax problems.

3. Instruments of Change

The links between tax policy and other areas of the EU policy are becoming clearer as European integration proceeds. To ensure that rules keep pace with social change within the interests of greater simplification, and to enable it in

the coming years to cope with new challenges, the EU is also introducing new tax policy instruments towards several objectives. By 2005 most of white paper's goals had been met:

1. Movement towards the harmonisation of corporate tax bases, that is the various national definitions of company income that is liable to tax:
 - the first step required to the EU to adopt international code of accounting practices, and to encourage companies to use this rather than national codes;
 - the second step required governments to make companies adopt the international code and to reduce and to harmonise the various tax exemptions that may cause the effective rate of taxation to differ from headline rate.
2. Ensuring that national tax systems are compatible and consistent with EU objectives, so that EMU becomes a reality.
3. A much tougher competition policy from the Commission, particularly on state aid, fighting fraud and dealing effectively with other irregularities.
4. Setting up a permanent forum for member states to exchange information on business taxes in particular and maintaining an active presence in international bodies (such as the OECD).
5. Establishing a dialogue with the public and business to inform them their rights in other EU countries.
6. A European Company Statute that makes cross-border mergers easier, by allowing firms to incorporate under EU law. Rates of capital gains tax applying to investments in small or young companies should converge on a low level of 10%. Enabling European industry to compete internationally, making it as cheap and quick to set up business in Europe as it is in the USA; aiming at creating a favourable tax environment for business in the Union.

But tax coordination should not stop with tackling harmful tax competition. To achieve balance in EU tax policy, the attention must now also be paid to the concerns of taxpayers, both individuals and companies.

Turning to definition of a strategy to tackle the main tax obstacles encountered by individuals and companies when they work or do business across borders. It is absolutely neither necessary nor realistic to define EU tax system. The aim is simply to make the national tax systems of the fifteen member states more compatible with each other, by using practical

measure that makes difference – not drastic changes. The only instruments of corporate tax policy are the 1990 directives, the arbitration convention and the code of conduct. So, the instruments should be used to reach the objectives, mentioned above are:

- Binding directives may be appropriate in certain cases.
- Infringement proceedings against uncooperative Member states should continue. But there is a need to draw up a wider range of instruments for different objectives. Citizens and enterprises can themselves turn to a Community judge in order to enforce the rights. But it is undesirable if citizens always have to go to the court in order to enforce their rights. And it cannot be satisfactory for Member States to see developments in the tax field being made solely by the Court rather than through the political and parliamentary process. Politicians have a clear responsibility in this area and it is time to act.
- In addition to using traditional instruments such as directives, to explore the use of other approaches to respond more quickly to the needs of the Single Market. The possibility of approaches that do not imply binding legislation, are so called “non legislative” approaches: in particular thinking of peer pressure, which is the basis of the Code of Conduct on business taxation, we could consider *recommendations, guidelines, multilateral agreements, and interpretative notices and statements of best practice and model agreements*, particularly in areas where there is a need to align national rules and practices with Treaty principles and case law. Such non legislative approaches should not be underestimated. For example, the non – binding OECD Model Double Taxation Convention and Commentary is the basis for bilateral and multilateral agreements in the tax field. As non legislative, these possible new approaches should be very firmly *based on the Treaty and the case law of the Court of Justice. The idea to develop a framework to ensure that the Treaty principles of non discrimination and non - double taxation are very effectively adhered to.*
- Community legislation should take the character of coordinating measures and would be limited to situations involving more than one Member State. The Commission has proposed to the IGC that QMV should be used for laws coordinating national taxation rules to remove anomalous effects or for the introduction of

minimum requirements in the certain areas of taxation. Small countries concerns that the Commission's proposed move to qualified majority voting in some tax fields would allow larger countries to dominate decision making. The Commission stresses the importance of ensuring that the decisions taken by qualified majority voting are genuinely representative of the between the different Member States. In addition to continuing the important fight against harmful tax competition, Qualified Majority Voting should apply now, to the removal of the main obstacles in the direct tax field encountered by individuals and companies when they engage in the cross – border activities.

- Also possible to turn on the use of so called reinforced cooperating between less than the 15 Member States provide, that this would not lead to the distortion of competition. However, this should not allow other Member States (which did not involved in such closer cooperation) to avoid their obligations under the Single Market. On the other hand, reinforced cooperation could not be allowed where non-participating Member States would obtain a clear economic advantage, e.g.: in the case of initiatives to remove tax distortions. There is a danger that, without agreed tax coordination, Member States may be forced towards a less than ideal type of tax harmonization, and loss of national tax sovereignty in favour of the markets.
- Globalization requires closer cooperation between public authorities. The elimination of tax obstacles has traditionally been achieved through bilateral tax treaties. But bilateral solutions cannot respond to the increasingly multinational nature of economic activities. Multilateral rather than national or bilateral solutions must be found with a global dimension. In the tax field, cooperation is required to prevent tax and ensure fair allocation of investment but without preventing enterprises from fully availing of the opportunities provided by globalization. Action against harmful tax competition should ideally be taken at a worldwide level, so as to protect the competitiveness of the EU vis-a-vis third countries. The European Commission and EU Member States are fully involved in OECD discussions on harmful tax competition. If a

satisfactory solution can be reached at the OECD this will minimize the risk of misallocation of investment.

- The key element is cooperation between tax authorities. The EU experience of the interface of the tax policy with the Single Market can provide guidance for the more global trade/tax policy interface. Whether the globalisation requires more fundamental reforms of the tax systems remains to be seen. The globalization process will not leave the current income allocation principles and transfer pricing transfer rules untouched.

The two panels of experts have been created under the Commission's mandate: to study effective corporate taxation rates in the Community; and remaining tax obstacles to cross border economic activity in the Internal market. On the basis of this study they will make a number of specific and pragmatic proposals on how the tax obstacles for companies operating in the internal market can be addressed.

We hope that, in the same spirit of pragmatism and cooperation, the EU countries will lend its support to the new policy and new use of instruments that have been outlined. Netherlands has an extensive network of tax treaties, a modern tax system, a highly efficient tax administration and a favorable location. Its imaginative, pragmatic and entrepreneurial approach to tax policy has been the cause of its great success in the attracting foreign investment during last century. Improving the functioning of the internal market through the elimination of tax barriers will, without a doubt, enhance the international competitiveness of the EU.

Conclusions

1. Impediments to smooth functioning of competitive markets for commodities, services and factors of production in the EU are still many. Differences among the corporate tax systems of the member states are one of the most important of these impediments and one of most difficult to alleviate.
2. At the moment, among the EU countries there are many differences in corporation tax. The most important of these concern the following: the scope of the tax – that is the liability to corporation tax; the basis of assessment – regulations and extent of exemptions, incentives, etc.; the tax rate; the system of taxation.

3. Today EU has chosen less complicated way towards the partial harmonization. In the long run, the members may have to adopt a closely integrated tax system, which they can reach by centrally coordinated action among the member states and by market process.
4. The link between tax policy and other areas of EU policy are becoming clearer as European integration proceeds. To ensure the new rules keeps pace with social change with the interest of greater simplification and ability to cope with coming challenges, the EU is introducing new tax policy instruments. Community legislations should take character of coordinating measures and would be limited to situation, involving more than one member state: 'non-legislative approaches', such as peer pressure of code, recommendations, guidelines, multilateral more than bilateral agreements, statements of best practice and model of agreements; infringement procedures against uncooperative states; adoption of qualified majority voting; cooperation between public authorities and business community, mutual assistance between tax authorities at EU and Global level; reinforced cooperation between member states.

Summary

At the moment, among the EU countries there are many differences in corporate tax. Partial harmonization is very important way for the better functioning European internal market. Taxation systems in the EU now face several challenges: taxation levels tend to be high; if private individuals and businesses are to able to work and operate freely, tax obstacles to such activity must be eliminated; with EMU, differences in national tax system are becoming increasingly evident; EU countries has a particular difficulty with Code of Conduct for business taxation; there is increasing globalization of economies; improvements in communication and transport, the development of e-commerce and above all the rise of internet, are creating new opportunities for business but also complex challenges for taxation.

To ensure that the new rules keeps pace with social change within the interest of greater simplification and ability to cope with a coming challenges, the EU is introducing new tax policy instruments. Community legislations should take character of coordinating measures and would be limited to situation involving more than one country; infringement procedures against uncooperative states; cooperation between public

authorities and business community; mutual assistance between tax authorities at EU and Global level. In the spirit of pragmatism and cooperation the EU countries could lend its support to the new corporate taxation and new use the instruments, which have been outlined.

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TAXES AS ENTREPRENEURSHIP AFFECTING FACTOR

Autore darbā izvērtē, kas jāuzlabo Latvijas nodokļu sistēmā, lai uzņēmēji neizvairītos maksāt nodokļus, bet būtu ieinteresēti sava uzņēmuma un visas valsts attīstībā. Latvijā uzņēmējdarbībai labvēlīgas vides radīšanai ir svarīgi apgūt ārvalstu pieredzi un to piemērot attiecībā uz apliekamo bāzi, nodokļu likmju lielumu, neapliekamo ienākumu minimumu, efektīvu atvieglojumu sistēmu, nodokļu aprēķināšanas un maksāšanas mehānisma vienkāršošanu, nodokļu administrēšanas pilnveidošanu.

No one country can exist without taxes that ensure revenues for it's functioning. The entrepreneurship support takes action using the fiscal policy. Such active and effective state policy is regulating the market economy both directly and indirectly. The direct regulation is implemented on the basis of the State Cash-Desk's direct target assignation solving the certain problems. The indirect regulation is implemented using the State Cash Desk's revenues, taxes, customs duties. Such a regulation determines moving toward the set target, but not grant its implementation.

Tasks and a role of the fiscal policy are related with ensuring of business activity and stability, effective consumption of resources, using the budget expenditures and taxes possibilities. The practical form of the fiscal policy is the state budget. The important implementation of the fiscal policy was started in 1993. The level of economical activities using the fiscal policy could be improved in a way of decreasing taxation rate and increasing the state expenditure, thus, increasing the total demand level in the economy. Using taxes the state is able indirectly influencing prices and production level, resources allocation and the state inhabitants' welfare level.

The author will analyze the taxes in the paper, how could be accelerated or hampered using the taxes entrepreneurship's development. The state tax system isn't a permanent one, it is improved and used for implementation of certain purposes. It is changed not only in countries with new, recently introduced taxation policy, but also in developed countries. The improvement of taxation system in developed countries is

determined by the state necessity to interfere into production relations' creation process and to specify social and economical borders of taxation. All the time takes action a searching process for possibilities how to decrease the state expenditure and needs on taxes revenues as well to improve the taxation system's effect. According to the foreign economists' opinion, all the countries have below listed taxation problems:

- The modern taxation systems are too complicated for taxpayers and their effective supervision. That makes the tax administration more expensive and effect the taxpayers to evade tax payments;
- The higher level of total taxes rates negatively influences economical decision-making process. The taxpayers have no stimulus working, they starts showing their interest concerning the illegal economy as well starts feeling difficulties creating the assets savings;
- Taxation allows an enterprise investing assets and correcting the balance sheet not on a basis of economical, but taxation courses. That negatively influences both capital investments and allocation of limited resources.

Enterprises taxation's reforms take actions in the following ways. *To abolish such tax discounts, which distort investment decisions.* Many taxation systems have a number of investment discounts (investment loans for taxes, regional discounts etc.) and practically all the systems have machinery and equipment's depreciation for taxation needs, which exceeds that one for economical needs. *To decrease taxes rates.* Extending the taxation bases we could achieve the lower taxes rates. Taxation liberalization, which includes introduction of lower rates, leads to loss of the state budget's revenues. That is really possible in the market economy, but only in short-term prospects. The long-term consequences have another trends – the budget incomes are increasing, because it ensures the increase of production values and that in its turn increasing inhabitants' incomes. *To decrease profit division discrimination.* Sometimes it is allowed to deduct the share of appropriated dividends from the taxable income, to give credits for shareholders or to introduce the separated rates system. As for taxes (direct and indirect) structure, within taxation reform a state introduces or exceeds value-added tax's (VAT) role. VAT comparing with the tax on income is more neutral and because of that, according to the opinion, it

gives more stimulus working and making savings as well it decreases taxpayers' dissatisfaction and possibilities to avoid taxation. At the same time VAT makes taxes administration more expensive and that could lead to increase of the taxation systems' regression.

The above listed taxation problems is common for Latvia as well. However the reform can't be implemented in such ways. The investment discount was abolished, but since 2001 it was introduced again (for bigger investment projects). Such reforms are aimed to fair taxation, but it couldn't be achieved so easily in the real life. The role of taxes in Latvian total budget's revenues is clear from Table 1.

Characterizing Latvian taxation system, it must be noted, that taxes load cannot be regarded as small ones, it compiles 36.3% of GDP. Comparing the revenues from direct and indirect taxes, we can conclude, that greater part in creation of the total budget's revenues belongs to the direct taxes, which compile ~22% of GDP, but the indirect taxes compile only 14% of GDP. The greatest share of the indirect taxes belongs to VAT (8.8% of GDP), but of the direct taxes to social insurance payments and tax on physical persons' income (that information isn't presented in the table 1). Entrepreneurship regulation most directly is influenced by the tax on enterprise income and the tax on real estate, which must be paid from an enterprise's profit, but in the total budget's tax revenues they compile only 3% of GDP (15.4% of the direct taxes' revenues).

Table 1

A structure of Latvian total budget's tax revenues, % of GDP [2]

	1997	1998	1999	2000
Total tax revenues	34.3	36.3	36.3	36.3
1. Indirect taxes, incl.	13.1	14.1	13.3	14.0
VAT	8.8	8.8	8.6	8.8
2. Direct taxes, incl.	20.9	21.9	22.7	22.1
2.1. Tax on enterprise's income	2.4	2.6	2.5	2.3
2.2. Tax on real estate	1.1	1.3	1.3	1.1

Let's see what kind of changes appeared in legislative norms on taxes listed in table 1 in 1990s. The new taxation system in Latvia was introduced in 1991, setting such the taxation policy's objectives:

- to create the taxation system that support an effective consumption of resources;

- to improve the tax administration and exclude avoiding from tax payments.

The taxation reform was started in 1995 that abolished a number of tax discounts, joined taxes rates and gave the new clearer definition of the tax basis. VAT instead of turnover tax was introduced; as well the VAT standard rate 18% was set. The VAT rate was 12% until 1993. The VAT rate increase took action at the same time with the decrease of the tax rate on enterprise's income. However, we should take in account that VAT hampers the business circulation more than the tax on enterprise's income. VAT is compatible with the EC 6th Directive main requirements (Council Directive 77/388/EEC). The last changes (in 2000) in VAT legislative norms adjust the taxation on cargo transport's services; determine an opportunity to deduct prior-tax on the goods delivery according to the tax receipts that are arrived, but not yet paid; determine VAT paying-back to foreign legal persons – to international auto transport's delivers for in Latvia bought fuel; supplement the list of non-taxable transactions. VAT influences the level of the selling prices, adjusting the demand on a certain product and the total demand. Increasing of internal demand positively influenced the revenues, higher level of excise tax's rate, but negatively the illegal economy, discounts for special economic zones (SEZ) and free ports. Latvia has 2 SEZ and 2 free ports.

The common rate (25%) was introduced both for the tax on enterprise's income and the tax on physical persons' income. The changes occurred in 1990s favorably influenced the entrepreneurship's development. Supporting the capital attraction to the entrepreneurship, the taxation discounts was introduced for small enterprises (it was used by 12.7 thousands of small enterprises and the discount's amount compiled 3.4 millions Lats in 1998, but in 1999 it was used by 10.6 thousands of small enterprises and the amount compiled 3.2 millions LVL) and for agricultural enterprises (the discount compiled 543.7 thousands Lats in 1998 and 344.23 thousand LVL in 1999). The discounts on income gained in a SEZ territory are set also for enterprises working in Rezekne SEZ and Liepaja SEZ. The discount compiles 80% of the calculated tax amount (the discount's amount for Liepaja SEZ's enterprises compiled 379.0 thousands Lats in 1999; the discount was introduces also for a one enterprise in Rezekne SEZ). According to the changes in the law on enterprise's income tax in 2001, 40% discount is granted for investments within the investments projects approved by the government, if during 3 years was invested more than 10 millions LVL. 10% tax on incomes from stocks realization in Latvia for non-residents was

abolished. 2% tax on income from Latvian real estate's realization for non-residents appeared. The objective of the discount for big amounts of investments is to support investors who are entering with new technologies to develop new and important projects. The discounts are related to the total investments into enterprise's machineries and equipments, if they take action in business. The negative aspect – the discount is introduced only for big enterprises and that increasing competition ability's inequality between the small and big enterprises. Proceeding from the fact that 99% of Latvian enterprises are SME and they give a half of GDP, the tax discount for investments must be granted also for SME. The revenue of the tax on enterprise's income depends on profitability of production resources, business effect and situation on a market, inflation. The increase of the enterprise income tax's revenue, is positively influenced by improving of taxes administration, increasing of profit and negatively by debts capitalization, illegal economy, discounts, especially for SEZ and specially supported territories.

The aim of the changes in the law on real estate is adjust the taxable basis, abolishing different interpretation of the norms. For the business activities built or reconstructed houses during a year after entering into exploitation are not liable on the tax since 2001. Only land and houses, but not non-house buildings will be liable on the tax since 2002.

Introducing changes in tax legislation, the role of tax administration is increasing, because introduction of the tax discount is complicating that. A function principal while working with the taxpayers before tax paying must be introduced within the tax administrates in a way of presenting information and explaining. The tax administrator special attention must pay on educating taxpayers, supplying information, ensuring more convenient tax paying process and easier reports working out process. The state revenue service must put stress on improving of staff's skills to improve the work quality.

Latvia takes such actions as getting-back tax debts, improving goods registration and customs documents' processing and import controlling procedure, reorganizing the state revenue service (SRS) while fighting against evading taxation. In cooperation with the World Bank the SRS modernization project for the period 1998-2003 was worked out. The project will help ensuring more thorough administration controlling and as result volunteer accept of tax legislation from the taxpayers' greater shear side. The common taxpayers consulting service in the country was established.

Creation of favorable environment for entrepreneurship in Latvia is conditioned by importance of international experience studying and its implementation with regard to kinds of taxes, taxable basis, tax rates size, non-taxable share of income, effective reductions system, simplification of tax calculation and payment mechanism, perfection of tax administrator. Now the author will stress on the foreign experience and its role while perfecting the taxation system and the system's administration in Latvia.

Accepting the foreign experience while organizing own taxation system, we should take into consideration that each country has its own special features, developing level and solving problems. It's incorrect just transferring one taxation system to another one and then comparing them. It's incorrect comparing the tax rates and making conclusions that the lower rates are stimulating economical development, but the higher rates are hampering business activities and investments.

Each country has specific parameters both in business and monetary fields, such as:

- countries difference concerning GDP per capita;
- different taxes' ratio;
- price ratio, purchasing power parity, inflation level;
- national currency ratio against free converting currencies that influences goods exports' price level;
- policy that includes opinion on tactics introduction etc.

For a comparison, there are presented information on the taxes rates in the world countries in table 2. The rates on the enterprise income tax fluctuate from 25% in Latvia to 53.2% in Italy. There isn't showed a non-taxable minimum that must be used while calculating the tax (there isn't the non-taxable minimum in Latvia). The non-taxable minimum is different, for example, in the UK it compiles 300 thousands pounds. It is lower in another countries.

The specific tax discount is depreciation deduction. The main aim of the depreciation policy is ensuring the necessary assets fund using regular payments to ensure renewal or change of eliminated long-term assets. The norms of the depreciation deductions are set by the taxation legislation. The norms must ensure the full change of long-term assets, when their exploitation time is expired due to moral and physical wear. In practice, introduction of different accelerated depreciation methods allows an enterprise returning costs before the assets exploitation expiration date and in such a way hiding from taxation the great share of profit. There are

different lists of assets for calculation of the accelerated depreciation in different countries. For example, in the UK the depreciation is calculated for production objects and buildings; machineries and equipments; petroleum origins; buildings and machineries exploited in agriculture and forestry; patents and others rights. The depreciation can be calculated also for author's rights, trade marks, licenses etc. non-material assets in the USA. Land, an enterprise non-material value and others assets that have unlimited exploitation time and considered as non-wearing are not liable to the depreciation. For example, there is allowed depreciating an enterprise non-material value and rights with unlimited exploitation during 7-10 years according to the proportional rates in Denmark. Depreciation of an enterprise's non-material value is allowed also in Sweden and Italy. Within the machineries and equipment group for depreciation's calculations isn't liable land, art items, ancient items, jewellery and others machineries and equipments that haven't moral and physical wear in Latvia. From the non-material investments only concession, patents, licenses, trade marks, research and development costs could be wrote-out. This discount allows enterprises decreasing tax payments during the first existence years, when machineries and equipments are new.

Table 2

Taxes rates in the world countries in 1990s [4]

Country	Enterprise income tax, %	VAT, %		Tax on real estate, %
		Lowest rate	Standard rate	
The UK	33	0	17.5	10.43
Austria	34	10	20	0.73
Belgium	39	0	21	0.02
Denmark	34	-	25	1.85
France	36.6	2.1	20.6	2.17
Greece	35	4	18	0.22
Italy	53.2	4	19	-
Japan	42	0	5	5.7
Latvia	25	0	18	1.5
Luxemburg	33	3	15	0.48
Netherlands	35	6	17.5	1.81
Norway	28	-	23	0.44
Portugal	36.8	5	17	-
Spain	35	4	16	0.21
Germany	45	7	15	1.06

Apart from the depreciation deductions to the costs, deductions' writing-out to reserves and funds exists as well: for questionable debtors' debts, expectable losses etc. deductions (15-25 types).

From the calculated tax amount also deduct loans: for abroad paid taxes; investments; employment stimulation etc. Also exist discounts for enterprises of certain branches. For example, there are decreased rates for enterprises from processing branches in Canada and Belgium. In their turn the UK and Norway for incomes from oil and gas mining set higher rates (+35% the special tax rate).

Some countries have important discounts for small enterprises. Some countries suppose that investments motivations are remaining while existing additional rates on capital increase (Austria, UK, Germany etc.). Another countries have tax on appropriated dividends (Austria, Luxemburg, Germany etc.). Interesting situation exists in a number of countries (Belgium, Italy, Switzerland etc.) where the taxable profit in a reporting year can be decreased by an amount of profit fixed last 5-10 or even more years before (such an approach exists in Latvia too). Profit to be invested is not liable to income tax in a number of countries. Also some countries have invested subsidies, for example, Israel.

VAT mainly has two rates: the lowest one for certain groups of products and the standard one. The lowest rate is 4-7%, but the standard one from 5% in Japan up to 25% in Denmark. Latvia has only the standard rate 18% and legislators are not certain about necessity introducing the lower one. No doubt, that sets new responsibilities for tax administer and could increase its maintenance costs.

The tax on real estate should be paid according to the land-survey cost of real estate and its rate is low. The tax has non-taxable minimum and discounts as well. Introducing the tax on real estate the non-taxable minimum was abolished (it was 1 500 LVL before) since 2000 in Latvia. The change of the law positively influenced big enterprises, because the tax rate for them decreased (1.5% instead of 0.5-4% before). However, the change isn't favorable for SME.

Despite the differences in national taxation systems, they have common principles:

- tax on physical and legal persons' income;
- taxation system stimulates investments;
- taxes support small entrepreneurship.

Latvia, taking in account material possibilities, must follow these principles while establishing and developing its taxation system.

An important role in improvement of the taxation system belongs to the tax administrator. Because of that let's analyze a tax administrator's activities in different countries. Tax inspections are organized according to the territorial principle in developed countries. For example, the UK has 600 tax regions that administratively subordinated to 15 tax districts' controllers. The tax inspector has such functions: sending of tax declarations; working-out of tax check on basis of declaration filled in; the past tax calculation if a declaration isn't handed in on time or possessed information is incompatible with presented one in the declaration; solving of conflict situation; solving of conflict situation in special committees if it isn't solved in agreement.

The state revenue service (SRS) consists of the central bureau, 7 regional and 58 district tax offices. Regional and district SRS are controlling tax payments on time, tax declarations' filling in order, tax debts payments, overpaid tax return, fines collecting from taxpayers. SRS is responsible on observation of taxation legislation, on preparation of information concerning observation of federal taxation legislation as well on the control.

France tax administrator comparing with other countries has a high level of tax service organization and adjusted control on inhabitants and enterprises taxes' payments on the all stages of the system. The central tax office is responsible on implementation of the state taxation policy and on control of tax revenue. An important place in the Central tax office belongs to *The taxable basis calculation service*. Its functions are the following: calculating of taxable basis for direct taxes, turnover tax and different registration duties; collecting of documents on each taxpayer, contacts establishing with taxpayers. *Tax collection service* must summarize reports handed in and register the taxes paid. One of the central tax office's functions is to explain taxation legislation and essence of the tax system in the state. The office organizes clients' consultation, supervises over simplification of reporting process and notices on possible breaches as well takes care of staff's qualification improvement.

An enterprise's investment into decreasing of taxes payments is organization of tax planning work. Tax planning is planning of business and investment activities with a mission to minimize taxes payments. Each business aim could be achieved in different ways. Depending on a chosen way, the amount of tax payments and even taxes types could be

different. Taking into consideration the fact that taxes payments are one of the costs types, the tax planning is a part of decision optimization strategy.

The necessity of tax planning is set in taxation legislation that has different taxation regimes depending on situation and allows exploitation of different methods while calculating taxes and offers different discounts for taxpayers. Studying and using situations occurred, planning the next tax payments, taxpayers take such actions that are expected by the government. A level of effect from the tax planning is determined as difference between the taxes payments economized and the costs that appeared while making changes in an the enterprise.

The necessity of tax planning depends also on the level of the tax burden in a state. If the tax burden doesn't exceed 10-15% of GDP (or total net income in a certain enterprise), than the tax planning necessity is minimal, but for small enterprises it isn't advisable spending assets for such the aims. If the tax burden is 20-35%, than such a work in SME must be carried out with a special officer, but in big enterprises with the officers' group who will control an enterprise taxes' payments. In countries, where tax revenue compiles 40-50% of GDP or even more, the taxes planning become an important part of the finance planning work in all enterprises. The control over the taxation issues should be carried out with the highest level of a management board. No one decision on important structural changes, setting new technologies, new investments can ignore the taxation issue.

Depending on the aim set, different methods could be used for the tax planning. The easiest one is a *current finance control* over the taxes planning. The control is implemented periodically, working out forecasts on payments' fluctuations and observing if the forecasts correspond to the fact taxes payments in the period. Provided the important fluctuations from the forecasted taxes, than the courses of the fluctuations are analyzed and solution ways are offered. Implementing these methods as basis they use taxation normative documents, discussions with a tax inspection, literature on taxes.

According to the complication level, the next method is a *prior taxation expertise* of new projects and important management decision. Realizing the method, an enterprise must have informatively analytical data base on taxes: not only with laws' and instructions texts, but also with lawyers comments, materials about discussions of taxation issues in

legislation giving institutions, court decisions on taxation conflicts, information on taxes in mass media and drafts of laws on taxes.

Quite complicated is a *comparative analysis method* for new projects and ways of enterprise activities. According to the method different ways of enterprise activities are compared to specify their "taxation effect": for short-term period (using the existing taxes rates) and for long-term period (using the expected law on a tax and different ways of the rates fluctuations).

The taxation issues are important part of an enterprise finance planning system for long time in many countries. Incorrect or not full registration of tax factors in higher taxes rates conditions could lead to unpleasant financial consequences or even to the enterprise insolvency. At the same time, correct exploitation of discounts set by the taxation legislation could ensure not only preservation of financial savings, but also an opportunity financing extended production and new investments on the taxes economizing account.

Introducing the taxes planning, we can't focus only to the rates level, because they haven't important role. The rates could be decreased by a number of discounts. Practically all the developed countries have important taxes' discounts (or even subsidies and compensations) for export, investments, creation of new production possibilities and new working places, enterprises set up in depressive regions etc. Thus, as for real production and commercial activities, the taxation systems of developed countries are compatible with "taxation oasis" Taking into consideration the fact that in real business the important part pay infrastructure's level, possibility buying resources, distance to selling markets, staff's qualification – developed countries are in better position than "taxation oasis"

Latvia, proceeding from the tax burden, belongs to the group of those countries, where it is necessary supervising taxation systems. So far as changes in Latvian tax law take actions quite often, the taxation planning should pay more important role. That is legal opportunity how to decrease an amount of taxes paid into the budget, although as an initiator must be an enterprise.

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Summary

Tasks and role of the fiscal policy are related with ensuring of business activities and stability, effective consumption of resources, using the budget expenditures and taxes possibilities. The important implementation of the fiscal policy in Latvian was started in 1993. Using taxes the state is able indirectly influence prices and production level, resources allocation and the state inhabitants' welfare level.

Characterizing Latvian taxation system, it must be noted, that taxes load is not from the smaller ones, it compiles 36.3% of GDP. That greater part in creation of the total budget's revenues belongs to the direct taxes, which compile ~22% of GDP, but the indirect taxes compile only 14% of GDP. Entrepreneurship regulation most directly is influenced by the tax on enterprise income and the tax on real estate, which must be paid from an enterprise's profit, but in the total budget's tax revenues they compile only 3% of GDP.

The common rate (25%) was introduced both for the tax on enterprise's income and the tax on physical persons' income. Supporting the capital attraction to the entrepreneurship, the taxation discounts was introduced for small enterprises (it was used by 12.7 thousands of small enterprises and the discount's amount compiled 3.4 millions LVL in 1998, but in 1999 it was used by 10.6 thousands of small enterprises and the amount compiled 3.2 millions LVL) and for agricultural enterprises (the discount compiled 543.7 thousands LVL in 1998 and 344.23 thousand LVL in 1999). The discounts on income gained in a SEZ territory are set also for enterprises working in Rezekne SEZ and Liepaja SEZ. The discount compiles 80% of the calculated tax amount (the discount' amount for Liepaja SEZ's enterprises compiled 379.0 thousands LVL in 1999; the discount was introduced also for a one enterprise in Rezekne SEZ). According to the changes in the law on enterprise's income tax in 2001, 40% discount is granted for investments within the investments projects approved by the government. The discounts are related to the total investments into enterprise's machineries and equipments, if they take action in business. The negative aspect – the discount is introduced only for big enterprises and that increasing competition ability's

inequality between the small and big enterprises. Proceeding from the fact that 99% of Latvian enterprises are SME and they give a half of GDP, the tax discount for investments must be granted also for SME.

Introducing the tax on real estate the non-taxable minimum was abolished (it was 1 500 LVL before) since 2000 in Latvia. The change of the law positively influenced big enterprises, because the tax rate for them decreased (1.5% instead of 0.5-4% before). However, the change isn't favorable for SME.

A function principal while working with the taxpayers before tax paying must be introduced within the tax administrates in a way of presenting information and explaining. The state revenue service must put stress on improving of staff's skills to improve the work quality.

Latvia, proceeding from the tax burden, belongs to the group of those countries, where it is necessary supervising taxation systems. So far as changes in Latvian tax law take actions quite often, the taxation planning should pay more important role. That is legal opportunity how to decrease an amount of taxes paid into the budget, although as an initiator must be an enterprise.

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FINANCIAL ANALYSIS: FACTORS OF BUSINESS SUCCESS AND WEALTH CREATION

Rakstā tiek izskatīta finansu analīzes loma, kas tiek noteikta kā galvenais faktors biznesa veicināšanā un labklājības radīšanā. Bez tam šī raksta mērķis ir parādīt, ka firmu attīstībā un izaugsmē ļoti liela nozīme ir investīcijām un biznesa plāniem, kā arī pašas firmas darbība nav mazsvarīgs rādītājs.

I The Research Problem Area

Modern finance has defined the wealth maximization as the main goal of the firm. Wealth creation in general is a multi-aspect problem. The purpose of this study is to investigate the wealth creation to firm owners through (1) investment and business plans, and (2) value creation from firms' operation. Therefore, the authors have set up a research question: what determines the success of business plans and wealth creation of the owners?

In dept qualitative analysis in this field will be held in two levels, covering the analysis of business plans (existing and future) from one side and the company as a whole from the other. Finally, the authors will mainly focus to the changes of economic input factors influencing the final result of the implemented business plans. Therefore, one can treat the financial planning as a dynamic process, consisting from the recalculation of these changes of factors in business plans and also from the formation of *pro forma* income statement, balance sheet and cash flow statement.

II Adjusted Financial Analysis Methods for Transition Economy

Estonian companies are still acting within the condition of transition economy. The following analysis is based on the viewpoint that, practically all companies in Estonia have been formed after the collapse of Soviet Union, i.e. during the transition period. Therefore, as most of our companies have already a 8-10 years long history, it is possible to make some generalizations about their actions.

a) Creating link between the project-based analysis and the company

Value creation is one of the utmost importances in every aspect of company's action. One of the important ways to accomplish this is to find and implement successful investment and business projects. From practice, one can find that, quite soon after the implementation of business plans, when the company already operates with full capacity, financial analysts usually will forget about the initial assumptions made about the project(s) and concentrate only on the analysis of the company as a whole. From our point of view, this is not the right way of action for the company who should be devoted to value creation to its' shareholders. Therefore, the authors have set up a twofold approach to the operating efficiency analysis: (1) the formation and implementation of projects (business plans) and (2) the analysis and correction of these implemented projects. Table 1 above will present the methodology of company's operating efficiency analysis with the focus on the business project.

Table 1

Formation, implementation and correction of business projects from the aspects of efficiency analysis

	Formation	Implementation	Correction
Organizing	Creation of project manager and project team <ul style="list-style-type: none"> Supporting the generator of ideas Formatting the plan of action Formatting the ideas in business plans 	Choosing the project leader and the creation of the implementation team <ul style="list-style-type: none"> Organizing additional research Business plan adjusting and implementation 	Identifying the changes and counting with them <ul style="list-style-type: none"> Within the corporation, organization Within the economy Within the business plan
Financing	Venture capital formation and utilization <ul style="list-style-type: none"> Governmental support Grants Going-concern equity Bank loans 	Acquiring money from financial and capital markets <ul style="list-style-type: none"> Increasing equity (stock issues) Increasing debt (bond issues, long-term bank loans) Lease financing 	Financing innovation supplements <ul style="list-style-type: none"> Equity Grants Loans
Controlling	Efficiency and profitability analysis <ul style="list-style-type: none"> Competitions for the best projects The choice of mutually accepted projects Analysis of multi-variant cash flows and NPVs 	Continuous monitoring of projected results <ul style="list-style-type: none"> IRR, MIRR, PI and NPV Net income On the corporation basis (ROE, ROA etc.) Output basis, without market price 	Additional feasibility calculations, resulting from <ul style="list-style-type: none"> Changes within the company Changes in the economy Social and non-marketable results

Figure 1 above shows the link between project-based analysis and the actions necessary to fulfill the goal of value creation.

b) Study methodology

Due to our experiences, we have found that for Estonian companies, there are two kinds of suitable methods for their analysis of success. These are:

- 1) Block analysis (see Figure 1) and
- 2) SWOT analysis (see Table 2).

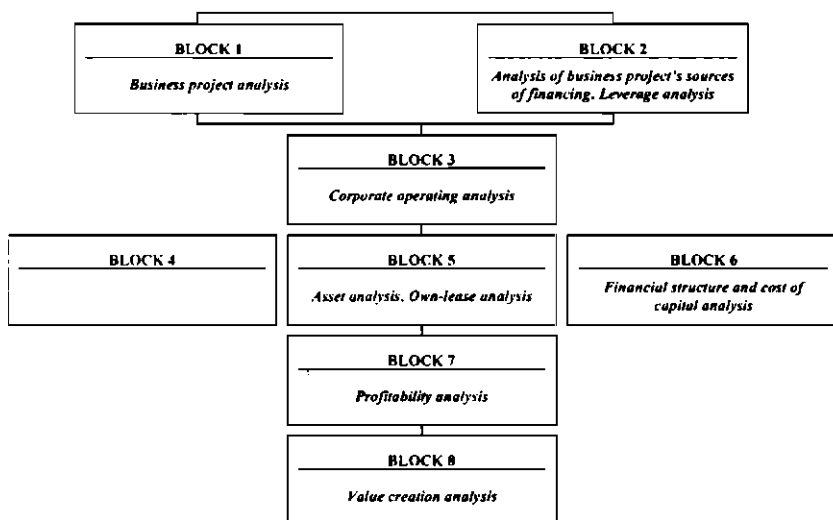


Figure 1. Link between the project-based analysis and corporation integral analysis.

There is one important factor in investment project analysis. Namely, the investment decision (block 1) has to be holding separate from its financing decision (block 2). One can say that, block 1 in figure 1, which embraces the business project analysis, is connected with the formation of asset structure in companies' balance sheet. In block 2 on the other hand, the analyst is dealing with the financing decision, which has the direct link to the capital structure formation. Thereafter, the analysis of impact of the business project to the whole company starts. The main goal here should be the identification of the influence of business project to the companies' value creation ability. SWOT analysis makes it possible to generalize

verbally the strengths, weaknesses, threats and opportunities of corporation, based on numerical results (see Table 2).

Table 2

Using SWOT Analysis in Corporate Finance

Strengths	Weaknesses
<ul style="list-style-type: none"> ▪ optimal level of assets, liabilities and owners equity ▪ balance between firms growth and sources of finance ▪ optimal cost of capital ▪ optimal capital budget ▪ reasonable strategy for working capital management (aggressive, moderate, conservative) ▪ proper use of operating and financial leverage ▪ reasonable cash conversion cycle ▪ optimal level of accounts receivables and inventories ▪ positive free cash-flow ▪ constant increase in company's value ▪ other strengths 	<ul style="list-style-type: none"> ▪ irregularities in sales levels (high market share volatility; lack of long-term sales contracts) ▪ current business idea has no long-term perspectives ▪ lack of alternative projects ▪ unreasonably high cost of capital ▪ excess assets ▪ lack of working capital management strategy ▪ high level of accounts receivable ▪ very conservative use of financial leverage ▪ negative cash conversion cycle ▪ negative free cash-flow ▪ decrease in company's value ▪ other weaknesses
Opportunities	Threats
<ul style="list-style-type: none"> ▪ implementing new innovative projects ▪ recruit more experienced financial staff ▪ increasing accounts receivable turnover; assuring sustainable growth ▪ lowering the cost of capital by using financial leverage more extensively ▪ using aggressive working capital management (synchronizing cash inflows and outflows) ▪ start financing innovative development projects ▪ merge with or acquire other company's ▪ increase intellectual capital ▪ other opportunities 	<ul style="list-style-type: none"> ▪ no new innovative project could be found when current projects come to an end ▪ irreversible insolvency; arising a situation in which an enterprise is liable to go bankrupt ▪ relationships with banks are worsening ▪ competitors are developing faster due to better financing opportunities ▪ bad investments in recent years ▪ no merger opportunities ▪ key employees leave the company ▪ the value of company is only equal to it's assets liquidation value ▪ economic slowdown; negative impact of economic cycle ▪ other threats

Table 2 summarizes the research result for SWOT analysis, based on the sample of 30 small and medium-sized enterprises in Estonia. Firstly, we drafted a middle-sized firm with ideal financial metrics. Assets and liabilities size was optimized, balance between sales growth and additional funds needed was established. Cost of capital was minimized

according to future capital budgets and reasonable strategy for working capital management was determined.

We came to the following conclusions. First management did not perceive the strengths concealed in financial management. The problem was that, management couldn't formulate the main financial problems. Secondly, the lack of financial staff or the lack of directions from management made it impossible to achieve the strengths presented in Table 2.

Next, we studied development perspectives, looking at the existence of innovative projects and their applications. Also we considered merger and acquisition perspectives and possibilities to increase intellectual capital. One interesting investigation was that, every firm had development perspectives. Not using these was considered as weakness (see Table 2). It is to be emphasized that many firms had built their business on projects that neither has long-term perspectives nor are they innovatory. Capital sources used by firms were relatively expensive, which leads to decrease in firm value.

Weaknesses can be removed by goal-orientated activities from top management. We concluded that the role of top management in directing finance department staff is not very strong.

Threats come directly from firm's weaknesses. Main threat is that when current project comes to an end, no new innovative project can be initiated. If competitors develop faster and no merger or acquisition possibilities exist then the company may have to be liquidated in conditions when the value of the company is only equal to the liquidation value of its assets. We concluded that there are many more threats to the company than the management admits.

III Implementation of Study Methods

a) Assumptions of the Acceptance of Business Projects

First, business project in operation must assure stable cash flows (planned cash-based revenue plus depreciation) to the company, from which depends also the profitability of the project itself during the ongoing years. These cash flows create the base of companies' operations and the possibility to break them off may lead the company to bankruptcy.

Second, cash flows from the business project are discounted with risk-adjusted discount rates to the present value. In normal situations

companies are using their cost of capital as discount rate. Therefore the right calculation of the cost of capital has the most critical importance, but the change of it does not always depend on the company itself. One possible example could be the decrease of tax rate or even its abolition, which increases the level of cost of capital.

Third, accepting investment projects, we have always taken into account reserves, which will cover our unexpected costs. Those main rules we accept in every case of the project analyzing process, but the truth is that every time there are certain kinds of economic conditions, which we are following. During the project analysing process in practice, one might follow the formation of multi-variance business plans, which take into account also different kinds of economic scenarios (e.g. strong, normal, stagnation, reversion). At the same time, we have to be realistic and try to understand that the data what we will get from the employment of these multi-variance business plans might turn to be very hard to interpret.

Table 3

Relations between projects' internal rate of return (IRR), cost of capital (WACC) and companies' profit margin

	IRR	WACC
Assumptions	<ul style="list-style-type: none"> • Stable cash flows • Stable sales volume • Constant level of risk, discount rate • Planned reserves 	<ul style="list-style-type: none"> • Cost of capital (loan, equity) • Targeted capital structure • Level of financial leverage • Dividend payout ratio
Changes	Changes in: <ul style="list-style-type: none"> • Sales' capacity and market share • Cost of production inputs • Prices of goods and services • Amount of inventory (with accounts receivable) • Risks of income/earnings 	Changes in: <ul style="list-style-type: none"> • Companies' operating business (the choice of working capital policy) • Cost of debt • Cost and risk level of equity • Financial leverage • Reinvestment options
Results	<ul style="list-style-type: none"> • Change in the level of cost of capital influences companies' profit margin (deviation from the planned level) • Changes in sales volume influence companies' solvency, level of inventory and profitability • Changes in risk level (discount rate) are influencing present value of net cash flows (deviation from the planned level of NPV) • Changes in cost of production inputs influence companies' solvency and profitability • Need to change the policy of working capital • Need to adjust current business project 	

Due to previously said, we can conclude that business project is acceptable only on certain level of cost of capital, where the condition $IRR > WACC$ holds. As the weighted average cost of capital consists of different kind of sources of capital (long-run loans, preferred and common stock), it is important to hold stable shares of these capital sources in our capital structure. Among other things this means stable debt-to-assets and debt-to-equity ratio, targeted dividend payout ratio etc.). In general we must to have optimal capital structure, where the value of the company (and also the value of common stock) is maximized. If we are not following the optimal capital structure of the firm, the value of it will change and usually downsize. Table 3 illustrates the internal link between IRR, WACC and company's profit margin as one of the main profitability measures.

The need for the constant recalculation of the changes of factors in business plans stems from the still unstable economic environment in Estonia.

b) The Difficulty of the Analysis of Changes during the Project Life

The most difficult problem is the preservation of planned sales volume and market share in the condition of competition. The decrease of sales volume under the break-even point may imply the loss of the business project and there will be no meaning to continue the project's implementation. The possible solution here may be innovation with the main attention to product development, which allows to keep pace with competition and even to increase the price of production unit. From one hand we must watch closely the inflation and the price increases of production input units due to it. But on the other hand if we do not follow the inflationary factors of the economy we may lose the market, therefore increase the inventory, accounts receivable, the risk of liquidity and default risk, which lead to profitability of the company and increases the possibility of bankruptcy.

As the project is mainly covered with long-term capital, the company itself produces and withdraws short-term capital (trade credit, short-term bank loans) during its everyday life. Changes of the economy cause the change in cost of capital of all sources of capital and therefore the company has to develop suitable management policy and strategy of its working capital (relaxed, moderate and restrict).

Bigger changes imply from the change of cost of debt, especially bank loan, because besides the nominal interest rate there is also effective interest rate and the level of the latter depends on the loan conditions that

stand in the loan contract (compensation balance, interest prepayment, charges, loan amortization schedule). But the problem is that the loan contract is not a public document, therefore we do not know the exact cost of capital in Estonian companies.

The cost of equity and the risk of project are tightly bound with each other. Required rate of return of shareholders is currently about 14 per cent in Estonia and it is very easy to control the fulfillment of their required rate by the company. Approximate result can be given by effective return on equity (ROE), which in our case must be around 14 per cent.

To the company with very low level of return on equity, nobody wants to invest in and reinvestment possibilities will also narrow, because the owners may want to take the profit out in full amount (e.g. by dividends) to find another investment opportunity or project to invest that will satisfy their required rate of return. This causes in turn the increase of risk level, also increase in cost of debt and finally in weighted average cost of capital.

The circumstances, which we are not able to control can very easily cause the situation, where $IRR < WACC$. We can also notice that unfavourable changes are reflected in ratio analysis at first, but the reason for changes we can still find only through project-based analysis.

c) Changing the Project After Identified Results

The most common need we face is to change the business project in process. Usually, it is important to find the right way to make the project more efficient and to innovate it, which should make the project to create additional cash flows and to decrease the riskiness of the project, at the same time saving already achieved market share (stable sales volume).

Here, in this case, the efficient method may be to change the policy (or strategy) of working capital management. For example, we can implement restricted current assets investment policy (the holdings of cash, securities, inventories and receivables are minimized and sales are relatively small) instead of relaxed policy (relatively large amounts of inventory with liberal credit policy and large net sales). Due to this, the general risk level of the company, especially liquidity risk, decreases, the value of company increases and the decrease of discount rate (cost of capital) increases net present value of future cash flows of the company. Later, after quick improvement of general economic conditions, we can re-establish relaxed working capital management policy.

The market value of the company does not arise from financial capital and its employment only, but very often the most important part is intellectual capital (human recourse and structural capital) instead. Therefore the most effective investments may be directed to the training and development of employees, which finds the output in higher quality of production. This, on the other hand, allows moderately increase the selling price of production unit and eliminate the unfavourable results due to the increase of production input prices. At the same time, it can lead also to the increase of the market share, which gives additional volume of net sales.

d) The analysis of return on equity

The authors consider two methods for return on equity (ROE) analysis. These are complex analysis and Du Point component analysis.

Complex analysis considers all connections between financial figures. We used four figures (profit, sales, equity and assets), so the total number of ratios to find was $4 \times 4 - 4 = 12$ ratios. Although every ratio gives some information about the sample, it is rational to determine first on what kind of ratios to focus on. Table 4 shows the ratios we considered being of importance.

Table 4

Complex Analysis of ROE Components

	Net Income	Sales	Equity	Assets
Net Income	1	xxx	xxx	xxx
Sales	Profit Margin	1	xxx	xxx
Equity	ROE	xxx	1	Equity Multiplier
Assets	ROA	Assets Turnover	xxx	1

With xxx on table 2 have been marked the ratios, what the authors didn't consider to be important in this study, although they also may provide useful information.

Analysis of ROE components was introduced by CFO of Du Pont corporation at the beginning of the 20th century. This model follows the formation of ROE by three components: profit margin (operating efficiency), assets turnover (asset use efficiency) and equity multiplier (financial leverage).

$$ROE = \frac{NI}{S} \times \frac{S}{A} \times \frac{A}{E} \quad (\text{Fig. 1})$$

where NI – net income,
 S – net sales,
 A – total assets,
 E – owner's equity.

Complex analysis and ROE component analysis enable to bring out numerical indicators. There are three possibilities to increase ROE. The first possibility is to increase profit margin (NI/S). In case of competing enterprises usually the only way to increase profits is to find ways to cut costs. It is also possible to add some special value to the product so it becomes possible to ask higher price. The second possibility is to increase the efficiency of assets use. This can be done with getting rid of excess assets in balance sheet. The third possibility is to increase equity multiplier by using more debt financing. The latter will hold as long as ROA will stay above the company's cost of debt.

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Summary

The authors found the implementation of project-based analysis especially suitable for Estonian, mainly small- and medium-sized, companies. Through the proposed adjusted financial methods, i.e. block and SWOT analysis, the identification of business success will be carried out. During the further deeper analysis process it is important to investigate every project separately, to find out changes during the project life and identify, whether positive or negative results coming out from these changes. Based on the analysis done, it is possible to rely on management decisions, which are valid and qualitative in nature. The concentration on the projects' internal rate of return (IRR), weighted average cost of capital (WACC), profit margin and ROE of the company is important, as these are the key factors influencing the business success and wealth creation of the entire company.

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MONETARY POLICY RESULTS IN LATVIA

Rakstā tika izskatīta tāda svarīga Latvijas Bankas funkcija, kā naudas un kredīta ekonomikas regulēšanas veikšana. Tika izskatītas monetārās regulēšanas metodes un monetārās politikas instrumenti, un iedarbības metode uz Latvijas ekonomiku. Ekonomikas situācijas uzlabošanai vispirms ir nepieciešams koordinēt valdības un Latvijas Bankas darbību. Integrācija ES joprojām bija gan Latvijas ārpolitikas, gan ekonomiskās politikas prioritāte. Galvenais uzdevums ir nodrošināt IKP pieaugumu, kas iespējams, sasaistot pārdomātu valdības iekšējo politiku un ārpolitiku. Latvijā ir vērojams IKP pieaugums, taču tas būtiski atpaliek no naudas masas pieauguma. Reālās darba algas pieaugums ir niecīgs salīdzinājumā ar cenu pieaugumu, un tas pazemina iedzīvotāju dzīves līmeni. Bezdarba līmenis ir stabilizējies, bet tendence ierobežot inflāciju var negatīvi atsaukties uz iedzīvotāju nodarbinātību tuvākajā nākotnē.

The Bank of Latvia is the responsible institution for the monetary policy and banking supervision. The main monetary policy objective is a control of the amount of money in circulation with the aim to maintenance stability in the country. This is a long-term objective of the monetary policy. Operations on sale and purchase of a foreign exchange are the basic tools of a monetary policy. Bank of Latvia to aspire to direct a policy of the exchange rate on achievement of low inflation, *rapprochement* of goods and services prices and to inflation rate of the countries, whose national currencies are included in "SDR" basket.

The stabilization program based on the currency exchange rate has been implemented in Latvia since 1993. In the middle of February 1994, the Bank of Latvia pegged the lat to the "SDR" currency basket thus *de facto* implementing the fixed national currency exchange rate policy (1 SDR = 0.7997 LVL). The strategy of the Bank of Latvia over the medium term is to maintain stability of the national currency thus supporting confidence into the national economy and the overall financial system and bringing down inflation. A priority direction of Bank of Latvia is

external stabilization of the national currency which strengthening conducts and to internal stabilization.

The Baltic countries have begun the programs of stabilization of national currency unit in middle of 1992. At a choice of a mode of the exchange rate economists collide with a problem: to accept the floating exchange rate or to work with the fixed rate. In spite of the fact that programs of stabilization of the Baltic differed from each other, however all of them came approximately to the same result: to the fixed rate to the national monetary unit pegged in Estonia – to DM, in Lithuania to US dollar and in Latvia to SDR. Estonia in 1992 has exchanged the Soviet rubles at a market rate 10:1 and has equated crone at the rate DM / EEK 8. In Lithuania the intermediate currency by the way the coupon was replaced with lit in June 1993, and since April 1994 was pegged to US dollars at the rate USD/LTL 4. The basic criteria are: maintenance of the greatest possible isolation of national economy from various external shocks and simplification of financial stabilization of structural economic reorganization.

In Baltic countries financial statistics there are no exact parameters confirming purchasing force of the national currency. There is opportunity to judge about purchasing force of national currency unit mainly on the historical paradigm basis. It is interesting, that in 1937 a rate of three Baltic currencies to US dollar were: USD 1/EEK 6.95 / LTL 4.38/LVL 5.04. Now rates of the Estonian crone, lit and lat to US dollar change in limits: USD 1/EEK 11.2 / LTL 4/LVL 0.59. As against two other Baltic currencies the rate of lat in comparison with a level of 1937 exceeds more than 8.5 times.

In Latvia there is one of the most liberal currency regime in the world. Both citizens, and foreigners can open accounts in national and other currencies, freely to manipulate cash flows in these currencies. The Bank of Latvia in the not limited amount purchases and sells currencies of baskets SDR on inquiries of commercial banks. The high rate of lat stimulates wide import of consumer goods, superseding the Latvian manufacturers from a home market, and it conducts to reduction of a share of internal accumulation.

In the world such regimes are named by delayed-action bomb. It is impossible to tell, whether the rate of the national currency real is or requires updating in this or that party. It is difficult to determine the factors, which are capable to cause the reasons of negative direction development. For example, the Great Britain having simultaneously both

a central bank and binding of currency has gone through serious crisis of the exchange rate in 1967 when the pound was pegged to the US dollar. The second crisis from which have suffered also France, Italy and other members of the European currency system, has taken place in 1992 when binding was not to dollar, but to European currency unit. In 1995 Mexican crisis is an example most to relatives on time of currency crisis in country with a central bank and the pegged exchange rate. Mexico could not return the milliard credits given it by international consortia. Recession and depression in economy, which proceeds till now, has resulted of the simple Mexicans' income reduction.

In conditions of the fixed currency rate there is a temptation to hope for the best, and there are good intentions in attempts in decision acceptance, which might develop national economy. Such policy would be effective if it dealt with smoothing of insignificant and temporary problems, but it allows them to develop into the big problems. In the fixed currency rate its management increases conditions when the central bank is accountable directly to the maximum legislature of country, the importance and a role of the decisions, accepted. The government is practically unable to influence a central bank and it only needs to reap negative results of miscalculations in the central bank actions. Only it is necessary to hope, that the government will manage to find mutual understanding with Bank of Latvia and in economy of Latvia the experience of monetary regulation saved up in world practice will be positively realized.

Analyzing the situation, which has been usual in Latvia, it is enough to notice an opportunity of central bank influence on activity of the commercial banks, which have concentrated on the accounts the financial resources. However influence of a central bank on economy is not settled, as it have a lot of monetary policy tools. Therefore any rejection of Bank of Latvia in the activity from objective economy laws, the slightest miscalculations in a monetary policy may affect results of activity of managing subjects negatively.

It is thought, there were faults in activity of Bank of Latvia, which have served one of the reasons of bank crises in 1995 and 1998. Though, it is necessary to notice, that principal crisis development causes of an industry were: the fast price liberalization undertaken by government, cancellation of grants, a manipulation with funds of the enterprises at an exchange of old money on new. After 1995 in the regulation of a banking system of Latvia there were essential changes, which consist in ordering

requests to credit institutions. It has allowed to strengthen the Latvian credit system and to improve parameters of banking financial activity.

The following bank crisis, as against previous, was caused not so much by internal faults in work-of the Latvian banks, but by external factors. As principal cause to that was served with financial crisis in Russia, burst in August 1998. The Russian crisis has negatively affected to development of Latvian banking sector as at the majority of banks the significant part of assets was formed by investments in CIS countries. This crisis has arisen in connection with Latvian banks acquired governmental and commercial valuable papers in CIS countries. It is known, that the way out from previous crisis situation was achieved due to increase of the investments and currency converting in CIS countries.

In August 1998 the investment in foreign securities exceeded more than 170mill. Ls. The capital migration was stipulated by high interest rates on the Russian governmental securities and commercial papers that have created an opportunity for reception of the profit by the Latvian banks. At this time in Latvia interest rates almost three times lagged behind the analogues in CIS countries. Unfortunately, the Bank of Latvia has not accepted duly actions to protect a national banking system from possible panic in CIS countries. According to financial reports of auditors for 1998 common Latvian credit institutions losses have made 56.6 mill. Ls. The Riga commercial bank and Latvian Unibank have received losses according to 29 mill. Ls and 15.1 mill. Ls.

Since 1997 the financial market stabilization is reached mainly for account of currency intervention realizations. At this time the Bank of Latvia began realization of swap operations, which terms at that time did not exceed three months. Since May 12, 1998 Bank of Latvia has begun organize tenders with return currency bargains once per one quarter. Since September 11, 2000 Bank of Latvia have been used for these purposes not only US dollars and Euro too. Per one week the Bank of Latvia offers three times to commercial banks of the "swap" operations for the period of 7, 28, 91 and 182 days. In December 2000 the sum of short-term "swap" operations has reached 319.5 mill. Ls and has increased on 34.6% in comparison with the previous year. On the same date the sum of long-term "swap" operations has exceeded 50 mill. Ls. The average weighted interest rate on short-term operations come to 4.8% (in 1999 – 6.7%), and on long-term operations – 6.5%.

Till 1994 in Latvia it was impossible to use open market operations, as state securities did not exist. After their issue the volume of state

liabilities grows rather slowly, and their liquidity was insignificant, because the secondary market was insufficiently active. In due course there were positive changes. For example, within the expired year the state securities in the secondary market has increased in 2.1 times in comparison with the previous year and has come to 862.7 mill. Ls. At the end of past year the share of operations with residents has increased up to 74.7% (in 1999 – 70.6%), and with non-residents has decreased from 11.8% to 6.2%.

As stabilizing measure the Bank of Latvia carries out purchases of securities in the open market, expanding thereby banking reserves and increasing the offer of money in that measure, which is sufficient for preservation of interest rates up to the mark. Money demand growth puts pressure upon norm of interest rate. As the norm of interest rate exceeds the scheduled level, the Bank of Latvia starts a purchase of securities at commercial banks. The Bank of Latvia continues purchases in the open market until enough of new money providing conformity of a supply and demand of money at constant norm of interest rate. In 2000 the Bank of Latvia has increased the securities portfolio, thereby filling up the amount of money turnover. During this time the Bank of Latvia has purchased securities to the amount of 104.2 mill. Ls and has sold them to the sum of 21.7 mill. Ls, while the previous year it was bought valuable papers only to the amount of 31.2 mill. Ls, and sales were not made at all.

Among the problems, which are slowing down the national economy are state budget deficit and negative balance of payments. Foreign trade still remains a weak place in national economy. In 2000 fiscal deficit of the consolidated state budget amounts to 121.9 mill. Ls that makes 2.8% from GDP. The deficit is basically financed at the expense of government securities issue.

During the past year slight growth both export and import was observed. However, the gap between export and import increased, creating significant deficit in country's balance of payments. In 2000 the foreign trade volume has made 3065.2 mill. Ls. The negative balance of payments at the end of year has made 802.6 mill. Ls and has increased compared to previous year by 87.0 mill. Ls. Money coming from international services may not compensate any more missing money for imported goods. Missing foreign currency was basically received from credits. Therefore the balance of payments depends now on capital movement more and more. While manufacturers of the goods will not find new markets for their goods Latvia will import goods and services at the account of foreign credits. The only

decision of successful economy growth is looking for new ways of national industry development, the increase of investments into production and infrastructure.

In other words, the negative balance of payments can be financed by state foreign currency reserve or by foreign currency assets inward to Latvia. The information on flows of the goods, services, the capital and the incomes concerned - percentage payments, dividends – between residents of Latvia and foreign countries is generalized in the balance of payments. Taking into account the limitation of state funds and commercial banks' discretion about long-term projects crediting, the main source of long-term capital now are foreign investments into enterprises. Since 1997, the government tries to limit the external debt growth, which is influenced by inefficiency of previously received credits.

It is possible to judge about national currency, and also about foreign currency role in internal turnover of Latvian commercial banks using changes diagram of money aggregates. The most important parameters describing a condition of monetary circulation are: the money multiplier (M2X to M0 ratio) and money turnover speed (GDP to M2X ratio). In Latvia, broad money M2X (where foreign currency deposits are also included) to a great extent determines a nominal gross domestic product, and also prices level.

Since 1998, according to the graph, there has been the tendency of reduction M2D in relation to wider money supply parameters – M2X. Such tendency is explained by bank crisis of 1998 and as consequence by restriction of the money supply to manufacturers. In 1997 parameter M2X grew approximately by 1.6% per month, but the gross domestic product has increased by 3.3% during the year. Steady money supply growth is observed both the existing lack of GDP growth, especially in 1999. It seems, such processes testifies about difficulties of Bank of Latvia in sphere of money supply regulation. In 2000 money aggregates M2D and M2X have increased in comparison with the previous year accordingly by 25.6% and 27.9% and more than four times outstrip GDP growth. In 1997 the best result was achieved, which has corrected the 1997 results, when money supply has increased by 38.7% at GDP growth by 8.6% (compared to previous year). Insignificant money turnover speed reduction (by 1.1 times) during the last five years may not reduce essentially the negative influence of redundant money supply.

Credit System Monetary Indicators of Latvia
(End of period; million LVL)

	1995	1996	1997	1998	1999	2000
GDP (nominal)	2349.2	2829.1	3275.5	3589.5	3897.1	4333.0
GDP	2349.2	2426.7	2635.4	2738.2	2768.6	2951.4
Growth of GDP (%)	99.2	103.3	108.6	103.9	101.1	106.6
Money base M0	273.6	340.7	441.7	471.5	526.2	566.7
Broad money M2D	357.9	432.7	592.3	657.1	698.7	742.3
Growth of M2D (%)	-	120.9	136.9	110.9	106.3	125.6
Broad money M2X	523.8	628.3	871.3	923.0	997.2	1275.9
Growth of M2X (%)	-	119.9	138.7	105.9	108.0	127.9
M2X to M0 (%)	191.4	184.4	197.3	195.8	189.5	225.1
M2D to M2X (%)	68.33	68.87	67.98	71.19	70.1	68.8
M2D to M2X (+/-)	-3.78	0.54	-0.89	3.21	-1.09	-1.3
GDP to M2X	4.5	4.5	3.8	3.9	3.9	3.4

The increase of a money supply is promoted by deposits of non-residents growth, which exceeded the amount of residents' deposits at the end of 2000. The total amount of deposits (legal entities and private persons) was 1714.9 mill. Ls, that is by 47.2% more than in 1999. During 2000 the credit portfolio of Latvian commercial banks has increased by 28% and amounted to 1087.6 mill. Ls. It should be noted, that the majority of credits was granted to financial intermediaries and personal consumers, not to producers.

Currency auctions still remain the main financial tool for the Bank of Latvia currency regulations. It is possible to look after the mechanism of money turnover regulation observing parameter M2D changes. Its growth is connected with deposits placement in national currency. The source for deposits growth is currency accumulation of commercial banks clients. The Bank of Latvia buys currency, after its conversion, so money base M0 is increasing. Thus, the volume of money supply in native currency depends on that, however long the deposits in native currency will be attractive for investors. In 2000 the residents deposits (in national currency) growth were faster than foreign currency deposits growth (33.3%), deposits in lats has reached 53.1% of total deposits (in 1999 – 51.8%). Deposits in native currency are more attractive because of their interest rate (interest rate on currency deposits is lower). Despite the fact that broad money M2X remain without changes, structural shifts of narrower money aggregates (in connection with growth of national currency amount) testifies about possible inflationary processes in economy.

At the beginning of 2000 both prices and unemployment level was stabilized. Primary goal is maintenance of optimum growth rates GDP, that it is possible at a combination balanced internal and foreign policy of government. In Latvia there is GDP growth is observed, but it is essentially behind of money supply growth. In conditions of undeveloped industry, high growth of money supply, which indicates financial inflows into economy, may negatively influence the national economy and population standard of living.

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Summary

The objective of this paper was to consider the methods of monetary regulation and instruments used for monetary policy. The article includes the most important aspects of monetary policy in Latvia. The main monetary policy objective is control the amount of money in circulation with the aim to maintenance stability in the country. The strategy of the Bank of Latvia over the medium term is to maintain stability of the national currency. In Latvia there is one of the most liberal currency regime in the world. The high rate of lat stimulates wide import of consumer goods, superseding the Latvian manufacturers from a home market, and it conducts to reduction of a share of internal accumulation.

There were faults in activity of the Bank of Latvia, which have served one of the reasons of bank crises in 1995 and 1998. After 1995 in the regulation of a banking system of Latvia there were essential changes, which consist in ordering requests to credit institutions. The following bank crisis, as against previous, was caused not so much by internal faults in work of the Latvian banks, but by external factors. Since 1997 the financial market stabilization is reached mainly for account of currency intervention realizations.

The author pays a special attention to the analysis of money aggregates (during the period from 1995 till 2001). Primary goal is maintenance of optimum growth rates GDP, that it is possible at a combination balanced internal and foreign policy of government. In Latvia GDP growth is observed, but it is essentially behind of money supply growth. In conditions of undeveloped industry, high growth of money supply, which indicates financial inflows into economy, may negatively influence the national economy and population living standards. At a closing of this paper the author pays a special attention to problems, which should be solved, and methods, which should prevent mistakes in the future.

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THE FUTURE OF MONEY IN THE INFORMATION AGE

Viens no stabilas ekonomikas priekšnosacījumiem ir drošas naudas sistēmas nodrošināšana. Tādēļ aktuāls ir jautājums, kāda sistēma ir spējīga nodrošināt veiksmīgu ekonomikas attīstību. Apspiežot alternatīvas monetārās sistēmas, rodas tādi jautājumi, kā: "Vai zelts nodrošinās inflācijas kontroli? Vai spēcīga nauda pastiprinās ekonomiku? Vai Centrālajai Bankai ir jābūt neatkarīgai?"

Trīs alternatīvas, kuras izskatīs autore, ir: "preču" naudas, daļējās rezerves naudas un papīra naudas sistēmas. Katra sistēma, galvenokārt, tiks apskatīta kā mehānisms naudas piedāvājuma kontrolēšanā. Nobeigumā autore piedāvās jaunus naudas veidus.

Economists generally accept that competition in supplying virtually any good or service will lead to superior results in terms of improved quality, efficient production, and lower prices. When the good being supplied is money, however, agreement about the benefits of competition is not universal. Even among economists, debates range about whether economic systems in which currencies compete would lead to superior performance or to over issue and runaway inflation.

Monetary systems always have been the subject of considerable debate: What is a viable monetary system? What is a desirable system? There is today much frustration, not to say cynicism, regarding the operation of our monetary system. Theorists from all quarters agree that, in recent years especially, the Central Banks have seriously mismanaged the money supply. Some believe that the authorities have been inept; others think they are dishonest. And yet a third group regards the institution itself as incapable even in principle of fulfilling its self-assigned function. Probably the truth is a combination of these three views.

Whatever its foundation, the prevailing mood has bred numerous proposals for radical reform. All have in common the aim of reducing the influence of Central Bank officials over money, prices, and interest rates.

Alternative monetary systems are too often discussed in the context of current policy debates: Will gold cure inflation? Is tight money

strangling the economy? Should the Central Bank be independent? I shall try to consider: What kind of money we are to have. In evaluating the alternatives, my main concern will be how well each monetary system permits people to make plans and contracts with reasonable confidence that the money they use will not change its value over time in unexpected ways. I will also discuss costs associated with different monetary systems.

The three alternatives I will consider are commodity monies, fractional reserve monies, and fiat monies. I will consider each primarily as a mechanism for controlling the quantity of money. This may seem a somewhat odd approach; while it is natural to regard the value of a fiat money as determined by how much of it is in circulation, it seems equally natural to believe that if the money consists of chunks of gold, it is the commodity value of gold which determines their value. Finally, I will consider new types of Money.

Commodity Monies

Assume that some convenient commodity – homogeneous, easily subdivided, and with a high value to weight ratio – has come into use as money. Individuals find that by holding a stock of that commodity they are able to separate the acts of buying and selling; they can sell goods and hold the money until they find something to buy, or buy goods with some of their stock of money and replenish it by later sales. After a little experimentation, they find that a stock of money equal to e.g. a week's income, is sufficient to cover their normal requirements. There is now a new demand for the commodity (let us call it gold); in addition to those who wish to purchase it for gilding jewelry or plating electrical contacts, there are others who wish to purchase it to hold as money. The new and higher demand curve will intersect the old supply curve at a higher price; more will be produced, less will be used for the old, non-monetary purposes, and the difference will go to monetary uses.

What does a "higher price" mean? We are accustomed to measuring prices in terms of money; in that sense that money price of money – the price of a dollar in dollars, for example – is always one. More generally, one can measure prices in terms of any good, speaking of the apple price of pears (how many apples must you give up for a pear) or the labor cost of weeding your own garden. For measuring the price of money it is possible to use any commodity; if apples sell for 50 cents, the price of a

dollar is two apples. In general, the price (or "cost" or "value") of a unit of money is the amount of something else you must give up to get it, hence the inverse of that something else's price measured in money. Since there are many different commodities, and since their money prices may not all change in the same way, it is convenient to use some conventional "bundle" of commodities – two apples, a pound of steel, and a loaf of bread, say – and define the price of money as the number of such bundles a unit of money exchanges for. The price of money then becomes the inverse of a price index, with the weights of the items in the index being the amounts of those items in the bundle.

What are the disadvantages of the commodity system? One is the commodity itself; since more is being produced and less being used for non-monetary purposes, the resources devoted to additional production and the benefits forgone must be counted as the price of the system. Also, the supply of money, and hence its value, may be affected by anything that affects the supply of gold (new discoveries or new production technologies) or its non-monetary uses. It may also be affected by anything that affects the demand for money – economic growth, changes in the structure of the economy, or simply the spread of the use of gold to new countries.

Along with these disadvantages comes one very important advantage. Because the supply of money under a commodity system is determined only by the sorts of things. I have just listed its variation is rarely very large. Mining gold takes work, and developing new technologies takes time. Hence, in the worst cases the magnitude of variations in supply is likely to be small, at least in comparison with the alternative of fiat money.

While the cost of producing the money is an essential characteristic of a commodity system, the other disadvantages depend in large part on the particular commodity used; hence, avoiding them may be viewed as one criterion for choosing a commodity. The ideal commodity from this standpoint should be one that is unlikely to have substantial unpredictable changes in value due to changes in its supply curve or its monetary or non-monetary demand. This might be a commodity whose supply curve is stable and highly elastic, allowing it to accommodate shifts in the demand curves without large changes in the value of the commodity; or a commodity whose non-monetary demand curve is stable and highly elastic, allowing it to accommodate shifts in supply or monetary demand; or simply a commodity for which supply and non-monetary demand are

both stable and large compared to monetary demand. The fourth possibility would be a commodity for which supply and non-monetary demand, although unstable, are small compared to monetary demand, so that substantial changes in the value of the commodity would at least be limited to those produced by changes in monetary demand.

Fractional Reserve Money

If money is viewed simply as a tool used to facilitate transactions, only those media that are readily accepted in exchange for goods, services, and other assets need to be considered. Many things – from stones to baseball cards – have served this monetary function through the ages. Today money used in transactions is mainly of three kinds – currency (paper money and coins in the pockets and purses of the public); demand deposits (non-interest bearing checking accounts in banks); and other checkable deposits, such as negotiable order of withdrawal (NOW) accounts, at all depository institutions, including commercial and savings banks, savings and loan associations, and credit unions. Travelers' checks also are included in the definition of transaction money. Since LVL1 in currency and LVL1 in checkable deposits are freely convertible into each other and both can be used directly for expenditures, this is money in equal degree. However, only the cash and balances held by the non-bank public are counted in the money supply.

A fractional reserve system is a commodity system without the commodity. The money consists of promises to pay some amount of gold, silver, or whatever the monetary base of the system may be. The organizations that issue these promises (typically banks) arrange to fulfill them by holding an amount of the commodity equal to some fraction of their total obligations, while keeping the rest of the assets that they acquired in exchange for the money in some more productive form. The stock in the commodity that they hold ("reserves" – hence the term "fractional reserve system," since the reserves are only a fraction of the obligations) permits them to fulfill their promise to redeem their money in the commodity. If many of those holding their money want the commodity instead, the banks sell some of their other assets and buy more of the commodity to give them. In such a system there are generally at least two monies circulating at once: a commodity money such as coined gold ("currency") and a fractional reserve money, in the form of either banknotes (written promises to pay particular numbers of gold coins or quantities of gold) or deposits (obligations by the

bank to give its customer, or anyone he names, up to a certain amount of coins or gold).

The advantage of such a system over a pure commodity system is that it economizes on the use of the commodity. If most people choose to hold their money in notes or deposits rather than in currency, and if the banks find that they can function with reserves that are a small fraction of their outstanding obligations, the total amount of money in the system will be much larger than the amount of gold being used for monetary purposes (currency plus reserves – sometimes referred to as "high-powered" money). Thus, the society gets its monetary services at a lower cost – an advantage reflected, at the individual level, in the willingness of banks to pay interest, in money or services, to their depositors.

Fiat Money

In a fiat system, there is no non-monetary demand for the money at all; it typically consists of pieces of printed-paper and the supply is determined by a printing press controlled by whoever issues it. (Its value is maintained entirely by its monetary demand.) This seems paradoxical, since the existence of a monetary demand for it is dependent on its having value. In practice, the problem has usually been solved by gradually creating a fiat system out of an existing fractional reserve system, eventually eliminating entirely the bank's obligation to pay in the commodity. It could also be created out of a commodity system by gradually increasing the seignior age at a time when monetary demand is increasing, and allowing the monetary demand to raise the price of the coin to a large multiple of the value of the commodity it contains. Once created, fiat systems have proved astonishingly stable; the convenience of using the same money as everyone else is apparently so great that people continue using a fiat money (instead of making their transactions in terms of some convenient commodity, such as gold or cigarettes) even when it is rapidly losing value.

In terms of producing stable and predictable prices, a fiat system is at the same time the best and the worst alternative. It is the best alternative because it is possible, by following some simple monetary rule (such as "keep the amount of money in circulation constant"), to make the supply of money perfectly predictable, or by following some slightly more complicated rule (print money when the price index goes below 1, burn it when the price index goes above 1) to make (average) prices almost

perfectly predictable, automatically accommodating the supply of money to the demand. It is the worst of systems because it is possible to expand the money supply virtually without limit (the cost being the cost of adding additional zeros to the newly printed bills to convert tens into hundreds, or hundreds into millions). Whether a fiat system is good or bad, that depends on your prediction of what the people running it will find in their interest to do.

New Types of Money

New types of money are unlikely to arise in the absence of substantial dissatisfaction with existing government-sponsored moneys. So the creator of a new money might arise in the face of substantial inflation. Of course the money entrepreneur would need to find a way to provide a credible promise that his privately issued money would maintain its value where the government money had not. Some commentators have envisioned the development of separate "cyberspace" monies as a means of avoiding taxes. If a bank or other financial institution has no physical offices, how could government regulators or tax collectors enforce a demand to review the institution's books? The task becomes more complex if account balances are reported and payments made and received in some new cyberspace credit. Then again, new types of money might represent nothing more than a convenience. Worldwide bank offering accounts in different currencies could conceivably create a completely new unit of account in which to keep its records. Deposits and withdrawals in government currencies would be translated into Planet Bank monetary unit equivalents. From there it is a short step to contracts written and fulfilled in Planet Bank units rather than in yen, francs, or dollars. Speculation about a Planet Bank monetary unit may remind readers of efforts by countries in the European Union to create a European-wide currency. The difference is that a private international monetary unit would have to gain acceptance among money users by displaying valued characteristics. It would not be imposed with government authorities. While advances in communications technology may dramatically change the terms under which market transactions take place, I believe historical episodes of private moneys can provide some insights into what a 21st century private money would look like.

Any money depends first on trust. Private (and public) issuers of money in the future will be required to establish their reliability in

delivering payment services through mechanisms that meet the needs of users. Marvin Sirbu, a professor with the Information Network Institute at Carnegie Mellon University, has observed: "All money depends upon trust in my ability to issue an instruction to move money from one place to another" (Bollier 1996: 26). Moving money essentially involves an instruction to the "keepers of the books." Buyers and sellers must believe that "money" exists in the repository that receives the payment instruction, that the instruction to make a payment will be faithfully executed, and that the identity of the payer and the payee can be authenticated.

But how do we know that the "keepers of the books," whether they are regulated commercial banks or institutions that exist in cyberspace, have money with which to make payments? What happens as electronic forms of money become increasingly important? Regulated commercial banks keep their money balances as cash in the vault or (primarily) as accounts with the central bank. Thus, the central bank vouches for their having "money balances."

Users of privately created cyberspace monetary units would also no doubt insist on some independent verification that the "money" did in fact exist. Trusted, the third-party guarantors might thus develop to verify the presence of reserves or assets necessary to make payments. Cyberspace credits would almost certainly be payable (at the depositor's discretion) in something other than just more cyberspace credits. For our Planet Bank described above, the newly created monetary unit might be payable in the depositor's choice of any of a number of government-issued currencies. Another contract might develop whereby a cyberspace customer could receive payment in any of a list of financial assets—U.S. Treasury securities, Aaa corporate bonds, or gold futures, for example. The formulas for converting cyberspace monetary units to either government currencies or to other financial assets would be established up front. Treasury bond futures contracts are based on an artificial bond with a standardized (and constant) coupon rate and maturity. When Treasury bond futures contracts come due, those owners of futures contracts who do not cash settle can choose from one of several actual bonds to meet the delivery requirements of the contract. Conversion formulas for different types of bonds are established and agreed to by all market participants up front.

Historically, successful issuers of money often had to do more than just make a promise to convert their bank notes into gold. They often needed a physical presence in the town someplace customers could go to

receive payment. Furthermore, successful "new" bankers often had already established reputations in a non-bank line of business so that customers felt they knew with whom they were dealing. Will market participants require similar reassuring structures before accepting new monies in the 21 century? It is widely expected that home banking using personal computers will allow banks to close large numbers of physical branches as we move into the 21st century. Will customers continue to demand to be able to meet with bank representatives face to face when there is a problem or a question? And if trust is a prerequisite to introducing new monetary services, what companies will become the new money entrepreneurs? Will totally new entrants find ways to reassure market participants about their trustworthiness? Or will we only use new monies and payment systems offered by corporations and institutions with recognized, established reputations?

There are also many questions about the terms in which new monies might be denominated. To truly compete with government-issued money, users would have to be able to distinguish privately issued currencies from dollars, pounds, and lira. That would make it more difficult to denominate new monies in terms of the government-sanctioned monies, but it would not necessarily be impossible. During the 19th century, privately issued bank notes in the United States were all denominated in dollars, for example. Notes issued by less sound banks simply circulated at a discount. Perhaps dollar-denominated private money issued by (say) American Express would circulate at a premium if it came to represent a superior store of value to U.S. government dollars.

Finally, F. X. Browne and David Cronin (1995), among others, foresee mutual funds becoming the basis for privately issued monies. Mutual fund-based money would eliminate any reason for runs to develop, and proponents argue it thus provides a superior basis for supplying transactions balances. Because mutual fund shares are constantly marked to market, there is no advantage to being first in line to receive your funds. This could be one of the new, superior forms of bank contracts that develop, but my guess is that many individuals and businesses will want their transactions account to maintain a fixed (or growing, but not fluctuating) value.

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Summary

Economists generally accept that competition in supplying virtually any good or service will lead to superior results in terms of improved quality, efficient production, and lower prices. When the good being supplied is money, however, agreement about the benefits of competition is not universal. Even among economists, debates rage about whether economic systems in which currencies compete would lead to superior performance or to over issue and runaway inflation.

Alternative monetary systems are too often discussed in the context of current policy debates: Will gold cure inflation? Is tight money strangling the economy? Should the Central Bank be independent? I shall try to consider: What kind of money we are to have. In evaluating the alternatives, my main concern will be how well each monetary system permits people to make plans and contracts with reasonable confidence that the money they use will not change its value over time in unexpected ways. I will also discuss costs associated with different monetary systems.

The three alternatives I will consider are commodity monies, fractional reserve monies, and fiat monies. I will consider each primarily as a mechanism for controlling the quantity of money. Finally, I will consider new types of Money.

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EVALUATION AND MANAGEMENT OF COMMERCIAL BANKS' ACTIVE OPERATION RISKS

Veicot aktīvās operācijas, banka saduras ar tādiem finansu risku veidiem, kā kredīta, likviditātes, procentu, valūtas, bankas aktīvu nepietiekošas diversifikācijas riski. Apzināta risku novērtēšana un pārvaldīšana ir viens no svarīgākajiem pasākumiem aktīvu aizsargāšanā un aktīvo operāciju sekmīgas veikšanas nodrošināšanā. Kā piemēru šim procesam, rakstā tiks apskatīta risku novērtēšana un pārvaldīšana kreditēšanas jomā, jo kreditēšanas operācijām pieder lielākais īpatsvars aktīvās operācijās. Tiks apskatīti arī pasākumi, ko var veikt, lai samazinātu kredīta risku. Nobeigumā var secināt, ka risku pārvaldīšana kopā ar citiem faktoriem, piemēram, ar personāla kompetenci un informācijas sistēmu kvalitāti, kļūst par izšķirošo faktoru banku aktīvu saglabāšanā, konkurētspējas palielināšanā un uzturēšanā, īpaši pasaules finansu tirgu globalizācijas un internacionalizācijas apstākļos.

There is a widely known connection: the larger the level of operational risks, the larger is potential loss, but the larger is also potential income, upon successful completion of the operation.

Commercial banks solve a twofold task in their work: to raise profitability and provide stability, while centralizing financial and other risks for better evaluation and control. Thus the art of banks' management is to find the optimum level of bank's risk with the purpose of raising income.

The "risk" category is understood differently in the economics theory. Risk is defined as:

- the probability of the event, that can deviate from the desirable tendency;
- the probability of loss due to event, which changed the initial situation;
- any unexpected results, positive or negative;
- a randomly occurring possibility of a loss or gain of value;

a threat of not receiving expected income or appearance of unpredicted expenses [3, 322].

Banks' financial risk this is a probability of occurrence of undesirable financial consequences – loss of income or capital, under conditions of indeterminism of banks' operation.

In theory a large number of ways exists, to classify risks. When talking about the risks of bank's assets and operations with assets, in their management the largest role is played by classification of risks by risk management methods and also by balance and out of balance dispersion.

The system of identifying and evaluating risks is open, because of the constant search for more effective possibilities of risk prevention and evaluation.

The management of banks' financial risks, including risks of assets and operations with assets is the process of not allowing or neutralizing their negative consequences, which consists of the following parts:

- identification of risks,
- evaluation of risks,
- prevention of risks,
- insurance of risks.

Let's take a look on the risks of operations with assets. These are one of the main bank's risks, because they are the risks of balance structure (portfolio).

When implementing operations with assets, bank encounters many types of financial risks, the main of them are **credit, liquidity, interest, currency risks and the risk of insufficient asset diversification**. Recognizing risks, linked with this kind of action, bank will strive to evaluate and decrease them implementing preventive measures and insurance. The risk in the absolute expression is the sum of possible losses, due to operations performed in terms of money. Risk, in the relative expression, may be defined as the proportion of possible losses in relation to bank's income, resources, capital, etc.

Cognizant risk evaluation and management is one of the most important measures in protecting assets and successfully implementing operations with assets.

As an example, of the bank evaluating and managing risks, evaluation and management in lending is considered, because the greatest part in operations with assets belongs to lending operations.

Credit risk is defined as the total amount of losses (L_t) from the provided loans and is calculated based on the bank's credit history. $L_t = S * V$, where S – is the total sum of bank's debtor obligations, which includes provided loans, client stiffs, overdraft on the client accounts, guarantees and statements in favor of the debtor. All bank's obligations to perform the payments in place of the clients, if they cannot perform them themselves (bank's accepts, approved credit letters), debtor's debts, which appeared while converting currency, buying securities by client's requests, and conclusion of all deals (repo, swap, etc.), other obligations not included in the balance and contracts (forward contracts etc.) are also included. The value S excludes the real market value of the gage and other insurance provided by the client.

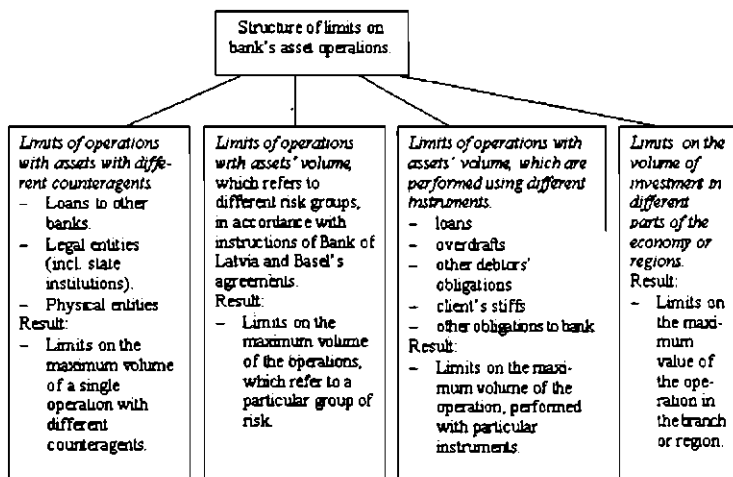
V – the probability of loss: the average part of loans and other client obligations not returned throughout the previous time of bank's development.

To decrease credit risks:

bank performs evaluation of the borrower's ability to pay. It is necessary to mention, that borrower is subjected to all the risks, which bank is exposed to. And although the differences are possible in the mechanisms of risk influence, their essence will not change. For example, client who is an exporter or importer will be greatly dependent on the risk of exchange rates that is the exchange rates can unfavorably influence the incomes of the producer, which may threaten the return of the loan. The same way borrower is subjected to strategic risk, which expresses itself in the way, that a wrongly chosen strategy may lead to misfortunes on the market, which again will influence the enterprise's ability to pay and thus repayment of the loan. We can conclude, that the credit risk for a particular loan is composed of several risks – liquidity, exchange rate, political etc., however in this case borrower is subjected to risk. To evaluate the client's ability to pay the so-called scoring method is used, which is based on the score evaluation of the borrower as well as other methods. Criteria, to use for evaluating the borrower, are different for each bank, dependent on it's credit policy and regularly revised. Currently banks use elastic system of evaluation, taking into account the level of risk for a particular loan. This allows to set sensible price of the loan.[4, 292].

Credit risks always involve failure to repay loans due to bankruptcy of borrower (legal or physical entity). Apart from this, the above-mentioned risk can also appear due to cost increase of bank's products, in changing market situation. Therefore, *bank limits the size of a single loan for a borrower*, in order to control credit risks.

To achieve this, bank has to define the limits of operations with assets that is lending operations, for a client or a group of clients. These limits are defined based on the amount of losses, which



Structure of limits on bank's operations with assets.

bank agrees to take on, due to occurrence of credit risks. Consequently bank has to define loan limits for those branches of the operation, which are connected with real risks, which together create credit risk. Banks pay great attention to the constant improvement of the quality of loans, new loan control systems are implemented to prevent unnecessarily large loan risk due to one or a group of debtors, risky segment of economics or geographical region (see Scheme "Structure of the limits on bank's operations with assets").

To decrease this risk so called netting operation is used, which is the twofold evaluation of both assets and obligations between counteragents, to determine the final position of the bank.

A bank should define all the loan volume limits based on a single methodology and regularly revise them, taking into account the changes in the client's base and in the overall economic situation.

Bank limits risk, by defining internal normative indicators, which bank cannot exceed. Coefficients of economic safety for the bank are calculated based on the assets, which are divided into groups, using principle of decreasing liquidity and growing risk rate. These indicators are sometimes called hedging indicators and are recommended to the banks for practical application. In ideal case there should be no exceptions and departures from internal indicators. Departures from these standards mean that, the loan is subject to a credit risk to a larger extent than commercial bank was planning. However in practice situations arise, when bank has to make an exception from its lending standards, for example, in order to keep a large client.

Bank insures the loan it gives, which means a complete transfer of the risk of non-repayment to the insurance company. Insurance expenses have to be covered by the borrower.

Bank draws sufficient hedge (a possible alternative to the insurance). However sufficient hedge is not the main in protection against credit risk. The priority belongs to the ability of the borrower to repay the loan and the interest from the current income without selling the gage, because it requires time and additional costs.

Bank attracts guarantee in favor of the borrower, as an additional way of decreasing the risk.

To compensate for the possible losses due to risk, bank collects penalty sanctions, which are settled in the contract. Penalties are used when loans are not repaid timely, interest payments are delayed or not paid. The sum of the collected fines has to compensate banks' financial losses, which are connected with not receiving planned income timely or not receiving it at all, in full.

Bank creates reserve funds – one more relatively widely used mechanism of decreasing the influence of risks. Reserve funds allow the bank to create the “amortization pillow”, which gives a possibility to compensate quickly for bank's financial losses, however the creation of these funds diverts notable sums of financial resources. As a result the effectiveness of equity usage

decreases. This means the necessity for optimization of the reserve sums, to provide neutralization of only particular financial risks.

Bank timely and correctly accounts for given loans and risky assets. Qualitative changes occurred throughout the last years in systems of accounting hopeless and dubious loans, which only recently acknowledged the sums, which would never be returned. This meant, that any loan was considered income generating until it would become unreturned. After implementation of the system reflecting risks, many loans turned out disadvantageous to the banks. The great importance of the accounting is also connected with the fact, that international practice of improving banks' own capital normative indicators demands a reservation of a part of their capital for maintenance of risky assets.

Regularity of the credit revision. To exclude malpractice in loan giving as well as to control the fulfillment of standards and instructions enforced in a bank for lending, a special, independent department is created, which overviews the lending operations. The more independent is this department, the quicker and more qualitatively it will perform its duties, the better will be the quality of credit portfolio and the lower will be the credit risk.

Since April 1, 2001 the "Recommendations on credit risk management"[1] created by Bank of Latvia had come into effect. The main accent in these recommendations is on the fact, that management of the credit risk has to be planned very carefully. According to the Bank of Latvia the conditions for the effective management of credit risk are the following:

The creation of the appropriate credit risk management environment, which means defining lending strategy and priorities as well as creation of different standards.

The use of sensible lending criteria, which means working out and enforcing certain lending procedures.

Constant administration of the loans, evaluation and supervision, which means, that staff of the commercial bank constantly monitors loans given out.

Respective control of the credit risk, which, in essence, is the control over observance to lending standards, procedures etc.

Unbalanced liquidity risk is linked with the inability of the bank to fulfill obligations and satisfy risks, including those about current asset

refinancing. To decrease the risk bank has to have such assets that, if necessary, can be sold. The price, for which they can be sold is often bank's external risk.

Such, already mentioned risks, as interest rate, currency and risk of insufficient bank's asset diversification, can be referred to as *position risks*.

Position (market) risks are connected with real or potential losses, which are caused by the discord of bank's assets and obligations by currency types, time to fulfill the obligations, as well as the mistakes in predicting the revenue and costs of different financial instruments, which lead to ineffective decisions on the attraction and placement of the resources. These risks are primarily dependent on the conjuncture of the financial markets and bank protects itself, defining limits for open currency positions, terms and hedging the positions, using different derivatives (forwards, options), and other operations, which lead to violations of these limits. These measures, on one hand, decrease the size of potential losses of the bank, but on the other hand lead to the decrease in the potential profitability of it's asset operations, because the respective expenditures are increased.

Interest risk or the risk of change of the interest rate – this is a risk, that bank's profit in total will be negatively influenced by the unpredictable changes of the market interest rate. This risk is caused by the assets and liabilities of the bank with the same interest rate and same execution terms not matching each other. The influence of these changes on the bank can be positive. The size of the interest risk can be evaluated using GAP management methods as a loss (profit) from re-evaluation of assets and liabilities in proportion to the size of bank's capital (see Table 1 "Implemented evaluation of bank's interest risk.")

Table 1

Implemented evaluation of bank's interest risk

Indicators	Date (t)			
<u>GAP</u> (net asset position – net liability position for a current date)				
<u>R</u> (placement rates LIBOR)				
<u>Income (losses) from re-evaluation of assets and liabilities</u> (GAP * R(t) - R(t-1))				
<u>Size of bank's capital.</u>				
<u>Risk evaluation Income (losses) from re-evaluation: volume of capital.</u>				

Interest risk in lending is decreased, using the following methods:

- a) Using insurance of the interest risk
- b) Providing loans with floating interest rates, which allows the bank to implement changes in the loan contract, if market lending rates change significantly. This way bank insures the possibility of losing the income.
- c) Signing fixed-term contracts with the client: after a forward contract client is offered bank's loan for the interest rate, set in the day of signing the contract. In this case the risk, linked to the change of the interest rate, is divided with the client.
- d) Using interest options, according to which the holder of the option has rights to buy or sell short term loan or deposit at the defined price before or after a certain date in the future.

Currency risk is caused by the discord between bank's assets and liabilities in different currencies and it is defined as the size of loss, caused by fluctuations of exchange rate, on a unit of open currency position in previous period.

To measure the currency risk the structure of the assets and obligations is compared, taking into account the currency. Each currency, which has a share in the total volume of bank's operations – larger than 5% from assets is considered separately. Open currency position (OCP) is calculated as the difference of assets and obligations in the given currency. If this difference is larger than 0, the position is called "long", if it is less than 0, the position is "short". The long position creates losses, if the base currency (that is currency, for which the OCP is defined) depreciates. Short position negatively influences the results of the work, when the base currency appreciates, because the assets in the alternative currency lose their value and as a result are unable to cover obligations, which are fixed in a growing, appreciating currency.

To evaluate the currency risk, that occurred it is necessary to analyze the dynamics of the OCP in different types of currency and the dynamics of the exchange rate of the respective currency. It is also necessary to determine the size of profit or losses, which were created due to re-evaluation of assets and liabilities and to relate it to the volume of bank's capital. (See Table 2. "Evaluating bank's currency risk").

Table 2

Evaluating bank's currency risk

Indicators	Date (t)				
Size of the OCP* USD(DEM)					
USD(DEM) exchange rate.					
<i>Income (losses) from re-evaluation of assets and liabilities</i>					
$OCP * (k(t) - k(t-1))$					
<i>Size of bank's capital.</i>					
<i>Risk evaluation Income (losses) from re-evaluation: volume of capital.</i>					

To decrease the influence of the currency risk on the assets in lending the following methods are used:

- Providing loans in one currency, with the condition to repay the loan in another currency, taking into account the forward exchange rate, defined in the loan contract
- Signing forward currency contracts as the main method of decreasing currency risk
- Signing futures currency agreements
- Signing currency options
- Signing swap-contracts about the exchange of payments in different currencies, in future
- Insurance of currency risk, providing all the risk to the insurance company

All the mentioned measures are inalienable parts of the implementation of the strategy to decrease or hedge risk.

Hedging is one of the bank's internal mechanisms of financial risk neutralization. The term hedging is used in the narrow meaning, but it can be used in a wider meaning as well. In the wider sense, the term "hedging" means using any possible mechanism of decreasing risks of possible financial losses. In a narrower meaning the term "hedging" means the decrease of financial risks, which is based on using respective financial instruments, usually, the derived securities – derivatives.

* The real size of OCP is calculated the best, taking into account the real value of the claims in a given currency. This is explained, by the fact, that part of the claims can be linked with problematic assets and the extra-balance obligations of the clients, which lead to certain loss of value.

Operations with derived contracts, which belong to extra-balance operations, had quickly become widespread and popular during the last years. The risks of the extra-balance activity (guarantees, letters of credits, derivatives, etc.) also are the risks of active (and passive) operations. Although the bank receives profit during the extra-balance activity, without assuming any current debt obligations, the risk is linked with the fact, that in future claims for bank's balance can be put up. The growth of extra-balance assets and the corresponding risk leads to decrease of the income from the balance assets, however banks are actively carrying out the above-mentioned operations, because they are profitable and perspective.

Derivatives have undeniable advantages. Operations with derivatives allow to separate risks on the financial markets. They link separate markets, in that way, improving resource allocation and transparency of the market, because greater market protection attracts more investors.

Still, it has to be said, that derivative instruments are simultaneously the instruments of creating new risks [2, 118]. The main danger of the derivatives is that operations with them, allowing to use small volume of liquid funds, can bring huge profits as well as huge losses. This is explained by the fact, that it is practically impossible to predict the evolution of the price of base assets, which are the basis of the derived instruments. The price is defined taking into account the interest rate, contract terms, fluctuations of exchange rate etc. This is an evidence for vulnerability of the markets of derivative instruments.

Risk of insufficient asset differentiation is in essence the risk of bank's specialization. It occurs, if the working of the bank is linked with a precise group of operations, with a definite types of assets (mostly lending, interbank lending, operations with securities). For example, it is possible to issue a large amount of loans, with a small credit risk, to the enterprises working in a particular branch of the economy and the credit portfolio, will thus be subject to the credit risk of insufficient diversification. This risk is decreased by the possibility to transfer the capital between different spheres of operations with assets in case of a necessity. To decrease or neutralize the risk of insufficient asset diversification banks also use such methods as:

asset diversification. The diversification of credit portfolio means the increase of the range of the clients, avoiding the heightened concentration of risks, and allows to minimize portfolio risks effectively. The diversification of bank's

currency portfolio (currency basket) means, that bank is operating with different currencies and regulates it's currency position, to decrease the currency risk.

risk division and others. This mechanism is based on the partial transfer of the risk to the partners in separate financial operations. An example is the division of risk, between the participants of leasing operation. Thus, when operative leasing occurs, bank transfers the risk of the outdated of the asset, risk of loss of technical productivity of the asset (observing certain exploitation rules) and other risks, defined in the contract to the client.

Of course, the most radical mechanism of neutralizing the risks is to abstain from executing certain operations, with a purpose to avoid the risk completely. Abstaining from the operation can be motivated with the fact, that risk level there is very high, or that the assets used in these operations have low liquidity and the bank strives to exclude the risk of inability to pay in the future.

Thus, risk management together with other factors, for example, with staff competency and quality of information systems, may become the decisive factor in the preservation of bank's assets, increasing and maintaining competitiveness, especially under conditions of globalization and internationalization of world financial markets.

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Summary

The paper deals with the management of banks' financial risks, including risks of assets and operations with assets, it is the process of not allowing or neutralizing their negative consequences, which consist

of the following parts: identification of risks, evaluation of risks, prevention of risks and insurance of risks.

The system of identifying and evaluating risks is open, because of the constant search for more effective possibilities of risk prevention and evaluation.

This paper discusses many types of financial risks, the bank encounters, throughout operating with assets, such as credit, liquidity, interest, currency and the risk of insufficient asset diversification.

The author defines risk in the absolute expression as the sum of possible losses, due to operations performed in terms of money. Risk, in the relative expression, may be defined as the proportion of possible losses in relation to bank's income, resources, capital, etc.

The author considers risk cognizance evaluation and management being one of the most important measures in protecting assets and successfully implementing operations with assets.

In this paper the author also draws attention to such new potential sources of risk as derivatives. Derivatives have undeniable advantages. Operations with derivatives allow to separate risks on the financial markets. They link separate markets, thus, improving resource allocation and transparency of the market, because greater market protection attracts more investors.

Still, derivative instruments are simultaneously the instruments of creating new risks. The main danger of the derivatives is that operations with them, allowing to use small volume of liquid funds, can bring huge profits as well as huge losses.

Thus, risk management may become the decisive factor in the preservation of bank's assets, increasing and maintaining competitiveness, especially under conditions of globalization and internationalization of world financial markets.

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DIVERSIFICATION OF INVESTMENTS

Rakstā tiek analizēta nepieciešamība dažādot ieguldījumus ārvalstu akcijās, kas tiek pamatota uz datiem, pasaulē pieejamajos 40 akciju tirgos astoņu gadu laikā.

Raksta nobeigumā autors piedāvā savas rekomendācijas, kas ir viņa pētījuma rezultāts.

The paper analyses the need for diversification of investments in foreign stocks based on the data from the operation of 40 stock markets worldwide over the past eight years. In the conclusion the author offers recommendations acquired as a result of his research.

At one time or another, all of us have been or will be faced with the decision of whether or not to invest abroad with our stock portfolios. Pressure is constantly on us from the press and from our financial planner to 'diversify'! At the same time, there are other financial planners, mostly with no international knowledge, who will hang their adamant recommendation to 'not diversify abroad' on a recent spate of articles about high correlations between the US and international markets. Diversify abroad or not – given this apparent contradiction in advice, what should the average investor do? The article is a hard look at 40 stock markets worldwide over the past eight years and concludes with a recommendation based on what we found.

Why would anyone want to diversify? The reason is to smooth out the bumps along the way and to possibly increase our returns. With increased correlation between the US and foreign markets, is this still the correct thing to do?

Diversification is based on a theory that may or may not be applicable in today's international markets. Nevertheless, most financial planners will advocate 'diversify' – and in most cases are simply repeating what they regurgitated on their qualifying exam. Most brokerage firms will tell you to diversify abroad as will the large mutual fund companies. Both have financial incentives to do so. Brokerages are able to charge outrageous fees,

sometimes (in my experience) 500 times more for stock transactions in non-US markets than in US markets. Prices are not transparent (not available for you to see) when they buy and when they sell, and competitors are few - allowing them to take money from you.

We wanted to know who was right, once and for all!

We examined a total of 40 foreign markets across the economic spectrum. Selected countries include the United Kingdom, Germany, Italy, Japan, Brazil, and Hong Kong to name a few.

In absolute returns, only four markets beat the United States (which returned 15%) over the past eight years. These include Finland at 22%, Russia at 21%, and China at 16%. The other 36 had lesser returns, with the biggest losers being Thailand at -7%, Indonesia at -24%, and the Philippines at -17%. On average, the foreign markets altogether returned only 3% compared to the S&P and the Dow's +15% per year.

Return per year

Costa Rica	26%	Israel	6%
Finland	22%	Hong Kong	4%
Russia	21%	Venezuela	3%
China	16%	Turkey	2%
USA- Dow	15%	Australia	1%
USA- S&P	15%	Poland	-1%
Panama	13%	Chile	-2%
Ireland	13%	Austria	-3%
Netherlands	13%	Argentina	-3%
Greece	13%	Singapore	-4%
Switzerland	12%	Taiwan	-4%
Germany	12%	New Zealand	-6%
Denmark	12%	South Africa	-6%
Spain	11%	India	-8%
France	11%	Japan	-9%
Italy	10%	Czech	-10%
Brazil	9%	Malaysia	-13%
United Kingdom	9%	Korea	-16%
Canada	8%	Philippines	-17%
Norway	7%	Indonesia	-24%
Hungary	7%	Thailand	-27%

The returns certainly are not interesting overall, so let's look at the correlations. On a quarter to quarter basis, the co-movements in foreign markets in comparison to the US S&P were ranked from most to least correlated, as in the table below. Most correlated, and therefore possibly

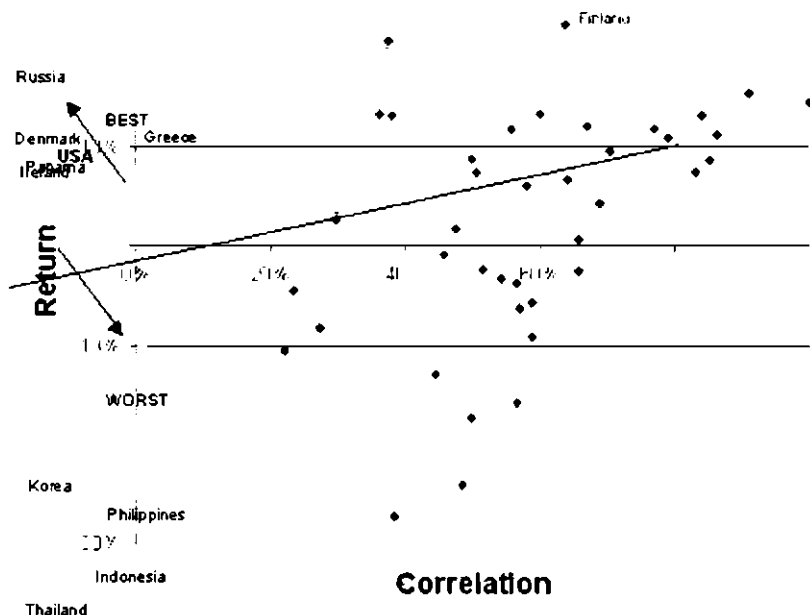
the least interesting to add to your portfolio were: Spain, the United Kingdom, the Netherlands, Canada, and France. The reason why they were not of value from a diversification standpoint was that they had volatility that closely mirrored that of the United States, and on top of that gave you a worse rate of return! You would want to examine countries from the bottom of the correlation list to see if they are of any value to your portfolio. These include China, Czech, Taiwan, India, Venezuela, Russia, and Greece. In choosing which would be of 'diversification value', it was necessary to analyze both the reward and the correlation together. The 'choosing countries for diversification' chart below highlights which nations were of the most interest. The horizontal axis measures the degree of correlation while the vertical axis shows the average yearly return. The most attractive countries were the furthest from the line to the upper left of the graph. These include Finland, Russia, Greece, Panama, Denmark, and Ireland. The absolute worst places you could have had your money, to the lower right and furthest from the line, over the past eight years were Thailand, Indonesia, the Philippines, and Korea. Also on the 'bad' list were Czech, Malaysia, and Japan.

Ranked by Correlation

USA S&P	100%	Finland	64%	Indonesia	48%
USA Dow	91%	Ireland	60%	Turkey	48%
Spain	86%	Japan	59%	Poland	46%
United Kingdom	85%	New Zealand	59%	Malaysia	44%
Netherlands	84%	Israel	58%	Thailand	38%
Canada	83%	South Africa	57%	Greece	38%
France	79%	Singapore	57%	Russia	37%
Germany	77%	Korea	56%	Panama	36%
Italy	70%	Denmark	56%	Venezuela	30%
Hong Kong	69%	Argentina	54%	India	27%
Switzerland	67%	Chile	52%	Taiwan	23%
Australia	66%	Norway	51%	Czech	22%
Austria	66%	Brazil	50%	Costa Rica	-11%
Hungary	64%	Philippines	50%	China	-24%

Have markets become more correlated with the United States over time? The answer is yes. Daily correlations have moved from an average of 15% for all foreign markets four to eight years ago to 24% in the last four years. This represents a whopping 60% correlation increase and is all the more startling given the short time period in which it occurred.

Choosing Countries for Diversification



Were the increases uniform? No they were not. Europe had the largest gains of all regions, up from 4% to 22%, on its daily co-movement. The Americas were already highly correlated at 24% and increased further, to the highest of any region, to 32%. Asia remained almost unchanged, moving from 25% to 24%. This analysis still favors Europe (if it does not continue its rising correlation pattern) and Asia (looking at correlations only) and almost completely rules out the use of the Americas for diversification. The Americas including Latin America had both a poor return (but not the poorest) and a high correlation.

We looked further at developed versus emerging markets for their correlation increases or decreases. Developed markets moved from 17% to 29%; emerging from 13% to 21%. The proportional change was slightly higher with developed – compared with emerging – markets. As a result, the emerging group is still favored-looking only at daily correlations and not weighing in on the return.

A third segmentation of the markets was carried out. Large capitalized markets versus medium versus small were examined. Included in the 'large' group were countries such as Canada, the United Kingdom, Germany, Hong Kong, and Japan. 'Medium' encompassed Turkey, Finland, Ireland, and Spain while 'small' covered Israel, Greece, Poland, and China. Notable differences were found. Large capitalization markets moved from 26% to 36%, medium made a huge jump from 8% to 22%, and small from 13% to 19%. In the past, medium capitalization offered the best diversification opportunity. Although the correlations still rank from highest to lowest based on their relative size, the gap is closing.

When we examined the quarterly correlations, the results were different than for daily co-movements. Daily movements tend to be knee-jerk buy and sell orders by the more nervous investor categories. However, quarterly tends to show the stability or instability of today's longer-term stock market price changes. Europe had the highest correlation at 61%, followed by the Americas at 51%, and Asia at 44%. With a returns average of +4% in the Americas and +8% in Europe, Europe offers much better diversification potential despite the higher correlation.

Developed markets as a whole were 70% correlated to the United States. This is extremely high. Emerging markets are only 40% related but gave an unattractive -1% return per year (versus +8% in the developed region). These results show that there is no clear way of diversifying across the developed / developing groups of countries.

Quarterly Results

	Return	Correlation
USA S&P	15%	100%
Americas ex US	4%	51%
Europe	8%	61%
Asia	-8%	44%

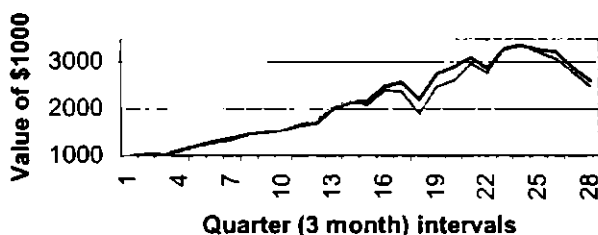
USA S&P	15%	100%
Developed	8%	70%
Emerging	-1%	40%

USA S&P	15%	100%
Large cap market	7%	74%
Medium cap market	5%	56%
Small cap market	-1%	38%

Next, we checked across the level of capitalization of a stock market. The smallest markets gave unattractive negative returns and were correlated by 38%. In a comparison of medium and large capitalized markets, the higher large cap correlation of 74% with a return of 7% was still more attractive than the 56% correlation from medium markets that yielded only 5% per year in returns.

At first glance, what can be concluded from the above analysis? The majority of markets over the past eight years returned less than the US and had relatively high and increasing correlations to the US stock market. Therefore, 'don't invest abroad' is what some would conclude. Before we accept this preliminary conclusion, let's look further at some of the possible alternatives.

Value from Diversification, or Not



If you had the S&P index as your portfolio over the past eight years, your return would have been +15% per year, and your volatility was 8.5% for one standard deviation on your quarterly return. Standard deviation is a measure of volatility with higher being worse and lower being better. If you substituted all foreign markets for one quarter of your portfolio and leveraged this portion up by 70% – to get the same return as in the US – your volatility would have increased to 10.4% for the same return. The chart 'value from diversification, or not?' shows an all US portfolio and this 75/25 one with no visible advantages. Diversifying is not a clearly good strategy!

If you had the top six markets, which we found included Finland, Russia, Greece, Panama, Denmark, and Ireland and you held one third of the foreign portion in cash and one quarter of your portfolio in these, you had the same return but reduced your standard deviation to 7.9%. Alternatively, you could have put the full 25% into these markets,

making your return 19% and your volatility 8.7%. Either way, the addition was not a huge advantage, but did provide some benefit. Furthermore, what are the chances you chose the best six markets of the 40 available?

Our findings were:

- No returns benefit from international passive stock index investment
- No diversification benefit from an international 'all markets' addition to the US portfolio
- Europe favored for diversification
- Latin America has no diversification benefit to a US investor
- Developed markets are favored over emerging markets because of dismal returns in the emerging markets over the past eight years. However, neither adds diversification value
- Larger capitalized foreign stock exchanges are better investments than medium and smaller markets. Smaller markets did not compensate you in returns or diversification benefits enough to make them interesting
- Large correlation increases occurred over just the past eight years
- Dramatic correlation increases took place in especially Europe and in medium sized foreign stock markets

What therefore are our recommendations?

- ✓ Do not diversify to a set of many global stock indexes
- ✓ If you really need to diversify, choose European and definitely not Latin American or Asian stocks. However, the large increases in correlations in Europe may worsen Europe's 'value' further
- ✓ If you really need to diversify, choose larger rather than medium and small sized foreign stock markets. Increased transaction fees make medium and small markets even more unattractive than they appear at first glance, thus worsening their outlook
- ✓ Increased correlation has increased stock market inefficiencies abroad. The only foreign opportunities are, the author believes, in 'smart diversification' with active management strategies able to capture these market inefficiencies

- ✓ 'Smart diversification' means stay away from standard mutual funds and favor hedge funds with unique strategies. Fund approaches that allocate to the 'best' countries at any one time or capture under-valuations and overvaluations from the high correlation movements to the US should be of interest to a portion of a US investor's portfolio

The past eight years includes fairly the recent correction in the US stock market. Regardless of this, it has been a period of higher than average US returns, at 15% versus a long run average return of 11%. As well, the period has been dismal for overall international stock market performance. A significant decrease in US stock market yields and a significant increase in foreign equity prices could change the recommendations materially. Notable also is that the eight years includes effects of the South East Asian crises and the Japanese long term recession.

The world has changed. Returns have been highest in the most efficient, largest, and best organized stock markets in the world mainly the US. High and increased correlations worldwide have almost completely eradicated the value of diversification from traditional index type and staid mutual fund investments abroad. There is no value in these any longer! At the same time, market inefficiencies caused by the correlation increases have increased the profit potential from active 'smart' international strategies. The recommendation overall is to avoid passive traditional funds for international investments, to avoid international investment altogether if this is all that is being considered, and to favor active hedge fund type strategies when you seek to diversify abroad.

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Summary

There exists an apparent contradiction in advice for the US investors on whether to diversify abroad or not. This problem gains particular importance with the increased correlation between the US and foreign stock markets.

The author has examined 40 foreign (non-US) markets across the economic spectrum. In absolute returns only four markets beat the United States over the past eight years. In choosing which countries would be of 'diversification value', it was necessary to analyse both the reward and the correlation together. The most attractive countries include Finland, Russia, Greece, Panama, Denmark and Ireland.

Stock markets have become more correlated with the United States over time. However, these increases have not been uniform, the analysis still favouring Europe and Asia.

As a result of examining developed versus emerging markets for their correlation increases or decreases, the emerging group is still favoured – looking only at daily correlations and not weighing in on the return.

The examination of large capitalised markets versus medium versus small favours the large ones.

The quarterly correlations apart from the daily ones tend to show the stability of today's longer term stock market price changes.

The results also show that there is no clear way of diversifying across the developed/ developing groups of countries,

Some of the findings of the study are as follows:

- *No returns benefit from international passive stock index investment;*
- *Europe is favoured for diversification;*
- *Developed markets are favoured over emerging markets because of dismal returns in the emerging markets over the past eight years. However, neither adds diversification value;*

There are the following recommendations offered:

- *Not to diversify to a set of many global stock indexes;*
- *If one has to diversify, European stocks larger foreign stock markets should be chosen;*
- *Increased correlation has increased stock market inefficiencies abroad. The only foreign opportunities are in 'smart diversification' with active management strategies able to capture these market inefficiencies;*
- *'Smart diversification' means stay away from standard mutual funds and favour hedge funds with unique strategies.*

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PROBLEMS RELATED TO DEFINING PROFITABLE HOLDING PERIODS FOR GOVERNMENT TREASURY BILLS

Līdz ar kompjuāterizāciju, tīklu INTERNET un krīžu svārstībām globālajā finansu tīrgū makroekonomisko rādītāju kvalitāte un to pieejamība pēdējos gados ir nozīmīgi uzlabojusies. Šajā rakstā tiek analizēts, kādi rādītāji varētu norādīt uz lēmuma pieņemšanu par valsts vērtspapīru pirkšanu vai nepirkšanu, vai arī par optimālo laika posmu šim ieguldījumam.

Individuālie pētījumu rādītāji tiek ņemti vērā un diskutēti Ir svarīgi izprast atsevišķus faktoros kā tādus, jo pārāk vienkārši ir pieņemt lēmumu par pirkšanu. Tāpēc sarežģītāks signālu modelis tiek aprakstīts turpmākam pētījumam, kur katrs faktors vai nu apstiprina, vai noliedz pieņemto signālu, kas rezultātā izskan kā rekomendācija izvirzītās darbības veikšanai.

With computerization, the Internet, and waves of crises in the global financial markets, the quality and availability of macroeconomic data has significantly improved in recent years. This paper examines which data may give a signal for the buy / not buy decision for government treasury bills and the optimum period for that holding. The relative strength based on a correlation to the next period's holding (predictive holding) is calculated. The direction of the relationship is specified as well as a distribution of the results. Individual macroeconomic data are then singled out and discussed.

Single factors alone are important to understand but are too simplistic to base the 'buy' decision on. Therefore a more complex signal model is specified for further study whereby each factor confirms or denies the signal provided, finally resulting in a recommendation and some measure of strength for that proposed action.

1. Introduction

Motivation. With budget surpluses becoming the normal state of affairs in the developed countries of the world, more capital is finding its way into financing the deficits of the non-group of seven ("non G7") countries. Fragmentation of the markets is severe with around 162 nations making up this set of sovereigns. The large number makes active but manual portfolio monitoring almost impossible.

Concentration by a fund manager on a particular region or grouping of countries could make the task more manageable. However, the cost of non-diversification is severe given the swings in asset prices. Also, a cross learning opportunity exists between different regions, something which would be missed with a focused management strategy. Even the monitoring of more than a few countries has become difficult, as the standard set of macroeconomic fundamentals from each country is now 751 according to the International Monetary Fund. Even if a manager could manually monitor announcements of monthly, quarterly, and yearly data for each of 751 variables, the question would be: which data should be chosen as the most relevant for decision making. Would it be: consumer inflation; producer inflation; gross domestic product growth; money supply M1, or any of the hundreds of others.

A fixed income fund manager must allocate their portfolio to any of a large number of countries, searching for the best 'subset' of these at any one time. The correct investment allocation choices are of tremendous economic value as they can significantly improve financial returns and limit downside risk. Further, the work can be used by multilateral agencies such as the International Monetary Fund to early diagnose and to repair economies before they reach the point of becoming critical. Until now the proper tools were not available to do this. The problem proposed in this paper has not been resolved in any literature available and is therefore a unique undertaking.

Objective. The purpose of this study was a first step toward being able to predict profitable holding periods for government treasury bills using macroeconomic data, with the specification of an 'investors guide'

Tasks. There were five main endeavors to complete the work for this paper.

- First, there was a search and analysis of theory and existing research to identify foundations for macroeconomic statistic

relationships with the profit holding objective of a short term fixed income instrument.

- Second, there was the locating of data and its preparation and accuracy testing as well as the specification of the problem from a formula perspective. Included in this was defining the independent and dependent variables to be used and defining the analysis techniques and assumptions used to make the problem 'solvable'
- Third was the calculation of correlations between the profit objective and individual macroeconomic factors. These results were analyzed together with correlation distribution graphs and the prior step identified theoretical relationships.
- Fourth was the specification of findings in the form of an 'investors guide' This guide displayed in tabular form the relevant macroeconomic factors and the direction of their correlation in order sorted from most strongly to least strongly related.
- Fifth and final were recommendations for further study to specify a general model and to make the findings commercially useable, suggesting possible avenues of refinement.

2. Securities market efficiency theory and its relationship to macroeconomics

Individual macroeconomic factors and their relationship to foreign exchange movements have been the focus of many studies. These findings are relevant to our problem as the foreign exchange component is the more significant of two variables determining the profit derived from a treasury bill (the other being the interest rate). The theory section highlights macroeconomic factors that others suggest may have predictive value and a body of research to support the claim of excess profits through market inefficiencies, a fundamental principle of our study. The results of testing by the International Monetary Fund of three other models gives some clues to our own model's development.

Inflation measures are most often quoted for their importance in foreign exchange fluctuations. They are also the most followed factors by practicing market participants, whether consumer or producer inflation or the components thereof. International financial theory is itself in large part based on the idea of purchasing power parity, which implies mean

reversion in real exchange rates. Chari, Kehoe, and McGrattan 1997 showed large and persistent deviations of real exchange rates, in this case from purchasing power parity. The paper's author agrees that large differences can and will exist from purchasing power parity. It is naive for any academic, including the ones above to think that foreign exchange cross rates are dependent on a single factor on equivalent prices in different countries. Many barriers exist to the free flow of goods, slowing the process of arbitrage, and differences in savings rates, transportation rates, taxes all contribute to natural price differences that will never correct themselves. The business cycle itself being one factor, shown in Fig 1, that is relevant to periods of currency under or over valuation.

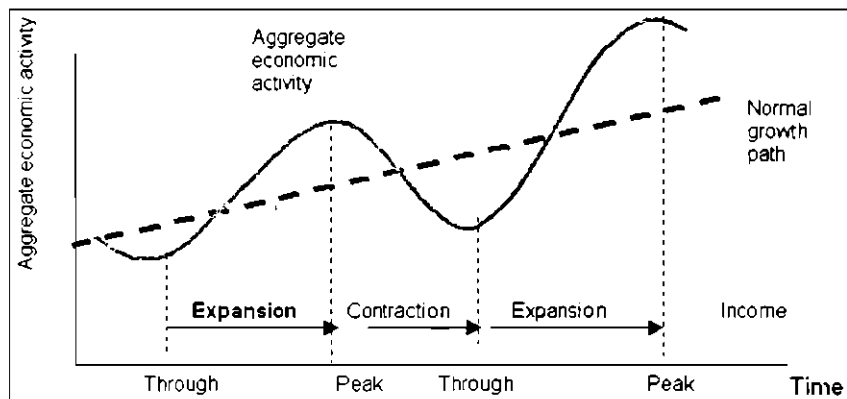


Figure 1. Business Cycle - Successive phases of expansion and recession in a typical economy as measured by gross domestic product growth

Overall, a body of research suggests that inefficiencies do exist, including in the foreign exchange and bond markets. This helps by at least making possible our goal of generating excess profits from the active management of fixed income using a scientific approach. Excess profit is defined as a rate of return above that justified by the risk undertaken. Most academic work was previously rooted on an 'efficient market' assumption. Small departures from conventional notions of rational expectations and market efficiency can produce trends in excess returns suggest Evans and Lewis 1993. They go on to add that strong evidence for the presence of trends in excess foreign exchange and bond returns exist. Lewis comes from a foreign exchange analysis background

prior to returning to an academic career. She quantitatively has proven inefficiencies and has experienced these first hand in her banking position. The paper's author believes this is the strongest combination an academic finding that is documented, borne of experience of actual events and conditions. Various models have been developed and used to predict currency movement and economic performance. The World Bank and the International Monetary Fund are best known for their attempts at using their own in-house models and those of others. Some methodologies were clearly more successful than others in their intended goals.

Andrew Berg and Catherine Pattillo 1999 tested whether or not three models for predicting currency crises were successful vis a vis the 1997 Asian currency crisis. The study found that two models failed completely and the third was informative but still not reliable. Therefore Berg and Pattillo concluded in their work that it was not possible to fully and systematically predict currency crises at that time. This paper's author is of the opinion that there is no model that has the ability to predict all crises. Crises are unusual occurrences each with unique features of their own and are therefore difficult to detect. For these authors to evaluate a model based on a single such occurrence is a highly limited testing sample and should not be used to discard or to keep any particular method of prediction.

Other models for prediction do exist and have success, even if that success is within a limited scope of time and circumstance. This paper's author concludes after finding little literature in this area, that the field of automated decision making for investment using macroeconomic data has not been deeply researched and in the future may become a significant branch of new research, based on the related financial and political importance. The challenge of developing a 'robust' methodology is great and is obviously not a simplistic task. The existence of excess profit (deviations) and the existence of the ability to predict both have a firm basis in research.

3. Analysis of macroeconomic indicator relationships to short term fixed income profitability

An objective function was first specified; the profit from a treasury bill. Limits were then defined. A procedure was next applied to test data and to reduce the number of countries and factors to analyze. Correlations were calculated and used to rank macro economic factors from the most

to the least significant. Next, distribution charts were examined to determine the stability of correlation relationships, coming to a final 'investors guide' listing.

Discounted fixed income instruments with no coupons are calculated according to the following equation:

$$Y = \frac{(100 - P)}{P} * \frac{360}{d}$$

where

Y – yield return expressed as a decimal number on a fixed income instrument

P – price of fixed income instrument discounted from 100, such as a bill selling at 95 for each 100 in maturity value

d – day count from time of purchase to time of maturity

4. Results of macroeconomic factor and fixed income profitability correlation

Analysis results were examined and interpreted. Results were grouped into a view on the best holding period length, a discussion of the most significant macroeconomic data findings, and a review of correlation distributions suggesting stability of relationships. This was the final step before making a determination of conclusions.

Optimum holding period

It may be possible to predict one year forward returns more accurately than one quarter and one month. The relationship of predictability based on all 71 macroeconomic factors was found to be on a ratio 6 4.3 3. Therefore it may be possible to predict yearly movements with two times greater accuracy than one month movements and 1.4 times greater accuracy than one quarter movements.

Most significant macroeconomic data – findings

Movements in interest rates, exchange rates, and the country's capital accounts are the strongest indicators that may be used to predict the profit derived in the next period. Interest rate increases, exchange rate weakening, and positive capital inflows into a country signal a possibly positive next holding period for treasury bills. Direct investment abroad

decreases are a sign, likely, that domestic companies and persons are repatriating funds. The result is continued domestic re-investment in the following period causing strengthening exchange rates and profitable returns.

Similar factors

Some factors were similarly effective in their ability to predict and in their direction of correlation across yearly, quarterly, and monthly data.

Discount rate (interest rate); deposit rate; and maximum lending rate were positively correlated. This suggests a signal for profitability produced by interest rate movements, with an increase in interest rates in a country being a good indicator for the profitable holding of short term local denominated debt in the next period and, alternatively, a decrease in interest rates being a good indicator to not hold or to short (sell short) short term local denominated debt in the next period.

Total net borrowing and claims on local governments (less strong correlation) had a negative correlation. Therefore, an increase in borrowing by a sovereign government or its local governments (such as cities or municipalities) signals a less profitable next period in holding the local currency debt instrument. Vice-versa, a decrease in borrowings by a government was the signal for a positive next period for holding of the local currency debt.

Factors with changing signs

Some factors changed in correlation sign (were positively or negatively correlated depending on the period examined) over the times of 1, 3, and 12 months. Gross national income was the most negatively correlated factor for a 3-month holding period but was mildly positively correlated for a one year period. Money market interest rates were positively correlated for periods of one and three months but negatively correlated for one year. Claims on private sector was positively correlated for one year and one month (not strongly so for one month), but negatively correlated for three months. Finally, the deficit gave varied returns profiles, signaling a less profitable quarter and a more profitable one-year holding period. This suggested, possibly, that the initial short-term reaction to an increased deficit was a weakening of the currency. Later however, in the three month to one-year period, the currency returns in value to some level making up for that initial change.

Factors that were not relevant to all time periods

Net domestic borrowing was relevant for one month forward only but not for three month or longer periods. This suggests that the impact of credit expansion or contraction of non-government entities in an economy is short term with respect to the exchange and interest rate combination.

Reserves and reserve money (Central Bank) were not relevant to one and three-month movements but were highly relevant to one-year predictions. Changes signaled by reserve levels in a Central Bank were longer term in nature, leaving ample time to enter or exit positions in response to reserves. The implication is that even with delayed Central Bank reporting of reserves the information provided may have been valuable (not too late) for use in the prognosis of investor return conditions.

Correlation distributions

Ideally the range of correlations around a mean should be normally distributed. Many, in our study, exhibited such a formation, including discount rate yearly and market rate quarterly. With 26 countries studied, the number of observations in each factor's case was not sufficient to determine with absolute certainty the existence or non-existence of a normal pattern. Capital accounts monthly and net borrowing yearly suggest that it may be necessary for countries to be grouped based on some criteria (possibly savings rate, GDP per capita, geographic region or some other basis) as they react differently (hypothesized) as a group to certain macroeconomic stimuli.

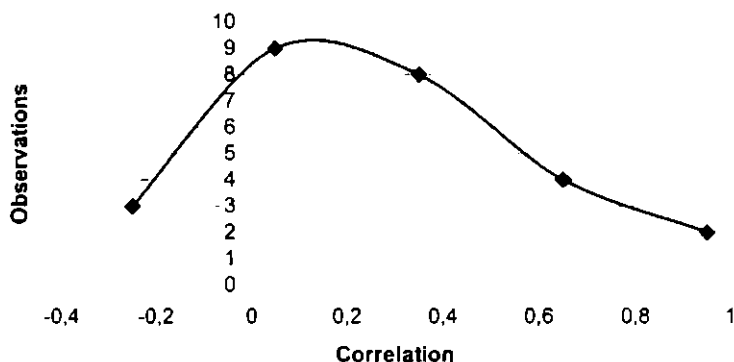


Figure 2. *Discount Rate (Yearly)* Distribution function of the yearly observation of an interest rate

Discount rate yearly (the interest rate) showed a normal distribution with a slightly positive skew (Fig. 2). Y-axis is the number of observations and x axis is the level of correlation. The negative tail ends at -0.5 (-50% correlation) and the positive tail at +100%. Although not perfectly normal in distribution, this is acceptable as it represents a stable positive relationship. The vertical axis is the number of observations. The horizontal axis is the degree of correlation ranging from -100% to +100%.

How does Latvia compare

Many of the same macroeconomic indicators found overall to affect the profit objective, also were found to be relevant for Latvia, with some important exceptions. However, the amount of data available for Latvia was too short to draw any statistically meaningful conclusions. Further, the currency of Latvia during the period studied was pegged to a basket of currencies, the SDR, making foreign exchange movements not dependent on national factors only.

Consistent direction of correlation and importance of relationship were found in; Trade Balance correlated at +98%; Discount rate (interest rate) at +93%; Goods Exports at - 92%; Deposit Rate (in local banks) at +91% and; Market Rate (exchange rate in previous period) at 61% (less significant). Therefore it was a good investment into Latvian Lat denominated sovereign interest rate instruments for a one year period just after the trade balance became positive, goods exports decreased, the discount rate and deposit rates moved up.

Significant factors for Latvia that behaved opposite to the average of all other countries studied were; Reserve money at - 98%; Foreign assets at - 86%; Capital accounts at -60% and less important Reserves at - 35%. For the 26 main countries examined the direction of the average correlation was exactly opposite that for Latvia. When reserve money falls, foreign assets owned by Latvians decreases and capital accounts for the country deteriorate, this is a time to be holding Latvian fixed income instruments in local currency. Differences are not surprising given Latvia's uniqueness. Latvia has outstanding overall macro economic performance, is ranked as one of the least indebted nations in the world and has a solid Central Bank with a practice of managed currency rates. Some indicators were important for Latvia but not important for the sample countries. Foreign liabilities - 97%, demand deposits - 95%, Total reserves - 92% and, Claims on government - 86% were those that stood out.

Unexpected results

Opposite to expectations was the change in Central Bank reserve assets. When the assets side of a Central Bank's balance sheet was increased, it

signaled a possibly less profitable investment in treasury bills. The opposite was true, suggesting a buy signal, when Central Bank assets were decreased. Recent economic publications have highlighted Central Bank assets as opposed to net assets, coming to the incorrect conclusion that increases are positive for investors and decreases negative.

Most notable was an absence of inflation as a signal to investors. Classical economic theory offers inflation as the single most important factor in exchange rate and interest rate determination. Inflation information was not found to rank even among the top 41 factors of those having predictive value. The recent low rates of inflation were not a reason for this important deviation from popular economic theory as data was used for up to 40 years in history.

5. Conclusions and proposals

The main conclusions from the study were:

- Specification of the 'investors guide', an organized list of correlation between the profit objective and individual macro economic variables as well as the time frame in which the 'predictive signal' is active
- Inflation is not a predictor of profit from short term treasury bills in our sample of 26 non G7 countries. This is contrary to what is suggested unanimously in fundamental economic literature and theory
- Central bank 'reserve assets' are negatively correlated to profit from short term treasury bills. However, central bank reserves themselves and reserve money are positively correlated. This suggests there is a sharp distinction between the implication of changes in gross and net central bank assets. A gross asset increase is a signal not to invest and a net asset increase is a signal to invest. This distinction is not brought out in any economic literature or economic theory reviewed by the thesis author
- Fundamental macroeconomic theory is correct, for the most part, in its suggestion of relationships between variables and both currencies and interest rates.
- Inefficiencies do exist in the non-G7 short term fixed income market. The high level of individual factor correlation was 'surprising' to the thesis author. These suggest that a multi factor general signal model is able with a high degree of

accuracy to predict the relative profitability of holdings of such treasury bills.

- Inefficiency is directly related to the level of fragmentation of a market. The more countries in a subset (this case the non G7), the greater the degree of market inefficiency. The thesis author believes this to be true from observations taken in the course of the work.
- Size of market is inversely related to market efficiency. The smaller a market is, the higher chance it experiences periodic and extended periods of market failure. The thesis author believes this to be true from observations taken in the course of the work.
- Profit from short-term treasury bills can be predicted with low degrees of accuracy in the short term of one month and less. It can be predicted with increasing degrees of accuracy from one month to one year, peaking near one year. And, the thesis author hypothesizes, profit can be predicted for periods longer than one year in ever decreasing levels of accuracy as illustrated in Fig. 3.

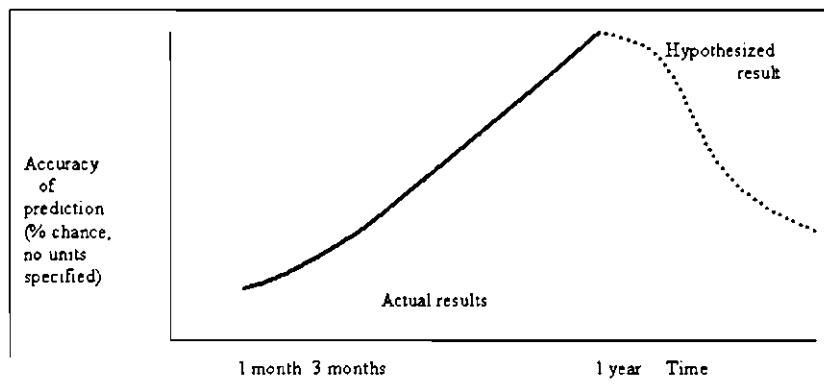


Figure 3. Accuracy of prediction of treasury bill profit peaks at one year

The main purpose of the study was to specify table 1, an 'investor's guide' of useable relationships between macroeconomic variables and the profit objective. Before the guide is an explanation of how to use it – complete with examples and hints on the guide's practical use.

How to use the investor's guide

The following serves as an explanation of how to interpret the table of macroeconomic variable changes for the allocation decision into government treasury bills in the currency of a specific country.

Factors have been ranked from the most to the least important on the basis of their effect on one-year holdings of one year treasury bills. The holding periods are for treasury bills held for their entire term and with maturity dates at the end of that term as opposed to the holding of a five year treasury note for a one year period with a secondary market sale at the end of that year.

The first factor, Discount rate, was as defined for the International Monetary Funds' data code definition for xxx60..zf.... Should the 'direction' of a movement of the variable's value be positive or '+' (discount rate increases), then the guide suggests that it may be profitable to invest in that country's treasury bill in the following one month, one quarter (three months), and one year. In this case, the factor had a positive correlation with the profit function and had alignment for all time periods. As well, the factor ranks highly on the list, giving it higher relative significance versus other macroeconomic statistics.

Capital accounts were an example of a factor that only affected one holding time period: one year. An increase in the capital account statistic means a possibly profitable one-year holding of treasury bills. The variable had not been shown to be a good predictor of one month and one quarter profit, but rather only of one year. It could be interpreted that it was therefore not necessary to immediately establish a position when a signal first is produced. It could be further interpreted that the greater and more significant effect predicted from this number comes between three and twelve months after the change occurs. For countries in which macroeconomic information was published late or with a delay of up to three months, this factor could be used with insignificant deterioration of profit results. Likewise, in a case where a '+' occurs in both the year and quarter columns but not in the month column, it was possible to use the trading signal in countries that delay publication for up to one month, or alternatively, the investor has one month to make their investment purchase. Note that the Treasury bill purchased must still match the remaining period. In the case of a one-year signal in which the investor waits three months to make the purchase of fixed income, the Treasury bill bought would optimally be a 9-month bill.

Table 1

INVESTOR'S GUIDE

<u>Macroeconomic variable</u>	<u>Direction</u>	<u>IMF code</u>	<u>Direction by period:</u>		
			<u>Year</u>	<u>Quarter</u>	<u>Month</u>
(most to least significant, ranked based on yearly results)					
Discount rate	+	xxx60..ZF...			
Market rate	+	xxx. AE.ZF...			
Capital accounts	+	xxx37A..ZF...			
Gross national income		xxx99A..ZF...			
Total financing		xxx80H..ZF...			
Total net borrowing		xxx84...ZF...			
Claims on private sector		xxx12D..ZF			
Foreign liabilities		xxx16C..ZF...			
Balance on goods service		xxx78AIDZF...			
Balance on goods service		xxx78AFDZF			
Overall balance		xxx78CBDZF...			
Good imports –freight on board		xx78ABDZF			
Direct investment abroad		xxx78BDDZF...	-w		
Trade balance		xxx78ACDZF...	+		
Claims on central government		xxx22A..ZF...	+		
Maximum lending rate		xxx60P..ZF...	+		
Deficit or surplus		xxx80...ZF...	+		
Foreign financing		xxx85A..ZF...			
Deposit rate		xxx60L..ZF...			
Net domestic borrowing		xxx84A..ZF			
Foreign assets net		xxx31N..ZF...			
Foreign assets net		xxx51N..ZF...			
General government deposit		xxx16D..ZF...			
Reserve money		xxx14...ZF			
Reserves		xxx20...ZF...			
Claims on private sector		xxx52D..ZF...			
Foreign assets		xxx21...ZF			-w
Reserve assets		xxx79DBDZF...			
Currency outside banks		xxx14A..ZF			
Changes in money		xxx34..XZF			
Money		xxx34...ZF			-w
Foreign assets		xxx11...ZF...			
Capital accounts		xxx17A..ZF...			
Capital accounts		xxx27A..ZF...			-w
Use of fund credit: gra		xxx.2EGSZF		-w	
OI monetary authority assets		xxx78BODZF			
Domestic credit		xxx52...ZF...			
Goods exports–freight on board		xxx78AADZF...			
Foreign exchange		xxx.1D.DZF...	-w	+w	+w
Claims on local government		xxx52B..ZF...	-w		
Money market rate	+	xxx60B..ZF...	-w	+	+w

Note: 'w' means 'weak correlation'

A quantitative and automated decision model can be developed to incorporate the findings of the investor's guide. Such a model would have the below specified characteristics, simplified for the one year case only, which is the recommended period for the investment horizon.

The **general model** is below:

(P is the signal for buy/not to buy in the 'next' period, the period being predicted. S is an integration sign representing summation. Small letters are individual macroeconomic factors with each group multiplied by its contribution weighting. Large letters are constants that depend on the number of factors used and each grouping's significance to the overall model)

$$\begin{array}{r}
 P \\
 1 \ 2
 \end{array}
 \quad
 \begin{array}{r}
 A \ F \\
 1
 \end{array}
 \quad
 \begin{array}{r}
 \int \\
 S \\
 0
 \end{array}
 \quad
 (a, b, c, d, e, f, g, h, \dots)$$

$$\begin{array}{r}
 \int \\
 + \ B \ F \ S \ (ab, bc, cd, de, ef, fg, gh, hi, \dots) \\
 2 \ 0
 \end{array}$$

$$\begin{array}{r}
 \int \\
 + \ C \ F \ S \ (abc, bcd, cde, def, efg, fgh, glu, luJ, \dots) \\
 3 \ 0
 \end{array}$$

$$\begin{array}{r}
 \int \\
 + \ D \ F \ S \ (abcd, bcde, cdef, defg, efgh, fglu, \dots) \\
 4 \ 0
 \end{array}$$

+
 note that all combinations of factors are
 valued between -1 and +1 depending
 on the signal they produce in
 confirming or denying the relationship

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Summary

In conclusion, the paper has taken the all important and most time consuming first steps toward completion of an automated 'buy' / 'not buy' country choice model. Theoretical relationships have been used as the foundation upon which extensive data work was completed to specify the initial parameters of such a model. The remaining work is more that of a computerized data analysis rather than a high level academic pursuit. The 'investors guide' and the signal model specifications are unique contributions to the academic world. They are a clear confirmation or denial of macroeconomic relationships with our investment objective. They counter some and substantiate other previous academic findings about macroeconomics. And, the work is quickly applicable for use by multi lateral agencies such as the International Monetary Fund and for use by private institutions such as banks, investment funds and insurance companies. The benefit of this work to these groups is a better current economic understanding of much of the highly fragmented and overwhelming block of 162 nations making up non G7 countries. This makes possible for these institutions the early detection of macro economic changes so that; pre-emptive action may be taken; investment returns may be increased; global crises may be averted and; risk may be limited, whichever serves the goal(s) of the organization using the model.

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THE ECONOMICS OF WATER SUPPLY IN RIGA

Rakstā tiek izpētītas Daugavas ūdens īpašības un tā kvalitāte. Tā īpaši izmainās dažādos sezonas periodos, tādēļ tiek mērīts ūdens pH līmenis, kur nav nepieciešamas ķīmikālijas. Tā ir ļoti droša metode, uz kuru var paļauties, nosakot izmaiņas Daugavas ūdens kvalitātē.

Rakstā mērījumu rezultāti tiek parādīti grafikos. Šis pētījums ir ļoti aktuāls jau tādēļ vien, ka Daugavas ūdens tiek izmantots kā dzeramais ūdens daļai Rīgas pilsētas.

The investigations of the characteristics of water of the river Daugava were carried out to characterise the river water quality depending on the season period in order to decide when special attention should be paid to connect to a common pipeline network.

One of the aims to characterise the water is to measure pH because no chemicals are needed and the procedure is very simple and reliable. Reliability was estimated by comparing pH values with the results of common chemical analysis. The results were put down on graphics where the argument was the water pH value. The investigated well water revealed pH changes in the range of pH 0.9.

The sulphate, nitrate, ammonium, iron concentrations have an inverse relation with pH values. In such a way the layout of results in co-ordinated net can give a reliable information of the river Daugava water characteristics, which is important to decide in the future what measures are needed to connect the water of Daugava to the central pipe system in order to improve water quality.

Introduction

Riga gets a part of the drinking water from the river Daugava. Not only in Riga, but throughout the world ½ of the drinking water is supplied from open water sources. This is possible with development of effective filtration systems (<http://www.epa.gov/sasewater/sdwa.html>). In Riga the filtration appliances works very good. The filtrated water does not significantly differ from the

underground water. However the filtration quality may increase the costs of the water. For 1m^3 of water in Latvia at 2001 the price will be $0.219\text{Ls}/\text{m}^3$. For the 6th delivery category (without central canalisation) the payment for 1 inhabitant is $365 \cdot 150 \text{ l/d} \cdot 0.219 = 12 \text{ Ls/year}$. In Denmark 1993 the price for m^3 was Ls 0.24, and the payment for 1 year 18 Ls (Texte des Umweltbundesamtes 22/98 Berlin 13.05.1998).

In Germany at 1996 the 1m^3 price was Ls 0.8. The consumption $30\text{l/day/inhabitant}$, which was 42 Ls pro year. In England the price at 1995 was $0.51 \text{ Ls}/\text{m}^3$, pro year Ls 35. In Italy the price at 1992 was $0.21 \text{ Ls}/\text{m}^3$, pro year Ls 22.

In France the price at 1994 was $0.6 \text{ Ls}/\text{m}^3$, pro year Ls 31.

In Netherlands the price at 1995 was $0.81 \text{ Ls}/\text{m}^3$, pro year Ls 41.

In Spain the price at 1992 was $0.12 \text{ Ls}/\text{m}^3$

It is evident that in Germany the prices were the highest ones. The water quality in Germany is also the highest ones (Texte des Umweltbundesamtes 22/98 Berlin 13.05.1998). Presumably the expenses for getting clean water depend upon the quality of water before cleaning. Therefore the water quality of Daugava has been analysed before cleaning as dependence of the year.

The aim of this work was to show:

- 1) that the water quality is varying during the season improving;
- 2) the water quality is improving during the last 3 years.

The water quality is dependent upon self-cleaning process. Self-cleaning depends upon water temperature.

The investigations of characteristics of water of river Daugava were carried out to characterise the river water quality in dependence on the season period in order to decide when special attention should be paid to connect to a common pipeline network.

Materials and methods

Data from analysis of water of the river Daugava have been obtained from the laboratory "Rīgas ūdens – The water of Rīga" The sulphate, nitrate, ammonium, iron concentrations are given in mg/l. The results were analysed by pair correlation. Results were printed out with the use of program Quattro Pro for Windows. Statistical analysis is used to determine the parameters or linear regression. The layout of results in co-ordinate net can give reliable information of the river Daugava water characteristics. These results are important to prognoses the water quality dependence upon season and water

temperature, to decide what measures are needed to connect the water of Daugava to the central pipe system to improve water quality.

One of the main detergents of water is a nitrate. The concentration of nitrates is the highest in winter period. Perhaps that shows a lack of including nitrates in vegetation. One can see that the winter values of nitrate are decreasing with calendar year. That shows the improvement of water quality of the river Daugava. The summer values are decreasing through the whole vegetation period. The minimal values are reached at October. The summer values reached at autumn are approximately 3 times lower than the winter values. The pH values of water vary during the season. At winter they are a little lower than at summer. It is likely that during the observation period the pH values have a tendency to increase.

Nitrates and pH in the river water Daugava
"The water from Riga" 2000

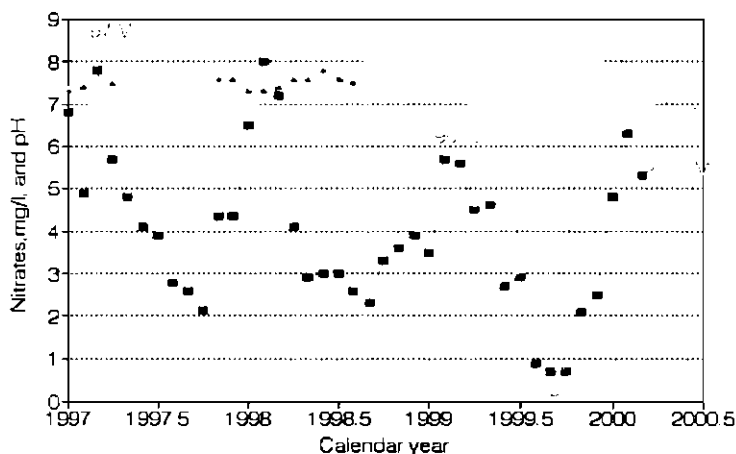


Figure 1.

Sulphates are proportional to nitrates. If on the X axis is the nitrate concentration, mg/l, on Y axes – sulphate concentration, then $R^2 = 0.375$ the X coefficient 2.09, the Standard Error of the X coefficient 0.44.

Regression Output:

X= pH Y= Calendar time, year. Higher pH values correspond to enhancing calendar time. pH is increasing by time going on. pH is increasing each year. That can be seen not only from statistic calculations, but also from

Fig.1. Further it will be shown that increment of pH is coupled with changes of various constituents of water.

Constant	1982.57
Std Err of Y Est	0.74
R Squared	0.411
No. of Observations	39
Degrees of Freedom	37
X Coefficient(s)	2.10
Std Err of Coef.	0.41

Regression Output:

X= pH, Y= ammonium concentration, mg/l Higher pH values correspond to a lower ammonium concentrations. Ammonium is a factor, which shows the uncleanness of water. pH is increasing each year (Fig.1). One can speculate that ammonia is decreasing and the water quality is improving.

Constant	3.17
Std Err of Y Est	0.33
R Squared	0.09
No. of Observations	39
Degrees of Freedom	37
X Coefficient(s)	-0.36
Std Err of Coef.	0.18

Regression Output:

X= pH Y= concentration of iron, mg/l. Higher pH values correspond to a lower iron concentrations. Dissolved iron is a factor, which shows the uncleanness of water. pH is increasing each year (Fig.1) Consequently iron is decreasing. The water quality is improving.

Constant	2.53
Std Err of Y Est	0.14
R Squared	0.264
No. of Observations	39
Degrees of Freedom	37
X Coefficient(s)	-0.289
Std Err of Coef.	0.079

Regression Output:

X= pH Y= concentration of chlorides, mg/l. Higher pH values correspond to higher chloride concentrations. Dissolved chlorides are a

factor, which does not show the uncleanness of water. pH is increasing each year (Fig.1). Consequently chlorides are increasing. The water quality is improving.

Constant	-1019.7
Std Err of Y Est	67.7
R Squared	0.27
No. of Observations	39
Degrees of Freedom	37
X Coefficient(s)	141.5
Std Err of Coef.	37.8

Regression Output:

X= pH Y= colour units. Higher pH values correspond to a lower colour units. Colour is a factor, which shows the uncleanness of water. pH is increasing each year (Fig.1) Consequently colour is decreasing. The water quality is improving.

Constant	430.28
Std Err of Y Est	36.45
R Squared	0.114
No. of Observations	39
Degrees of Freedom	37
X Coefficient(s)	-44.35
Std Err of Coef.	20.33

Regression Output:

X= pH Y= saturation % with oxygen. Higher pH values correspond to a lower saturation % with oxygen. Saturation % with oxygen is a factor, which shows the intensity of self- cleaning processes. pH is increasing each year (Fig.1) Consequently self- cleaning processes are going better. The water quality is improving. However it should be minded that statistical significance of latter calculations is not high.

Constant	146.9
Std Err of Y Est	11.6
R Squared	0.056
No. of Observations	39
Degrees of Freedom	37
X Coefficient(s)	-9.6
Std Err of Coef.	6.4

Regression Output:

X= pH Y= Temperature of water. Higher pH values correspond to higher temperature of water. Temperature of water is a factor, which stimulates the intensity of self-cleaning processes. pH is increasing each year (Fig.1) Consequently self-cleaning processes are going better. The water quality is improving. However it should be minded that statistical significance of latter calculations is not high.

Constant	-32.9
Std Err of Y Est	7.2
R Squared	0.046
No. of Observations	39
Degrees of Freedom	37
X Coefficient(s)	5.4
Std Err of Coef.	4.0

Regression Output:

X= pH Y= the number of *Coli* in 100ml water. Higher pH values correspond to lower number of *Coli* in 100ml water. Less number of *Coli* in 100ml water is a factor, which stimulates the intensity of self-cleaning processes. pH is increasing each year (Fig.1) Consequently self-cleaning processes are going better. The water quality is improving. However it should be minded that statistical significance of latter calculations is not high.

Constant	786
Std Err of Y Est	135
R Squared	0.038
No. of Observations	39
Degrees of Freedom	37
X Coefficient(s)	-91.5
Std Err of Coeff.	75.3

Conveniently it is thought those bacterial infections in water and food does require optimal environment temperature. Such temperatures are at summer time. It seems that product should be feared from contamination at summer time, however our observations show *Coli* titre are much higher in late autumn. The self-cleaning process which efficiency may depend upon the temperature can explain this

phenomenon. In this graph is also illustrated the water temperature. The period when the water temperature is nearly to 0, characterises the period at which the river is covered with ice. The highest *Coli* titre has been observed at winter of 1997. At the winter of year 2000 the *Coli* concentration was more than 3 times lower. That shows the improvement of the water quality of Daugava.

The number of *Coli* commune/100ml in the river water Daugava
"The water from Riga" 2000

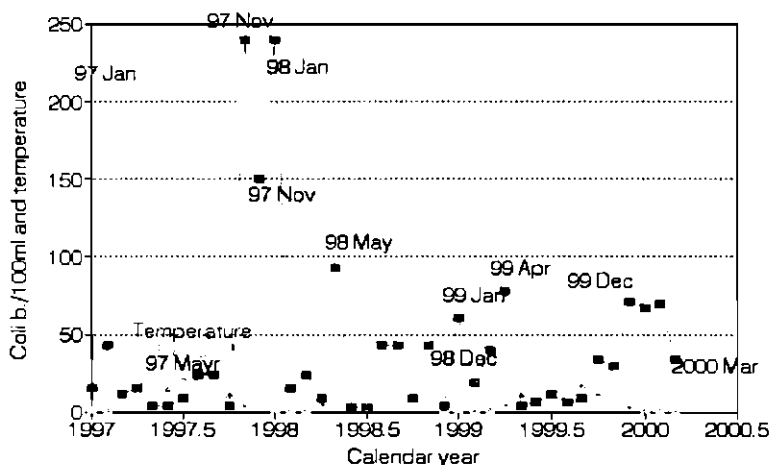


Figure 2.

There are several periods of sulphate concentration changes. Maximal concentrations of sulphates have been observed at winter period. The longest ice cover period has been observed at winter 1998/99 that does not correspond to a high level of sulphates. However the maximal sulphate concentration does not depend on the ice cover period. At the summer time there is intermediate sulphate concentration.

The concentration of iron begins to decrease earlier before the summer heat starts. Especially low values have been reached in autumn 1999. Under the ice cover the iron values begin to increase. The ice cover has persisted for 4 month at the winter of 1998/99. At April the iron values reached 0.75 mg/l. A very short ice cover time (only 1-month) has been observed at the 1997/98 winters. The level of iron at March was only 0.4 mg/l.

Sulphates and temperature in the river water Daugava
"The water from Riga" 2000

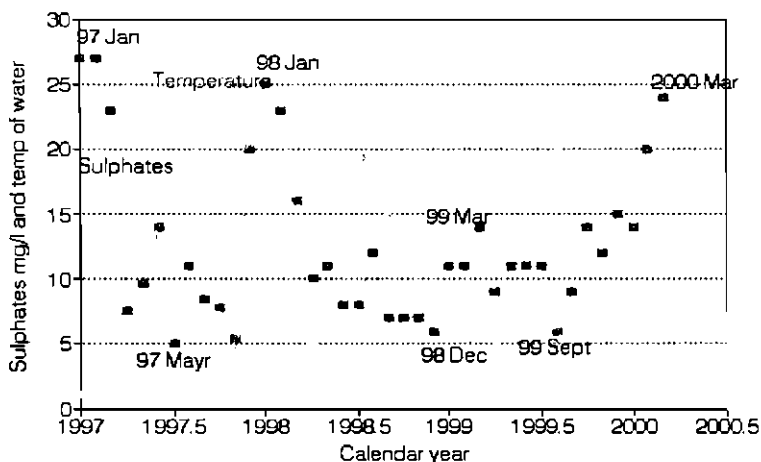


Figure 3.

Iron, mg/10 l, and temperature in the river water Daugava
"The water from Riga" 2000

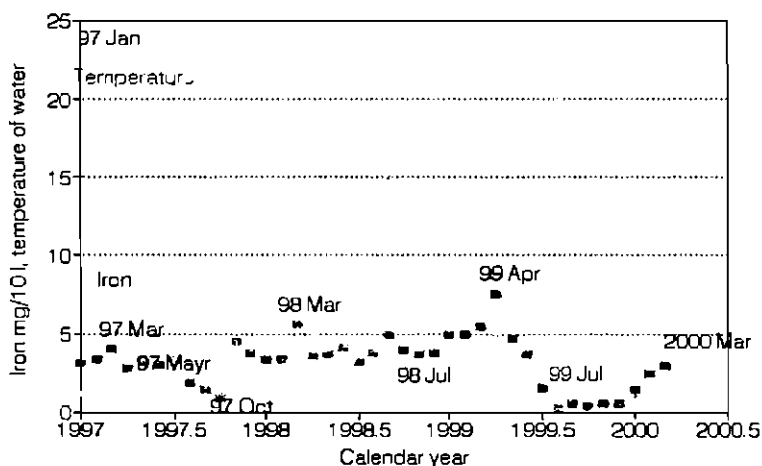


Figure 4.

Oxygen saturation % and temperature in the river water Daugava
 "The water from Riga" 2000

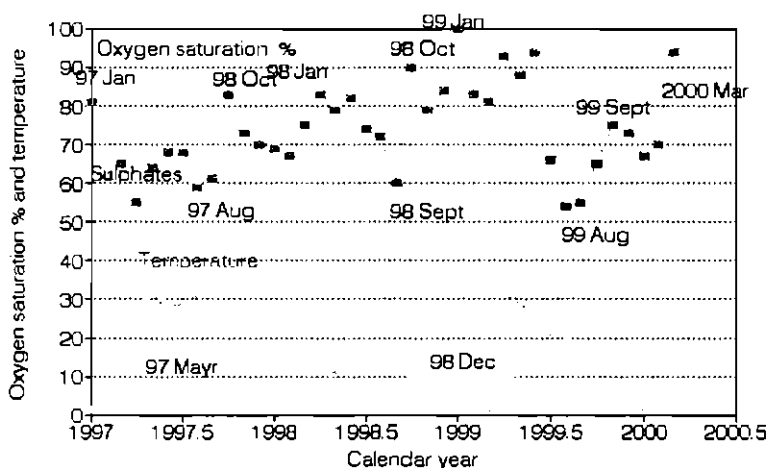


Figure 5.

Chemical Oxygen Demand and temperature in the water Daugava
 "The water from Riga" 2000

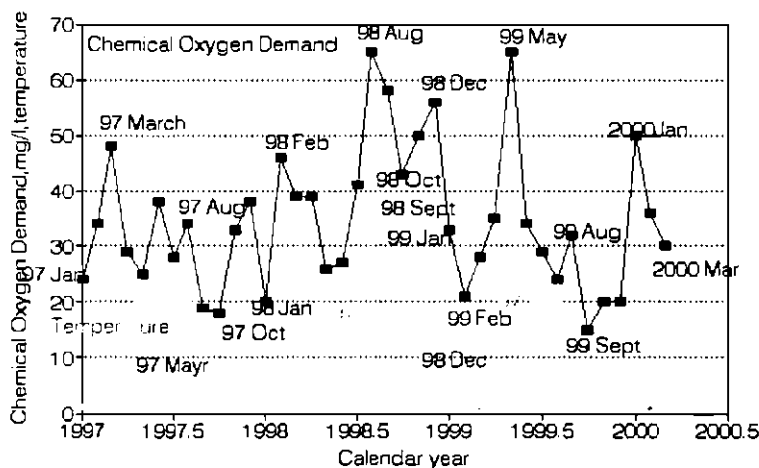


Figure 6.

At August and September the oxygen saturation reaches the lowest values. That is the period with maximal water temperature. The oxygen saturation is the lowest at the period with maximal water temperature. The highest oxygen level is at winter period. The highest oxygen saturation level has been observed at the winter period of 1998/99 that corresponds to the ice cover for 4 month. The O₂ saturation level at January has reached 100% that means that the O₂ demanding processes are on a very low level. The highest oxygen saturation level is at winter. That shows that there is no reason to be varied of unacceptable oxygen pressure, which can harm fishes.

The Chemical Oxygen Demand (COD) shows the impurity of water. There are several maximums and minimum.

The COD depends on several factors: on factors, which are stimulating the inflow of impurities into the water, and on factors, which are stimulating the self-cleaning processes. In Latvia it has been feared that at winter the ice is one of the factors, which stoops the solution of impurities into the water. The current investigation shows that during the period of ice cover the COD is low. The lowest values have been observed at winter 1998/99. After melting the ice and snow the COD values increases. Presumably much dirt is solute into water. After that a period is to be observed were self cleaning processes eliminates the dirt. At the hottest summer time the COD values are going down. In summer is stimulated not only the oxidation processes but also the incorporation of various minerals in living organism. They are fixed to various surfaces of the river and escape the sampling. This provides in a fall of COD. At spring the old living material is washed out. That may elevate the COD.

References

Data from the laboratory "The Water of Riga - latv.-Rīgas ūdens",
Texte des Umweltbundesamtes 22/98 Berlin 13.05.1998.

Summary

Water of the river Daugava near Riga, which is used partly used also for the town supplements of water, is clean water because in Daugava there are very efficient self-cleaning processes.

It is accepted that Chemical Oxygen demand (COD) reflects the uncleanness of water. It goes parallel; with the inverse values of iron,

nitrate, ammonium colour and other ingredients, which are, accept to be pollutants of water. The purity of water depends on two factors: on dirt, which may be included into rivers as ab-flow water, on land farming areas, and on the velocity of flow, that is, on the output of the river. Farming areas are fertilised twice a year at spring and at autumn. The output of the river is the least at the middle of the summer. That coincides with the period when the COD is low. It is likely that the self-cleaning has gone forward. The self-cleaning is very dependent on temperature. At the hottest time – July the self-cleaning process is very active. This can be observed also by lowering oxygen saturation. A sensitive indicator of processes in water is the pH values. The lowest pH values correspond to the winter period. That is the period, were the impurity of water is the highest pH is elevated at the summer time. At the end of the summer the impurity is the lowest. Correlation analysis has shown parallelism between lowering of pH values and increasing impurities. During the past 3 years the pH value of water of the river Daugava has a tendency to rise. Rising is also other purity indicators.

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THE DEVELOPMENT OF INTERNATIONALISATION OF ESTONIAN BANKING

Rakstā tiek analizēta parādība, kas mūsdienās arvien plešas plašumā – tā ir banku internacionalizācija. Šo procesu veicina arī tirgu integrācija. Igaunijas ekonomikas modelis, kurš bāzējas uz stabilu valūtu, sabalansētu fiskālo politiku un pieejamiem preču un kapitāla tirgiem, ir radījis pietiekami labu pamatu Igaunijas banku internacionalizācijai.

Introduction

After becoming independent in August 1991, Estonia chose an economic model of the transition from the command socialism to the market economy. Therefore Estonia has been over ten years a transition country building up a welfare society. Owing to its small dimensions with less than 1.5-mln population, Estonia can best achieve its goals by strengthening its orientation towards open and liberal market economy. The Estonian banking sector has been one of the first ones to realize the possibilities and risks of globalisation and follow the process. As banks must guarantee their clients and their foreign partners for international business the financial service of the same quality as the internal one then their efforts of internationalisation are understandable and reasonable in every respect.

The main problem is that in transition countries the banks must reconstruct themselves considering the needs of market economy and join the globalisation process at the same time. These two developments are to be performed in accelerated speed and in the conditions of economic and financial crises. For this reason the internationalisation of banking business in a transition economy has essential differences compared to the banking internationalisation of developed countries.

The aim of the article is to research foremost the activities of the Estonian banks in their efforts to change from local banks to international ones. The paper tries to point out the stages of these efforts and find out

the impelling forces that direct the process. As the internationalisation of the Estonian banks has not proceeded without problems and setbacks then the present research also tries to point out the reasons why some plans were not realized.

Internationalisation of banking business

At different times, the internationalisation of banks has had various goals and forms. In the early years of capitalism, the main activity of the banks was to offer local companies services by making transactions in a domestic currency. Only very few banks took a risk or were able to finance foreign trade, make foreign remittances or guarantee loans and payments for international transactions. It has been alleged that financing of foreign trade led to the formation of the first commercial banks in the cities of Italy, Germany and in London (Linnamo and Vanamo, 1980).

Both the world economic crisis in the 1930s and the fiscal policy after World War II restrained the internationalisation of banks significantly. But since the late 1950s, the gradual abolition of the restrictions on capital transfers and liberalization of customs restrictions quickened the internationalisation of banks.

Theory of multi-national banking was first developed with Grubel (1977) and later researchers tried to answer some of the questions posed in his paper (Aliber, 1984). Researchers have studied more thoroughly the foreign banks entry into the CEE countries. The conclusions are that higher efficiencies, better technology and management level form a priori advantages of foreign banks vis-à-vis domestic ones (Wachtel, 1995; Bonin & Leven, 1996; Buch, 1996).

In the last decade, the end of the cold war and the breakdown of the communist regime have become especially important factors for the internationalisation of banks. The western banks hurry to conquer the emerging markets, especially the Russian market as the bigger one.

Besides the macroeconomic factors that rule the internationalisation of banks, the ambitions of bank managers also play an important role.

In the bankers' viewpoint the motives of internationalisation can be divided into four groups (Rugmah, Kamath, 1987):

1. Use the potential ability of a bank more entirely. For example, the domestic management and sales skills may enable banks to offer services abroad at lower costs. It also enables the local

- companies' subsidiaries abroad to use competent information about the possibilities and conditions in the mother country.
2. Use the reputation of a parent bank. The subsidiaries set up abroad may get competitive advantages as, by a rule, an international bank is considered more reliable than the local banks.
 3. Reduce banking regulations. In many cases, the main purpose of setting up subsidiaries and branches abroad is to overcome the restrictions on moving capital abroad.
 4. Reduce risks. As the economic situation, legislation, political situation and other circumstances may change, being present will enable to recognize the risks in time and take necessary countermeasures.

It is rational to carry out the internationalization of banks in two stages:

1. To secure the existence in a target country, in order to learn the local market better. Mostly there are used the following ways: setting up of correspondent relationships with local banks, opening of representative offices in the target country or acquisition of a minority stake in some local bank.
2. Starting banking business in a target country either by setting up daughter banks and subsidiaries, buying up a bank or obtaining a significant stake in a bank through a merger or buying the shares.

At the end of 1996 there was made a survey of the main banks that had invested in CEE (Konopielko, 1999). The survey showed that the main motivation for entry in CEE banking market according to factor's level of importance (1 not important at all; 2 not important; 3 important; 4 very important) was the following: the first rank got supporting client base (3.46 points) and the second was looking for new business opportunities (3.32 points).

The mentioned survey showed that the entry strategies were different for different transition countries. Table 1 shows that in the Czech Republic and in Poland the preferred entry strategies were similar. For the Hungarian banking sector, as the most mature, it is necessary to adopt a more aggressive strategy, characterized by the willingness to search for new business as well as an expectation of a relatively short period of investment return.

Table 1

**Prevailing elements of entry strategies*
and country characteristics**

	Poland	Czech Republic	Hungary
Reason for entry	Follow client	Follow client	Search for new opportunities
Method	Subsidiary	Branch	Take-over
Activity	Corporate financing	Corporate financing	Corporate financing
Branching	Underbranched	Overbranched	Overbranched
Profit growth expectation	Yes	Yes	Yes
Period of investment**	3.12 years	3 years	2.5 years

* Table lists highest rated or dominant answers for each question in the survey.

** Period of investment return is given as an average of answers.

Source: Konopielko, 1999.

Development of Estonian banks activities abroad

At the beginning of the 1990s, Estonia began to build up market economy and integrate with the global economy. These directions forced the Estonian banks to pass in a short time the stages of internationalisation that the developed countries had gone for years. The first steps of the Estonian commercial banks in their way of internationalisation were most probably made in order to offer the clients better deposit and transaction services. The clients were disappointed by the fact that the Soviet legislation obliged them to sell the major part of their foreign currency income to the state. The first steps in competition of the banks were the opening of correspondent accounts in foreign banks.

The Estonian currency – kroon – was fixed to the German currency Deutsche mark (8:1). Besides that the Bank of Estonia quoted 18 foreign currencies (17 currencies of the developed countries + ECU). In addition to DEM and USD the correspondent relations were the closest with Estonia's main trade partners Finnish and Swedish currencies. Besides, there were opened accounts in USD and DEM and many other hard currencies in Finnish and Swedish banks.

Coming from the strategy of better payment service the establishment of correspondent accounts in foreign banks was quite burdensome for the commercial banks. For example, at the end of 1993 the liabilities of commercial banks to foreign banks were 1151mln Estonian kroons or 18.1% of their total liabilities. By the end of 1994 the foreign currency resources in foreign banks were grown to 2242 mln kroons and already formed 21.8% of the total liabilities. But this lessened significantly the possibilities of the banks to grant credits and complicated internal liquidity management.

Further, the need for correspondent accounts was decreased due to the fact that the Estonian commercial banks joined the international electronic payment system SWIFT (Society of Worldwide Financial Telecommunications) and due to the application of international banking cards in Estonia in 1993. In December 1993 Bank of Estonia and 5 commercial banks joined the SWIFT system. The number of Estonian banks, which joined the SWIFT, increased to 9 and the turnover of electronic payments increased to 40bln kroons in 1994. In 1999 the SWIFT was the most popular payment method of payment with 464bln kroons or 44% of the total turnover of payments. In December 2000, the amount of the SWIFT payments was 38.5bln kroons and formed 32.6% of the payment turnover.

In 1993 Tallinna Pank and Hansapank offered the VISA-card services. They managed to issue only some international cards and at the same time they worked on their own card projects (ELT-card, Raekaart). Since then the number and exploitation of international banking cards have grown in accelerated speed. When at the end of 1995 the local debit cards formed 90.5% of the issued 120 thousand banking cards, then at the end of 2000 the part of international debit and credit cards had risen up to 99.5% of the issued 858 thousand banking cards.

Another motive of internationalisation for Estonian banks was a possibility to invest their loan resources in foreign countries more favourably and without risk or buy the resources for cheaper price. The process was already started by Tartu Kommertspank which granted the credit outside Estonia in the conditions of former Soviet Union with higher interest rates than it would have been possible in the domestic market. At the end of 1994 the non-resident liabilities formed already 28.8% and assets 8.4% of the total assets of commercial banks.

The Estonian commercial banks had also high ambitions in non-financial business outside Estonia. In such business deals a bank preferred

not to lend resources but did the business itself, trying to use the big disparities in prices in transition countries. Thus the main reasons for liquidity difficulties and later crashes of Otepää Ühispank and Revalia Pank were unsuccessful international commercial deals (for the first bank the business of MAZ trucks, for the second bank the purchase of big quantum of nickel). The Estonian press has written about other similar deceiving cases of Estonian banks.

After the first banking crises the remained banks recovered and learned a lot and foreign banks trusted to lend them money. In the middle of 1997, the commercial banks could proudly announce that the four major banks had gained besides subordinated loans also 2.4bln kroons from foreign markets for re-lending. This carelessness began to cause headache when a stock market crashed in October 1997 and became a serious problem for Estonian commercial banks after the Russian financial crises in autumn 1998. When until 1997 total assets and profits of the banks had increased rapidly, then this expansive growth, which was gained mostly by entering the foreign markets, began to generate the losses of the similar amount.

The Estonian banks have used three strategies in their internationalisation: setting up subsidiaries and branches, buying up local banks, or acquiring a significant stake in some local bank. The first one to succeed was Hansapank who acquired a Latvian bank (Deutsche Lettische Bank) in 1996 that had defaulted. The former name of the bank was changed into Hansapank-Latvija, the shares of the former shareholders were exchanged for the shares of Hansapank, and the management of the subsidiary was changed. Because the credibility of Latvian banks had weakened, Hansapank with its reputation insured and in the second half-year of 1997 Hansapank-Latvija already earned profit.

After the success of Hansapank became known, the other commercial banks began to make plans for buying up the banks in the markets of Latvia, Lithuania, Russia and Ukraine. As acquisition usually means taking over a poorly functioning bank, which needs restructuring or re-capitalisation, obtaining a strategic share can meet the reluctance of other banks and the central bank, often the tactics of starting from scratch is chosen. Hansapank has reiterated its intentions to establish a subsidiary in Lithuania although the first two failed. On July 7, 1999 Hansabankas Lithuania opened the doors to the clients in Vilnius.

Eesti Ühispank had especially highflying plans. In autumn 1997 the bank announced its plans to establish a subsidiary bank of the total assets of

1.5 bln kroons in St. Petersburg (the total assets of Eesti Ühispank this time was ca 9.5 bln EEK). Even at the beginning of 1998 the value of Eesti Ühispank had not changed essentially as the bank is planning to spend a billion kroons on opening a branch in Helsinki and a bank office in Stockholm (Koovit, 1998). Tallinna Pank had even more ambitious plans in January 1998 the Chairman of the Board announced the bank's goal to gain a market share of 35% in the Baltic market.

The internationalisation of the Estonian banks has given both positive and negative experience. We can make two general conclusions, which can be applied to the majority of the Estonian banks. The internationalisation is directed toward East. But the eastern direction will raise the risk level of Estonian domestic banking and its sensitivity to crises, due to the higher risks and one-way character of internationalisation. The second conclusion is that the realization of internationalisation plans is often being dragged on, thus it will not be so successful as expected. Conclusively it indicates that either the banks are not able to foresee the risks of internationalisation or they use the announcement of their internationalisation plans to the public as the means of advertising and improving their image.

The researchers of the banking globalisation have reached the conclusion that excessive eagerness in entering foreign markets without sufficient preliminary knowledge about local economic conditions may rise the vulnerability of such banks (Balino *et al*, 2000). The Estonian banks' experiences of the East expansion have proved this conclusion once more.

As the internationalisation of Estonian banks is one-way – towards the East, then in the result of the financial crises of Southeast Asia which began in 1997 and was followed by the Russian financial crises in autumn 1998, most of these projects were terminated, and caused the owners mainly negative results. The Estonian banking sector ended the year 1998 in big losses.

After the Estonian banking crises in 1998–99, the small banks began to abandon risky eastern projects. But in the major banks the strategic investors decide these questions instead of local management. Only Hansapank was continuing its expansion policy. On December 29, 2000 the State Treasury Fund of Lithuania accepted the offer by Hansapank to buy 90.73% of the shares of Lietuvos Taupomasis Bankas. When the deal is concluded, then according to the forecasts the market share of Hansapank in Lithuania will grow to 30%.

Expansion of foreign banks into Estonia

Bank of Estonia did not allow before the currency reform in 1992 any foreign share in Estonian commercial banks. But the new regulations of the issuance of banking licences after the currency reform did not impose such restrictions. Therefore on August 26, 1992 American Bank of Baltic, whose sole proprietor was an USA businessman, received a licence as well as INKO Baltic Bank on September 29, 1994, which was the subsidiary bank of the Ukrainian INKO Bank. In September 1994 Merita Bank established a branch in Tallinn. As the first two banks, created on the basis of foreign capital, did not find their place in Estonia and had lost their licences by now, then the branch of Merita-Nordbanken (now Nordea) after a long period of quiet growth has begun to apply an expansion strategy and wishes to increase its market share in Estonia remarkably.

The major foreign banks have always been waiting for a suitable moment to come to Estonia. Schleswig-Holsten Landesbank, based on the German capital, started a bit too early and met in autumn 1997 the resistance of the management of Eesti Investeerimispank to the wish to acquire 60% of the shares of the Estonian bank. The resistance was justified by the necessity to continue the activities as an investment bank and not to turn to a retail bank. But this idea was not realized. In June 2000 Optiva Pank, which was established by the merger of Eesti Investeerimispank and Forekspank, and had received financial injections from the central bank, was acquired in favourable conditions by Sampo Finance Ltd, a joint company owned by the Finnish banking and insurance company Sampo-Leonia and the Estonian Kaleva Mutual Insurance Company. The new owners turned Optiva Pank to Sampo Pank that offers both insurance and banking services.

The Swedish major banks (Swedbank and SEB) managed to wait their time. They bought from the stock exchange the cheapened shares of the Estonian major banks and in 1998 they were able to acquire without resistance an essential share of the share capital of Hansapank and Eesti Ühispank that were facing financial difficulties.

The question why the Scandinavian banks are especially active in the Baltics has its own logic. The Baltic region is geographically ideal for Scandinavian banks in their expansion spree. Decisive action can be observed in Estonia, which banking sector is the most advanced Baltic

State as far as the banking sector is concerned (Tiusanen & Jumpponen, 2000:53).

To test the motives of Swedish Banks' entry into Estonian banking market we set up the hypothesis that Swedish banks have entered into Estonian market by using customer following strategy. We used two indicators that explain the customer following aspect by combining regression equations that is used by Miller & Parke (1988) and Engwall & Wallenstål (1988). First indicator is FDI from Sweden to Estonian non-banking sector in 1996:1–2000:2 (18 periods). The second variable is bilateral trade between Estonia and Sweden.

Regression equations were tested by ordinary least square method (OLS). We used lagged terms in the equations. The economic meaning of lagged variables in the equations is the reaction time needed to make the investment decision. Both FDI from Sweden to Estonia and bilateral trade between Sweden and Estonia affected dependent variable (in the first equation share-capital of non-residents and in the second equation change in share-capital of non-residents) positively.

We can conclude that during period 1996:1–2000:2 Swedish banks have used customer following strategy dominantly. Both regression equations proved the hypothesis. Therefore the conclusion is similar to what Li & Guisinger (1992) found in their research. In early stages of internationalisation the customer following strategy is dominant, but its importance diminishes over time. We can see that at present competitor following strategy is more used by Swedish banks in Estonia. Swedbank increased their share in Hansapank and SEB bought up Ühispank. This is quite clear oligopolistic reaction to competitors' activity.

Our results are also similar to study by Miller and Parkhe, they showed that there is a strong positive correlation between foreign assets of the bank and FDI to target country and bilateral trade between home country and host country. Our findings are different from study carried out by Engwall and Wallenstål (1988), they found that during the period 1960–1985 Swedish banks have used mainly competitor following strategy, different results can be explained with different time periods and countries observed.

Table 2

Shareholders of the Estonian commercial banks (%)

Shareholders	31.12.98	21.12.99	31.12.00
Eesti Pank (Bank of Estonia)	13.1	11.4	0.0
Local governments	0.4	0.3	0.0
Non-resident credit institutions	45.5	52.6	67.0
Other non-resident legal bodies	9.5	9.0	16.7
Resident credit institutions	1.5	4.6	0.6
Other resident legal bodies	20.8	10.5	6.2
Resident private individuals	8.4	10.8	9.1
Non-resident private individuals	0.5	0.7	0.2
Other shareholders	0.3	0.1	0.2

Source: Data of BOE.

By the end of 1998, the share capital of Eesti Ühispank and Hansapank were on the hands of foreign credit institutions respectively 68.4% and 64.9% and the foreign share in the share capital of Estonian banks had increased to 57.8%. By the end of 2000, 83.9% of the shares of Estonian commercial banks were in the ownership of non-residents (Table 2).

Foreign banks came to other transition countries the same way as in Estonia when the local banks are in difficulties. For example, the analysis of the Croatian banking proves that during the period of the third banking crises (1999–2000) the share of private capital in the banking sector increased to 90%, most of it was a foreign share (Barisitz, 2000).

Vice Governor of the Bank of Estonia Mrs. Helo Meigas concluded that with the entry of Swedish banks, the maturity structure in Estonian banking improved, creating sufficient buffers. The share capital of Estonian commercial banks increased and the capital adequacy of banks improved from 12.4% to 17% (Meigas, 1999).

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Summary

The internationalisation of banks is an expanding and accelerating phenomenon in modern times. The deepening integration of the markets as well as the internationalisation of the relationships of the customers of the banks stimulates it. Transition countries have joined the globalisation process of economy. Estonian model of economy, which is based on a stable currency, balanced fiscal policy and open markets of goods and capital has created quite a good foundation for the internationalisation of Estonian banking.

Estonian commercial banks have passed the same internationalisation stages as the banks of developed countries: first, establishing correspondent relations with the banks of other countries, then entering the international financial and capital markets and finally building up controlled units within the boundaries of other national banking system.

Estonian banking sector is also opened to the invasion of foreign banks due to the openness of Estonian economy and taken excessive risks. The Scandinavian banks have been the most active here and by the end of 2000 three Estonian major commercial banks have gone over to the ownership of foreign banks. Local shareholders hold only three banks that have a marginal share in the market. Similar tendencies can be noticed in the other Baltic States and in the transition countries of Central Europe.

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STATE BUDGET PROCESS CONTROL AS ONE OF THE MOST IMPORTANT STATE FINANCIAL AND MANAGEMENT TOOLS

Savā darbā autors aplūko valsts budžeta procesa kontroli kā vienu no svarīgākajiem valsts finansu un vadības instrumentiem. Valsts budžets ir viens no valdības finansiālās darbības un vadības pamatinstrumentiem. Valsts budžeta izstrādes principu – savlaicīguma, realitātes, atklātuma – ievērošana ir cieši saistīta ar veiksmīgi realizētu budžeta procesu. To, cik veiksmīgi ir realizēts budžeta process, rāda tā izpilde, precīzāk, izpildes kontrole. Budžeta process ir pilnveidojams atkarībā no veiktās kontroles rezultātiem, un tā pilnveidošana ir viens no svarīgākajiem uzdevumiem valstī.

The state budget is one of the basic instruments for financial operation and administration of the government. The objective of the budget is to determine and justify the resources needed for execution of those state revenues, the financing of which is laid down by laws and regulations, ensuring that during the time period these resources are intended for, the expenditures are covered by corresponding revenues. When preparing budget the need to ensure overall economic balance has to be taken into account. Observance of such state budget development principles as proper timing, reality, transparency closely linked with successful budget process implementation. The indicator of successful budget implementation process is its implementation. Audit has to be carried out in order to determine the results of budget process implementation. Budget process, which includes preparation, approval and execution of the state budget, can be improved depending on results of the control and improvement of this process is one of the most important tasks for the country.

Decisions related budget approval varies in course of time. There are broad aspirations to have the control over decisions related budget, as this allows state civil servants to meet requirements of voters. Constituents of the budget are persons involved in budget development for example,

politicians, groups of interests and etc. Willingness to play a role of budget constituent in budget decision-making cause a pressure aimed to split decision-making process in order more participants could have some, at least insignificant, budget power. That leads to endeavour to get the main role in decision-making process and keep a power in this position with regard to others, which, moreover, try to increase their budget power as well.

The government has to ensure the collection of taxes, duties and other revenues provided for in the section of revenues of the state budget as well as to ensure the financing of expenditures provided for i.e. execution of the budget. Budget execution means to get the revenues confirmed with law and to conduct the expenditures to a certain extent i.e. to execution of the revenue section and the expenditures section of the budget. In the end of financial year the government reports about the execution of the state budget. Survey of state budget execution developed by the government is submitted to the parliament for consideration. Results of the state budget execution are depending of the tasks and objectives that were set out by those who prepared the budget. If the results of execution differ from planned it means that state budget policy chosen is not completely implemented. It is necessary to increase the budget implementation control that would deal not only with the examination of lawfulness with regard resources used, but also will perform the assessment whether the utilisation of resources has been useful and which objectives have been met or not. The former experience shows that gross breaches of budget discipline can be identified quite often. The efficient extirpation of corruption and larceny of state resources could be carried out with this stage of budget implementation control. The State Audit Office has a significant role in the fight against corruption in such areas as e.g. state procurement, investments and implementation of state programmes.

Establishment and strengthening of internal control system is necessary and it is a significant element in the fight with corruption. In our country the internal control system is poorly developed and more attention needs to be paid regarding its further development in order to fight with a possible corruption in the very root phase. Another problem that do exists not only in Latvia, but in all post-socialistic countries and countries developing towards democracy as well is the usurpation of civil servant's authority for selfinterested purposes and the use of this authority for increase of personal good. It is hidden privatisation of state power

functions, which is one of reasons for corruption. In Latvia this phenomenon is distinctly manifested. According to statistical data of foreign investigators 1.7% of populations feel comfortable with the existing corruption as that allows easily manage with the own problems with regard the state apparatus and to reach the own objectives. Therefore the review of need for licences, permits etc. different other kind of bureaucratic documentation is considered as one of the ways to fight with corruption. To eliminate unnecessary phases and excess in this area and further bureaucracy as well it is necessary to find out so called "golden mean" in this regard. Corruption has a tendency of increase and development also in those countries, which have reached economic prosperity, and has an adverse affect on global financial structures as every year 3 billion dollars slide into hands of shady economy. In Latvia it is about 40% of annual state budget that is passing by the State Treasury.

Important issue of fiscal policy is the implementation of medium term planning. During the recent years one of the key reasons for increase of state budget deficit is the need to finance measures unforeseen previously. International financial assistance makes a part of the state budget revenues. Prognoses for the own revenues and the revenues of international financial assistance are prepared with ministries on receiving these revenues. Consequently the funding received through SAPARD, ISPA and Phare financial instruments are reflected under the budget category "international financial assistance" In some ministries and other central government budget institutions where the actual expenditures exceed incomes there is a tendency for increase of this overrun. Several ministries and other central government budget institutions have allowed such significant overrun of actual expenditures in comparison with incomes many times especially in 1999, which is linked with gross breaches of financial discipline. This is in contradiction to Article 24 (1) of the law "On Budget and Financial Management" provided that actors of state budget may carry out state budget expenditures or take any commitments only within those assignments identified in the financial plans, which are allocated by State Treasury according to authorisation of Minister of Finance. As there is no uniform approach regarding explanation to be provided for the report period it is impossible to get a complete and valid confidence about lawfulness and justification of actual overrun of expenditures in comparison with revenues. In the article 47(24) of the Law "On budget and Financial

Management" it is provided that State Treasury may impose penalties if the head of the budget institution has violated conditions laid down in the Article 24 of this law and taken commitments exceeding assignments provided by State Treasury. However in 1999 State Treasury has not imposed such penalties. Explanations received from the ministries regarding balance for 1999 do not contain full information about the goal of financial investments. This could be determined only by performing audits about long-term financial investments. In the same way one review or survey about donations and grants received and the utilisation of these resources independently on grant or donation providers has been prepared and submitted to State Treasury also by state budget institutions. These surveys included resources received under EU Phare programme as well. According to information incorporated in the survey of state budget execution in 1999 the total value of donations and grants received by state budget institutions in 1999 is of Ls 6 939 487 and it is impossible to identify how much of that makes EU Phare program resources. According to the information of Central Finance and Contracting Unit these resources makes EUR 7 337 986.83 or Ls 4 543 959.95. In line with summary on balances of the state budget institutions the residual cash on 1st January, 1999 was as of Ls 54 768 036, but on 1st January, 2000 – as of Ls 27 287 785 (decrease of Ls 27 480 251). In the survey prepared by the Ministry of Finance no residual cash per ministries and other central state budget institutions are indicated.

In 1998 State Social Insurance Fund (hereafter – SSIF) delegated the functions of social tax administration to State Revenue Service (hereafter – SRS). Two memorandums of understanding about the procedure of delegation of social tax administration functions were signed by SRS and SSIF however a number of conditions of these memorandums were met later than at the date determined or not fulfilled at full extent, for example:

- Taking over of records on taxpayers and debtors were going on until the middle of 1998, but records about several debtors were handed over just in December, 1998.
- The total amount of debts identified by territorial institutions of SRS and The Major Taxpayer Administration in the delivery and acceptance certificates differs from the total amount of debts, that as on 1st January, 1998 were recorded by territorial institutions of SRS in electronic format;

- According to the information provided by SRS as on 1st October, 1999 the information received contains data about 101 075 payers. Information has been reconciled with records of SRS on about 85 283 taxpayers, but with regard 85 283 payers that has not been reconciled SRS does not provide the State Treasury with no breakdown per names and amounts of taxpayers.

However according to agreement signed by both parties the final delivery and acceptance certificate of social tax and mandatory social insurance deductions had to be signed not later than April 1, 1998, in fact such certificate still was not signed in the middle of the year 2000. First summary of debts in country compiled by SRS was not done according to status as at 1 January 1998, but according to status as at May 1, 1998 that means SRS had administrated this tax already for four months. Total amount of debts identified in the report was of Ls 165.3 millions, but the total amount of debts indicated by SSIF on 1st January, 1998 i.e. the date of handing over was of 148.1 millions. In many cases the comparison of debts is not carried out in the end of report year as well. Requirements of Article 11 of the Law "On Accounting" are not met by SRS neither taxpayers therefore there is no confidence that topical total amount of tax debts reflected in SRS reports under section on payers correspond to that amount of debts indicated by enterprises in their annual reports. In the computer programs developed to ensure electronic tax record system the debts of taxes as they are at the first date of each month is not saved, and data depending on date the printout is made and may be different which makes it more complicate to compare the debts with the information as of the date when payer's report was submitted.

In the article 23 of the Law "On Taxes and Dues" it is laid down that incorrectly calculated taxes may be collected only in respect three preceding years. In order to ensure continues examination correctness of tax calculations and opportunity to collect taxes, SRS should perform annual audit of at least for 30% of payers. Within nine months of 1999 only 2236 of total mandatory social insurance payers which maked of 45004 paeyers were audited or i.e. 5% from the total amount. Budget institutions are among tax debtors as well. In the received explanation form State Treasury during audit performed it was said that State Treasury is performing control on payment of taxes only in case when tax payment documents submitted contains also pay-roll documents. In all other cases the consideration of State Treasury is that control should be

carried out by SRS. Consequently due to lack of co-ordination in operation and imperfections of legislation the state budget have losses. During 9 months in 1999, 79% of recovery operations performed by the SRS were in the form of written or oral warning of debtors and only 21% of recovery operations are in another form, such as encachment, immobilisation of cash, seizure or sale of property. Several business entities avoid tax repayment, by the way of establishing new enterprises, continue working and receive incomes. According to the effective laws such operations are not prohibited consequently causing budget losses in the form of such due taxes.

Some problems do exist also regarding allocation and recording of resources to be utilised under budget program "Contingency resources" of the Ministry of Finance according to the procedure provided by law. Contingency resources are not always allocated and transferred to the ministry or local authority for further transactions respectively and in accordance with orders, but are transferred to the institution under the subordination and supervision e.g. the Naturalisation Board that is under supervision of the Ministry of Justice. However in the ministry's report on use of contingency resources in 1999 these expenditures are not included. In some cases actual expenditures differ from allocations e.g. in the Ministry of Welfare, Ministry of Culture, Ministry of Education and Science, Supreme Court, Ministry of Justice and Ministry of Finance. Overrun of actual expenditures in comparison with allocations has been ascertained as resources received in 1998 was utilised by conducting advance payments for services and material values, which, in fact, was received in 1999. Moreover, in 1999 the overrun of allocations in comparison with actual expenditures occurred because the resources allocated in 1999 were transferred as advance payments for services provided and for computers received in 2000. Such activities causes discrepancies between the data provided by ministries about allocation of contingency resources and data identified in the survey of the Ministry of Finance as well as decrease the control and responsibility of ministries with regard utilisation of the allocated resources.

The most typical drawbacks identified during audit of state budget institutions are the following:

- All requirements of Article 2 of the Law "On Accounting" are not met i.e. /bookkeeping records not always provide clear pictures about financial status and economic transactions of the

object to be audit. As regards requirement of Article 7 – records made in books are without justifying documents;

- Several ministries have not met requirements laid down in the Article 24 of the Law "On Budget and Financial Management" providing that the executors of state budget may conduct state budget expenditures or take any commitments only within the limits of allocations identified in financial plans submitted by State Treasury which is subject to the authorisation of Ministry of Finance. There is a tendency for increase of overrun of expenditures in comparison to revenues;
- Requirements of the Law "On Prevention of Wasting the State and Municipal Financial Resources and Assets" are not always observed, i.e. material values are transferred to enterprises at their disposal of free of charge;
- In several cases requirements of the Law "On Public Procurement" are not met i.e. no informal consultations/queries, tenders or auctions have been launched, no procurement procedure records made;
- List of services that may be planned and received to accomplish tasks is not provided through Regulations and rules on budget planning in state budget institutions. When annual budget draft of the institutions is prepared, basic expenditures are used as the baseline and the total amount of procurement and services needed are planned with the head of the institution. As "0" budget method is not used in budget planning process for all expenditures of budget programmes there it is not clear the resources expenditures within the "maximum target level" are planned for.

Supervision of state budget execution in Latvia should not be limited only by the supervision of the State Treasury, which allocates and performs payments for specific purposes from revenues of state budget, organise and performs control, accounting of state budget and other functions related financial management. The State Treasury performs it's function of state budget control in co-operation with the State Revenue Service and through monitoring if the all incomes that are due to the state budget are timely received and within the corresponding amount and that expenditures of state budget are conducted according to the laws in force. The State Revenues Service

deals with collection of state taxes, dues and other state mandatory payments. Furthermore, the State Audit Office performs supervision to ensure that collection and utilisation of state (central government) basic budget and Local government basic budget as well as operations with state and municipal assets would be lawful, advisable and correct. The State Audit Office submits its surveys about audits performed, breaches identified and investigations initiated. Unfortunately these documents are considered as informative material and no measures by the Parliament are initiated. However the State Audit Office is independent institution financed from the state budget the State Audit Office in contrary to other institutions is not represented in government neither in the Parliament. Unfortunately the current legislation of Latvia does not ensure financial independence of the State Audit Office as well. The current practise of the State Audit Office to maintain 20% of penalties calculated in order to provide own operation is not acceptable. However such a procedure is provided with the Law "On State Audit Office" this is the precondition for the State Audit Office to have subjective factor and interest to impose higher penalties. The author believes is that the State Audit Office should receive funding only form state budget. Although according to the Constitution of the Republic of Latvia the State Audit Office is independent institution the procedure in accordance to which the budget of the State Audit Office is approved does not ensure financial independence of the State Audit Office. According to the legislation the draft budget of the State Audit Office prior submission to the Parliament (Saeima) is discussed with the Ministry of Finance and government. Due to this the conflict of interests is quite possible as among the institutions to be audited there are the Ministry of Finance and representatives of government as well. Solution of this issue needs provision that request for state budget may not be changed without agreement of the State Audit Office.

In order to ensure overall control of state budget execution the State Audit Office should seriously work on establishment, improvement and development of internal audit structures as well as establishment of government control system in public institutions. The State Audit Office should not operate only as auditing institution, which to some extent performs functions of internal audit. It has to be attained that internal supervision system ensuring and indicating that the goals set up are reached, budget resources are utilised according to estimate is established in every budget institution. It is essential to identify whether these budget

resources are spent to reach the goals set up and how efficient, economically and rationally they are utilised. The task of the State Audit Office is establishment, improvement and implementation of these control criteria overall the country.

The author believes that the parliamentary control, as the highest link of this process is necessary. The commissions, which will review the reports of the State Audit Office and also will take measures in order to eliminate drawbacks identified, but not only accept these reports for information purposes. International experience shows that the commission of parliamentary control is necessary.

Having such system state control system cycle is complete, as the internal supervision system works, the State Audit Office perform audits in the institutions and there is a parliamentary commission, which carry out a detailed analyses and evaluation of reports prepared by the State Audit Office about issues related financial policy as well as make conclusions about changes needed regarding further arrangement of legislation process in the country In such situation the State Audit Office acts on budget institutions, reports to the parliament which makes it's own decisions and by this way have an influence to the state administration structure. The parliament has to control the government through execution of state budget. It is necessary to make an assessment of the work performed during the previous year in order every next year to improve the state budget, improve it's preparation, supervision of execution and control. Having system for control and analyses of such level the financial environment is arranged. Many other issues e.g. such as rational utilisation of resources, compliance with rules of financial discipline are solved in this connection as well. That is the issue, which often is linked with fight against corruption, as corruption does not exist by self it exists in poorly arranged environment. The better the financial system is arranged the fewer opportunities are left for the illegal operations.

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Summary

State budget is one of the key tools the government use for finance management needs. The aim of the budget is to identify and to justify the resources necessary to ensure the state revenue, to be financed according to legislative acts, and to guarantee that within the period of time associated with the allocated resources, the state expenditure will be covered by corresponding income. The budgeting process should follow the necessity to maintain overall economic equilibrium. Implementation of the main budgeting principles, i.e. timeliness, reality and transparency, to great extent depends on how successfully the budgeting process is managed. The key indicator showing the quality of the budgeting process is budget realisation, or more precisely – the budget realisation control. The budgeting process should be improved following to the results obtained during the budget realisation control. Presently the improvement of the budgeting process should be considered as one of the most important tasks of the government. The State should ensure collecting of the taxes, dues and other income stated in the budget income part, as well as financing of planned expenditure. The implementation of the Latvian State budget includes realisation of budget income part, execution of budget expenditure part, as well as accomplishment of budget treasury. Starting from year 2001, income from various EU Technical Assistance programmes and funds are also included in the state budget income part. Unfortunately the actual inflow of resources and execution of expenditure within these programmes are not following to the initial time schedule and amounts, thus negatively affecting state economic position. It is important to intensify the budget implementation control that should not only concentrate on control over the legitimate disposition of budget resources, but also weight the usefulness of the

expenditure and provide follow-up in meeting of the goals. The former experience shows that rather frequently we are facing excessive violations of the budget discipline, and therefore the budget implementation control, integrating the above functions, should facilitate to deal with corruption and theft of state resources.

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THE PROBLEMS OF THE EUROPEAN UNION ENLARGEMENT

Rakstā ir analizēts Eiropas Savienības (ES) paplašināšanās process. To raksturo liels skaits jaunu kandidātvalstu ar atšķirīgu sociālās un ekonomiskās attīstības līmeni, atšķirīgām reliģijām un atšķirīgu politisko stabilitāti valstīs. Šīs atšķirības radīs virkni problēmu, kas būs jāatrisina Eiropas Savienībai:

- *institucionālās problēmas, jo, pieaugot ES dalībvalstu skaitam, ir sagaidāma to institūciju darbības efektivitātes samazināšanās;*
- *ekonomiskās problēmas, kas ir saistītas ar jauno kandidātvalstu ievērojami zemāku sociālās un ekonomiskās attīstības līmeni;*
- *iekšējās drošības līmeni, jo kandidātvalstu ekonomiskā situācija neļauj tām ieguldīt pietiekošus resursus aizsardzības spēju, robežu un iekšējās drošības nostiprināšanā.*

Rakstā ir piedāvāti šo problēmu iespējamie risinājumi.

There exists a misleading opinion that the European Union will solve all of our problems over a very short period of time. However, we must be aware that the EU has enough problems of its own regarding maintaining high living standards without losing in the international competition at this, as well as decreasing unemployment and developing the EU economy by introducing the single currency and certainly strengthening its security.

Questions of the EU enlargement are topical and, consequently, widely discussed today. 13 countries have applied for joining the EU, including 10 Central and East European states: Bulgaria, the Czech Republic, Estonia, Latvia, Lithuania, Poland, Rumania, Slovakia, Slovenia, Hungary as well as Cyprus, Malta and Turkey. According to the EU Council Luxembourg resolution (1997), the accession negotiations have been started with six countries: the Czech Republic, Slovenia, Hungary and Cyprus.

In the process of the EU enlargement institutional, economic as well as internal security problems are arising.

Institutional problems. For democratic administration of the EU a complicated institutional mechanism has been created, which has to provide for co-ordination of the interests of all Member States. The mechanism is based on the representation quotas for each Member State and the number of votes in different institutions. By increasing the number of Member States, the number of representatives will have to be increased proportionately, which, in its turn, will decrease the work efficiency in these institutions. This is of particular importance in the cases, when resolutions have to be passed unanimously. A good example of that was the inefficient operation of the EU during the Yugoslavian crisis, when the EU Member States found it difficult to co-ordinate the common action. Besides, during the EU enlargement, if the present procedure of determining the representation and the number of votes is kept, the weight and influence of small countries will increase.

Economic problems. One of the fundamental principles of the EU is help provision to the economically weaker Member States. Different structural funds have been created in the EU, which are available depending on the economic condition of the state or region. The level of economic development of the Central and East European states at the possible moment of accession will considerably lag behind of the average level of economic development of the EU Member States. That means, the number of candidates for the financing from the structural funds will considerably increase. This situation does not satisfy those Member States, which are currently using the structural funds. However, the countries, which are the biggest contributors to the EU budget (e.g. Germany), will not agree to the increase of the structural funds. Therefore, to agree on accession of some country to the EU, the Member States have to be sure that the country economic development is stable and with the help of the EU structural funds it will be able to achieve the average economic indicators of other Member States in a short period of time.

Internal security problems. In the countries of Central and Eastern Europe the economic situation does not allow to invest sufficient resources in strengthening their defence capability, borders and internal security. Organised crime, illegal migration, trade of drugs already now requires a certain action on part of the EU. Therefore the EU has allocated considerable resources to assist the applicant countries. However, if the above-mentioned threats persist, further enlargement of the EU is risky and problematic.

The solution of the problems listed above would be facilitated by dividing all EU Member and Applicant States into three groups according to the following:

- their historic and cultural links;
- economic relations;
- population;
- level of economic development.

As a result it would be possible to form the following groups of countries:

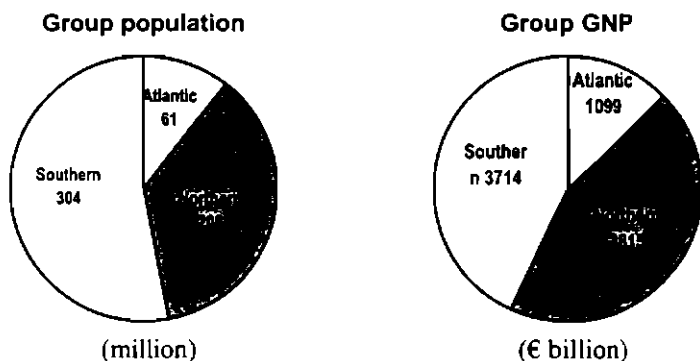
Northern group: Germany, the Netherlands, Denmark, Sweden, Finland, the Czech Republic, Hungary, Slovakia, Austria, Estonia, Lithuania and Latvia;

Atlantic group: Great Britain and Ireland;

Southern group: France; Belgium; Luxembourg; Italy; Spain, Portugal, Greece, Bulgaria, Rumania, Turkey, Slovenia, Malta and Cyprus.

The Southern group has the biggest population (304 million), the Northern group, in its turn, has the highest level of economic development, showed by GNP of these countries (3.815 trillion euros) compared to 3.714 trillion for the Southern group. However, it must be noted that the number of population of the Southern group is twice the number of the Northern group. (See figure 1).

Figure 1. Group Population and Gross National Product per capita (GNP) in 1999.



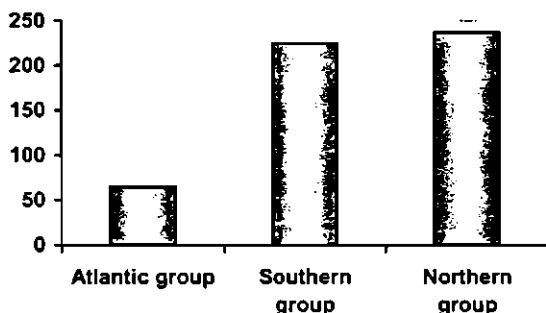
Source: Montezemola. Europe Incorporated. The New Challenge

The Atlantic group has the smallest number of population, but its level of economic development is close to that of the Northern group.

The Northern group is dominated by Germany, which considerably surpasses other countries of the group both in the number of population and the economic potential. To our mind, this entitles Germany to bigger representation in the EU institutions and proves increasing potential of Germany's political influence.

Disregarding the dominance position of Germany, there are several factors, which unite the countries of this group. They are as follows: trade, the investment policy practised by the countries, networks of mutual contacts. The volume of mutual trade among the countries of the Northern group exceeds that of trade with other European countries. Germany, which has always had well-developed trade with the neighbouring countries in the Western Europe, has been developing trade with the East European countries and Scandinavia in recent years (see Figure 2).

Figure 2. Germany total trade with Northern, Southern and Atlantic group countries, 1998 (million €)

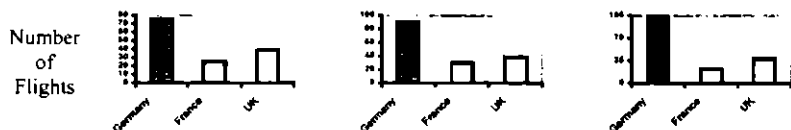


Source: Montezemolo. Europe Incorporated. The New Challenge.

The investments flows of recent years also prove the existence of the Northern group. Thus, in 1995 the countries of this group – Poland, Hungary, the Czech Republic, Slovenia and the Baltic States accumulated more than a half of all German investments in Europe.

Three diagrams (see Figure 3) show the high interest of the German citizens, trade and capital about the new countries of the Eastern Europe.

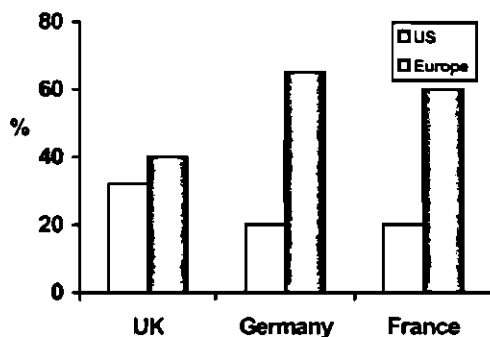
Figure 3. Number of non-stop flights from the six main airports to Prague, Warsaw and Budapest as of September, 1998.



Source: Montezemolo. Europe Incorporated. The New Challenge.

Besides the countries of the Northern group are also linked historically and culturally. Most of the inhabitants of these countries speak German, which allows them to read German literature, watch TV as well as communicate. The inhabitants of these countries are well organised and are fond of order. It can be said that the Northern group is formed with the highly developed Western wing and the Eastern wing, which is in the process of rapid development, both of which are combined into the industrial drive of Europe.

Figure 4. Investment in US and Europe by the UK, Germany and France, 1995. (Share of Foreign Direct Investment - FDI Stock)



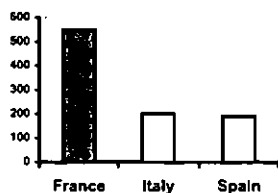
Source: Montezemolo. Europe Incorporated. The New Challenge.

The feature of the Atlantic group is the close links of these countries with the United States. The level of investment of Great Britain is approximately the same in the USA and Europe. However, Germany and

areas. The author believes that such division will allow solve the fundamental problems of the EU.

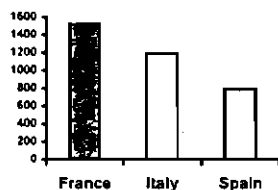
1996 GNP

£ bn



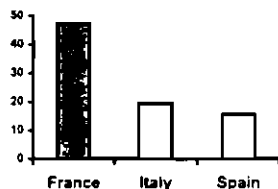
1996 Top 500 EU Countries

Number of companies



1996 Stockmarket Capitalization

\$ bn



Source: Montezemolo. Europe Incorporated. The New Challenge.

Institutional problems. The author suggests all problems put forward in the central EU institutions first to be examined in the special meeting of the Members of EU Parliament in each of the three groups. A special

procedure of decision-making is made in each of the groups and the MPs must vote in the Parliament according to the decisions taken in the group. Different sanctions must be envisaged to be applied against the MPs, if they vote differently. Due to the common interests of each group, decision-making will be more simple and efficient.

Economic problems. To decrease competition among the EU Member States regarding the use of different funds, we consider, that funds must be created within each group. Thus it will be possible to create also the mechanism of fund raising as well as their use with the aim to motivate both the dominant and other countries and even their levels of social-economic development. This, in its turn, will even more strengthen the trade, investment and finance links among the countries. Besides, it is necessary to maintain common EU funds to implement the projects concerning all EU.

Internal security problems. These problems are different for each group of countries. In the Southern group the central problem is the trade of drugs, whereas in the Northern group – illegal immigration, in the Atlantic group – terrorism. It is necessary to establish special target funds within each group regarding their specifics. It is also necessary to develop a common internal security system for all EU Member States.

To create such two-level administration system, it is necessary to implement re-organisation of the EU administrative institutions, without changing the most important administrative principles of the EU. Such reorganisation would make the operation of the EU legislative institutions more efficient as well as simplify the decision-making procedure, taking into account both the interests of separate countries as well as common interests of the EU. Besides the total EU administrative body would not increase, because forming new administrative structures within groups it would be possible to decrease the central administrative body of the EU.

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Summary

To solve the problems related to the enlargement of the European Union the authors of the article offer to create the following regional groups comprising Member and Applicant States: Northern, Atlantic and Southern group. The EU could delegate part of its central administrative functions to these groups as well as the groups could form special development funds within them. The solution of institutional, economic and security problems would be easier within such groups. The article motivates the choice of the countries to be included in each group based on the analysis of their economic, trade and cultural connections. There is also the economic development and internal security problems specific to each group presented.

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SECURITIES MARKET IMPORTANCE IN NATIONAL ECONOMIC GROWTH

Mūsdienīgs investīciju vides vērtējums valsts līmenī nav iedomājams bez vērtspapīru tirgus analīzes. Vērtspapīru tirgus attīstības līmenis ir tikpat svarīgs rādītājs, kā iekšzemes kopprodukts, ekonomiskā izaugsme, bezdarba līmenis un inflācija.

Vērtspapīru tirgus jau ilgu gadu dod iespēju aizņemties līdzekļus uzņēmumiem, valstij, pašvaldībām, kā arī vienlaicīgi dod iespēju pelnīt kapitāla piegādātājiem. Mūsdienīga vērtspapīru tirgus iespējas ir vēl plašākas, īpaši nozīmīga ir finansu riska apdrošināšanas iespēja. Pētījumu mērķis ir parādīt vērtspapīru tirgus nozīmi Latvijas ekonomikā un izvērtēt tā attīstības iespējas.

Nowadays, in evaluating the state economy development, often the importance is stressed on the security market, particularly its realization in the development of the economy. The condition of the security market in the state is done also by evaluating the investment sphere. Investment sphere evaluation becomes especially important when talking about the foreign state investment connection. Investment sphere evaluation is usually done in various levels. When evaluating state investment sphere, usually political, economical, social and other factors are analysed, but for studying economical factors great attention is shown directly to the security market analysis, only analysing states, which are in the development stage, demand against market quality is lower.

In the last years in Latvia by researching the development of national economy emphasis is given to the security market in big significance to the attraction of the investment, however it should be noted that the security market is only in the initial development stage and at present is unable to influence state economical development altogether. In the short period of historical development (from year 1996) Latvian security market can be considered as a quite stabilized market, because the capitalization of the Latvian enterprise market in the Riga Stock

Exchange Fund increases constantly and brings approx. 6% from the GDP. The Latvian security market's initial development stage proves the fact that, Latvian investors choose the possibility to distribute their free finances in the security market of foreign countries, where one can find more possibilities of earning income. Although the mentioned investment is concerned with risk, they are with higher liquidation, unlike the offered investment possibilities of the Latvian security market.

Latvian security marketing problem is concerned with the inactivity of the owner's of the security. It has been viewed that only approx. 1% from the security owner's in Latvia are actively taking part in the marketing work. Such inactive collaboration of the security owner's the market process is not seen in foreign countries market, for example, in America approx. 50% from security owners take part actively in the market work, in Europe is it usually 20-30% from the security owners. Security owners inactivity is easily explainable by the fact that basically the security case was invested in the privatisation process, that is why the security owner became people who weren't actively ready to take part in the business concerned with the security, and also to these people the belonging amount of the security being not enough and the inability to obtain more security. Security market specialist's opinion is that the investment becomes effective if one can allow investing minimum USD 5000. World's experience shows that the security market usually gives the opportunity to earn more unlike other alternative investment spheres, for example, depositing of money in the bank for term deposit that gives to think that slowly this investment form in Latvia can gain such popularity that would not be left behind from the developed states observations, because term deposit usually gives the opportunity to earn only 4-7% per annum, on the other hand in the security market there is the opportunity to earn at least twice as much income specially, if we talk about equity market.

In the analysis of the security market work there is no accomplishment separately from the macro economical observation tendency. That is why there is no chance of how to evaluate the security market instrument from fundamental analysis point of view where big importance is given directly on the macro economical observation analysis. Taking the above context as the basis, the security market appoints the demand and offers whose amount/dimension is appointed by the economical development conjuncture, where at there own point characterize the GDP growth. Security market redistributes the capital, which shows the GDP, in whose case it is usually law-governed to wait for the security market development, if there is a stable

GDP growth, which completely is not directed towards consumption. The importance of the security market in the economics characterizes also its function, especially stressing on the specific function importance.

Security market specific functions are concerned with the possibilities to insure finance and price risk, using derived finance instruments as well as the markets role in optimum source division between department/field and in the state budget deficit coverage.

Question about the security market development usually attracts the locals/natives, also foreign investors, which is concerned with how the security market opens wider scope/opportunities to draw/attract not only additional source enterprisers, for self-government and state, but also to give the opportunity to invest free source and gain extra income, as well as insure the finance risk.

Security market development dynamic can be characterized using stock exchange indexes, which give the opportunity to analysis security market's progress tendency, however this observation is more orientated based on the past information, but that can be used promoting also prognosis according to the past contacts. Stock exchange index tendency shows market progress based on the past happenings. That is why attention was paid to such a market research. For successful opportunities in future, by knowing these tendencies one can forecast state's economical development tendency altogether.

Similarly there are also possibilities to study market development by analysing capitalization change, turnover change a.o. observation.

In world's practice there various prognosis methods are known, with whose assistance there is opportunity express prognosis about the security market development in future. Methods are used also practically and have given positive as well as negative results. This means that none of the known prognosis methods give absolute precise prognosis about the future development tendency because large measure supports/regards previous information analysis.

In the research's result the author wants to give a look into the Latvian economical development growth tendencies in the past few years, parallel examining also security market development tendency and to evaluate the footer perspectives and to estimate what are the opportunities to use prognosis methods of the security market development for Latvian security market work prognosis.

Security market nowadays is concerned with larger opportunities to attract sources, with debt security as well as using equity issue to attract owns

capital. Drawing of the source is important not only for enterprise but also for the state and self-government standard. Latvian Security market development has taken place not uniformly. Market's main support till now were state security and the equity formed during the privatisation process, this means that source attraction using the security market till now is used inactively and mainly only from the state side/behave.

Actually development in Latvia has only faced state security market which initially was supported on short term promissory note, that gave opportunity to cover budget deficit, but was comparatively expensive coverage source, that is why in recent years state's security is mainly with a long term character, there are issued obligations with term till five years. State shows that the security market in Latvia works in strong collaboration with Commerce bank because Commerce bank is the main state's creditor for the security buyer in Latvia. The above-mentioned has brought to conclusion, that the state's security credit is not advantageous for private person, to distribute their means, because it does not give the opportunity to gain the according income.

In many countries of the world' of great importance is the self-government security that gives the opportunity for the self-government to realize the required projects. Which are achieved from the mentioned securities inadequate income tax, in this way directly increasing interest about self-government security. In Latvia self-government security till now is not spread out, reason for which can be mentioned, that to issue these securities is comparatively difficult, and also there are seen no possibilities, that these securities can be issued and distributed in not big self-governments which in the given time are also experiencing maximum shortage of finance.

In the world's developed states security market of big importance is directly credit for security co-operations, however in Latvia also this security market share is not developed. In the world the credit for security is as one of the opportunities to draw attraction by borrowing capital, seeing in this various advantage comparatively with other capital attraction forms, for example, different forms of credit (bank credit, deliverers credit and others).

At the same time, credit for security, big importance in the work of security is also equity, which usually gives the opportunities to the investors to earn not only dividend, but also the opportunity to earn on equity course changes. In Latvia equities of public stock company mainly have come through privatisation process in stock exchange, which has brought to this,

that now the market sector is facing developmental problems, because the enterprise's offered security amount for public turnover outside the privatisation process is insignificant.

The Latvian security market in the above-mentioned opportunities has used the capital attraction to the very minimal, which means that the development opportunity in the finance market sector is wide. In the 20th century the importance of the security market hasn't been big in the Latvian economy, that is why it can be considered that the security market formation and complete organization of work in the recent years has invested actual work, which proves also the security market law governing advertisement foundation, which is formed in accordance with the EU "Investment Service Directive" Development of the security market in the European states has come the requirement to increase the directive, that is why also in Latvia there will be the necessity to look over the legal document standard concerning with "Small Investor" protection, alternative marketing system complete formation and other questions.

Latvian national economy from 1996 has had a noticeably positive progress, which reflects in the GDP growth. Particularly successful GDP news was in 1996, 1997 year and 1998 year 1st half. The difficult economical situation in the second half 1998 around the world influenced also GDP growth in Latvia, that is why there was no possibility to achieve the planned GDP growth.

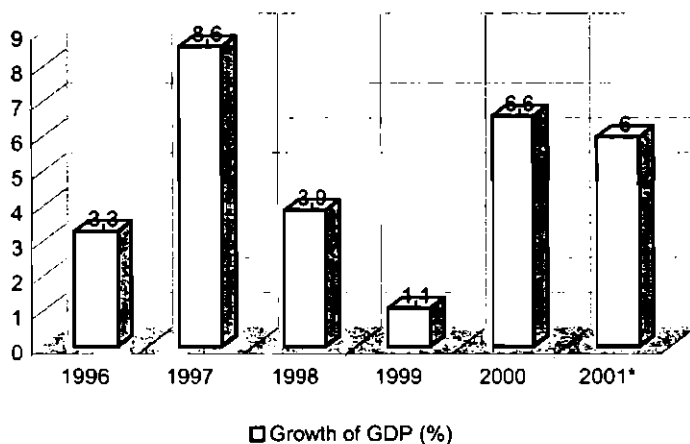


Figure 1. Growth in the GDP comparing with the last year (%).

GDP growth compared with the earlier years is shown in Fig.1. Worlds' economical influence on the GDP growth in the year 1998 and 1999 is shown too. GDP growth speed slows down influencing other macro economical observations decline, for example unemployment level growth in the state form 7% in 1997 year till 9.2% in the end of 1998.

Stable states economic development shows precondition in the security markets successful development, however mentioned preconditions not always are realized. Security market development in Latvia began comparatively later than bank and insurance sectors development that is why the done research will also mainly refer to the time period from year 1996.

Security market development usually analyses using information about the stock exchange market development, however it is to be taken into account that actual role in Latvian Security market is directly outside the stock exchange market, where concentrates the greater transaction dimension but despite that the stock exchange market shows tendencies in the security market altogether. Market work is made more difficult by small issue count, which offers security for public turnover, and with that it is difficult to secure market with the quality security. For example, at the end of 2000 in security market committee was registered 24 equities, 2 bonds, 4 mortgages and 7 investment certificates.

The mentioned observations are stable and have not actually changed comparatively from the end 1999. Also in the beginning 2001 no significant changes have occurred, for example, in February in the security market committee hasn't been registered any equity.

Security market characteristic observatory is stock exchange indexes, which credit on the security market development dynamic.

In Latvia calculation of 2 stock exchange indexes takes place: RICI or price index and Dow Jones RSE or market capitalization index.

In Figure 2 is shown index dynamic from 1996-2000.

In 1998 the index value rapidly decreased which coincides with the GDP growth diminishing, unemployment growth and other negative phenomenon.

It should be noted that comparatively with GDP growth in 2000 index observations have not reached the of level 1997-1998, also should be mentioned the tendencies which can be noticed also in 2001-index value continuing to decrease a little, comparatively with the end of 2000. Stock exchange index's negative tendencies prove about the serious problem in the security market, when GDP growth doesn't insure positive tendencies in security market.

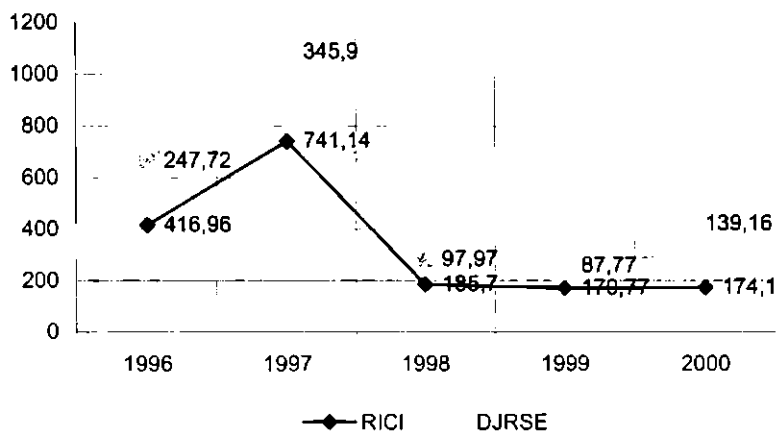


Figure 2. Stock exchange indexes from 1996-2000.

Stock exchange work characterization can also use different observations, for example, market capitalization; mentioned observation is directly concerned with equity market development. In Figure 3 is seen the dynamic of equity market capitalization.

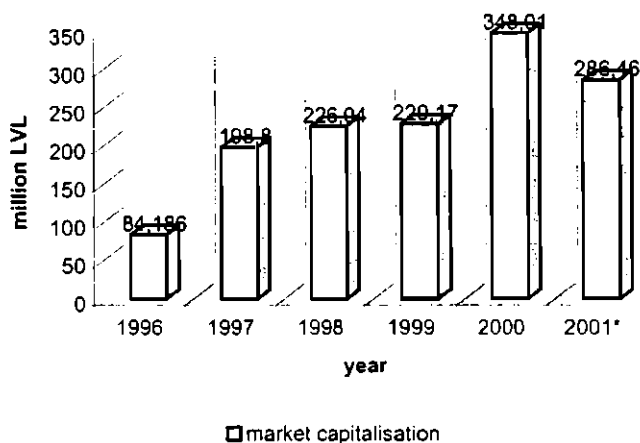


Figure 3. Market capitalization from 1996-2001 (1st quarter).

Market capitalization changes have been more constant than index changes, it is taken in concern that the economical crisis in 1998 slowed down the capitalization growth speed, but didn't alarm the capitalization down fall, comparing with the earlier periods, however in the beginning of the year 2001 market capitalization has decreased, comparing with the end of the previous years which was concerned with the changes in the stock exchange report. In the year 2001 the decrement in the capitalization sphere collides with stock exchange index value decrement. It should be taken in to account that demand for security market takes place characterizing after its face value and the state security sector characterized growth from 193.91M LVL in 1996 till 304.57M LVL in the first quarter of 2001 small decrement has concerned the other demands for security market sector which had reached its maximum value in 2000-29.3M LVL, but in the first quarter of 2001 the rest of the demand of the securities standard value was only 14.35M LVL.

Display of activity in the Latvian security market influences also the security number changes in the stock exchange list/figure as well as structural change between the figures. In Figure 4 is seen the total number of security and the distribution of the list dynamic.

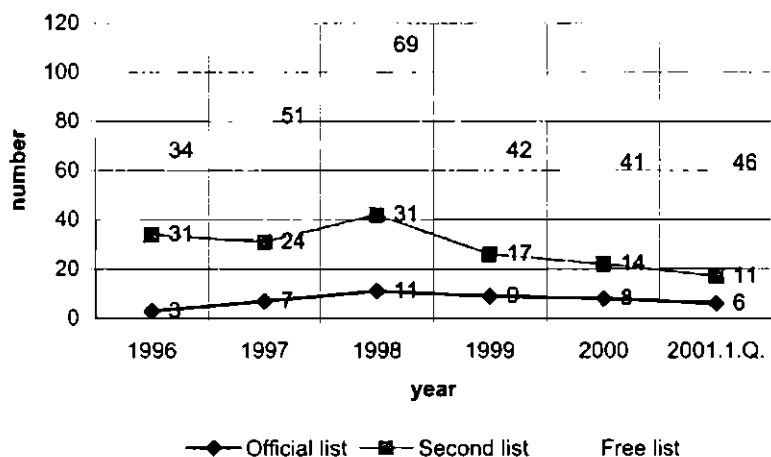


Figure 4. Number of listed shares in the stock exchange from 1996-2001 (1st quarter).

Above it was already mentioned that in the stock exchange security mainly have come down through the privatisation process that is why there is no rapid growth in the security in the past few years. Figure 4 shows equity number change dynamic but in the stock exchange Figure is also included that the demanded security, which mainly are the state securities and are included in the official figure. In one quarter of 2001 the demanded security was 18 and all were included in the official figure, also in this market sector is known negative tendencies, because comparatively with the year 2000 its number has decreased. Figure 4 indicates on that how changes have occurred in the structure of security according the figure diminishing officially and in the second figure included security number and growth in the free figure security number. This indicates that there are not enough enterprises, which would quote their equities in the most qualitative stock exchange figure and with that influencing also the rest of the stock exchange market observations because mainly the market capitalization and the stock exchange turnover form directly in the official and in the second figure security. It should be noted. That index calculation uses the enterprise equities included in the official and the second figure that is why diminishing this figure to the security count diminishes also the security count included in the index turnover.

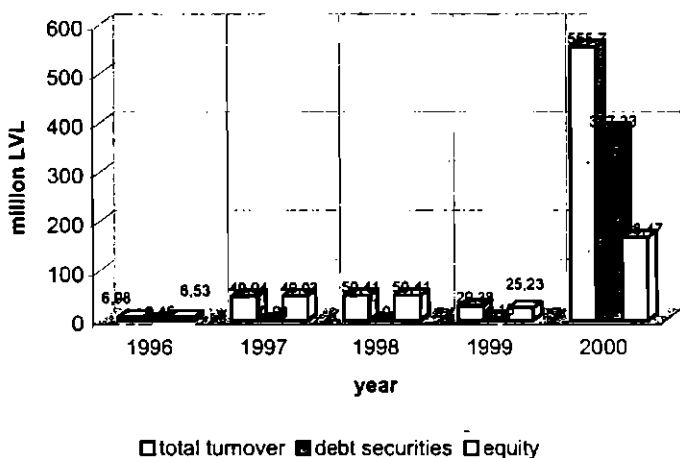


Figure 5. Total capital market turnover from 1996-2000 (mln LVL).

The security is included in the official stock exchange and in the second figure forms also the actual stock exchange turnover part. Figure 5

shows, how were the stock exchange turnovers in the period of the last five years, separately inspecting the equity and the demand in the security market.

Stock exchange turnover forms not a big part from the total market turnover, however those tendencies are possible to see in their own contact, which can be noticed in the total turnover of the Latvian security market. In Figure 5 is seen, that in 2000, in stock exchange is fixed comparatively greater turnover than in earlier years, however this is not only bound with the stock exchange work activity growth, because as it can be seen the greater part from the total stock exchange turnover forms state demand security turnover, which in the earlier years has not been fixed in the stock exchange turnover, all the same rapid growth in the equity market sector was bound with the Latvijas Unibanka equity pay off which showed in the end of the year the actual stock exchange turnover specific growth in the market's total turnover. Mentioned facts prove, that while studying the market tendencies one should know, which near factors have influenced the market activity growth or decrement because in the opposite case it is not possible to obtain completely precise market tendency value of the past and be able to support future development prognosis.

Security market development future prognosis mainly supports on the past information analysis and that complexes the mentioned methods usage in Latvia, because the study period is big enough (separate methods at least 5 years), and in the Latvian security market there is no required information, where could be enough objectives, where the methods are usually worked out. In order to analyse the security market in the developed states according to the author's opinion---for the analysis of the Latvian security market condition, it would be preferred to apply "Efficient/effective Market Theory", that supports on research about the market prices reaction on appointed information. So that the market can be considered to be efficient there is required security market price corresponding and at the same time reaction on the spread of the information in the market. If in the market doesn't work the connections, which from the market's historical information research, then it is practically impossible to forecast the future development and then occur the so-called sudden changes in the market (Random Market Hypothesis). Market price can influence public as well as private information and from that how precise in the mentioned information will depend the end result on the prognosis. Taking in consideration the various specific features,

one can conclude that in the Latvian security market work analysis is to be done connecting with macro economical observations, bounding them with the actual incidents, which could influence market work. The role of the security market growth in economy could show additional investment opportunities, increasing the possibilities to obtain regularly the additional income dividend and in the percentage form.

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Summary

The particular importance of the security market in the development of the state's economy is proven in the many developed states. Latvia also has recognized the importance of the security market role in the development of the economy, however for now the particular role is still not completely realized. Development of the Latvian security market is wide, however there is requirement of a clear formula, of how this development is to be directed.

In the research result it is made clear that the security market in Latvia develops almost at a constant rate, to which there is at the same time changes in the Latvian national economy. It was stated that the characteristic indicator of the Latvian security market, for example stock exchange index, changes happening in connection with the GDP growth, however in separate incidents the security market observations influence also factors which are not connected with macro economy (e.g., delivery of the equity control package deal).

In research it was made clear, that Latvian security market work evaluation is complex because constant development evaluation method is supported on a long term marketing result, as well as problems are brought by inefficiency of the market, when information's spread in the security market not always leaves impression on price of the security in the market.

In order to activate market work in Latvia new security is required, which would give the opportunity to do investments and obtain necessary high income. Author views that for future development assurance is required new and quality security, which would be actively sold in the Latvian security market.

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INTERNET BUSINESS MODELS AND IPO'S (INITIAL PUBLIC OFFERINGS)

Autors savā rakstā pievēršas tādiem jautājumiem, kas mums Latvijā drīzumā arī kļūs aktuāli, respektīvi, ar kādiem INTERNET tīkla biznesa modeļiem un kādām stratēģijām investētāji var pelnīt naudu (par pamatu tiek ņemta ASV e-komercija).

In 1999, there were 399 Initial Public Offerings in the US, an estimated 271 of them backed by venture capital. Functionally about 250 of the total were internet-related or in some other cases digital. As for the money raised, some \$47 billion in stock was issued for the year, more than double 1998's \$21 billion. In the last quarter of 1999 alone, the offerings added up to \$22 billion, or more than the 1998 total.¹

When the financial markets gave up on the money-losing, internet-based, recent issues in the spring of 2000, the market for new issues settled down. This paper will attempt to describe to see what business priorities survived. In other words, which Internet business models, or strategies could earn money for investors.

Introduction: IPO Price Increases, 1995 – 1998

The so-called "Internet Gold Rush" can be seen in Table 1 whereby from 1995 to February 1999 a large number of Internets-related IPO's doubled in price by the end of stock's first day on the open market (see Table 1, adapted from Ritter, 1999.)²

As a comparison, during the 1980's only seven IPOs doubled in price on the opening day of trading. Obviously none were Internet-related. In the early 1990's only these offerings doubled in price on the first day.

By 1994 MOSAIC was being repackaged as the commercial browser Netscape, thus allowing for the Internet to break out of its academic niche. A year later, in 1995, eleven stocks "ran-up" (as many in the prior 15 years combined), and most were Internet-related. Some of the best performers included Netscape, Citrix Systems and Tivoli Systems.

Table 1

Ritter list of IPOS that doubled in price the first day, 1990 - 1998

Company	Offer date	Offer price (\$)	Closing price (\$)		Change (%)
			First day	02/12/1999	
Net Worth	11/25/1992	16.00	32.00	42.00	31.2
Boston Chicken	11/08/1993	* 20.00	48.50	0.50	-97.9
Shiva	11/17/1994	* 15.00	31.50	5.88	-62.7
Tivoli Systems	03/10/1995	14.00	30.75	47.38	54.1
Premiys Comms.	03/05/1995	* 16.00	35.00	8.75	-50.0
Arcsys	06/06/1995	13.00	26.50	18.25	-31.1
Netscape	08/08/1995	* 28.00	58.25	66.94	129.8
Triathlon	09/07/1995	5.50	11.75	11.63	-1.1
Arbor Software	11/06/1995	17.00	39.25	16.69	-57.5
Sync Research	11/09/1995	* 20.00	44.00	0.69	-98.4
Secure Computing	11/17/1995	16.00	48.25	19.38	-59.8
Objective System	11/30/1995	19.00	41.25	3.31	-92.0
Citrix Systems	12/08/1995	* 15.00	30.00	82.38	723.8
Extended Stay Amer.	12/13/1995	* 13.00	27.50	9.19	-33.2
Xylan	11/11/1996	26.00	58.38	20.00	-65.7
Yahoo!	04/12/1996	* 13.00	33.00	151.00	2645.5
Edify	05/02/1996	15.00	33.75	6.63	-80.4
Open Market	05/22/1996	18.00	39.88	13.69	-65.7
Rambus	05/14/1997	12.00	35.25	74.13	145.0
Great Plains Software	06/20/1997	16.00	32.38	41.00	26.6
Broadroom Class A	04/17/1998	* 24.00	53.63	125.63	134.3
Inktomi	06/10/1998	18.00	36.00	68.50	280.6
Broadcast.com	07/17/1998	* 18.00	62.75	68.88	119.5
Geocity	08/11/1998	17.00	37.31	95.13	154.9
Ebay	09/24/1998	* 18.00	47.38	236.00	398.2
Earthweb Tech.	11/11/1998	14.00	48.69	39.11	-18.2
theglobe.com	11/13/1998	* 9.00	63.50	48.13	-24.2
E-Tek Dynamic	12/02/1998	12.00	26.75	27.25	1.9
Ticketmaster Online	12/03/1998	14.00	40.25	36.50	-9.3
Ubid	12/04/1998	15.00	48.00	62.50	30.2
Xoom.com	12/09/1998	14.00	34.44	51.44	49.4
Artificial Life	12/17/1998	8.50	23.50	12.50	-46.8

Note: *Stock has subsequently had one split. **Bolded:** declined from first-day close.
Source: Jay R. Ritter, 'Big IPO Runups of 1975-99' (for on-line details, see note 2)

Disappointments after Day One

On the other hand, eight of the eleven big run-up IPO's of 1993 had lower stock prices in early 1999 than they had at the end of the day's trading back in 1995.

A similar pattern holds for new issues through 1998. Of the 32 big IPO run-ups in 1990–1998, over half experienced real declines in the stock price (adjusted for stock splits) by February 12, 1999 an arbitrary end-of-period date used by Ritter.

Each of the 32 had at least doubled in price on the first day of the offering, but then about half would decrease from the price at the end of the opening day, trading lower in February 1999. During this time the broader market averages (the Dow, NASDAQ, and S&P 500) were doubling during this period, even stocks whose prices rose slightly (Great Plains Software, E-Tech Dynamics) turned out to be under-performers after the first day.

The strength of infrastructure IPOs

The big winners were: Yahoo! (until 2645.5%, or 26 fold), Citrix Systems (up 723%) e-Bay (up 398%, almost quintupling in price) these few strong stocks overshadow a general pattern of price declines.

What do these pre-1999 Internet-based IPOs have in common?

Loosely defined, each of the four provide so called "infrastructure" for the Internet.

- *Yahoo* began in 1995, had an IPO in 1996 as a search service, and has now expanded its role as a premier Internet portal
- Citrix Systems, based in Florida, makes software to improve the operation of Windows-based networks
- E-Bay (like Yahoo!) is not technically an infrastructure enterprise, but as the leading on-line auction service, is very similar by nature, in that it handles purchases and sales for its millions of registered users.
- Inktomi provides Yahoo and other major web sites with its search engine and also makes Traffic Server, a network bottleneck-breaker sold to America Online (AOL), and other companies.

That is why this period has deemed the Internet "Gold Rush" as it parallels the original USA gold Rush of 1849. In the very beginning, a few miners became wealthy, and only a few remained rich. The people who became and remained wealthy, keeping the gold, were the ones who sold the

miners whiskey, equipment, and Levi's jeans. The obvious parallel today is that the companies making the most money are the ones that provide infrastructure in the form of network-enhancements for e-commerce.

The 20 Best Performing IPO's of 2000

Table 2

IPOS from 2000 with largest rates of return, by product line (as of July 25, 2000)

Company name	Product or industry	IPO date	Offer price (\$)	Current price (\$)	Return (%)
Sonus Networks	Voice via packet networks	05/24/00	23.00	237.00	930.4
Nuance Communications	Voice software for the web	04//12/00	17.00	135.44	696.7
New Focus	Products for optical networks	05/17/00	20.00	124.44	522.2
Orchid Bioscience	Health/Biomed/Genetics	05/04/00	08.00	43.13	439.1
StorageNetworks	Data storage utility	06/29/00	27.00	139.63	417.1
ONI Systems	Optical Networks	06/01/00	25.00	120.50	382.0
Quantum Effect Devices	Embedded chips for networks	02/01/00	16.00	75.44	371.5
Turnstone systems	Loop mgmt. Software systems	02/01/00	29.00	135.88	368.5
Bookham Technology	Chips for fiber optics networks	04/10/00	15.83	74.13	368.3
Centillum Communications	Chips for DSL equipment vendors	05/23/00	19.00	85.88	352.0
Pixelworks	Chips for broadband display	05/18/00	10.00	43.63	336.2
Stanford Microdevices	Radio frequency components	05/24/00	12.00	49.50	312.5
Uliticom	Wireless network software	04/04/00	13.00	53.44	311.1
webMethods	Web based B-to-B e-com	02/10/00	35.00	133.13	280.4
Exelixis	Health-Biomed/Genetics	04/10/00	13.00	49.25	278.8
Embarcadero Technologies	Mgmt., software e-com	04/19/00	10.00	37.50	275.0
Capstone Turbine	Energy alternatives	06/28/00	16.00	59.13	269.5
Numerical technologies	Software to design chips	04/06/00	14.00	50.06	257.6
Avanex	Photonics for optical networks	02/03/00	36.00	127.63	254.5
Marvell	Circuits for data storage	06/26/00	15.00	52.69	251.3

Source: Renaissance Capital on-line (<http://www.ipo-fund.com/topfive.htm>)

Similarly, if we analyze the list of the 20 biggest IPO price run-ups for the first six months of 2000, it contains mostly digital issues, most of which, in some form, have models for increasing bandwidth. This would also fall under the category of infrastructure services as defined by voice and data transmission over networks (see Table 2). It is evident that neither business-to-business (B-B) nor business-to-consumer (B-C) issues did positively experience the Gold Rush.

Those stocks did, were for companies that offer solutions to network problems, devices for photon systems, or other fiber-optic applications, in other words "infrastructure"

Potential Profitable Business Models

As discussed, the Internet Gold Rush seemed strange because billions of dollars were being paid for companies that had yet to earn a profit. By April and May of 2000, reality caught up and a classic shakeout occurred, in which most "story-based" internet companies saw their stock prices plummet. The "story" was that profits did not matter, but they actually do.

Peter S. Cohan analyzed the situation after the fall of stock prices.³ His approach to Internet – related companies is that they fulfill these requirements for future profitability:

1. Economic "leverage" Companies must have the ability to hold on to a specific niche, or position, by brand identification, patent rights, or the advantages of standards-setting
2. "Closed-loop solution" to customer needs, meaning that the company can fulfill all the steps related to the product
3. Competent flexible management.

Management aside, which Internet businesses are candidates for the first two criteria, i.e. leverage and completeness? Cohan develops the answers by means of nine separate business segments, grouped three tiers or levels. The three are "loss ware", "brand ware", and "power ware" As the names suggest, certain segments have low probability to become profitable (See Table 3).

Table 3**Cohan's hierarchy of Internet profitability**

Level III: Power ware

- Network Infrastructure
- Web consulting
- Internet venture capital
- Internet security

Level II: Brand ware

- Web portals
- Electronic commerce
- Web content

Level I: Loss ware

- Internet service providers (ISP's)
- Web commerce tools

Source: Cohan 1999 (p.19)

Loss ware: ISP's and Web commerce tools

These are businesses that require tremendous amounts of advertising for brand development and the cost of entry is low. For an ISP to become brand- reorganized it takes a lot of spent advertising dollars. Brochure designers, broadcast and "cookie" software are very competitive and switching and entry costs are low.

Brand ware Portals, Security, E-commerce, Web content

The stock shake out was hit hardest in this segment, and only a few survived. Once Web portal sites realized that they could charge for advertising, and not only be search engines, the competition took the attracting the most traffic. Eventually users settled into habits and loyalties. *Yahoo* emerged as the leader. It is expensive to up-keep a portal, hence the barrier to entry.

Amazon.com is the best-known example of e-commerce. It has a great brand name, but also began having problems in mid-2000. e-Bay, the on-line auction house, and E-Trade; the brokerage company are other examples.

Examples of web content firms are CNET, the Gartner Group, and Ziff-Davis. Web content firms monitor and analyze the Internet, and other media.

“Cyber-terrorism”, “hackers” has given rise to Internet security firms whose goals are to protect government and corporate networks from outside “invasion” Examples are Network Associates and Security Dynamics.

Therefore, Brand ware can be characterized by trying to create customer feedback, or interaction, through customer loyalty and brand identity, that erects barriers to entry and creates economic leverage.

Power ware: Internet VC, Web Consulting, and Network Infrastructure

According to Cohan, potential profit lies in companies that can establish leverage and offer closed-loop solutions.

Internet venture capital firms are an example of companies that moved from brand ware to power ware by virtue of network effects. As VC partnerships became successful, providing high returns for their stakeholders, suppliers of capital sought their out, and personnel talent and the best underwriters followed.

Web consulting focuses strategy and tactics for companies to become “connected” among themselves and with customers and suppliers. Examples include Sapient, Viant and the Peppers and Rogers Group.

Network infrastructure, as noted above, provides goods and services to improve the Internet as a delivery system. The best known of these are Cisco Systems and 3 Com. Cohan has named these established successful companies as the “old new industrials”

Measuring Internet-Related Companies

Between 1999 and 2000, analysts at the influential investment brokerage house, Paine Webber, issued a series of reports where they anticipated the shift against the dot-coms, meaning companies that had recently gone public and were Internet-related. They developed the term “new metrics” by referring to an approach to stock valuation that predicts future earnings in compasses that have yet to make a profit. They described such “new new industrials” as having been over-valued and that the “new metric “measures the value as a high multiple of the as-yet-only imaged earnings.

As we saw in Cohan's framework, many of the Internet-related IPO's relied only on "story-telling" and in trying to push the brand identity hoping to reap high profits. The brand identity could only be built through heavy advertising. Few companies succeeded in building their brand because they ran out of money. This strategy, in the absence of current profits, frightened many investors and the stock-markets crashed. Many "new new industrials" went down with the market.

The Paine Webber analysts argue that the "old new industrials" remain good investments, worth their high price-earnings multiples.⁴ They devised a method of calculating stock values for currently profitable companies that leads to much higher acceptable P-E ratios than the traditional limit, about 20.

The basis for higher than traditional valuations, in their view, is low inflation (Kerschner et al.2000, p.7). If inflation equals four percent a year, for example, then a company with 15 percent annual earnings growth should be valued at about 20 times earnings. But if inflation equals to only two percent, the valuation for the same earnings growth grows to a P-E ratio of the of 65 (Kershner et al., Chart 8). This model assumes, of course, a forecast for low inflation and rapid productivity growth.

In short, according to Paine Webber, some form of "new metrics" is required to measure Internet-related companies, and the companies that will survive will be the "old new industrials." With this approach, augmented by the Cohan approach, then, the band-width boosting and other infrastructure stocks will be the winners.

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TAXATION WITHIN THE INTERNET ECONOMY

Rakstā tiek iztirzāti aktuāli jautājumi – nodokļu politika e-biznesā. Vai bizness INTERNET tīklā ir aplikams ar nodokļiem? Šis jautājums ir aktuāls ne tikai šeit Latvijā, bet arī ASV

The taxation of online commerce is a current topic of debate, here in Latvia, and especially in the United States. Should Internet commerce be taxed? How and who will implement the taxation? What are the ramifications of this taxation to small businesses, online merchants and local governments? In this paper, using the United States as the example, I will attempt to explore these questions by reviewing the legislative history and discussing some of the research done on this topic.

Legal history

In the United States, from a legal perspective, the Internet taxation discussion is quite similar to that of mail-order catalog sales. As a stand alone transaction the actual act of purchasing via the Internet, or through mail-order, is exactly the same. In both cases, the purchaser does not know, nor does he care, where his purchased goods will arrive from, but they come from some type of a warehouse. This warehouse is located somewhere, and it is very likely that the purchaser is buying across state lines (the United States has fifty states) hence the question – where should the taxes be collected?

Two U.S. Supreme Court cases address this question: *National Bellas Hess v. Department of Revenue of the State of Illinois* (386 U.S. 753, 1967) and *Quill v. North Dakota* (504 U.S. 298, 1992). These two court cases essentially ruled that companies do not have to collect state taxes on those transactions that occur in a state where they do not have a “physical nexus”, or geographical presence. This concept has also been adopted for electronic commerce.

However, what most consumers in the United States are not aware of, is that their purchases are still subject to so-called “use” taxes, which

is the responsibility of the purchaser. The “use” tax is usually the same level as the state’s sales tax and is applied to all goods that are subject to sales tax. Not surprising is the fact that “use” tax is quite ineffective and compliance is virtually non-existent.

State legislators, beginning in 1997, began thinking about Internet taxation as they feared a decrease in their tax base due to the growth of the Internet. Small businesses also began to give legislators pressure because of the competition provided by online retailers, which were able to offer lower prices, at least partly because of the tax advantage.

In 1998, the Internet Tax Freedom Act (ITFA) was introduced with representative Christopher Cox (R-Calif.) and Senator Ron Wyden (D-Oreg). The ITFA placed a three-year moratorium on new Internet taxes and created the Advisory Commission on Electronic Commerce to study issues related to Internet taxation. Its term was to expire in April 2000, when it was supposed to present its recommendations to Congress.

In the commission’s first meeting, the Federal Trade Commissioner Orson Swindle noted, “with approximately 30,000 taxing jurisdictions, compliance becomes a significant obstacle. The Internet is inherently susceptible to multiple and discriminatory taxation in a way that commerce conducted in more traditional ways is not”¹ During the next few months, the advisory commission explored many options, ranging from no tax to a flat tax for all e-commerce.

As January 2000 approached, the commission was unable develop “official” recommendations, and the commission decided to issue a report on those proposals that had secured a simple majority. The main recommendation of the report was a five - year extension on the existing ban on new Internet taxes. This recommendation was attached to a bill and passed through the House of Representatives in late May. Surprisingly, not every industry leader was satisfied. Intel Chairman Andrew Grove, in a June 2000 hearing before the Joint Economic Committee, argued that he did not see any “justification” for the tax exemption.² Needless to be said, the bill was introduced to the Senate with economic arguments and justification supporting each side.³

Current Research

As the Internet taxation debate continues, scholars are addressing the issues in theoretical terms, supported by argument from traditional public finance economics. Charles McLure, who compares e-commerce

events to the history of mail order catalogs believes that electronic commerce should be taxed.⁴ Assuming the “infant industry” arguments that would support a moratorium on Internet taxation until the electronic commerce channels are more “mature”, McClure argues that such policies keep favored industries from ever “growing up” He also argues that by not taxing the Internet there is an indirect transfer of wealth to the rich (the rich utilize e-commerce moreso than the poor). If the Internet is not subject of taxation, economic decisions will suffer “gross inequities and distortions” and local merchants will face unfair competition from out-of-state vendors who pay no sales tax.”⁵

Another approach, or claim, is that the tax differential will encourage conventional retailers to migrate to the Internet and that if state governments are genuinely concerned about equity, they should consider “harmonizing tax rates downward for local retailers”, rather than imposing new taxes on the Internet to eliminate the tax differences.⁶

Some empirical research has been done on the possible effects of imposing sales taxes and compliance costs on the Internet. Austan Goolsbee has attempted to determine the price elasticity of demand associated with Internet Sales and the sales and consumption choices that would follow from such a tax.⁷ Examining data from a private survey conducted by Forrester Research in 1997, he examined the purchasing decisions of 25,000 users as a function of their demographic traits and their residential characteristics, including local sales taxation rate.

Goolsbee found that the probability of buying something online grows as the local sales tax rate increases. He also found that the higher the local tax rate, the greater the amount of money the average consumer spends online. In his study, he did take into account and controlled for demographic characteristics such as income, education, age, consumer technological savings, and general computer access.

As the web grew since 1997, Goolsbee revisited the 1997 database, in conjunction with a Forrester Research survey, the following year, to alleviate any questions or risk regarding a possible selection bias, i.e. the majority of consumers in the initial sample were more technologically sophisticated and more tax-sensitive than the typical offline consumer.

Looking at a sample that was more representative of the average consumer, he again found the coefficient on local tax rates to be significant and positive. However, when he divided the sample into two groups – experienced and new users (defined as those who have been connected to the Internet for at least two years), the tax sensitivities were

not very large for new users. Then the question becomes: are new users just not as sensitive to tax rates as old users, or are they just not aware of the relevant differences in tax policies between e-commerce and regular outlets?

Goolsbee's continued research showed that consumers become more aware of the tax code as they become more experienced with the Internet and therefore become more sensitive to local sales taxes in the purchase decisions. Hence, there seems to be a tax sensitivity from consumers if sales taxes were implemented that would negatively affect online commerce.

As mentioned before, state governments feel that they will lose billions of dollars of tax revenue if e-commerce and mail order sales not taxed. The question is how much will they lose. The National Governors' Association (NGA) has cited a figure of \$20 billion in lost revenue by 2002.⁸

Is this figure accurate? To test this \$20 billion number, Goolsbee and Jonathan Zittrain examined where states' revenues are currently coming from and how the Internet is likely to affect them.⁹ The authors concluded that the \$20 billion cited by the NGA is not accurate for three reasons. First, the estimate does not take into account the possible trade created by virtue of the fact that is trade "caused by the Internet" This could not be deemed as "lost" revenue. Second, there could be an artificial overestimation of potential loss of some taxable items. For example, the NGA counts the online sales of home computers as a revenue loss even though most online computer sellers' collect/ pay taxes in some capacity. Third, the figure includes business-to-business commerce, which is currently not taxed, regardless of the transaction method.

Eliminating the above-mentioned categories of goods that are not subject to taxes or are already being taxed, Goolsbee and Zittrain claim, that only \$2.5 billion of sales are subject to taxes, which is not being collected. This could be the equivalent to a tax revenue loss of \$210 million to \$430 million in 1998. Assuming a high rate of growth in e-commerce, projected tax losses will come to about \$2.5 billion in 2002 and \$3.5 billion in 2003, which is less than 2% of potential sales tax revenue, a much smaller figure than that cited by the NGA. The authors concluded that the need for taxes to "level the playing field" unfounded and argue for a moratorium on Internet taxes so that Internet usage

increases among all demographic groups and the maximum benefits of the network might be realized.

There was a similar exercise implemented by Robert Cline and Thomas Neubig on sales data from 1998 to attempt to determine how much governments could possibly lose as a result of not taxing the Internet.¹⁰ They concluded that the total amount of untaxed sales in 1998 was approximately \$2.6 billion, a number very close to that of Goolsbee and Zittrain. From this estimate, they calculate that the actual revenue loss to the Internet in 1998 was only \$170 million. This is 0.1% of total revenues, not very much, and therefore state and federal governments have plenty of time to develop an appropriate (if any) taxation program for electronic commerce.

Although these two studies have quite similar results, it should be remembered that the forecasts in each of these studies follow from a particular set of assumptions about current and future economic conditions. That, of course, does not make the studies invalid, but needs to be taken into consideration when one makes conclusions.

A final important question that requires study – are the compliance costs associated with different tax policies. In the United States, there are approximately 7,500 local governments and 46 states impose sales tax. The taxes for similar goods are not uniform and depend on the region. It is probably correct to assume that there would be as a significant cost to online retailers if they had to determine what goods are taxable and the appropriate rate for a given destination as well as ensuring that collection takes place. This area needs to be explored with further studies.

Summary

There are basically two views on Internet taxation – to tax, or not to tax. The proponents of taxation argue that there are lost revenues to state and local governments as a result of e-commerce. The opposing group argues that the relevant levels of revenue are not very large. Implementing taxes impedes e-commerce growth and burdens retailers with extra costs arising from collecting such taxes. Technology could probably solve this latter issue, but there is no reasonable solution, yet.

Studies on Internet taxation are relatively young. As electronic commerce grows it will be even more important to study tax policy as it relates to the Internet. This would include the possible "lost" revenues by governments without Internet taxes versus the costs of tax collection, as

well as the effects of taxes on purchases. Conventional tax theory has clearly shown different sales tax rates lead to a migration of consumers to areas of lower taxation”¹¹

It seems that the studies examined in this paper support this conclusion. However, more study is required because e-commerce is still an “infant” industry.

Another ramification of this debate is what will be happen with the “traditional” retailer? If consumers will migrate to purchase in lower-taxing outlets will traditional retailers be able to complete owing to economies of scale and will this factor be enough to offset the sales tax differential? Research is required, over time, to compare consumers retail buying habits in both, traditional outlets and online to see if consumers are shifting then purchases.¹²

Technology will probably solve the compliance issue. There are several software companies developing software that would allow retailers to calculate the correct sales taxes for purchases made in remote locations. Currently the costs of such packages are quite high, approximately \$20,000, but should probably come down as demand increases if taxes were mandated.¹³

The Advisory Committee on Electronic Commerce proposed that credit card companies be used as an intermediary to transfer taxes from consumers to governments.¹⁴ This would take the responsibility and complications away from retailers. As of early 2000, several software companies had plans to announce sales-tax accounting packages that could calculate sale taxes across 60,000 potential tax jurisdictions.¹⁵ Therefore it seems compliance to potential sales tax will fall to lower levels of cost.

At this stage of Internet development, it is very difficult to recommend a taxation policy for e-commerce. As I have attempted to discuss, the final solution will have to take into account a number of political and practical problems: potential effects of “lost” revenues to governments, consumers’ response to tax differentials, and the impact of traditional “retailers”. More study and analysis is required examining Internet taxation.

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Ingrīda Ūdre

Saeima of the Republic of Latvia

E-BUSINESS, FINANCIAL REPORTING AND RISK ASSESSMENTS

Pētījumā ir aprakstīta inovācijas un globalizācijas kā mūsdienu ekonomikas pamata ietekme uz jauno biznesa veidu attīstību, kā arī kompāniju darbība jaunajā biznesa vidē, e-biznesa vides ietekme uz finansu atskaitēm. Izpēte ir veikta par iespējamiem e-biznesa riskiem, kādi varētu rasties e-biznesa vidē.

Innovation and globalisation as a basis of modern economy

Today we can treat innovation in the broader sense of the word at the base of the modern economy.

Innovation is an economic category determined by demand facilitating the process of the change of values and efficiency, and creating an unlimited amount of services and goods. Innovation is an objective economic category and, at the same time, also the leading element in the system of the production relations in innovative economics. One can't imagine a modern economic mechanism ensuring reproduction without innovative economics. Furthermore, in modern economic systems mutual relations between individuals on many occasions are determined being based on the innovative potential of these individuals.

Considering innovation as a category of economic theory, it should be taken into account that the contents of this category are the dialects of negation. Innovation can be treated as a dialect unity of the old and the new, which can be contained disclaiming the old form, or, just the opposite, the new form disclaiming the old content.

However, it is just innovation that underpins the progress of the creation of both material wealth and moral value. Innovation is the essence, basis and main condition for the existence of human civilisation since without innovation humanity can reach a stage, which can be characterised as "going against the stream and fighting with an enormous flow or disorganisation, which, in accordance with the 2nd rule of thermodynamics, is trying to bring

everything to the death of heat – general balance and equivalence or, in other words, entropy”

“Fragile economic systems, which are not flexible and capable of adjusting through evolution to increasing complexities and social changes, have the greatest danger of expiring, although they might seem durable or strong at the moment, since science and technology are constantly altering the natural course of life. Should we wish that our system continue”

Innovative economics functions in accordance with economic and social theories investigating changes and objective phenomena, which can be used to increase the effectiveness of public production. The main purpose of innovative economics becomes the search for innovation different from already existing forms of activity.

Today we do not have a full or detailed investigation on innovative economics; however, there exists an objective need to draw nearer to the essence and logic of the existing economic process.

In the social and economic life we can observe. The situation that with an increase in the speed of the thinking processes of the whole society, the speed of economic and social changes also increases. Together with the increase of the level of public education, the given processes are in material form influenced by the introduction of computers and technology in the human activities.

Innovation in any area, but especially in the area of technology and information leads to globalisation or, in other words, general interaction in the network across the national borders. Therefore, it can be considered that “globalisation is a new way how people in an open world by means of general networks combine their abilities and knowledge with capital, technologies, market and politics.”

The positive effect of globalisation can be characterised as new opportunities, which, in combination with current ones, can provide additional strength to an accelerated development of the state. It is considered, that globalisation results in growing competition, and economics undergoes reorientation towards an increasing role of science and education in the development of national economy.

Modern globalisation is based on the use of computers, information technologies, satellite telecommunications, the Internet and similar instruments.

E-business world and its three phases of development

The above-mentioned gives rise to a new type of business, i.e. business carried out means of electronic instruments or, in other words, e-business. This type of business comprises technology, processes and practices of management, which increase the competitiveness of the organisation by a strategic use of electronic information. Chief executives of the world leading companies consider that e-business can directly influence consumers by improving the quality and speed of services, raising loyalty towards a specific organisation, strengthening of brand name and reputation. Chief executives of internationally recognised companies are of the opinion that e-business today has the highest priority. E-business is considered the shortest way of increasing the competitiveness together with the increasing of the effectiveness of business activity and reducing costs. Using the possibilities offered by e-business, organisations envisage large opportunities for expanding beyond the borders of their national countries.

E-business involves individuals as well as organisations engaging in a variety of electronics transactions, without paper documents, using computer and telecommunication network. These networks can be public, private, or a combination of the two. Traditionally, the definition of E-business has focused on Electronic data Interchange (EDI) as primary means of conducting business electronically between two entities having a pre-established contractual relationship. More recently, however, the definition of E-business has broadened to encompass business conducted over the Internet (specifically the Web) and includes entities not previously known to each other.

E-business determines that companies involved in this type of activity become network builders and system integrators. Electronic markets can be formed as pyramids, where there are some large buyers and a fragmented mass of sellers. Sometimes they are called also "biased markets" They naturally favour one side of the dual flow. Another way how the e-market forms is a butterfly – shaped highly fragmented on both sides. These are neutral markets, which lead themselves to independent, third party exchanges. They have advantage to being closer to true markets, such as stock exchange, and thus better at lowering prices and improving liquidity by matching buyers and sellers. Most buyer to buyer (B2B) exchanges fit to this category. The first B2B boom has been a race

to fill these opportunities, with any of hubs and exchanges in almost every industrial market imaginable.

How does a company change when it turns to e-business? Traditional business involves large physical and working capital. Human capital is focussed on production or provision of services, and brand capital is “push focussed”. Companies involved in e-business are different. In these companies brand capital is “pull focussed”, human capital is customer focussed, and both as working and as well physical capital are small. As a result, this model of companies determines that costs are low for such items as, for example, stock, real estate or equipment, and there is a considerable shift from production focus to that of customer centricity, and allows the organisation to concentrate more on product sales and brand management.

Through the information of e-markets, on-line exchanges and networked business communities traditional business models are being turned with the transition towards decapitalisation and external networks, rather than owning every aspect of production. New technology has allowed companies to finally integrate and fully leverage changes that took place in the 1990s, in particular restructuring and business process standardization, the integration of global capital markets, and a focus on core skills (and resultant moves towards outsourcing). It’s curious, who will produce or manufacture all the materials and products? The answer is networks of external companies – e-markets or Value-Added Communities (VAC) – covering both the supply chain as well as processes such as financial and human resources services.

VACs are already forming along at least two primary dimensions-addressing either industry-specific processes, or cross-industry processes.

- Industry-specific, or vertical communities, organized to resolve specific supply chain inefficiencies – industry “pain-points” – that lower margins;
- Cross-industry, or horizontal communities, address functional processes such as financial accounting, IT, maintenance, repair and operations (MRO) procurement and human resource services – solving problems that are common to more than one market. And as these communities continue to evolve, and begin to become more organized and efficient, new models begin to emerge as VACs begin to consolidate and integrate themselves into larger communities called MetaMarkets.

In author’s opinion e-business has already undergone three perfect phases of development. The first was approximately three years ago,

when three world largest companies, for example, General Electric, started selling goods online. Using this method, buying and selling costs of goods and services were materially reduced. It was a revolutionary decision and fully justified itself – the time of ordering and paperwork were materially reduced.

The second phase – the third party transactions. Their essence is the following: an independent company, using the opportunities offered by computers, attracts a large number of buyers and sellers, and creates genius market. The potential, certainly, is larger, but the critical mass of profit is smaller. Many companies still are working in this area, and they do not see that conducting this type of business income can decrease.

The third phase was when large industrial giants joined in a single consortium. January 25, this year, General Motors, pooling its resources with Fords and Daimler-Crysler created the largest virtual market with sales of approximately 240 billion USD per annum and the number of suppliers tens of thousands. Also such companies as Toyota, Nissan and Renault have expressed their wish to join the market.

February 28, 2000 American companies Sears, Roebuck and France's Carrefour created a retail consortium GlobalNetXchange. The approximate estimate of annual sale is 80 billion USD. Approximately at the same time companies Cargill, DuPont and Centex Harvest created Rooster.com, engaged both in the supply of resources and raw materials, which required by farmers and sale of agricultural products.

The main benefit of creating such market is that, using the Internet and standard software, suppliers can precisely assess the size of the future demand. Besides, any of the market participants can afford to reduce the amount of stock since the electronic market allows projecting the demand in the nearest future.

In addition, the Internet has created unprecedented opportunities for companies to create and participate in Value-Added Communities (VAC) – reaping the benefits of cross-company optimization, new efficiencies to supply chain and new, innovative ways of selling and purchasing products and services. In the end, companies get a better quality product, delivered precisely when they want it, and at much better costs. Most importantly they can respond to customers far more quickly than before.

Financial information in the electronic way and reporting languages

As information moves farther, faster and reaches more people, it becomes increasingly obvious that "hard copy" has few, if any, advantages over "digital copy." The reasons are clear: Digital communication is a faster, cheaper, and more efficient way to reach a global audience. For the audience itself, looking to the Internet for the information, especially for the time-sensitive corporate disclosures, has become a given. However, the Internet is not yet provided a consistent way for users to extract and analyse data, including the information that companies disseminate in corporate reports, press releases, and other communications posted online. That is about to change thanks to a new Internet technology that provides a common way for disparate information systems to exchange data.

In terms for corporate reporting, the new technology will enhance the way companies communicate internally and externally, benefiting all members of the business information supply chain.

The critical data needed by investors and analysts is substantially the same as that used by managers to make both strategic and operating decisions; and two, the technology used to generate in-depth information channels within companies is the same one used to generate corporate communications to the public via the Internet.

The Internet may not create amounted too much if a way to make it relevant for business and personal use remained undiscovered. But there was a first big step, Hypertext Mark-up Language (HTML), which opened the floodgates for Internet-based information exchange. Today, creating an HTML document is straightforward from almost every software application. Document creators do not even need to know anything about how HTML works to make content of Internet ready.

HTML has some shortcomings: Extensible Mark-up Language (XML), which will bring "smart data" to the Internet through self-describing data structures. XML's like HTML, is freely available and is also a standard recommended by the World Wide Web Consortium (W3C). XML enables powerful capabilities, which explain why it is the fastest-growing Internet technology today. HTML generally provides information in formatted documents that a person must read through to locate desired pieces of information. This means that, right now, the Internet is not much more than a gigantic fax machine, moving documents from place to place. With XML, information is actually

separate from its document presentation format, so documents can be searched for specific information and, once located, that information can be served up independently of the document. By making information easier to access, use, reuse as well as making information more structured through commonly used tags, XML stands to become the primary technology data over the Internet in a more efficient, timely, and interactive manner. XML is often referred to as the “language of e-business”

For corporate reports to continue providing financial market participants with relevant information needed to make investment decisions, corporate reporting must keep pace with the changing business environment. The corporate reporting industry has its own consortium, which is developing XBRL (Extensible Business Reporting Language), the adaptation of XML for the corporate reporting information supply chain.

The Extensible Business Reporting Language – XBRL is a new digital reporting language for the Internet and beyond – is the joint effort of over 80 international organizations to come to an agreement on the representation of businesses and financial reporting information/terms for the use over the web/Internet. XBRL is, in substance, “e-business for the business reporting supply chain” XBRL is based on XML The Extensible Mark-up Language. “XML is the language of e-business.”

The mission of XBRL is to enhance the availability and cost effectiveness of the information drawn upon to create – or use data already contained within – the business reports of today and tomorrow. The goal of XBRL.org is to create – and facilitate the creation of – specifications that enhance the usability of information by all participants in the business information supply chain. This encompasses three primary areas: existing financial reporting, transaction level reporting, and merging the area of business reporting/performance measurement.

In the short term, XBRL is aiming at:

1. Developing taxonomies for financial statements by jurisdiction with industry sector consideration.
2. Obtaining market adoption for existing taxonomies.
3. Developing strategies to expand from external reporting to internal reporting.

During this time, XBRL will focus on improving the usability of information provided under existing financial disclosure standards by

creating specifications that allow this information to be efficiently and reliably exchanged between software applications.

In the media term, XBRL will focus on improving the sharing of financial and operational information that is generated and shared within organizations attempting to cope with diverse operating environments, facing changing reporting and regulatory requirements, and dealing with other challenges requiring flexible interfaces between reporting systems. As electronic commerce expands, the demand for standardized business transaction reporting, within companies, between close trading partners, and among joint ventures and other partnerships, will become stronger. XBRL will also support these reporting data specifications through the development of appropriate taxonomies and modifications to the XBRL specification, as necessary. The timing for the medium term goals will be largely dependent upon the demand for this type of specification from the market. Further, it is anticipated that such development will have significant participation by the prepare community.

In the long term, other standards for business performance reporting will emerge within the investor community. XBRL will create specifications that support those business performance-reporting standards as well. It is anticipated that the use of the XBRL.org specifications for current reporting and disclosure standards will facilitate the discussion around these emerging areas. The timing for the long-term goals is dependent upon the emergence of such reporting standards. These long-term goals are considered as directionally appropriate more so than specific at this time.

To use XBRL taking information of accounting system and other information sources the real users could be:

- Printed Financials,
- Regulatory Filings,
- Web site,
- Tax Return,
- Bank Filings.

What will XBRL financial statements look like? It depends on who's looking upon. Because XBRL frees information from the confines of a document format, that information can be rendered in many different ways to suit different kinds of financial statement users. Why is this important? There are multiple sources and multiple uses for financial data. First, the data emanates from different areas inside and outside companies and, usually, comes from different systems. Then, all the data

must be searched, extracted, configured, and formatted so that the appropriate information ends up in other areas inside and outside the company. The process is difficult, time consuming, and, in majority of companies, manual.

XBRL can only make life easier for the range of financial information needs to multiple financial information users.

The ways in which users of XBRL-tagged financial statements might be able to “read” and analyse financial statements more effectively may include some of the following scenarios:

- **Benchmarking/Ratio Analysis** requesting specific financial ratios from a single company or a range of companies for comparison purposes;
- **Virtual Documents** requesting that a virtual document be assembled from a single and/or group of financial statements. This might be used to create an assembly of revenue recognition note disclosures from a specific group of companies;
- **Extraction** – requesting selected data from financial statements be extracted into worksheet analysis tools for further assessments. This might include data from the notes to the financial statements that were previously costly for the average user to extract;
- **Linkage** – requesting that additional information on an item in a financial statement be taken to related disclosures on the topic.

The benefits of XBRL reporting should be in particular appealing to companies that have multiple external reporting requirements.

The XBRL reporting process has fundamental advantages over the way reports are assembled and distributed today because XBRL enables:

- Lower preparation cost,
- Reduced preparation time,
- Simplified information access,
- Broader information availability,
- Enhanced analytical capabilities,
- Better investment decisions.

XBRL is being designed for the use on a global basis for financial statements through the creation of data tagging specifications that describe information in terms of each jurisdiction principles. This will benefit financial market participants by facilitating analysis and use of the information that corporations prepare – XBRL enables the use of

significantly enhanced assessment, extraction, and query tools, making analysis faster and easier. Users can collect data from one source or multiple sources, so, for example, it will be possible to quickly see basic financial ratios from a single company or from a range of companies for comparison purposes. Users will also be able to request that related disclosures on a specified item in the financial statements and in the Notes to the Financial Statements be assembled in a "compound document" dynamically prepared for them as their request. This will enable users to do, at the "click of the mouse," tasks that are manual and time consuming in today world, which is still dominated by paper-based financial and business reporting.

Just now unfortunately it is impossible to talk about XBRL reporting introducing in Latvia. Firstly, we have not yet agreed on the accounting standards to be used, what makes situation difficult for those companies, which want to take part at the multinational market. Secondly, there are not so many experts being able to consult companies on using XBRL. Thirdly, Latvia could not be considered as e-business leader even in the East Europe. New technologies bringing in the finance accounting does not facilitate underdeveloped security market.

For the past several years, financial-market demand for broader corporate disclosure has been rising steadily as shareholder value became the dominant measurement used to assess stock price. The measurement, which is future oriented and cash flow based, has left traditional reporting, with its historical orientation and earnings emphasis, out of step with market needs. To bring reporting into closer alignment with the information the marketplace is actually using to arrive a stock valuation, company reports will need to include information on value drivers and value-creating activities.

What kind of information are the markets looking for? In addition to tangible assets, which are already included in corporate reporting, the shareholder value metric includes company intangible assets, such as customer retention, market share, and intellectual property. These intangibles are important drivers of a company's future value, but current reporting models do not even begin to measure them. Within the XBRL framework, adding this kind of incremental data is as fast and easy as gathering any other information. As long as the data is properly tagged, it is a fairly simple matter to include, it is a corporate-reporting item for internal and/or external use. Therefore, with relatively minimal effort, companies can add information on value drivers and gain credibility by

making their reports more relevant to management, financiers, and the financial markets.

Risk assessments

Risk assessment should be an integral part of a sound e-business strategy. E-business risks in terms of a loss of reputation or brand are two of the most significant business risks.

The first risk to be considered is what impact this failure will have on the company customers and business partners if it chooses not to participate in the new wave of e-business? If the company does not develop an e-business strategy, will its competitors do? Do customers or suppliers expect the company to develop new ways of doing business?

The second risk is that of developing an e-business strategy but failing to consider the problems of future development and maintenance of e-business strategies. Many firms develop an e-business strategy, but the process either becomes stagnant, with no changes in the process, or fails to consider what others are doing. With the speed of technological exchange, there needs to be constant monitoring of new enhancements for the company e-business strategy. For example, have the needs of suppliers changed? Has e-business enhanced company operations by increasing revenue, reducing costs, or improving employee morale? Each of these questions must be considered before either venturing into e-business or maintaining a presence in this new realm of business activity.

The third are the legal risks, as defined by the past and future court cases, as e-business technology involves and changes. The legal risks consist of copyright infringement and violation of local, state, national, and international standards, policies, and laws. Additional issues involve jurisdictional taxations, where and if sales taxes are to be collected, privacy issues, and medical problems (e.g. carpal tunnel syndrome).

The fourth are the operational risks. These risks consist of additional employee training and screening, increased hardware and software expenditures, and increasing visibility (site registration). Site registration and exposure can be expensive in that addresses need to be placed on all company literature, and customers as well as suppliers need to be notified of this site address. Other risks include product defect policies, including return and multifunctional currency. How does the company handle the returns from customer that can be thousands of miles from its physical location? How does it handle transactions from others with different

currencies? Including in this issue is the monitoring of exchange-rate fluctuations.

The fifth category of risks is related to the external parties involved in e-business. The external risks are associated with relationship developed with partners in the e-business process such as customers, suppliers, and creditors, investors, and potential investors. Rehash on suppliers also increases vulnerability if one partner fails to meet its obligations in a contract. Investors and potential investors may require immediate access to company information, reducing reaction and response time for business changes. This also puts more pressure on companies to make sure information up-to-date and accurate.

The sixth are the technical risks of an e-commerce network, including hardware and software issues. These risks are related either to lost cash flow or to the possibility of future cash outflows due to legal actions resulting from technical problems. In this context, the types of hardware, software, firewalls, and passwords and the delay of system administrator must be considered carefully. Issues such as network configuration, off-site backups, and the integration of Web page and order processing are also items that need analysis before establishing an e-business network. Failure to carefully construct a secure e-business network can lead to systems downtime, which stops the cash or transactions flow for an organization. Failure to control externally induced problems (i.e. viruses) can result in damage to data centres and transmission networks. Failure to maintain the integrity of transactions can lead to lost documents and duplications. Changed and incorrectly processed orders can lead to lawsuits. In addition, the failure to develop e-business network that responds quickly to users results in loss of trading partners and damage reputations. Management, while accountable for all previous risk categories, does incur specific risks of its own. For example, failure by management to adopt a systematic e-business-based strategy may provide competitors with a competitive advantage in cost reductions, data collections, or improved customer/supplier relations. On the other hand, if management chooses to adopt an e-business strategic orientation, it must be able to integrate business and marketing plans. Failure to do so increases the risk deterioration in customer relations, supplier relations, and service quality and can lead to dysfunctional policies. Finally, careful analysis of dot com partners is needed. By the end of 2000, several firms, as a result of financial difficulties or mergers, may not be providing services. Many firms have suffered losses for a period of time, and investors may be more wary of providing continuing support.

To offset these before mentioned risks, the e-business strategic and tactical efforts should address employee training along with technical considerations such as encryption, private networks, Internet security systems, and insurance. Employee training, including hiring quality employees, is important, because it is estimated that more than one-half of the frauds involving technology come from within the organization.

The century-old business model in which brand-owning companies put a premium on maintaining internal bases of physical capital – manufacturing sites, distribution centres, telecommunications infrastructure, etc. will crumble and give way to thinly capitalised brand-owning companies operating with external or outsourced networks.

New technology has allowed companies to finally integrate and fully leverage changes that took place in the 1990s, in particular restructuring and business process standardisation, the integration of global capital markets, and a focus on core skills (and a resultant moves towards outsourcing).

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Summary

Author looks at the innovation as an objective category as well as the leading element in the system of the relations of production in innovative economics. It is just innovation that underpins the progress of the creation of both material wealth and moral value. The main purpose

of innovative economics becomes the search of innovation different from already existing forms of activity.

Innovation, especially in the area of technology and information leads to globalisation, based on the use of computers, information technologies, satellite telecommunications, the Internet and similar instruments.

Things mentioned above give rise to a new type of business carried out of electronic instruments – e-business. E-business involves individuals as well as organisations engaging in variety of electronics transactions, using computer and telecommunication network. E-business today has the highest priority. It is considered the shortest way of increasing the competitiveness together with the increasing of the effectiveness of business activity and reducing costs.

In author opinion e-business has already undergone three phases of development, which are described in this research.

The author shows as information spreads farther, faster and reaches more people, it becomes increasingly obvious that "hard copy" has few, if any, advantages over "digital copy" Digital communities are a faster, cheaper, and more efficient way to reach a global audience. In terms for corporate reporting, the new technology will enhance the way companies communicate internally and externally, benefiting all members of the business information supply chain.

The first big step was Hypertext Mark-up Language (HTML), which opened the floodgates for Internet – based information exchange. Today, creating an HTML document is straightforward from almost every software application.

The author takes into account risk assessments, too. Risk assessments should be an integral part of a sound e-business strategy.

As a result e-business has a bigger role with every day. The century-old business model in which brand-owning companies put a premium on maintaining internal bases of physical capital manufacturing sites, distribution centres, telecommunications infrastructure, etc. will crumble and give way to thinly capitalised brand-owning companies operating with external or outsourced networks.

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THE CRITERIA FOR CANDIDATES OF THE EUROPEAN MONETARY UNION

Kļūstot par ES dalībvalsti, Latvijai būs jāiekļaujas Eiropas Monetārajā Savienībā. Raksta mērķis – noskaidrot vai Latvijā kā potenciālajā ES dalībvalstī pastāv eiro ieviešanas priekšnoteikumi. Lai sasniegtu izvirzīto mērķi, autors rakstā izvērtē Latvijas ekonomikas attīstības pamatrādītājus atbilstoši Māstrihtas konverģences kritēriju prasībām un pēta Latvijas Bankas kā Latvijas Centrālās bankas atbilstību ES galvenajām pamatprasībām.

Since the restoration of its independence, Latvia has consistently been moving from a planned-economy to a market economy. In a relatively short period of time, the country has established the foundations of the market economy, and macroeconomic prerequisites for economic growth have been ensured. On February 10, 1999, Latvia became the first of the Baltic States to achieve full membership in the World Trade Organization, and this allowed Latvia to expand its economic relationships with the 135 member countries of that organization. Accession to the EU, meanwhile, remains one of the most important priorities, both in terms of foreign policy and economic development, after the many years that were spent under Soviet occupation. In December 1999, a new phase in the relationship between Latvia and the EU started – the European Council decided to continue with the enlargement of the Union, and Latvia was invited to begin full membership negotiations.

When Latvia joins the EU, it will also be obliged to join the European Monetary Union, and the introduction of the euro in Latvia is both logical and inevitable. If we are to determine whether the conditions are right for this to happen in Latvia, while it remains a potential member state of the EU, we must first evaluate the country's economic development indicators in line with the convergence criteria that were established by the EU at Maastricht. Furthermore, we must establish whether the Bank of Latvia, which is Latvia's central bank, operates in accordance with the EU basic requirements.

Latvia has maintained relatively low levels of government debt when compared to the Maastricht convergence criteria. Table 1 shows that in

1997 government debt represented nearly 12% of GDP, but in 1998 the figure declined to 9.9% of GDP. An increase in the fiscal deficit in the government budget in 1999 logically led to an increase in government debt – a rise of 4 percentage points in 1998 to reach 13.9% of GDP. Yet Table 1 shows that in 2000 government debt declined to 13.3% of GDP. Among member states of the European Monetary Union, only one country has a relatively low level of government debt (Luxemburg); in the other 11 participating countries, overall government debt is at a level ranging from 47% to as much as 115% of GDP.

Table 1

The Maastricht criteria and Latvia, 1997-2000

	1997		1998		1999		2000	
	MC	L	MC	L	MC	L	MC	L
Government debt (% of GDP)	60.0	11.9	60.0	9.9	60.0	13.9	60.0	13.3
Budget deficit (% of GDP)	-3.0	1.2	-3.0	0.1	-3.0	-4.0	-3.0	-2.8
Average annual inflation (%)	2.7	8.4	2.3	4.7	2.07	2.4	3.65	2.6
Long-term interest rate (%)	7.8	8.3*	6.6	12.7*	6.58	11.44*	7.3 ¹	8.8 ^{1**}

** Five-year debt obligations

* Two-year debt obligations

May 2000

Source: *Bank of Latvia*

Latvia's budget in 1999 was based on excessively optimistic assumptions, and during the course of the year there was a need to amend it several times. Table 1 shows that in 1997 and 1998 the budget had a positive balance, while in 1999 a deficit emerged that was equivalent to 4% of GDP. This situation is not acceptable under the Maastricht criteria – a full percentage point exceeds the accepted deficit level. It is commendable, therefore, that in December 1999 Parliament voted not to permit a budget deficit in the 2000 national budget that would exceed 2% of GDP, and in future years to elaborate balanced budgets or ones with a surplus. Yet Table 1 shows that in 2000 a budget deficit was 2.8% of GDP. But such situation already corresponds to the Maastricht criteria.

Latvia has also managed to keep inflation relatively low, although it continues to exceed the level in Europe's developed countries. Table 1 shows that in 1997 the annual inflation rate in Latvia exceeded the relevant Maastricht criterion by a full 5.7 percentage points, in 1998 by 2.4 percentage points, in 1999 – by 0.33 percentage points. But situation in 2000 already corresponds to the Maastricht criteria. It is, of course, a good

thing that inflation is declining, but we must not forget that inflation calculations also include goods and services for which prices fluctuate widely and irregularly. There are several groups of goods and services of this type in Latvia:

- prices are Goods and services in which influenced by administrative decisions rents, utility services, public transportation services, communications services;
- Goods and services with prices that are affected by seasonal factors – potatoes, vegetables, fruit, tourism services;
- Goods and services with respect to which prices are influenced by shifts in excise tax rates, as well as changes in global oil prices.

The share of administratively regulated goods and services in the Latvian consumption basket remains high and has increased by 5.9 percentage points over the last four years – from 19.4% in 1996 until 25.3% in 2000 [7, 3]. Significant fluctuations in these prices, as well as the important role which the goods and services play in the consumption basket – these factors have led to a situation where administratively regulated prices represent 40-50% of overall consumer price increases. Fuel prices in Latvia change largely as the result of shifts in oil prices on the global market, as well as by increases in the excise tax rate. Prices at the pump, therefore, are very volatile in Latvia, and their effect on inflation has differed considerably from year to year – in 1997 and in 1999 fuel prices stoked inflation by 0.19 percentage points and 0.71 percentage points respectively, while in 1998 they helped to reduce inflation by 0.02 percentage points [7, 3].

In addition to these factors, we must also remember that government decisions have led to changes in indirect tax rates. These taxes have been increased mostly in order to increase budget income, but also to harmonize tax rates with EU requirements in the area of indirect taxes. This has an effect on those groups of products in which prices fluctuate not only because of changes in tax rates, but also because of supply and demand on the market.

If we exclude from Latvia's annual inflation indicator price changes in goods and services that are administratively regulated, changes in fuel prices, and the effect of changes in indirect tax rates, we can come up with the core inflation indicator that is calculated and used in the EU member states. For example, in December 1998 overall inflation declined to 2.8%, while in 1999 it increased again to 3.2%. Core inflation, however, continued to decline in

1999, staying at a relatively low level – 1.3% in December 1999, and 1% in March 2000 [7, 3].

From these data, we can conclude that higher inflation in Latvia is preserved mostly because a large share of consumer prices are regulated administratively, and the share of these prices in the consumer basket has increased steadily. This means that objective calculations in seeking to determine the causes of change in inflation rates in Latvia require the application of the core inflation indicator, as is done in the world's developed countries.

The long-term interest rates on government debt obligations in the member states of the European Union cannot at this time be compared objectively with data about the long-term interest rates on government debt obligations in Latvia. In the EU, the obligations are issued for terms of 10 years or longer, while the maximum term for Latvian government obligations has been three years since January 26, 2000, and five years since March 22, 2000. The development of the market for Latvian government securities has been hindered by a number of sudden crises, such as Latvia's banking crisis in 1995 and Russian's financial crisis in 1998. The market still has relatively low liquidity and is easily influenced. In order to avoid a situation in which the refinancing of Latvia's government debt requires a large volume of resources that must be accumulated in a short period of time, there are efforts to transfer government debt to the accounts of future years, refinancing debt obligations with longer-term obligations. The development of Latvia's long-term market for government securities requires a positive impulse. The treasury should change its existing borrowing strategy, reducing the volume of government securities emissions in the short-term on the initial market and, in line with the practice of European Union countries, focus on the emission of longer-term debt obligations, ensuring that in the near future 10-year obligations are issued.

In 1994 the Bank of Latvia attached Latvia's national currency to the SDR basket of currencies, making the lats more stable in relationship to any of the currencies in that basket than would have been possible had the lats been linked to a single currency. Data in Table 2 show that the exchange rate with the American dollar fluctuated consistently in 1999 and in 2000 – this is a process that depends exclusively on fluctuations in the world's currency markets. The exchange rate between the lats and the euro has been distinctly regressive, and in the first quarter of 2000 the rate for the euro was close to that of the US dollars. There are no shifts in the exchange rate between the lats and the SDR basket of currencies, however – Ls 0.7997 is equal to 1

SDR, and that is one of the basic elements of the Bank of Latvia's monetary policy.

Table 2

The average exchange rate of the LVL and USD,
EUR and SDR, by quarter in 1999-2000 [5, 1]

	1999				2000			
	1 st q.	2 nd q.	3 rd q.	4 th q.	1 st q.	2 nd q.	3 rd q.	4 th q.
LVL/USD	0.578	0.593	0.588	0.580	0.591	0.603	0.611	0.621
LVL/EUR	0.651	0.628	0.617	0.603	0.585	0.563	0.554	0.539
LVL/SDR	0.7997	0.7997	0.7997	0.7997	0.7997	0.7997	0.7997	0.7997

The Maastricht Treaty states that one of the most fundamental prerequisites for the introduction of the euro is the independence of the various national central banks. The banks come together to form the European Central Bank System (ECBS), and it is within this system that the laws of the various member states are harmonized, and decisions are taken as to whether countries are in conformity with the requirements of the unified currency zone. There are four indicators that are used to determine whether a national central bank is sufficiently independent:

- functional independence;
- institutional independence;
- financial independence;
- independence of personnel.

The functional independence of the central bank, according to the Maastricht criteria, involves the following requirements:

- the primary goal of monetary policy must absolutely be price stability;
- there is a liberal requirement that in addition to the functions and obligations that are specified by the national central bank and by the ECBS, central banks can also engage in other obligations and functions, but only if these do not create any obstacles against the reaching of goals as set by the ECBS.

All of the national central banks observe the basic rules of functional independence, and they have clearly stated that price stability is the central goal of monetary policy. The Bank of Latvia operates in a way that is in full compliance with the Maastricht Treaty's requirements in the area of functional independence. Article 3 of the law on the Bank of

Latvia specifies that the main goal of the bank is to use monetary policy to regulate the amount of money in circulation so as to maintain price stability in the country. The bank also works to promote competition, the effective awarding and circulation of resources, the stability of the financial system, and the coordination and supervision of that system [4, 29].

The institutional independence of central banks is mandated in Article 107 and Protocol 4 of the Maastricht Treaty. These provisions prevent the European Central Bank (ECB), national central banks and members of their decision-making institutions from demanding or accepting any instructions from governments or other institutions in the relevant member state. EU institutions are banned from trying to influence the decisions that are taken by the ECB and the national banks. Within the framework of the ECBS, the following are considered unacceptable limitations on the institutional independence of national central banks:

- the right of any third party to issue orders;
- the right of any third party to approve, postpone or repeal ECB or national central bank decisions;
- any legal rights to censure decisions;
- the right to participate in the meetings of national central bank decision-making structures with voting rights;
- the right to provide consultations to the national central banks when decisions are prepared.

On May 19, 1992, Parliament adopted the law on the Bank of Latvia, and the requirements of institutional independence for the national central bank were observed only partly Article 25 of the law specified that the finance minister of Latvia could participate in meetings of the Bank of Latvia's council and demand that the implementation of decisions be postponed for up to 10 days. In order to ensure the full institutional independence of the Bank of Latvia so that it could function in accordance with the basic regulations of the ECBS, Parliament on October 29, 1998, amended the law on the Bank of Latvia, specifying that the finance minister could continue to participate in the council meetings, but without any voting rights. This means that the Bank of Latvia is no longer subject to any decisions or orders from the government and its institutions, and it is fully independent in taking and implementing decisions.

The financial independence of a central bank, according to the ECBS, means that it is fully able to cover its own expenditures. If

national central banks have ensured complete functional and institutional independence, then they must also be able to find the financial resources that are needed to do their job properly.

Table 3

**Profit and loss calculations for the Bank of Latvia,
1995-2000 (in thousands of lats) [3, 73]**

	1995	1996	1997	1998	1999	2000
Interest income from foreign operations	21 592	19 322	23 394	25 834	22 138	28 459
Interest income from domestic operations	10 053	4 942	3 558	5 588	6 096	5 496
Interest expense on foreign operations	2 960	2 272	1 529	724	400	439
Interest expense on domestic operations	3 159	2 988	2 750	5 113	4 870	3 754
Net interest income	25 526	19 004	22 673	25 585	22 964	29 762
Specific provisions	7 825	1 142	2 658	3 000	10 748	290
Loss on disposal of investment in associate						2 030
Other operating income	604	611	622	482	3 884	527
Other operating expense	11 872	11 550	12 817	15 332	16 100	16 809
Profit before appropriation	6 433	6 923	7 820	7 735		11 160

In the interest of increasing the financial independence of the Bank of Latvia, Parliament over the last two years has made very significant changes to the law on the central bank. On October 29, 1998, Parliament adopted amendments to Article 36 of the law to specify that in the future the Bank of Latvia would not have the right to make loans to the government or to purchase domestic government debt obligations on the primary market. On November 4, 1999, Parliament amended Article 20 of the law to specify that the profits of the Bank of Latvia would henceforth be put into the central bank's reserve capital instead of being treated as government income. These changes mean that the legal conditions have been created in Latvia for the financial independence of the central bank.

Data from Table 3 make it clear that the Bank of Latvia's income indicators are increasing. In 1999, even though the interest rates paid on the world's securities markets were not very high and income from debt obligations declined, the Bank of Latvia, by investing its external reserves in highly liquid

financial instruments, earned interest income of 22.138 million lats. Initially, by engaging in transactions on the domestic currency market and in the secondary market for government securities, the Bank of Latvia earned income of 6.096 million lats. Interest expenditures in 1999 amounted to 5.270 million lats – interest paid on government demand deposits and term deposits. Net interest income in 1999, therefore, amounted to 22.964 million lats. The analysis of the data in Table 3 shows that in 1999 the Bank of Latvia covered its expenditures with its income. If specific provisions had not been increased by 358.3% and had instead been kept at 1998 levels, the Bank of Latvia would in 1999 have earned profits of 7.748 million lats. In 2000 profits before appropriation of the Bank of Latvia was 11.160 million lats. In May 2000, the Bank of Latvia's 100 per cent owned subsidiary institution Bank of Latvia, Ltd. – *Komerčbankas rehabilitācijas aģentūra* disposed of its 6.6% investment in the shares of the JSC *Pirmā Latvijas Komerčbanka* that carried 37% of total voting rights. As a result of the disposal of the above investment, in 2000 the Bank of Latvia incurred a loss of 2030 thousand lats, which is included in the profit and loss statement caption "Loss from disposal of investment in associate"

The independence of the central bank's personnel is based on the following minimal ECB requirements:

- the term in office of members of the bank's council cannot be less than five years;
- council members can be dismissed only if they prove unable to fulfil their duties or if they are convicted of a crime by the courts;
- similar requirements must also be applied to other decision-making structures at national central banks;
- members of these decision-making structures must not be allowed to have any conflicts of interest.

The independence of personnel is a matter that is open to very broad interpretation. Here we must take into account not only the requirements of the ECB, but also the practice that has been established by the national central bank. In order to increase the loyalty of employees and to reduce the change of unauthorized information disclosure, many national central banks apply principles aimed at strengthening personal independence not only to members of decision-making bodies, but also to other bank employees. Staff, for example, may be prohibited from taking additional jobs at other institutions or from taking loans from banks. The latter requirement can be viewed as a human rights limitation, so Latvia's

national bank has the practice of issuing credits to its own employees [1, 2].

The Bank of Latvia, like several other European central banks, does not allow the president of the bank or members of the council and board to hold second jobs. The directors of the bank's various structural units, however, may hold second jobs if the president of the bank allows them to do so. Board members and the directors of structural units may not, however, participate in any kind of entrepreneurial activity, directly or indirectly. The independence of the personnel of Latvia's central bank is not entirely clear at this time. When Latvia began its integration into the European Union, the 1992 law on the central bank was reviewed, and on June 18, 1997, Parliament approved amendments that put into the law the afore-mentioned minimal requirements of the European Central Bank with respect to the independence of central bank personnel. Article 22 of the law was supplemented with a fourth section which specified the concrete instances in which Parliament can dismiss the president, vice president and council members from their posts before their term in office has expired. This can happen if the respective person has asked to be relieved of his or her duties; if a court ruling has taken force in the context of which the president, vice president or council member of the bank has been convicted of a wilful crime; or if the president, vice president or council member is unable to carry out his or her duties for at least six months in a row due to illness or other problems [4, 30].

Although Latvian law has been adjusted to deal with the issue of the independence of the Bank of Latvia's personnel, the fact is that there is still a possibility that members of the central bank's decision-making structures may encounter conflicts of interest. An element in the central bank's umbrella law that has not been updated since the law was adopted in 1992 is Article 32, which prohibits board members and structural unit directors of the Bank of Latvia to participate in any kind of business activity, whether directly or indirectly. The concept "business activity" can be interpreted widely, and Latvian law does not contain a completely clear definition of what involvement in a business activity would mean for the bank employees. Currently Bank of Latvia staff can buy shares in credit institutions and participate in the privatisation process, for example. The following changes are going to be necessary in the law on the Bank of Latvia in order to avoid conflicts of interest and to increase the independence of the bank's staff:

- article 31 will have to be amended so as to prohibit the directors of the bank's structural unit from holding any other jobs, except for educational or research work, even with the bank president's authorization;
- article 32 will have to be updated with a separate section that discusses specific types of entrepreneurial activities and behaviour that cannot be allowed for members of the Bank of Latvia's decision-making structures.

In 1999 and in 2000 the Bank of Latvia continues to implement regulations concerning bank operations in line with the requirements of the relevant EU directives, as well as the principles of the Basel Bank Supervision Committee which are set up to monitor effective banking operations.

First of all, consolidated supervision of banks in Latvia was introduced on January 1, 1999, and the Bank of Latvia has elaborated regulations concerning this process. The regulations specified the procedure for preparing financial reports and other information that is needed for the consolidated supervision of banks, the range of enterprises that is to be included in the consolidated financial reports, and the procedure for calculating the indicators that are used to ascertain that regulations are being observed. Furthermore, credit institutions that prepare their annual reports must take into account instructions from the council of the Bank of Latvia on these consolidated annual reports. A consolidated annual report must provide information to investors and other interested parties about the financial status and operational results of the group that consists of the bank and its subsidiaries, seeing these as a unified economic entity.

Secondly, the council of the Bank of Latvia has approved amendments to the procedure whereby the indicators that describe the operations of credit institutions are calculated. The definition of A-zone countries has been changed in accordance with the world's economic trends, the procedure for calculating the open positions of foreign currencies since the introduction of the euro has been established, and changes that relate to amendments to the Latvian law on credit institutions have been introduced.

Thirdly, on May 1, 1999, new regulations concerning the issuance of Bank of Latvia permits that regulate the operations of credit institutions took effect. These replaced previous instructions which the council of the

Bank of Latvia had issued on March 15, 1996, on changes in the statutes, shareholders, equity capital, directors, chief accountants, legal addresses and names of credit institutions, as well as the merger or split-up of credit institutions. In the new regulations the central bank updated and supplemented the requirements, listing those documents that have to be submitted in relation to identifying the shareholders of credit institutions, the financial status of these shareholders, and the substantial participation of shareholders in other enterprises or companies. Of particular interest to the central bank is the question of whether such companies or enterprises don't include credit institutions, financial institutions or financial management firms. Moreover, the regulations were updated with the requirement that when a credit institution begins to offer a new financial service, it must inform the Bank of Latvia of this fact no later than 30 days in advance, submitting at the same time documents which describe the relevant risk management policies and procedures.

Fourthly, the council of the Bank of Latvia, in continuing the approximation of its regulatory documents with the relevant EU directives, approved amendments to the instructions on the annual reports of credit institutions. The changes apply to the additional information that is to be included in annexes to annual reports with respect to the average number of employees at the credit institution, to the remuneration which council and board members receive, to the advances, loans, guarantees and other transactions which are issued to or which involve council and board members, and to the information which is included in sub-items on the balance sheet with reference to subordinated demands and obligations vis-à-vis linked or related enterprises.

Fifthly, the council of the central bank approved regulations concerning the preparation of reports on state risk, so that the Bank of Latvia, as the institution which supervises credit institutions, might regularly have access to information which allows it to evaluate the state's risks with reference to the operations of credit institutions. The new regulations provide that the Bank of Latvia is to receive regular information about the concentration of bank assets and obligations that are off the balance sheet in specific countries, the term structure of these assets and the various factors which affect the state's risks. One of the basic principles which the Basel Bank Supervision Committee has elaborated in terms of effective bank supervision - principles which the Bank of Latvia has undertaken to implement in full - is that the institution which supervises banks in a country must be fully convinced that banks

manage the state's risks adequately when it comes to international crediting and investment transactions.

Sixthly, the Bank of Latvia, in line with qualitative changes in the crediting practice and credit risk management of Latvia's banks, introduced regulations concerning the evaluation of assets and off-account obligations. These regulations took effect on January 1, 2000, and replaced previous regulations that dated back to January 1996. The Bank of Latvia elaborated the regulations on the basis of recommendations from the Basel committee with reference to loan registration and revelation of credit risks. The regulations set out guidelines for evaluating the quality of assets and off-account obligations, their classification in accordance with specified credit risk levels, and the reflection of quality changes in financial reports.

Finally, the council of the Bank of Latvia approved regulations concerning the calculation of capital adequacy. These regulations, which took effect on July 1, 2000, order credit institutions to calculate capital adequacy on the basis of the credit risk involving the assets and off-account obligations of the relevant institution, as well as currency risks. After January 1, 2001, calculations of capital adequacy will be supplemented with market risk capital requirements with respect to the trade portfolios of credit institutions. The implementation of these regulations has served to ensure that all of the basic principles on effective bank supervision that have been issued by the Basel Bank Supervision Commission are being observed in Latvia.

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Summary

The euro introduction political and economical preconditions quintessence suggests thesis, that European Union market can not be considered as a full value, common and being in function till the moment, when it will be based on different and some separate states' monetary systems. The main problem today the European Union requires candidate countries to have functioning market economies that can survive competition in the Union. When Latvia joins the European Union, it will also be obliged to join the European Monetary Union, and the introduction of the euro in Latvia is both logical and inevitable.

On the basis of the above mentioned we can conclude that the introduction of the euro in Latvia involves a number of objective prerequisites.

First of all, the political conditions are in place for the introduction of the euro:

- integration with the European Union is a key foreign policy priority for Latvia after many years of Soviet occupation;*
- Latvia has been an associated country of the European Union already and has launched full membership negotiations;*
- Latvia is a member state of the World Trade Organization;*
- Latvia's Company Register is the first Eastern European register to be admitted to the European Business Register.*

Secondly, Latvia has also put in place the economic prerequisites for the introduction of the euro:

- the national currency is stable, and a fixed exchange rate has been set;*
- the country has relatively low fiscal deficit and government debt indicators;*
- the Bank of Latvia is independent and pursues strict monetary policies;*
- the basic requirements which the central bank applies to commercial banks are in conformity with European Union requirements;*
- free capital flow without any limitations is guaranteed in Latvia;*
- finance and banking service market has been made free.*

The management of the Bank of Latvia should realize in connection with unsolved problems of stability a single European currency on an international exchange market, the refusal from binding the Latvian national currency to a basket SDR is inexpedient up to the moment of the introduction of Latvia in the European Union.

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"The choice of a common stock is a single act, its ownership is a continuing process. Certainly there is just as much reason to exercise care and judgment in being a shareholder as in becoming one." *Benjamin Graham and David Dodd*

PENSION FUNDS AND CORPORATE GOVERNANCE: EXPERIENCE OF DEVELOPED ECONOMIES

Процесс глобализации мировой экономики выявляет нужду участия финансовых институций в корпорационном управлении. Доля инвестиций пенсионных фондов в рынок капитала возрастает, такой рост стал главным условием для создания универсальных правил, помогающих эффективно управлять инвестиционным портфелем. Пенсионные фонды как контролирующие акционеры являются более гибкими чем банки, ввиду того, что банки фокусируются на безопасном возврате ссуд, вместо того, чтобы повышать возврат капитала в контролируемых компаниях, позволяя им инвестировать в новые проекты повышенного риска.

Усилия улучшить корпорационное управление в Литве могут быть успешными только в том случае, если они будут воплощаться в рамках понятной и хорошо защищенной законами инфраструктуре финансовых институций. Пока будет создаваться законодательство поддерживающее хорошее корпорационное управление, особенно важно создать эффективные институции гарантирующие соблюдение законов. Улучшение корпорационного управления в стране может произойти в нескольких этапах начиная с детальных контрактов между собственником капитала и менеджментом в ближайшем будущем и заканчивая сильными пенсионными фондами с правилами и процедурами для компаний, помогающими улучшить климат корпорационного управления в длительном времени. Создание пенсионных фондов и разрешение им управлять значительной долей акционерного капитала компании становится важным фактором.

We observe an increasing understanding of the importance of corporate governance within the context of rapidly developing world economy. The problems of corporate governance are overcome in various ways – ranging from high concentration of ownership to strict legal regulation. Financial institutions such as pension funds are key players in corporate governance issues in developed economies. This article surveys the role of pension funds in corporate governance practice.

Introduction

Corporate governance is getting increasingly discussed around the world. It deals with the ways in which investors to corporations assure themselves of getting return on their investment. In developed economies the largest investors to equity are such financial institutions as investment, pension funds and insurance companies. These organizations have accumulated large pools of capital, which are invested into different types of assets. Large investments made by pension funds into equity of companies increase their influence. It allows improve general corporate governance atmosphere within the economies they are into. Considering plentiful examples of redistribution of wealth made by those who had control of companies in transition economies and especially at the beginning of transition from plan to market, we can claim that getting return on investment usually is problematic in those countries. Investment to a company in transition economy usually means aiming to get control over it. Lithuania is not an exception. The degree of ownership concentration in Lithuanian companies varies from company to company – hence it is very concentrated. Foreign investors having good reputations such as Carlsberg and Kraft Foods are aiming at complete ownership concentration in own hands. They report regular dividend payments and investments. In some companies ownership concentration is just under 50%, but still evidence shows that control over the companies is being exercised. Such companies usually do not pay dividends and are much less profitable than their competitors that have different ownership structure. Thus, in order to corporate governance problems it is needed a strong unifying force, which is protecting interests of all shareholders. Pension funds could be such a force.

I Overview of corporate governance models

Corporate governance problems today are overcome in various ways. There exist three basic corporate governance models – German-Japanese bank dominated, British-American model of widely held corporations, and Italian family dominated corporate governance model:

1. **German-Japanese corporate governance model.** In the case of German-Japanese bank domination, financial institutions such as banks are exercising their control rights through large shareholdings in companies. Just by owning significant stakes in companies, banks are able to influence board's decisions.
2. **British-American corporate governance model.** In the case of the British-American model, corporate governance is exercised through strong courts and credible legislation. Well-developed capital markets make managers care about share prices, because frequently they are given stock options. If the stock price rises above the exercise price of the option, then the manager can realize large financial gains. Stock options are also an alternative form of compensation. Thus, managers are made to care about share prices through the way in which executive compensation is structured. The concept of fiduciary responsibility is well defined and has a long history of interpretation by the courts. Thus, shareholders can sue boards of directors, and the threat is credible. Some of the worst excesses are probably limited in this way, but that still leaves large areas that remain open to management "discretion"
3. **Italian corporate governance model.** Italian family dominated model means weak courts and legal protection of the rights of shareholders. Corporate governance problems are overcome just in one way – ownership concentration in family hands. In that case investment to equity is close to zero, stock exchange is not functioning well, and low share prices in the market reflect the high value of control.

Everything noted above reflects one central fact – in order to deal with corporate governance problems you have to be a large stakeholder, or the legislation protecting the rights of minority shareholders must be highly developed. Even in the United States there are lots of corporate governance problems despite the presence of strong courts and the clearly defined fiduciary duty of corporate boards. For example, transfer pricing case of Victor Posner, who received in 1985 over 8 million US dollars in salary

from DWG, a public company controlled by him, at the time the company was losing money.

II Corporate governance status in Lithuania as a transition economy

In transition economies, just writing laws aimed at the legal protection of minorities is not enough, as the intent of such laws is generally circumvented with ease. Lithuanian case confirms that only laws can not efficiently protect minority interests. Complete failure of so called "official proposal" (referring to article 10 of the Law on securities public circulation, which says that if person acting individually or together with other persons has acquired more than 50 percent of votes in the general meeting of an issuer of securities for public circulation, he shall submit an official proposal to purchase the remaining part of securities conferring a voting right as well as securities confirming the right to acquire securities bearing voting rights of the issuer for the price of the proposal which may not be lower than the average price of securities which were purchased by the person submitting the proposal during 12 months before exceeding the 50 percent limit) shows how easily the laws can be avoided, because usually "official proposals" are made at very low prices due to some friendly hand transactions used to draw the prices down. One of the specific examples could be Lithuanian stock company "Ragutis". The controlling stake of company's shares was acquired for 22 litas per share. "Official proposal" was made at 5 litas per share. Lithuanian stock exchange is also not viable and does not provide enough liquidity for the stocks in order to reflect proper stock prices. The use of block trades is unrestricted for all practical purposes, the manipulation of stock prices is almost effortless. In such situation shares of minority shareholders become worthless, because of their weak protection.

Being a large shareholder means having power. In context of transition economy the ownership concentration in one hands means gaining access to control. In cases when foreign investors are acquiring companies in transition economies there is a risk that even by being large shareholder, but without having strong control. The managers of the company could capture the system in place the real control. So having large stake of the company not always helps to completely manage the company.

Which model could Lithuania choose on its way to a better corporate governance system? An analysis of current situation shows that ownership concentration in Lithuanian companies is extreme (see Didžiulis, Kairys and Sabunas, 2001), which indicates that corporate

governance problems are overcome by concentrating votes in hands of one owner. Situation is similar to the one in Italy. Nobody wants to be a minority shareholder. Stocks are not liquid.

The analysis of ownership concentration in Lithuanian companies was made based on data of 100 largest Lithuanian stock companies, by sales, as reported by the Lithuanian Central Depository for 1997. Definition of ownership concentration is as follows:

A1 – percentage of company owned by largest shareholder;

A4 – percentage of company owned by the four largest shareholders (if disclosed for crossing the 5% ownership threshold).

Although starting point was a full sample of 100 companies, data is available for only a subset, due to missing data, reports not filed, etc. As a result, 28 firms are excluded because of incomplete information, thereby reducing sample to only 72 firms.

The results of an analysis reflect very high ownership concentration in Lithuanian companies. Average A1 is 45.9% and average A4 is 59.9% for sample of all 72 firms. This is indication of very high ownership concentration in Lithuanian companies (Table 1).

Table 1

Ownership concentration in A1 and A4 categories

	All firms	Majority state	Majority private
A1	44.9%	84.1%	33.7%
A4	59.4%	85.9%	51.8%

The analysis performed on base of the largest Lithuanian companies also pointed out that strategic investors require obtaining control before putting in their funds. Basically by obtaining control strategic investors secure their positions on one hand, but on the other hand such situation may potentially cause using of different techniques such as transfer pricing, consulting fees and so on in order to cheat minority shareholders by not declaring profits. In general the pattern of ownership concentration in Lithuania and behaviour of controlling shareholders should not be different from the rest of Eastern Europe. The conclusion we can draw is that corporate governance problems in Lithuania are overcome by high ownership concentration.

Do we want such situation? If not how could we improve it? Who is big enough to be respected as a shareholder and acts in favour of minorities? Let's take a look at how corporate governance issues are being addressed in

developed economies. Corporate governance issues are resolved in various ways ranging from strong courts and legal protection of shareholders to ownership concentration in hands of large shareholders including financial institutions and families. Only large shareholders may have significant influence on partial resolution of corporate governance problems. Thus, in order to become a large shareholder pools of capital are needed in order to finance acquisition of substantial proportion of shares.

III Pension funds – catalyst of better corporate governance

Looking at developed economies largest pools of capital are in disposition of such financial institutions as investment funds, pension funds and insurance companies. These institutions are investing accumulated capital in the equity shares of companies, which means they are largest suppliers of capital to the market. Small investors frequently invest through mutual funds, thus institutional investors are again in a stronger position to assert shareholders rights (or follow the lead of pension funds, such as California Public Employee's Retirement System CalPERS). Amongst the most active institutions in the world in corporate governance issues is California Public Employees' Retirement System (CalPERS). This pension fund is largest single institutional investor in the in United States of America and the most active one in solving corporate governance issues. Assets managed by fund were 170 billion US dollars in 2000 compared to GDP of United States of America of 7.500 billion US dollars and GDP of Lithuanian Republic of 11.2 billion US dollars in 2000. Total capitalization of Lithuanian securities in 1998 was 3.4 billion US dollars. This is an indication of how huge CalPERS is. Does something of such a magnitude exist in Lithuania? – of course not. Is someone in developed economies who is big enough in order to solve corporate governance issues, who is protecting minority shareholder rights instead of protecting his own rights? – CalPERS is one of not many institutions which is recently establishing corporate governance standards in the world. So the pension fund is big enough to have sufficient shareholdings in different types of companies in order to be respected within the economy. It is building up the reputation of an institution, which is protecting minority interests. Such a reputation will lead smaller shareholders to vote the way it is done by CalPERS. At the end of the day under pressure of CalPERS policies the managers realize that they have to respect not only majority, but also minority interests. Above said implies once we deal with diffused ownership companies.

CalPERS have created 6 global principles as a base for free and fair markets throughout the world. Moreover, the Principles reflect the core of what CalPERS believes the corporate/shareholder relationship should be. Specifically, the 6 Global Principles are:

1. Directors should be accountable to shareholders, and management accountable to directors. To ensure this accountability, directors must be accessible to shareholder inquiry concerning their key decisions affecting the company's strategic direction.
2. Information about companies must be readily transparent to permit accurate market comparisons; this includes the notion of some globally accepted minimum accounting standard.
3. Investors – even minority and foreign investors – must be treated equitably and upon the principle of one share/one vote.
4. Proxy materials should be written in a manner designed to provide shareholders with the information necessary to make informed voting decisions. Similarly, proxy materials should be distributed in a manner designed to encourage shareholder participation. All shareholder votes, whether cast in person or by proxy, should be formally counted; vote outcomes should be formally announced.
5. Each market should adopt its own Code of Best Practices; and, where such a code is adopted (as in the UK), companies should disclose to their shareholders whether they comply with it.
6. CalPERS believes that corporate directors and management should have a long-term strategic vision which at its core emphasizes sustained shareholder value. In turn, despite differing investment strategies and tactics, shareholders should encourage corporate management to resist short-term behavior by supporting and rewarding long-term superior returns.

CalPERS provides an example of how a large institutional shareholder has chosen to take the lead in working to improve corporate governance for the benefit of all shareholders. Because of its huge size, CalPERS immediately commands attention. Other institutions, if they choose to follow CalPERS lead and to vote their shares accordingly at the annual meetings of companies, provides for a means to challenge the entrenched interests of incumbent managers.

Looking at Lithuanian companies we see huge concentration of ownership already. The need for new capital may arise as an economy

develops. In that case pension funds could become suppliers of capital the same time introducing some corporate governance rules.

What needs to be done in Lithuania in order to improve corporate governance issues?

First, sufficient pools of capital should be accumulated in order to allow acquisition of control. For example, few decades ago Chile has made its pension reform switching from pay-as-you-go to compulsory funded pension system. Introducing of “defined contribution” pension system helped to accumulate large pools of capital in Chile. Those pools of capital under governmental regulation must be invested mainly within the country. Such regulations increased viability of Chilean stock exchange and also helped to supply cheap capital to companies. After Chilean pension reform was introduced the economy started to grow. Chilean experience could also be adopted in Lithuania, because reform of Lithuanian pension system is needed very badly. Introduction of pension funds in Poland also had positive impact to turnover in Warsaw’s stock exchange by supplying cheaper capital. According to P. S. Green from New York Times: *“the only market vibrant enough to exist independently in a shakeout is Warsaw’s because Poland’s mandatory private pension funds have become major investors in local stocks.”*

Second, accumulated pools of capital should stay within the country as it was in Chilean case. It was decided by government and regulated by the law. The pools of capital could be used not only to supply cheap capital, but also to protect shareholders rights by introducing strong supervising institutions, which are governing companies in interest of all shareholders.

Third, in order to protect shareholders rights strong courts and sets of rules, which could be applicable widely is needed. CalPERS is constructing such rules and procedures. Global principles proposed by CalPERS could be used as a starting point in Lithuania too.

Complete set of processes improving corporate governance is possible to implement just in long run.

Conclusions

As a short-term solution of discussed corporate governance problems could be detailed contracts made between supplier of the capital and the management of the company. Contract should describe in detail the freedom

of management actions without need to inform the capital supplier about those actions. Such contracts are already used in Estonia.

The second stage of corporate governance development would take longer period of time and would require accumulated pools of capital. As an illustration we could use introduction of funded pension system in Chile. Chilean pension funds are major suppliers of capital to companies and same time big enough investors capable of making an influence to corporate governance issues.

The third stage requires well functioning pension funds. Large funds such as CalPERS are able and willing to create and introduce rules and procedures dealing with corporate governance issues. The companies, which are willing to get capital from pension funds, will need to keep along the requirements of above-mentioned rules and procedures. The companies, which ignore requirements will not get new capital and will loose in competition battle. This is really long term perspective from Lithuanian point of view. It could take few decades till strong pension funds able to make positive influence to corporate governance are established in Lithuanian Republic.

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Summary

The world economy globalisation process exposes the need of institutional participation in corporate governance. Investment share to capital

market made by pension funds is increasing, such increase causes the need of creation of universal set of rules helping to efficiently manage investment portfolio. Pension funds are more flexible as controlling shareholders compared to banks, because banks are focused to secure repayment of loans instead of increasing return on capital in controlled companies by allowing for companies to invest to new projects with higher risk.

Efforts to improve corporate governance in Lithuania could be successful just in case if they are implemented within comprehensible and well protected by the laws institutional infrastructure. While creating legislation supporting good corporate governance extremely important is to establish efficient institutions securing observance of the laws. Improving of corporate governance in the country may take few stages – beginning from detail contracts between owner of the capital and the management in short time and ending up by strong pension funds with sets of rules and procedures for the companies helping to improve corporate governance climate in long term. Creation of pension funds and allowing them to manage substantial portion of company's share-capital becomes an important factor.

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LEGALIZATION OF ILLEGALLY ACQUIRED MEANS

Pēdējo desmit gadu laikā ir novērotas diskusijas pasaules līmenī par to, cik lielā mērā būtu sabiedriskām institūcijām jāinteresējas un pat jākontrolē finansiālo institūciju un banku sadarbība ar to klientiem.

Raksta autore iztīrā problēmas, kas saistītas ar nelikumīgo ienākumu legalizāciju caur finansiālām institūcijām un bankām. Šādu ienākumu legalizācija vienmēr ir konfliktā ar jebkuras valsts likumiem.

Latvijai kā nākamajai Eiropas Savienības dalībvalstij arī ar šo problēmu ir jācinās, jāattīsta un jāpilnveido finansiālā sistēma, lai nepieļautu nelikumīgo ienākumu legalizēšanu valstī.

After the society developed general behaviour norms and the state strengthened its role in economics, a number of income generating activities were deemed to be illicit. While the regulating functions of the state were increasing, it started requiring a declaration of income sources. As a result of this, at the beginning of the 20-th century there evolved a process of legalization of illicit income which attracted a wider public attention during 1980-s and is popularly known as “money laundering”

1988 UN Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances (Vienna Convention) stipulates that money laundering is:

- The conversion or transfer of property, knowing that such property is derived from any offence or offences for the purpose of concealing or disguising the illicit origin of the property or of assisting any person who is involved in the commission of such an offence or offences to evade the legal consequences of his actions;
- The concealment or disguise of the true nature, source, location, disposition, movement, rights with respect to, or ownership of property, knowing that such property is derived from an offence or offences or from an act of participation in such an offence or offences;

- The acquisition, possession or use of property, knowing, at the time of receipt, that such property was derived from an offence or offences or from an act of participation in such offence or offences.

There are other variations of the same definition, one of the most appropriate being proposed by the US Senate Foreign Relations Committee, Subcommittee on Narcotics, Terrorism and International Operations, which reads [1, 2]:

Money laundering is a transfer of illicit property into financial assets of allegedly legal origin.

Besides, the above Committee has identified three stages of money laundering:

- placement – physical riddance of cash by a transfer into deposit;
- layering – transferring the money through various accounts in order to disguise its true origin;
- integration – investment of the laundered funds into legally operating businesses.

If money-laundering definitions do not vary much from country to country, the opinions on the sources of laundering do. Initially the money laundering was associated with legalization of property acquired as a result of drug traffic, but gradually the list of those sources has been expanded. If such crimes as trade of radioactive matters, smuggling of weapons and taking of hostages in most countries are legally classified as money laundering sources, then opinions regarding other illicit activities still differ. In the USA practically any illicit activity may be considered to be a source for money laundering. The European legislation however is less stringent and in a number of development countries, if they have any anti-laundering legislation at all, the identified sources of this practice include only drug traffic and some of the most serious crimes.

Lawyers and legislators from various countries still continue discussing whether the so-called “intelligent crimes” – financial fraud and tax evasion – should be ranked among the activities, which function as money laundering sources.

Similarly, different countries have varying opinions on whether the money laundering in itself should be recognized as a criminal offence. Most of the developed countries starting with the USA recognize the

money laundering as a criminal offence, but many development countries either do not have any anti-laundering legal norms at all, or deal with it only in conjunction with another criminal offence, usually the drug traffic.

Summarizing all the above, it can be said that depending on legislation of various countries the sources of money laundering are as follows:

- drug traffic;
- trade in radioactive materials;
- smuggling of weapons;
- terrorism;
- taking of hostages and trade in people;
- prostitution;
- gambling;
- robberies and thefts;
- smuggling;
- illegal trade in securities;
- financial fraud;
- tax evasion a. o.

Banking sector is traditionally still the most widely used venue for the money laundering. Profits of the criminal structures are usually in cash and quite often in small bills. USD one million in 20 dollar bills weights 50 kilos, and the weight in 5 dollar bills is 201 kilos [2 , 4]. Thus both inconvenience and risk of the money being discovered and confiscated by the police or robbed by other criminals encourages a desire to get rid of the cash by converting it into a deposit and transferring to a safe place. For this purpose using a bank is the safest and quickest way how to satisfy those objectives.

Banks are used in all the three stages of money laundering – in placement, layering, as well as in integration.

Recent years saw an increasing tendency in using subsidiaries of foreign banks for the purposes of money laundering. In a number of countries these subsidiaries enjoy the rights to accept deposits that then can be transferred to collection accounts in local banks without revealing the remitter [3, 4].

The money laundering method used at both placement and layering stages includes opening of an account by producing documents that are either fake or belong to another person or acting in the name of another

person. The latter includes services of various agents, such as lawyers, solicitors and accountants, and bogus companies. These accounts are used for depositing or transferring the illicit income.

Due to more stringent legal norms regulating the control over the banking sector, in many countries criminals are having increasing recourse to intermediaries other than those of the banking and financial sectors.

Thus manual currency exchange operations are exceedingly often used for the purposes of money laundering. It is mostly due to the fact that such operations are regulated much less stringently than activity of banks and other financial institutions [3, 5].

Another method involves mediation of lawyers, accountants or other professionals in founding bogus companies or partnerships. These companies are used for various transactions in order to disguise the origin of funds, their owner or beneficiary. Quite widespread is registration of such enterprises in off-shores, which makes it easier to disguise the true owners of the funds.

Casinos and gambling businesses are still targeted as potential money laundering sites. To a large degree it is explained by the fact that they offer a range services that are similar to those provided by banks – currency exchange, loans, fund transfers, besides they are characterised by high cash turnovers.

Money launderers also use services of insurance companies. The usual method here is to obtain an insurance policy, which after a short time is revoked by paying a certain commission. It is also important to note the exceedingly increasing use of the securities market for money laundering purposes, especially at the layering stage. This is largely promoted by the specific peculiarities of this area [3, 8]:

- international operations with broker companies owning subsidiaries in various countries and widely using cross-border money transfers;
- the securities market has a high degree of liquidity which allows for instant buying and selling operations;
- brokers are working under conditions of severe competition and their income directly depends on the volume of transactions they conclude – they are not interested in paying attention to the origin of funds;

- in some countries broker companies are allowed to open securities accounts without revealing the identity of the owner of funds.

Traditional methods of money laundering, such as investments in real estate, jewellery and gold, are still widely used too. Also the use of international trading for the purposes of money laundering is growing – laundered funds are used to purchase goods in one country and then sell them in another country.

Available literature and statistics fail to identify precisely the amounts of money that are annually laundered in the whole world. The very objective of laundering is to avoid the registration of illicit proceeds therefore we can only try to give our best estimates.

While trying to determine the amount of laundered funds, experts usually use data on production and trafficking of narcotics, police operations on drug detention and solving of other crimes, excess of money in banks and other indicators. They all, however, lack in precision and besides it is problematic to determine the weight factor of each particular indicator in the total money laundering volume.

As to the most widespread money laundering typologies, it must be emphasized that the most commonly used recycling methods still pertain to activities of the banking sector. Meanwhile, the recent years saw an increase of the role played in money laundering process by other financial institutions. It also seems that cross-border smuggling of cash and other monetary instruments is experiencing a true renaissance due to a more stringent control over the financial system, as well as due to the fact that in Russia, for instance, as well as in other post-Soviet countries, there is a large cash concentration of USD, which also includes the criminal ranks [3, 4].

North America with its wide market, stable economic situation and high purchasing power of the inhabitants, as well as highly developed financial system, is one of the most significant regions of both gaining and laundering illicit proceeds.

Canadian government believes that 80 % of funds laundered in Canada are of international origin. This is due to the well-developed Canadian financial sector, proximity to the USA and relatively relaxed control over financial institutions. Money laundering takes place at banks and other institutions operating with deposits, at *bureaux de change*, by using bogus companies, transactions with real estate and purchasing of

gold. Most widely used are bank services, since they have their subsidiaries in off-shores. Besides, there still are cases of substantial cash amounts being transported from the USA into Canada, to be deposited in banks and transferred to third countries [4, 12].

South America is one of the world's most prominent production place of drugs, especially cocaine and hashish. Central America and Caribbean Basin serve as an essential drug trafficking avenue. Thus drug production and traffic constitute a vital part of illicit proceeds generated in this region.

Due to the lack of effective countermeasures banks of this region play an import role at the layering stage. This finds reflection in the pivotal position of offshore (especially Caribbean) financial centres in international money laundering proceedings. There is a significant cash movement from North America and Western Europe to this region, which is afterwards either deposited in banks or used for purchasing high value commodities. Illicit funding is being used in construction of luxury hotels or supermarkets without attempting to disguise its origin. Also employed are seemingly legal commercial transactions, operating with surcharged or undervalued invoices for goods and services in order to transport illicitly generated funding [3, 10].

Money laundering situation in Asia is characterised by several factors:

- Economy of Asian countries is heavily oriented towards cash operations and there are no mechanisms to control substantial cash transactions;
- An old historical tradition of these countries is a well developed system of clandestine banks offering a rapid, inexpensive, efficient and anonymous way of cash transportation;
- Only a few Asian countries have adopted anti-money laundering legislation.

The most significant source of illicit proceeds in this region is connected with production and trafficking of drugs. Afghanistan, Pakistan, Laos and Thailand are the biggest producers of opium in the world. Besides, other sources of criminal proceeds financial crimes, smuggling, trade in weapons and corruption.

Japanese yakuza, Chinese triremes, Indian terrorist groups as well as Russian criminal structures all take active part in money laundering processes.

Money laundering techniques most widely used in the Asian region are cross-border cash smuggling, utilization of bogus companies, bearer's securities, money transfers, *bureaux de change*, purchase of luxury commodities and real estate, production of fabricated invoices, use of casinos for money laundering purposes as well as transactions with securities.

In the absence of proper regional anti-money laundering groups, information on laundering in Africa is extremely limited. We do not have conclusive evidence of significant money laundering centres being located on this continent. Most widespread criminal activity there is connected with the Nigerian organized crime, involved in various criminal activities, including rather sophisticated financial fraud. Besides, Northern African courtiers deal with the drug trafficking to the Western Europe [3, 11].

Australia as well as a number of Pacific region countries are also involved in money laundering processes. There are several countries in the Pacific region, which due to the liberal financial legislation and strict laws on bank confidentiality have become significant financial centres, also used for money laundering operations.

Research shows that **Australia** is used for recycling proceeds of both local criminal circuit and international crime groups. It is estimated that each year between 1 and 4.5 billion USD is being laundered in this country. However, in recent years due to the anti-laundering legislation the role of Australia in global money laundering processes is gradually decreasing [5, 3].

On the one hand, the developed financial system and economic stability, as well as relatively stable economy as well as stringent legislation regarding bank confidentiality encourages using of the Western European countries for money laundering operations. On the other hand, the robust system of law enforcement organizations and their exceedingly closer co-operation limits further spread of money laundering.

Money laundering in Central Europe is not high on agenda. It is mostly to do not so much with activities of local crime circuit as with that of the Commonwealth of Independent States (CIS). However, along with stabilization of economy and growing investments in those countries, as well as due to the gaps in legislation and relatively relaxed procedures of establishing companies and banks and their insufficient control, in future this region might become more involved in money laundering processes.

Criminal circuits of former Soviet republics are involved in practically all kinds criminal activity, including drug trafficking, prostitution, trade in people, financial fraud, extortion and car theft. Russian criminals have proven to be highly organized and managed groups with efficient international criminal contacts.

Research shows several money laundering techniques to be more preferred by criminals from the former USSR countries [3, 11]:

- Private individuals open accounts in financial institutions and deposit large sums of cash, which are then transferred to another country. Often it involves services of lawyers or other intermediaries.
- Bogus trade or other companies are being set up in G-24 countries, which open their accounts in financial institutions and receive funds from abroad (incl. off-shores). The alleged payment purposes here most often are export or import of goods to or from the CIS countries.
- Groups from the CIS countries continue providing large-scale investments in real estate, hotel, restaurant and tourism businesses of the Western European countries.

Although large amounts of money continue flowing Westwards from Russia, there are evidence testifying that illicit proceeds generated in the West is then transported back to Russia. For instance, following indents from certain Russian banks, a number of banks in the USA every day transferred to Russia approximately 100 million USD in cash [2, 4]. In view of such huge cash amounts we may conclude that along with legitimate needs this cash flow also satisfied requirements of the criminal circuit.

It should be noted however that in the vast majority of cases even if the Western law enforcement agencies have expressed their grounded suspicions, it has been virtually impossible to prove any connection between the funds of CIS countries and illegal operations.

It is worth pointing out several conditions that might turn the CIS countries into attractive money laundering centres corrupt or corruptible banking system, lack of anti-money laundering legislation, opportunities for funding new banks or purchasing existing ones with relatively low financial investments, lack of financial crime fighting expertise in law enforcement bodies, high degree of corruption in public

institutions, burning shortage of financial funding and unwillingness to co-operate among law-enforcement bodies.

As to the true extent of the legalization of illicit proceeds in **Latvia**, the available information is not sufficient. Without any doubt, recycling of billions of USD in Latvia is unlikely, however the presence of money laundering operations in this country cannot be denied, especially taking into account rather close ties with the CIS countries and relatively developed banking sector.

The most likely money laundering sources in Latvia are as follows [6]:

- Smuggling of strategic materials from Russia;
- Smuggling of foodstuffs to the CIS countries;
- Smuggling of weapons;
- Tax evasion.

There is a number of factors that encourage using Latvia as a convenient venue for legalization of illicitly generated proceeds:

- Lack of anti-money laundering legislation;
- Inadequate control over the banking system;
- Relatively stringent legislation regarding bank confidentiality;
- Devitalised law enforcement institutions;
- Cash-driven economy.

In recent years, however, there have been significant changes affecting both money laundering sources and factors encouraging those processes.

Regarding the smuggling of various commodities as a source of money laundering, one has to conclude that its role must have seriously diminished. This is due to both the levelling of prices between the CIS countries and developed industrial states and the improving work of Latvian Russian border guarding service and customs. Also the tax collection situation in Latvia is gradually improving. However, Latvia still remains an attractive site for the businesses operated in the CIS countries in order to evade taxes in their own countries. At the same time, it needs to be noted that tax evasion is considered to be a money laundering source only in its broadest definition. It may or may not be considered as money laundering.

With the regard to the above factors that encourage money laundering processes, it needs to be observed that after the 1995 banking crisis control

over the banking sector has significantly tightened. Although client information is to be revealed only to some specific institutions designated in the Law on Credit Institutions, banks are supposed to know their clients – they must not open numbered accounts. Although cash still plays an important role in the Latvian economy, its significance is gradually decreasing along with the stabilization of situation in the banking sector after the 1995 crisis. Law enforcement bodies are also gradually building their experience in operating in a country with an open market economy. However, frequent changes in legal acts notably impede the compliance monitoring procedures. Finally, the legislators have finished drafting a Law against legalization of illicit proceeds.

Thus even if there were in place factors encouraging money-laundering operations in Latvia, in recent years they have significantly decreased. At the same time, there is little doubt that attempts to legalize illicitly generated income do exist in Latvia, probably amounting to millions of dollars.

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Summary

During the last decades we have seen a global increase in discussions regarding to what extent public institutions should interfere with the work of financial institutions and their relations with customers. The issue has re-emerged alongside with efforts to curb legalization of illicit income by reinforcing control over banks and other financial institutions. This process is marked with the conflicting interests of law enforcement bodies, financial institutions and customers. In order to respect interests of all the above groups, there is a need for a serious co-operation between lawyers, economists and financial experts. This is the only way to decrease the abundant flow of illicit income, on the one hand, and to protect customer information confidentiality of the financial institutions, on the other hand.

The report provides a review of legalization of illicit income, analysing the methods of this process and its extent both worldwide and in particular regions and countries.

Taking into consideration the development of Latvian financial system and political commitment to comply with the EU legal norms, the report emphasizes that legalization of illicit income is a burning and topical problem for Latvia.

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THE ROLE OF FINANCIAL ANALYSIS IN CREDIT RISK MANAGEMENT

Viens no efektīvākajiem veidiem, kā samazināt finansu institūcijas kredītrisku, ir novērtēt potenciālo kredīta ņēmēju pirms kredīta izsniegšanas, tas nozīmē, noteikt aizņēmēja kredītspēju. Kredītspējas noteikšana nav vienīgais kredītriska samazināšanas paņēmiens, taču tas ir primārais un obligāti veicamais pasākums sekmīgai kredītiestādes vadīšanai. Viena no galvenajām kredītspējas novērtēšanas metodēm ir finansu analīze. Darbā ir izpētīta kredītriska būtība, novērtēta tā nozīme kredītiestāžu sekmīgas darbības organizēšanā, izskatītas kredītspējas noteikšanas metodes, kas pamatojas uz finansu analīzi.

There is business transaction free of risk – from failure to return debts till bad harvest or inability to sell a new product. However, the banking business besides its own risks is also subjected to the risks of its clients, changes in the financial banks as well as consequences of the failures of the state economy. The main causes of the instability of the banks in new economies are general instability of national economy, transactions with linked parties, government action and liberalisation of the financial market. Potential bank customers must be aware that all banks are subjected to the same set of risks and the decisive factor for their successful performance depends on the level of their knowledge and managing these risks.

What do we understand by “a risk”? This concept is as old as the world. Insecurity is synonymous with a risk – it is a lack of ability to tell with total accuracy whether something will happen or not. Although we are surrounded by risks, we still are able to forecast them. If we are not able to control the risks, we do not run them usually. And, although we are capable to admit the risk, which is persistent in our lives, we still try to reduce it to minimal. Similarly we always tend to choose the less risky alternative from two alternatives available.

Differentiation of separate risk categories is a pre-condition for managing the typical bank risks. With this purpose in mind H. Sirenbeek

has developed such dichotomous (mutually contrastive) pairs of notions [5, 99]:

- risks of individual transactions and risks of structure;
- risks of success and liquidity risks;
- process risks and inventory risks;
- risks of opposite parties and market risks.

Issuing of loans is one of the main methods of placement of the bank funds. On issuing a loan the bank assumes the credit risk by issuing the credit (including the risk of non-repayment) as the receiver of the loan might fail to meet his obligations (liabilities) in relation to the creditor: refuse to pay interest and/ or not return the loan due to the creditor. The degree of risk for a loan depends on the personality of the loan receiver, his economic position, overall economic situation and the form of the loan.

The diversity of credit operations determines also the peculiarities and causes of risk appearance [3; 68]:

- dishonesty of the loan receiver;
- decrease in the competitiveness of the company that has received a loan;
- unfavourable economic situation;
- mistakes in assessing the market situation, etc.

The aim of credit risk management is to decrease the consequences of the identified credit risk. That can be achieved by soon identification of the risk potential and purposeful use of the existing favourable situation. As a starting point for risk policy can be both a separate transaction as well as the total of transactions. The object of the risk policy might be both the causes, which raise the risk of non-repayment as well as its consequences. [5, 132]

The aim of the risk policy oriented towards its causes is to decrease the likeliness of non-repayment that means, to act before the risk has come into force. Regarding individual transactions this aim can be achieved by improving the impartial assessment of the paying ability of the potential and existing loan receivers. The aim of the policy is the decreasing of the risk of non-repayment of the issued loans, i.e., to minimise the losses from the having been issued loans [5, 132].

Thus, firstly, before issuing a loan creditworthiness of the borrower is tested. The creditor checks the solvency and creditability of the borrower.

Creditability is the borrower's ability to return the principle loan as well as the set before interest on the loan at full extent and in agreed time. If a company during the loan agreement validity is not able to make instalments according to the initially set schedule, the company's creditability is low and obtaining of a new loan will be complicated. If a company, however, has always met its payment obligations, that still does not prove that the company's creditability is high enough for obtaining a new loan.

The increasing of creditworthiness is significant both on the part of companies and financial institutions. It is advantageous for a company as if needed; it will be able to obtain additional financial resources. The credit institution will be able to issue loans more safely and with a lower rate of interest, which, on its turn, is profitable for the company.

The main aim of assessing the creditability is reduction of the above-mentioned credit risk as credit risk is a significant part of the financial risk. For this purpose every financial institution has to design its risk management conception. This conception must contain several chapters, including by all means credit risk management conception, the main task of which is reduction of the aggregate credit risk of the credit institution.

The assessment of creditability is directed at not issuing a loan to those customers in the cases, when there are doubts that the loan might not be returned [5, 134]. However, assessment of creditability has other aims as well, such as to identify the already issued loans the return of which is under threat, thus increasing the aggregate risk of the issued loans. It is important to notice the worsening of the borrower's financial position in due time and accordingly to use the credit institution's authority and react.

There are two groups of factors, which determine the aggregate credit risk of a credit institution [4, 491]:

- factors, which are determined externally, for example, the economic situation of a country, national failures, etc.
- factors, which depend on the action and cautiousness of the financial institution management.

It means that credit risk depends both on the cycles of economic activity and on the management philosophy or attitude towards risk. Thus the function of credit risk can be written as follows [4, 493]:

$$\text{Credit risk} = f(\text{internal factors}; \text{external factors})$$

Credit risk is a function of internal and external factors, which determines that the company creditability does not depend only on the company itself, but also on the external environment, where it acts and which influences the company's performance and future prospects.

There are no close systems in economy therefore the influence of external factors is included in the credit risk function and consequently also in the assessment of a company's creditability. The theory of risk management provides several ways of reducing credit risk. The most significant of them are as follows [1, 27]:

- diversification:
 - according to the type of borrower;
 - according to the region;
 - according to the maturity;
 - according to branch (industry).
- limited amount of the loan;
- assessment of creditability;
- supervision of loans;
- ensuring long-term business relations;
- establishing loan issuing committees;
- insurance of loans;
- freezing of deposits, etc.

The first and primary task to be done within the crediting process is assessment of the creditability, which is followed by many of the methods of reducing credit risk mentioned above. These are either reduction of consequences and possible losses, or provision against unfavourable consequences. The rules of diversification must be designed before issuing a loan; nevertheless the assessment of the creditability is needed. Diversification determines what kind of a customer is to be analysed for the purposes of an optimal and balanced loan portfolio.

The assessment of creditability is used as the primary measure for reducing the aggregate risk of the financial institution and thus for improving its financial performance or profitability. All other methods of reducing credit risk are secondary, as, for example, credit supervision and assessment, that is monitoring a customer's account turnover, visiting the customer, examination of the information published by mass media as well as implementation of other methods of reducing credit risk after issuing the loan are the measures, the main goal of which is supervision of the borrower over the validity period of the loan agreement in order to

minimise losses if the customer's financial position worsens and the financial institution could immediately take action for recovering the loan.

There are different methods applied for assessing creditability in the operation of the world credit and other financial institutions. Conditionally these methods can be divided into two groups:

- qualitative models;
- quantitative models.

The main characterising feature of the qualitative models is that mainly qualitative analysis is used in the assessment of creditability and this analysis does not use ratios and other indicators. There is no information in figures.

There are several methods of qualitative assessment of creditability. Thus, for example, the US banks use the 5C Law for assessment of the creditability of the potential borrowers. Among the UK Commercial banks the method PARTS is widespread. Another rather common method used abroad for assessing the creditability of a borrower is the CAMPARI system.

In the process of quantitative analysis of the company's financial reports are used as well as ratios calculated both from the past information and the forecast one. Based on that a conclusion is made. The quantitative analysis implies calculating different ratios and using mathematical models.

One of the main methods of assessing creditability is the analysis of financial reports. In this case the financial analysis must be done in the following certain stages. Firstly, there are past data and historical information analysed. Based on this analysis a conclusion is made about the prospects of the company. After analysing the historical information complex assessment of the documentation characterising the future operation of the company must be implemented. The process of the financial analysis mainly uses the information included in the annual statements. The future information is obtained from the planned financial reports, which have been designed according to the data of the business plan budget entries, as well as from the forecast cash flow. If needed, other data and explanations must be required.

Another method of assessing creditability using financial analysis is based on the analysis of the historical information and forecast data, i.e., analysis of the balance sheet, profit and loss account and cash flow both

regarding the past events as well as forecasts from business plans and future financial reports composed based on these plans.

When assessing a company's creditability critical analysis of the borrower's future plans must be prepared grounded by facts, how the company will have envisaged the optimistic alternative in its plans, but the credit institution must take the pessimistic alternative into account as well.

To assess the financial situation of a company, an analyst needs certain tools. For this purpose financial tools are often used, i.e., relation between two financial indicators. With the help of the method of ratios it is possible to implement more detailed analysis of the borrower's economic situation. Therefore bankers all over the world nowadays pay particular attention to the financial ratio analysis.

Ratio analysis is a quantitative model where the assessment of creditability is made with using mathematical calculations, however, the ratio analysis accounts for the qualitative part of the model because calculation of a single ratio does not reduce the risk of a credit institution and it is impossible to make an objective decision based on that calculation.

Ratio calculation must be done based on both – the past information as well as on forecast data, but anyway the ratio analysis can only be used as a supportive method in assessing the creditability of a company. Ratios mainly are relative values and their assessment is possible only by examining their dynamics and comparing with similar companies in the industry. Nevertheless it is impossible to completely exclude the significance of the ratios in the creditability assessment as they may indicate at possible development trends of the borrower.

All ratios used in assessing creditability are divided into four groups:

- ratios of financial independence;
- circulation ratios;
- profitability ratios;
- liquidity ratios.

For the financial stability the company must meet the following requirements:

- the company must have high creditability or the ability to meet its obligations in due time;
- it must have high solvency or it must make all payments in due time;

- the company needs a high profitability, that is, it must ensure sufficient profit to provide for the company expansion;
- it must achieve high liquidity of the balance sheet or it must have sufficient current assets to meet the short-term obligations.

Most financial institutions use the creditability assessment model, that is based on the analysis of financial reports. In this case the form of the financial analysis may differ, but contents basically stays the same. The assessment of creditability may be made both with the help of computerised information systems as well as independently without using information technologies.

Real assessment of creditability is limited by several factors. The main of them are as follows:

- limits to comparing accounting data;
- dishonesty;
- asymmetry of the available information.

In order the risk of the credit institution would be smaller in relation to the completeness of the accounting data, it is necessary to require the financial reports from the company, which have been audited by certified auditors or best of all internationally recognised auditing companies.

The problems in assessing creditability may also arise from the dishonest action of the borrower, which might even be illegal. In this case it poses a particularly serious threat to the credit institution and therefore requires adequate attention. It means that the financial institution must keep in mind that it must not co-operate with dishonest partners, although their business is perspective. Failures can certainly occur also with honest business partners, the credit institution, however, may only co-operate with honest partners, although their business might not be so successful.

The honesty of the potential borrower must be assessed before issuing the loan as after it will already be too late and credit risk will be increased.

To avoid serving dishonest clients, the issuer of the loan must include some of the qualitative methods in the assessment of the creditability, which would analyse the borrower as a person, for example the 5C method, as this method assesses also the borrower's character features.

The borrowers always know more about their real financial situation than the lenders, therefore the lenders face asymmetric information. Disregarding this asymmetry and the incompleteness of the information

to be analysed, the lender must divide all potential borrowers into two categories: the customers, to whom the loan may be issued and those to which the loan must not be issued. After that the first category must be divided according to the level of risk.

As a result of incomplete information a credit institution may issue a loan to borrowers, whose risk is higher and not issue to those whose risk is lower. Thus the credit institution that makes such mistakes repeatedly may face potential bankruptcy.

The asymmetry of the available information is bigger in the case of small and medium companies unlike the big joint-stock companies, the shares and other securities of which quoted in stock exchanges are subjected to certain influence of the regulatory institutions and their operation is more public. The information about these companies is available from different public sources, which must be studied and analysed.

The credit institutions of Latvia basically issue loans to small and medium businesses therefore a problem of particular importance arises. It is also determined by the fact that accounting in many small companies is done by unqualified accountants, who do not follow the basic principles of accounting, not to speak about the international accountancy standards. In such cases the authorities of a credit institution have to approach the financial reports critically and make more use the methods of qualitative analysis. In the case of imprecise financial reports, the calculated ratios affecting creditability will be imprecise as well and consequently the real creditability will not be determined correctly.

The assessment of creditability must be made with highly qualified specialists and the financial institution must not economise resources for the professional training of specialists and employment of qualified specialists as well as setting an adequate remuneration. By not allocating the needed resources, the credit institution will be able to save only in short term because the saving of resources achieved on account of remuneration and training in the long term will be lost as the credit risk of the credit institution will increase.

The remuneration of credit specialists must not be determined proportionately to the rate of interest of the issued loans because that way the employees might be interested to issue more loans with higher interest rates. That, in its turn means, increasing of credit risk and untrue assessment of credit risk because business people, who are well aware of their own creditability and safety of their investment projects will not agree to pay high loan interest and will approach other credit institution,

which will, possibly offer the interest rate corresponding to the degree of safety of the project and the true creditability of the borrower.

In the situation of increasing competition among banks and financial institutions in general, there must not be mistakes in the assessment of the borrower's true creditability as the potential sources of profit are constantly decreasing. Therefore it is necessary to concentrate more on qualitative operation, which is both the guarantee for the stability and development of the credit institution and the gain of all companies as it is possible to obtain higher quality products.

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Summary

All banks are subjected to equal a set of risks and the decisive role is played by the way the banks are managing these risks. Credit risk is the possibility that the borrower can fail to meet his obligations against the creditor. The main methods of reducing credit risk are diversification, setting limits to the maximum size of the loan, assessment of creditability, supervision of loans, provision for long-term business relationships, freezing of deposits and other methods. However, the primary measure is the assessment of creditability that must be implemented before issuing a loan.

All methods of assessing creditability can be divided into qualitative and quantitative models.

Another method of assessing creditability using financial analysis is based on the analysis of the historical information and forecast data, i.e., analysis of the balance sheet, profit and loss account and cash flow both regarding the past events as well as forecasts from business plans and future financial reports composed based on these plans.

When assessing the creditability with the help of the method of financial analysis, we must take into account that the repayment of a loan can be made only in money therefore we must concentrate on the cash flow statement analysis so as the situation can arise when a company has a sufficiently large profit, but it lacks cash for returning the loan as well as paying the interest on it.

The assessment of creditability in practice is limited by several factors, such as:

- *limits to comparability of accounting data;*
- *dishonesty;*
- *asymmetry of the available information.*

The problem of the limited comparability of the accounted data can be avoided by using only audited financial data for analysis best of all presented by internationally recognised auditing companies, as well as by concentrating and requiring companies to prepare their financial reports according to the international accountancy standards. Assessment of a customer's honesty is possible by using some of the qualitative creditability assessment methods, which involves analysis of the borrower's personality and character traits. To avoid the problem of the asymmetry of the available information, to must be collected from the all-possible sources, including the publications in mass media, references from business partners as well as from visits to the company itself and interviews with the employees.

A credit institution or any other financial institution, when creating the office of credit assessment, must not save financial resources for training and remuneration of the specialists, as this will only allow for saving resources in short-term.

In the situation of increasing competition among banks and financial institutions in general, there must not be mistakes in the assessment of the borrower's true creditability as the potential sources of profit are constantly decreasing. Therefore it is necessary to concentrate more on qualitative operation, that is both the guarantee for the stability and development of the credit institution and the gain of all companies, as it is possible to obtain higher quality products.

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CURRENCY EXCHANGE RATE REGIME

Rakstā tiek aplūkoti dažādi valūtas kursa režīmi, faktori, kuri ietekmē valūtas kursu. Autors izvirza priekšlikumu mainīt lata kursa režīmu: atteikties no lata piesaistes SDR un pāriet uz mainīgā kursa režīmu. Priekšlikums nenozīmē, ka Latvijas Bankai jālikvidē ārzemju aktīvi un lata kursam jāļauj brīvi svārstīties. Latvijas Bankai jāturpina lata vērtības uzraudzība ar monetāro instrumentu palīdzību. Tikai tas jādara nevis mehāniski, balstoties uz lata ciešo piesaisti SDR, bet, pamatojoties uz nepieciešamību, veicināt Latvijas ekonomikas attīstību.

The article discusses different currency exchange rate regimes and factors, which influence currency exchange rate. The author recommends change the existing currency exchange rate regime: to give up its peg to SDR and pass over to the floating exchange rate regime. The proposal does not mean that the Bank of Latvia has to abolish the foreign assets and let the currency exchange rate fluctuate freely. The Bank of Latvia has to continue supervision of the lats value with the help of monetary instruments. Only it must be done based on the need to promote the development of Latvian economy rather than mechanically based on the close peg of lats to SDR.

The published research in different literature sources shows that general ideas about the essence of a fixed and floating currency exchange rate and their macroeconomic effect are similar. However, author does not agree on different details, for example, which currency exchange rate and under what macroeconomic conditions is more useful for particular economies. The questions about the choice of the currency exchange rate regime is gaining importance, when small economies are considered and Latvia can be listed among such.

Under existence of the floating currency exchange rate the stability of the currency exchange rate seems rather questionable at the first sight. However, empirical experience shows that instability of the rate under non-fixed currency exchange rate can be observed only in weak and

collapsing economies. A lot of world-famous authors have defended the advantages of a floating exchange rate. M.Freedman (1953) was for a floating exchange rate arguing that speculations around the currency of a changing currency regime will have more stabilising character rather than destabilising. [3, 125] He also considers that thanks to the presence of the speculative capital fluctuations of the currency exchange rate in a long term will be smaller than if there were no speculators in the currency market. It is important to mention that several economists argue for the idea that the behaviour of market participants is rational and it will be adequate to the changes in fundamental factors influencing the currency exchange rate in the country issuing the currency. Respectively, the currency exchange rate cannot fluctuate endlessly as a result of the speculator pressure, except for the cases, when it takes the form of real changes in the currency demand and supply, which represent logical consequences of changes in the national economy (Dornbush and Frankel) [1, 129]. Another argument for introducing a floating exchange rate is the assumption that the currency exchange rate as it is a tool of the monetary policy must be as stable as are the macroeconomic indicators of the country. One more argument listed among the ones for a floating exchange rate is the parity of the currency purchasing power, which should stabilise and regulate the value relations among different currencies in a long term.

The floating currency exchange regime has three main advantages: it promotes balance in the state payment balance sheet; there is no need for currency reserves; and it promotes internal and external economic balance of a country.

The first advantage – smaller discordances in the national trade balance. As a result the internal political pressure to patronise domestic production decreases. The central bank of the country does not intervene in the currency market by currency interventions. For that reason the balance sheet can achieve full balance due to automatic correction of the currency exchange rate according to the currency demand and supply. This advantage leads to *the second* one: the central bank does not have to hold currency reserves in order to intervene in the currency market in case of necessity and to regulate the currency exchange rate according to the political guidelines set in the country.

The third advantage is that no conflict exists between the absolute balance of payments and internal goals of the country. For better understanding of the third advantage, it is worth giving an example:

thanks to adequate corrections of the currency exchange rate a country achieves balance in its balance of payments, when there exists high level of unemployment. To reduce the level of unemployment, the country can start a broad monetary expansion, which will lead to the increase in the money supply and consequently also to the fall in interest rates in the country. Producers will be able to increase the volumes of production (this particularly concerns the exportable goods). The consequences will include increasing both employment and national income. Of course, it must be taken into account that these processes will also cause increasing rate of inflation in the country. When the welfare of population increases and production becomes more expensive (under economic growth, labour costs usually increase rather rapidly), the import into the country grows as well. As a result there is a bigger demand for foreign currency, depreciation of the national currency and as a result – macroeconomic balance is recovered.

However, the main aim to increase employment has been achieved. Moreover, it has happened without experiencing any dramatic changes in the country balance of payments. Typical examples of floating currency exchange rate regime countries are the USA and Japan. The changes in the values of the national currencies of these countries most precisely correspond to the features of ideal market. Depreciation of JPY against the USD and other currencies by more than 15% has been possible thanks to the doubts and concern about the unity, stability and perspectives of further development of Japanese economy.

Under certain macroeconomic conditions of the country the fixed currency exchange rate regime has several advantages over the floating one. As the main one of these, the supporters state that the prices of goods very slowly are becoming adequate to the real currency exchange rate and thus the balance in the national balance of payment is setting in over a very long period of time. The supporters of the fixed currency exchange rate consider that curbing of the fluctuations in the currency exchange rate helps in faster stabilisation of both incomes and prices of goods in the economy [2, 8]. Likewise the currency exchange rate is allowed to fluctuate only together with the fluctuations of the most stable currencies and the country achieves aggregate stability of the national currency.

On a macroeconomic level, it must be admitted that the fixed currency exchange rate regime has a negative feature of making the country hold assets in a foreign currency, which must serve as a collateral for the stability of the national currency. The Bank of Latvia

also has to keep reserves in a foreign currency in order to provide for the stability of lats.

Among other important aspects of the fixed currency exchange rate regime the stability and predictability of the state economic environment, which can promote inflow of international investments into the country and facilitate international trade. The main grounding for this argument is the safe feeling of the international managers, which does not make them concerned about the dependence on investments and fluctuations in the currency exchange rate. The supporters of the fixed currency exchange rate consider that imbalance of the balance of payments created as a result of unbalanced current and capital accounts and covered by loans from IMF or other financial organisations, must be regarded an integral part of the fixed currency exchange rate regime. It must be managed as carefully as any other national macroeconomic position.

The fixed currency exchange rate can significantly change only in some cases:

1. If political decisions are made about the change of the currency parity (devaluation or revaluation).
2. As a result of a big supply in the national currency market and lack of foreign reserve the country is no longer able to carry out the "safeguarding" of the national currency, which is followed by devaluation of the national currency.

The floating currency exchange rate is directly determined by the demand and supply in the market, which theoretically allows for its completely free fluctuations against any other currency. In the floating exchange rate regime the currency supply and demand are determined by all fundamental, technical and psychological factors. However, also under a floating currency exchange rate regime there are real possibilities to influence the market rate of the currency, which is usually assumed by the Central Bank, for example by interventions or changes in the interest rate policy.

However, empirical experience differs from macroeconomic theory. The differences mainly take the form of irrational motivation and action of the market participants, which are not directly rooted in the traditional monetary theories. The most evidently the differences can be observed in the US economy. As we know, the US dollar is a floating currency. At the same time the US possesses a huge deficit in its trade account. According to the date published by FRS as to March 30, 2001, it accounted for 361 billion US dollars. The irrational stability of the US dollar rate in no way

facilitates achieving balance in the US trade account. Under such a trade deficit the positions of the dollar in the global market long since had to have weakened. It must be added that there are several countries, where never the less there is the floating currency exchange rate regime the countries still keep reserves in currency and gold, in order to be able to provide for the trend of the value of the national currency if there is a need for that. The author considers that the above-mentioned action is optimal for small countries with adequate reserves covering the national currency and a rather stable economy.

Still not long ago the opinion has dominated that for small and open economies like Latvia the currency exchange rate is appropriate, which is either fixed or pegged to some other currency or currency basket. Most recent sources, however, underline that small and open economies themselves must consider, which mechanism of setting the currency exchange rate would be more suitable for them as the main task of the currency exchange rate policy depending on the condition of the national economy and its basic guidelines must be stabilisation of the national economy and its further development [2, 3]. The currency exchange rate regime must stabilise both prices and the level of production in the country. Economists also indicate that currency regime does not have to be chosen solely as fixed or floating as there are a range of possibilities how to combine the currency exchange rate regime out of these two extreme policies. Generally a more fixed currency exchange rate regime is desirable if its influence is more monetary, for example, leaps in the currency demand and supply. If the pressure on the currency is defined, for example, by changes in technologies, which allow reduce the costs of production, then the floating exchange rate is considered more acceptable.

The most important fundamental factors influencing the fluctuations of the currency exchange rate are national political factors and the economic factors resulting from them. They are as follows: GNP, inflation, interest rates, unemployment rate and national balance of payments. Each of these fundamental factors consists of a range of macroeconomic indicators, which are important instruments in the disposal of market participants enabling them to forecast the changes in the above-mentioned fundamental factors in the future. The influence of the fundamental factors is either average or long-term. However, unexpected changes in the fundamental factors can result in a destructive influence also in a short term. The short-term influence often takes the form of market shock and should not be considered a serious trend or the

beginning. Usually after the short-term shock the currency either "regains" or "looses" most of the value it has lost or gained as a result of the shock. In the case of the most of fundamental factors the importance of their absolute value, even if they are compared with the respective indicators in other countries, is less than the importance of their predictability and the ability to control changes in them. So, for example, a high level of national budget deficit does not automatically mean that the positions of the national currency will be weak. They will be weak only under the condition if the country does not have a special programme and tools for balancing the budget income and expenditure. Namely the trend analysis of macroeconomic indicators allows us to forecast the economic development of a country and consequently also the supply and demand of this country. It is interesting that market members interpret macroeconomic data differently. Market speculators or short-term players, whose main aim is to acquire profit, are more interested in short-term interpretation of the macroeconomic indicators and the resulting influence of them upon the psychological factors on the currency exchange rate. The importers and exporters are interested in macroeconomic indicators namely in the long-term perspective with the aim to minimise risks connected with the production factors and international trade.

When forecasting the development of the currency exchange rate, the condition of the national balance of payments must be taken into account. Particular attention must be paid to the condition of the current account and changes in comparison with the previous periods. In the situation of a floating exchange rate a negative current account usually indicates to a decrease in the national currency exchange rate. The decrease in the exchange rate will take place gradually – in accordance with the changes in the national trade balance, and will not cause shocking negative effects in the national economy.

In the situation of the fixed currency exchange rate regime as well as high and stable deficit in the current account high risk of the national currency devaluation will be present in the country. It is not always possible to cover the current account deficit with a positive capital account or loans from international financial institutions. Loans create liabilities, which will have to be like in aid of in different times due. Thus if the economic environment in the country worsens and the flow of foreign capital to the country decreases, the situation may arise that also

the capital account of the payment balance becomes negative, which leads to devaluation of the national currency.

The currency exchange rate can be significantly influenced by the central bank. The national currency exchange rate greatly depends on the monetary instruments applied by the central bank. If the country issuing the money has a strong currency it can influence the whole currency market. Thus the currency markets particularly carefully follow the reports of FRS, ECB, Bank of Japan and Bank of England about changes in the monetary instruments applied by them. The decisions of these central banks can directly influence the rates of other currencies in global markets. For example, if the Bank of Japan reduces interest rates, then it is considered that it will promote economic growth not only in Japan, but also in the neighbouring countries. Moreover, market members allow that such a decision may urge other neighbouring countries to reduce their refinancing interest rates. Thus if the Japanese yen "strengthens" its positions there is a possibility that the South Korean won will improve its positions as well.

There are several tools, with the help of which the central bank can achieve its aims – one of them is an interest rate.

One of the main factors determining the formation of the exchange rate between two currencies is the difference between the interest rates in comparable countries (the so-called interest-rate differential). Provided the real interest rates are approximately similar in both countries (that is nominal interest rates minus inflation rate), then it is equally profitable to invest in either of them. However, if any of the central banks increases its interest rates, it becomes more profitable to invest in this currency and it leads to bigger demand for this currency and respectively also to the increase in the exchange rate.

However, increase in demand is short-term and it is mainly connected with the investments of market members in the fixed-income securities. In the long-term interpretation Empirical observations show different rules. Lately the interest rate has been perceived not only as a measure of investment profitability, but also as a stimulus or a hindering factor in relation to the economy, where the changes in refinancing rates are taking place. If the interest rate is being increased then the modern interpretation states that the increased interest rates will hinder the expansion of production, which, in its turn, will lead to the slow-down in economy and facilitate slow-down in the growth of GDP, which will automatically mean weakening of the positions of national currency.

The dynamics of the euro rate is as an example to that. Contrary to the decrease in interest rates expected and forecast by market members, ECB announced that it would keep the interest rates at 4.75, which caused negative reaction from market members. As a result euro fell by almost 2 %. Euro sank from 88 to 89 US cents for one euro that is to the level it has had before the above-mentioned announcement.

There are several possible reasons and forms, why and how the central bank implements currency intervention:

1. Small interventions are carried out to settle short-term currency fluctuations, which could influence desirable long-term trends. Small interventions can also be carried out with simply increasing the aggregate currency demand or supply to strengthen the currency rate trend desirable to the central bank.
2. In order to prevent or decrease the changes in the currency rate created by economic or political shock, the central bank can intervene, if it considers that the reaction of the market members to separate economic or political events has been inadequate and can damage the national economy.
3. To prevent seasonal and cyclical fluctuations in the balance of payments.
4. To achieve a certain aim according to the economic interests of the country.

Provided the central bank wants to increase the rate of the national currency against some other currency, it "floats into the market" (actively sells) its reserves of the foreign currency thus increasing the supply of the currency and decreasing its rate. This intervention results in the appreciation of the national currency. If, on the contrary, the central bank due to certain considerations wants to decrease the national currency exchange rate, it respectively "throws" national currency into the market and assumes active purchasing of foreign currency, thus depreciating the national currency and increasing its foreign currency reserves.

It is not always that importers and exporters can use currency interventions for forecasting the currency exchange rate because in that case they would have to follow all announcements of the central bank and all macroeconomic indicators of the country. One can consider the presence of the central bank interventions in the currency market considerable only in the case if the value of the currency in the country where it is issued in comparison with its average value has appreciated or depreciated significantly and most important – inadequately to the

changes of macroeconomic indicators over a long term. In any case it has been empirically fixed that the presence of interventions in currency markets creates threat to the optimistic forecasts about decrease in interest rates.

There is an interesting situation in the countries with a collapsing economy. Not long before the Russian crisis in August of 1998, when Russia vetoed any payments leaving the country and carried out restructure of its external and internal debt, interest rates in the country reached up to 300% per year. At the same time it was impossible to speak about any kind of appreciation of the Russian rouble. Therefore it is impossible to state that the national currency will appreciate whenever interest rates are increased.

The other regulatory tools at the disposal of the central bank are the currency intervention. Besides real interventions, when central banks spend their reserves into foreign assets, there is also the so-called verbal intervention. It means that the real intervention in currency markets does not take place, but the head of some central bank comes up with conclusions and forecasts about the macroeconomic indicators of the country and the possibilities of their improvement. It allows market participants to forecast that a real intervention will follow in the currency market. Besides during interventions it is often also profitable to the indirect market participants depending on their needs to sell and buy currency.

A vivid example of the likelihood of the mentioned events took place on September 22, 2000, when ECB, FRS and even the Bank of Japan were trying hard to support euro, which was experiencing a heavy fall. It brought only a short-term result. Based on the empirical observations we can state that by the help of intervention the central bank can influence the exchange rate seriously and in the desirable direction only in small economies.

The implemented theoretical and empirical analysis allows us to put forward a significant proposal for the change of the lats exchange rate regime. The key point of the proposal is abolishing the formal peg of lats to SDR. The author considers that any limitation hinders making adequate and effective decisions in the situations, when it is necessary.

The proposal does not necessarily mean that the Bank of Latvia has to abolish its assets of foreign currency and allow free fluctuation of lats. Vice versa, the author considers that the Bank of Latvia has to continue strict supervision of the value of lats as well as control with the help of

monetary instruments. Only it must be done based on the need to promote development of Latvian economy rather than mechanically - based on the close and unarguable peg of lats to SDR. At the same time the important task of the Central Bank to provide for price stability must not be neglected.

The author has several arguments, which prove, why Latvia can abolish the close peg to SDR and pass over to a very strictly controlled and managed floating exchange rate.

First of all, Latvian economy has survived the most difficult part of the transition period characterised by high inflation and fall of GNP and gross national income as well as rapid increase of national debt. The comparatively stable Latvian macroeconomic indicators are given in Table 1. The analysis of these data can hardly be used for attacks to the stability of lats. The statistical data also show that the increase of the nominal income of inhabitants in Latvia exceeds the inflation rates.

Table 1. [7, 25]

	1998	1999	2000	2001 *
GNP (%)	3.9	1.1	6.6	
Inflation (%)	4.7	2.4	2.6	0.9

* First semester

Secondly, one of the most significant features of Latvian balance of payments is the lasting current account deficit. From 1995 till 1999 it has increased 4 times and in 1999 it reached 37.5 mln lats or 10.2% of GNP [6, 34].

Based on simple macroeconomic considerations it is possible to conclude that the lasting current account deficit leads to the capital leaving the country thus creating the need to settle the current account deficit of the balance of payments either with a positive balance in the capital account or by borrowing from IMF and other institutions, or by changing the volume of foreign reserves the country possesses. In any case, the current account deficit, even if it is provided for with the above-mentioned tools, which in fact represent liabilities to be paid off, poses the threat of devaluation, which create negative shock-like effects in the countries with the fixed currency exchange rate regime. Therefore when abolishing the fixed currency exchange rate regime the Bank of Latvia would have much wider possibilities to achieve an adequate value for lats

with moderate and long-term monetary tools. The risk of devaluation is also increased by the negative position in the Latvian state budget.

Thirdly, the foreign assets of the Bank of Latvia have a constant growth tendency. Thus the reserves of convertible currency in the Bank of Latvia have increased by 250.6 mln lats or 51.9% from 1995 till 2000 and at the end of 2000 they accounted for 521.5mln lats. Net foreign assets of the Central bank covered the imports of 3.4 months. The cover of the issued national currency was 95.4% of net foreign assets of the Bank of Latvia (end of 1999 – 99.1%). Only in December 2000 in order to meet the increased demand for foreign currency the Bank of Latvia carried out more significant interventions [5, 17].

It must be underlined that it is taking place in the conditions of urgent lack of capital in Latvia. The country needs finance for investments in the infrastructure and other branches. By abolishing the cover of lats in foreign currency and implementing a strict supervision and control of the value of lats it would certainly be possible to direct a part of the currency reserves into implementation of a wider state investment programme.

Fourthly, Latvia has never received large volumes of the "hot" capital based on which it could be possible to make long-term investments in the capital of enterprises or their fixed assets, long-term financial instruments or real estate. Thus, in the Latvian situation rapid outflow of funds as a result of changes in the exchange rate of lats is virtually impossible. Empirical observations show that short-term foreign capital in the Latvian financial system is not converted into lats.

Fifthly, the Bank of Latvia could promote foreign trade of Latvia with the help of moderate regulation of the currency exchange rate. The close peg of Latvian lats to SDR has facilitated the fact that the Latvian export in the first quarter of 2001 compared to the first quarter of 2000 has increased only by 11% [8] in comparison with Estonian 23.9% [9]. Estonian national currency is pegged to the German mark, and in this case it is simply successful for the Estonian export in the case of changes of the rate of Euro-zone currencies. When the Central Bank of Estonia pegged Estonian national krona to the German mark it certainly could not predict the successful influence of this currency upon the country export in the future. However, the Bank of Latvia has all possibilities to use monetary tools and achieve an adequate value of lats for the promotion of export and curbing of import.

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Summary

Based on theoretical and empirical research the author concludes that the floating currency exchange rate has several important advantages in comparison with the fixed exchange rate. In the floating exchange rate regime the currency supply and demand is determined by fundamental, technical and psychological factors. The most important fundamental factors influencing the currency exchange rate fluctuations are the political factors of the country, gross national product, inflation, interest rates, level of unemployment and the national balance of payments.

The author suggests the Bank of Latvia abolish the peg of lats to SDR and pass over to the floating exchange rate. It would allow decrease the foreign currency reserves of the central bank as well as facilitate balancing the national balance of payments and prevent the threat of lats devaluation as a result of lasting current account deficit and would create beneficial conditions for the economic development in Latvia, particularly for increasing of exports.

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THE TERM STRUCTURE OF INTEREST RATES AND ITS ESTIMATION FROM THE CENTRAL BANK PERSPECTIVE

Pēdējos gados, saskaroties ar monetārās transmisijas procesu, kas ir kļuvis komplicētāks nekā agrāk, centrālās bankas, t.sk. Eiropas Centrālā Banka, lielāku uzmanību pievērš dažādu finansu tirgus mainīgo, pirmām kārtām, finansu aktīvu cenu izpratnei, tādā veidā papildinot informāciju, kas iegūta no monetāriem agregātiem, un izmantojot finansu aktīvu novērtējumu kā ieguldījumu monetārās politikas formulēšanā. Šajā sakarībā interesants un aktuāls kļūst jautājums par vienu no visbiežāk izmantotām metodēm, ko pielieto vairākas centrālās bankas, proti, ienesīguma līknē ievērtētās informācijas izmantošana monetārās politikas īstenošanā. Darbā autors apskata procentu līkņu termiņstruktūras modelēšanas metodes un to piemērotību Latvijas finansu tirgum.

Introduction

For Latvia, the strategy for further development of the economic regulatory framework is largely predetermined by the view of achieving membership in the EU. The necessary precondition for development of this framework is to widen the use of adequate and qualitative economic and mathematical methods of analysis and forecasting. These methods should help to evaluate the dynamics of main economic indicators, as well as impact of different factors on this dynamics. In the future, membership with the European System of Central Banks (ESCB) will result in a profound reorientation of the Bank of Latvia's (BoL) research focus. In evaluating the monetary policy position and formulating its strategy the European Central Bank (ECB) relies, *inter alia*, on a basket of financial indicators. In the first instance membership in the ESCB will commit the BoL – just as the other national central banks – to the regular contribution of, *inter alia*, reliable financial indicators required for the correct judgment of the national economic position. Among financial indicators, the term structure of interest rates assumes a prominent place and provides a valuable source of information for policymakers.

What is a yield curve?

The notion of the yield curve is closely linked to the notion 'term structure of interest rates'. This term structure reflects relations between interest rates of different terms. The yield curve is a graphical depiction of the interest rates dependence on their term. It is important to note that interest rates placed on the yield curve should have the same degree of risk and liquidity, as well as the same tax conditions.

In order to construct a yield curve, market yields of certain securities (typically bonds and bills) with different maturities are usually used, although yield curves may be constructed from certain interest rate derivative (e.g. swaps) prices as well. These securities have to fall in the same risk category (at least in terms of default risk). In practice government securities are generally used in the estimation of the term structure of interest rates, since they have the lowest risk and the biggest number of instruments in a wide maturity range, traded on a fairly liquid market.

By definition, the yield-to-maturity (YTM) of the bond maturing in m periods is a solution of the following equation:

$$P = \sum_{j=1}^m \frac{CF_j}{\left(1 + \frac{y(m)}{Fq}\right)^{\frac{n_j \times Fq}{360}}}$$

where P is price of the bond;

CF_j is a cash-flow at the end of period j ;

Fq is a number of coupon payments per year;

n_j is a number of days from the settlement date to the next coupon date at the end of period j ;

$y(m)$ is yield-to-maturity of the bond maturing in m periods.

In fact, $y(m)$ corresponds to the internal rate of return of the bond. However, it rarely equals the realised return since it assumes that all future coupon payments can on average be reinvested at the $y(m)$. Another weakness of the YTM-curve stems from the so-called coupon effect, which is the fact that a bond with a higher coupon will have a higher yield-to-maturity than a bond with the same maturity but a lower coupon. None of

these problems emerge in the case of a spot (or zero-coupon) curve. A spot interest rate is the rate at which an individual cash flow (either a coupon or a redemption payment) is discounted.

Provided spot rates for payments at all dates in the future are known, then the price of a bond maturing in m periods can be equated to the present value of future cash flows:

$$P = \sum_{j=1}^m \frac{CF_j}{\left(1 + \frac{{}_0i_j}{Fq}\right)^{\frac{n_j \times Fq}{360}}}$$

where ${}_0i_j$ is the spot rate applicable for a payment in period j .

Comparing both price equations it is obvious that the YTM is in some sense an "average" interest rate associated with the maturity of the bond. Of the two measures, the YTM is more widely used. However, taking into account the shortcomings of YTM curve, economists usually refer to the spot rate curve than talking about the term structure of interest rates. Since we cannot observe directly the spot rates that market participants attach to different maturities (spot rates directly are available only for discount securities), the zero curve will always have to be estimated, using price data for a set of coupon bonds.

The bond price equation based on spot rate curve is often written in terms of discount factors, so that the present value of each cash flow is written as the product of its nominal value and its discount factor:

$$P = C \sum_{j=1}^m d_j + d_m R$$

where d_j is the discount factor for period j ($j = 1, \dots, m$) and simply a transformation of the j -th period spot rate:

$$d_j = 1 / (1 + {}_0i_j)^j$$

Besides, it is more often used the continuous analogue to the set of discount factors, the discount function $\delta(t)$, as a continuous function that maps time t to a discount factor. Given a continuous discount function the present value of a cash flow at any point in the future can easily be

calculated. In terms of the discount function and continuous compounding, the bond price equation becomes:

$$p = C \int_0^m \delta(t) dt + R\delta(m)$$

How can Central bank use the information included in the yield curve for monetary policy purposes?

First of all, the most obvious and direct application of the yield curve is to use it for pricing of different financial instruments, as the central bank, just like any participant of the financial market, participates in the market by conducting various transactions in cash and securities. Secondly, the information included in the yield curve can assist the central bank in determining, in a timely manner, whether the financial market participants have confidence in the existing monetary policy and what are their expectations for future short-term rates, inflation and economic activity. Analysis of such expectations is an important precondition for implementation of forward-looking monetary policy that is focussed on maintaining the price stability in the medium term. Expectations of the financial market participants have traditionally been of great importance; however, alongside with the improvement of financial markets and development of information technologies, as well as the transformation of the monetary transmission mechanisms, they have gained additional significance, complementing the information contained in monetary aggregates. The Bank for International Settlements, in co-operation with the central banks of the Member States, recently established a data bank for spot interest rates that are determined on the basis of bonds issued by its Member States.

The ECB uses the indicative monetary aggregate as the first pillar of its monetary policy, at the same time recognising the potentially important role of other financial indicators in implementation of the euro area monetary policy. The second pillar of the ECB monetary policy includes financial market indicators. An essential characteristic of the monetary policy strategy of the Euro-system is that it does not foresee mechanistic monetary policy reactions to any indicators or forecasts. This also applies to market expectations extracted from financial asset prices. Moreover, such market expectations can never be a substitute for the central bank's own independent assessment of the economic situation and

of future economic developments. Rather, these market indicators should be viewed as providing separate and complementary information that can be used to crosscheck the central bank's own internal assessment and forecasts. Though market expectations can be, in principle, determined from a broad range of prices for financial assets, this article focuses only on those prices for financial assets that are based on such fixed-income securities as bonds and money market instruments.

Financial asset prices reflect market expectations because they are inherently forward-looking in nature, as opposed to the goods- and labour markets, where past movements probably have a bigger influence on current prices. Financial asset prices also have the potential to reflect developments at critical stages of the transmission process since financial markets, in general, adjust faster than goods markets, and their prices are more timely and less prone to measurement error than quantitative variables [5;162].

To obtain information on financial market expectations, central banks use not only the prices for financial assets, but also information implied in the prices for financial assets that are traded on spot and forward markets. Implied information denotes information that is not obvious, but is included in the prices for financial assets. The most straightforward use of the information content of the yield curve is to examine financial market expectations from the implied forward curve of interest rates (and its shifts). The implied forward curve can be derived either from the spot rate curve or discount function.

If we know the spot rate oi_m we can calculate the implied forward rates in the following way:

$$1/d_j = (1 + oi_m)^m = (1 + oi_1)(1 + if_2) \dots (1 + m \cdot if_m),$$

where d_j , oi_m as defined before;

${}_j-if_j$ is implied one period forward rate ($j = 1, \dots, m$).

As it follows from the above equation, the spot rate oi_m can be thought of as a geometric mean of all the implied one period forward rates.

It is important to note that there are certain significant preconditions to be met for a yield curve to have valuable information content. One of such preconditions is related to the so-called expectations theory that includes a hypothesis that there is a close link between short-term interest rates implied in today's long-term interest rates and the market expectations for actual short-term rates in the future. According to the

pure form of the expectations theory, implied interest rates reflect only the expected future interest rates. The following are the key assumptions of this theory:

- fixed interest securities of different maturities are perfect substitutes;
- investors are risk neutral – long-term bonds do not require any risk premium;
- the shape or the slope of the yield curve is determined by investors' expectations for future interest rates and inflation;
- an upward yield curve indicates that the market expects a rise in the short-term interest rates in a certain future period. Similarly, a downward term structure reflects the market expectations that the short-term interest rates will be reduced in the future.

Contrary to the pure form of the expectations theory, a less rigorous form of this theory says that implied future interest rates reflect not only expected future interest rates, but also a certain risk premium. For securities of a longer maturity, investors require a risk premium that is positively dependant on the term of bonds, i.e., the longer the term, the larger the risk premium.

$$(1+i_2)^2 = (1+i_1)(1+i_2 + RP_2),$$

where RP_2 is a risk premium for a two years' period.

Thus, an ascending yield curve can evidence that the market expects that in future the interest rates will increase, decrease or remain the same, while the upward shape of the yield curve is determined by the risk premium required by the market participants today. Whether the expectation hypothesis holds or not is of course an empirical question, which can be tested by econometric methods. However the first step before evaluating the informational content of the yield curve is to find the most suitable for the Latvian financial market model for constructing the spot and forward rate curve, which is in fact the main task of this paper.

Estimation models

Implied interest rates can be derived directly when spot rates are available for different terms. However, often such rates are not available, and many central banks use parametric or non-parametric methods to obtain implied future curves that would interpolate and extrapolate the

missing points on the curve. The purpose of approximation is to extract, by using the existing market rates, as smooth a function as possible that would, preferably, be convenient for subsequent use.

There are two main groups of methods to be used for approximation of the yield curve: basis functions' and modelling methods. The basis functions' methods are based on smoothing underlying market rates without considering the factors influencing them (polynomials and splines). The modelling methods are based on approximation of the yield curve considering the macroeconomic factors affecting it (models by Vasicek, Cox-Ingersoll-Ross, Nelson-Siegel, Longstaff-Schwartz and others) [1; 67]. This article deals with four of the above methods, i.e. polynomials, splines, Vasicek and Longstaff-Schwartz models by applying them to construction of the interest rate curve for Latvia.

Basis functions' methods assumes that the discount function $\delta(t)$ is described as a linear combination of k approximating functions $f_j(t)$ ($j=1, \dots, k$) on which the coefficients ($a_j, j=1, \dots, k$) are estimated:

$$\delta(t) = 1 + \sum_{j=1}^k a_j f_j(t)$$

where $f_j(t)$ is j -th basis function;
 a_j is the coefficient of the j -th basis function.

If $f_j(m) = m^j$ for $j = 1, \dots, k$, the discount function generated by this set of approximating functions will then be a simple k -th degree polynomial. However, unless observations are spaced equally through the maturity range, such a polynomial tends to fit well at the short end and badly at the long end or vice versa. To solve this problem it is possible to increase k , the order of the polynomial, but this can cause instability in the parameter estimated.

In order to improve the trade-off between goodness-of-fit and stability one can use the polynomial spline technique. The essence of this technique is that maturity range is divided into some segments, and for each segment a separate, relatively low-order polynomial is fitted. These polynomials are joined smoothly at a number of so called join or knot points. The word "smooth" has a precise mathematical meaning, but in the context of a piecewise j -th degree spline it is generally taken to mean that $(j-1)$ th derivatives of the functions either side of each knot point are continuous. However, estimation of spot curve with splines is not without

problems either. That will be shown in practical part of the paper when evaluating the spline method for the Latvian term structure of interest rates.

According to the equilibrium-Vasicek model, all information required for modelling a yield curve can be summarised by using a single factor, i.e., the short-term rate r . This rate is often called the momentary interest rate and is assumed to evolve as

$$dr = k(\varphi - r)dt + \sigma dB_t$$

where φ is the asymptotic mean of the short-rate;

k is the rate of mean reversion and σ determines the local volatility of the process for a given value of r_t . [1; 76]

According to Vasicek, this single factor, i.e., the short-term interest rate r_t , changes constantly over time; however, it tends to return to a certain long-term average level (reverts towards its asymptotic mean φ). If r is higher than φ , than r tends to decrease. If r is less than φ , than r tends to increase. The Vasicek model states that changes in the short-term rate r in any limited time interval take place in accordance with the normal distribution rule. According to Vasicek the price P of the zero coupon bond are established as follows [1; 76]:

$$P(r, t, T) = \exp\left(\frac{1}{\alpha}(1 - e^{-k(T-t)})(R_\infty - r) - (T - t)R_\infty - \frac{\sigma^2}{4k}(1 - e^{-k(T-t)})\right)$$

$$t \leq T$$

where R_∞ is a long-term average level of interest rate, r ;

The discount function depends on four parameters k , φ , σ and θ the level of the short rate at time t .

It should be noted that the bond price P is calculated as exponential function, where the power is a linear function of the single factor, i.e., the short-term interest rate r . Models of this type form a large group of yield curve models and are sufficiently flexible to cover many characteristics that are necessary for a yield curve and to record their changes over time.

Longstaff-Schwartz model is a two-factor general equilibrium model for the short-term default-free interest rate and its variance. The two

fundamental factors in this model are the level of the short-term interest rate itself, and the volatility of the short rate:

$$dX = (a - bX)dt + c\sqrt{X}dW$$

$$dY = (d - eY)dt + f\sqrt{Y}dW_2$$

$$r = \alpha X + \beta Y,$$

where X is a factor of short-term interest rate itself;

Y is a factor of volatility of short-term interest rate;

$\alpha, \beta, a, b, c, d, e, f, \gamma_1, \gamma_2$ are parameters;

W_1 and W_2 are two scalar Wiener processes that are assumed to be uncorrelated.

Estimation of the Latvian Term Structure of Interest Rates

For the daily estimation of the Latvian zero curve the author uses the secondary market prices of T-bills and T-bonds (15 instruments) which are available from the electronic information system Reuters and from the Riga Stock Exchange quotations. Since it is very unlikely that in any given day there are transactions for all these instruments, market prices used in the estimation are not actual transaction prices, but the best bid prices quoted for all the instruments in a certain day. The maturities of the instruments used for the estimation fall between 16 days and 5 years. However, due to the fact that there only few 3 and 5 years bonds issues, the observations are not equally spaced over the maturity range.

Using the above mentioned data the author tried to construct the Latvian zero curve using alternative methods, i.e. 3rd degree polynomial, cubic spline with one knot point, Vasicek and Longstaff-Schwartz models. The theoretical yield estimates are obtained by minimising the squared yield-to-maturity error. The numerical method used for the estimations is a Newton algorithm provided as an option in the Excel Solver software.

The estimated zero and forward curves are presented in Figures 1 and 2.

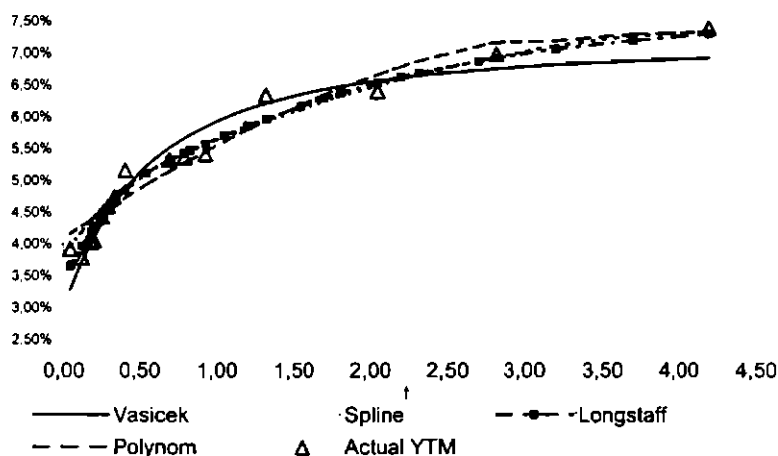


Figure 1. Spot curves for the Latvian government securities market on January 10, 2001 estimated by different models

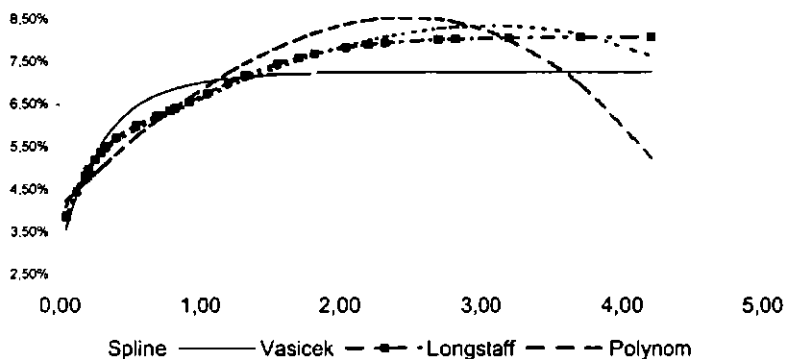


Figure 2. Forward curves showing the Latvian government securities market on January 10, 2001 estimated by different models

Which model is preferable? As to the functional form considered, probably the Vasicek and Longstaff-Schwartz approaches fit better since there are derived from a theoretical model. Certain plausibility criteria can be used as reference variables for assessing the approaches. Another

criterion for assessing different curve-fitting approaches is how well they can represent the observable information. The errors between fitted and observed yield-to-maturity or prices have regularly been used as a criterion for assessing different curve-fitting approaches [7;20]. Simple summary statistics are used here for comparing the estimates obtained from the different methods – the root mean squared error (RMSE), the coefficient of determination R^2 and the R^2 adjusted for degrees of freedom (Table 1).

Table 1

	3rd degree Polynom	Cubic Spline	Vasicek	Longstaff-Schwartz
Sum of squared residuals	0.000136396	6.67645E-05	0.000181804	0.0000674560
Root mean squared error	9.09306E-06	4.45096E-06	1.51503E-05	0.0000044971
R squared	0.99999906	0.999999579	0.9999985092	0.999999776
Adjusted R squared	0.999998718	0.999999211	0.9999978316	0.999999519

Summary for the curve fitting approaches

Looking at the summary statistics, all four methods perform well from R^2 perspective. Such a good performs look suspicious, but this is probably attributable to the relatively small number of instruments available – fifteen. The Longstaff and spline produce the lowest RMSE. The polynomial and spline methods proved to be problematic due to the fact that they do not guarantee plausible forward curve shape. As it is seen from the figure 2, these methods could lead to infinitely small yields in the case of long-term extrapolation. Since it is quite important that the BoL chooses a method by which constructed time series are complete and consistent with economic intuition, this seems to be significant disadvantage. Moreover, in practise one of the important applications of the yield curve in emerging bond markets where the length of the maturity spectrum may still be short is extrapolation beyond the longest current maturity in order to price new, longer instruments. This kind of problem cannot emerge in the case of equilibrium models. According to Vasicek and Longstaff-Schwartz the forward curve tend to some equilibrium level at about 8% in the long-term. However, it should be stressed that all of the forward curves show the significant risk premium, which in fact is a typical for emerging bonds market.

The fact that the parameters of the equilibrium models have some economic meaning is an advantage. The Longstaff-Schwartz model shows a bit better performance than Vasicek model in terms of RMSE, which can be explained by the higher number of parameters in the Longstaff-Schwartz model (7 parameters) than in the Vasicek model (4 parameters). While the differences in the performances of all four models are relatively small, there is not clear-cut answer to which of them is the better. Still, on the basis of the above criteria, it seems more reasonable to use Vasicek or Longstaff-Schwartz models, since they produce plausible implied forward curve shape. The use of such models, like Vasicek and Longstaff-Schwartz, which allow for a more complex functional form seems to be justified for the description of the Latvian term structure, although more testing is necessary in this direction.

It is fair to say that monetary authorities are still feeling their way regarding the role of newer financial market indicators. The most serious disadvantage of these indicators is the difficulty in disentangling their information content, besides they are often based on reduced-form of arbitrage relationships. The interpretation of Latvian yield curve informational content regarding the development of economic activity and prices is beyond the scope of this paper. This, as well as testing of expectation hypothesis, is the issues for the further investigation.

Looking into the future investigations it should be noticed that one major concern regarding financial market indicators is their possible unreliability. It is generally held that financial markets, unlike goods markets, by their nature over-react to shocks and are susceptible to herding and speculative phenomena. Time-varying risk premium are probably the major drawback to their use in setting monetary policy. Hopefully, the deepening of government securities markets will improve the availability of forward-looking data on financial market expectations and risk dispersions. Further development of the financial market will determine, to a large extent, boosting of confidence in the information content of financial market indicators. Where the markets are not liquid, interpretation of such indicators can become even more complicated as it would be necessary to apply additional technical assumptions to obtain the required information.

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Summary

The purpose of this paper is to examine some of techniques used to estimate the term structure of interest rates from the prices of government securities and their appropriateness for the Latvian financial market.

The paper builds upon the grounds that the use of the yield curve has long been a standard in financial and monetary policy analysis in countries with well-developed financial markets. Specifically, this information is used to measure expectations regarding short-term interest rate movements, and predict activity and inflation. However, until recently, the possibilities to use the yield curve for the above purposes in transition economies, such as Latvia, were rather limited due to the underdeveloped financial markets. Alongside with the increasing liquidity and the extended number and maturity of financial instruments, in particular government securities, in these markets, the possibilities to construct and evaluate the potential use of zero-coupon and forward rate curve became more realistic.

The paper describes briefly the forces that have generated interest in the use of the yield curve by monetary policy makers, the role and importance of the yield curve for the Bank of Latvia. In the absence of forward markets in Latvia, implied forward rates need to be estimated from data on existing financial instruments, government securities being the most liquid of them. For the purpose of approximation of the zero-coupon yield curve, the polynomial, cubic spline approach, the equilibrium model of Vasicek and Longstaff-Schwartz has been used.

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Latvia**STATE FINANCE MANAGEMENT PROBLEMS IN LATVIA**

Ir apskatītas galvenās valsts finansu vadības problēmas Latvijā šodien – valsts parāda vadība, valsts budžeta plānošanas un budžeta izpildes un uzskaites nodrošināšanas jautājumi.

Nowadays the dominant society's economic model is mixed type of economy – parallel with free market activities in bigger or smaller pace exists government's interference in economical processes. At the moment no one tries to dispute the state's role in economy. The state directly is able ensuring creation of stable and necessary public environment. Thus, the state regulating activities take an important part in the modern developed market economy. These activities determine the state economical policy or the state economical regulation systems. However, it must be mentioned, the level of the state influencing in economy depends on certain situation in a country. Firstly, that is economical circle trends and as a rule situation concerning business development. Secondly, that is government's activities objectives and tasks. Thirdly, that is political forces arrangement, because economical processes in big pace are influenced by political aspects nowadays.

Thus, an important role in market relations and the state regulation belongs to the state finance. These are economical relations, which are reflected in creation, allocation and spending of assets funds that are necessary for the state. Finance definition as historical category has appeared together with a state setting up. The biggest share of state necessities was ensured with natural revenues in prior capitalism formations. By feudalism dissolution and development of capitalism type of production the greater role start paying the state revenues and expenditures in cash that is ensured by widespread goods-money relations system. However, during the state development earliest stages state resources were not divided from assets in the state possession – monarchs used the state resources as their own property. During 16th–18th century took place the State Cash-Desk division from the monarchs' property.

Thus, such economical categories as state finances state budget and state credit occurred.

The state finances as economical relations ensure assets for state functions implementation. That takes place during GNP distribution and re-distribution process. During the process appear production process participants' cash incomes and their further spending. Assets circulation obtains certain type of independence. State finances amount is determined with community of those functions, which are set by the certain state activities. If the state interference in economy regulation is not so active, it doesn't need such great assets. And vice versus if the state economical interference is quite active, it needs much finance resources.

In the modern economical theory exists opinion that according to the business system's dialectics the state finances favourably influence the state economical development. However, the finances could create certain kind of difficulties both in the state economical and social spheres. Effective solution of the problem depends on precisely worked-out and implemented the state finance policy. That is community of such state activities, which the state uses for finance resources mobilisation, allocation and spending with a purpose to ensure state functions implementation. The state finance policy could be assessed in concern with its compatibility with society's interests and achievement of objectives set by the state. Finance policy must ensure finance process stability in the state economy that is one of prerequisites for macro-economical stabilisation.

State budget definition is closely related with the state finance. That is the main state assets centralised fund for ensuring of the state functions implementation. The state budget is a mediator that ensures GNP re-allocation in a way of mobilising and spending for the state necessary finance resources. Such an opinion exists that the budget is a tool for the state policy realisation using financial methods. A non-divisible part of the finance policy is fiscal policy – economy regulation system with a help of taxes changes and the state expenditures determination. One can say that the fiscal policy is the state budget spending with a mission to influence the state total demand on goods and services, as well the total level of economical relations in the state. The main objective of the fiscal policy is to ensure equalised budget creation as well to set stable macro-economical prerequisites for an economical development. The role of the fiscal policy in economy is related with the support of business activities and economical stability in the state, as well with the finance resources effective

spending. That could be achieved using the budget expenditure and taxes possibilities. Thus, there are used tools that are related with the budget creation or spending in fiscal policy. The fiscal policy implementation leads to changes in the state budget, including possible deficit of the budget that is an indicator of the state finance and economical stabilisation. The state debt definition is closely related with the budget deficit financing, where the most common method is the state loans.

Proceeding from the fiscal policy's possible solutions we could conclude that one of the most important budget's tasks is to support the government's function optimal implementation, effectively spending finance resources and achieving maximal usage. That must be taken in account during the whole budget process – while planning and disputing the budget, accepting the law on the state budget as well ensuring its implementation. The task's successful implementation depends on organised state finance management system that is the state fiscal policy's main determining factor. Finance management includes itself all the administrative activities, including control and responsibility ones, that are necessary within the budget working-out and implementation process. Thus, that is the government function and it is ensured by a certain institution's activities.

The state finance management function in Latvia implements the State Cash-Desk that was established in 1993 according to IMF advise. Such the necessity appeared to set up institution with the mission to supervise the state assets and the budget implementation. Officially the State Cash-Desk is subordinated to Finance Ministry. It assigns and implements payments for certain objectives from the state budget revenues, organises and fulfils the state budget revision and accounting functions, the state debts management function as well others with the finance management related functions. Thus, the State Cash-Desk fulfils official the state finance accounting in a way of registering all the state budget payments, assets, liabilities and debts. It doesn't exist the common State Cash-Desk model in the world – in each country it depends on historical traditions and national legislation. However, the State Cash-Desk activities conception was based on experience of developed world countries. The conception includes the main questions that must be solved by certain institution, thus, also by Latvian State Cash-Desk:

- 1) it must collect the state revenues and ensure expenditures
- 2) it must concentrate all the government financial resources at a common the State Cash-Desk account

- 3) it must establish certain accounting regime for the registration of the government financial transactions
- 4) it must develop finance management and planning in the government sector.

It must be noted that since 1993 Latvian State Cash-Desk is implementing thorough work concerning the government financial assets administration. Latvian State Cash-Desk activities and its functions implementation was positively evaluated in IMF Fiscal Issues Department's research in 2000. Very positively were evaluated all the institutional factors that influence the state finance administration environment. It was appreciated that concerns taxes collecting and their allocation registration according to the revenue types. Latvian budget's revenue and expenditure qualification was recognised as compatible one to ensure the state budget revision and registration. Positively was assessed the fact that each from the state budget financed establishments has not its own account in a bank. Since November 1999 the State Cash-Desk is working according to the common account principle – all the state revenues and expenditures are implementing using the common State Cash-Desk's account that is located in Latvian Bank. In such a way was avoided the risk that took place concerning Latvian Cash-Desk transactions accounts allocation in commercial banks. Besides that the assets accumulated for the accounts operation were economised.

The State Cash-Desk started its activities on registration of the state budget institutions' debts to improve the state finance administration. That will help reflecting the real state fiscal situation. In the process of the budget institutions' debts collecting the government could have unforeseen expenditure. Thus, the long-term debts planning and registration system was introduced. Such the work will come further during the next years taking into account wider range of debts. The state finance management problems also are related with still existing not full including of self-governed territories' (regions and districts) finance into common the state public finance management and reporting system. Solution of the problem is carrying out by the State Cash-Desk. However, that is the issue of the future, because it asks for acceptance of political decisions in the country. I should note that according to the changes in the state budget legislation, all the self-governed territories handing-in their reports for the year 2000 to the State Cash-Desk should take into consideration the State Control's letter on correct and precise working-out of yearly reports. Introduction of such the revision will ensure self-

governed territories' finance flows transparency. The chair of the State Control Mr. R.Chernajs in April 2001 gave the information that 37% of self-governed territories' yearly reports were not worked-out properly.

Next task of the State Cash-Desk in the coming future is related with the work on governing of the state capital shares in commercial enterprises as it asks the law. That will give full picture concerning all the financial assets. At the moment this work is carrying out by Privatisation Agency and branches Ministries. The State Cash-Desk supposes that it will overtake the function after privatisation in the country will come to the end. At the moment being the State Cash-Desk just summarises those enterprises' financial reports, which are subordinated to the Ministries.

One of the most important the state finance management's aspects also is the state budget planning in a way of assessing of all the possible the budget's revenue and analysing expenditures. In Latvia is working a system when in the state budget creation collaborates Saeima (Parliament) and Cabinet of Ministers i.e., government, as well Finance Ministry, but others ministries collaborates on their level. Such a system is considered as stable. However, as it is noted, Finance Ministry's positions and rights in finance field comparing with the rest of ministries must be much stricter. I should note that in past years the budget in Latvia was planned taking into account only the current and the next year indicators. It is impossible achieving the state finance stable development concentrating just on the current and the next fiscal year expenditures. Because of that in the budget planning in Latvia must be started creation of the medium-term plan. The medium-term state expenditure structure shows the future budget revenue and expenditure possibilities within the existing finance policy. In thin extent the future problems could be detected and solved operatively, while that is possible.

Specifying the state possible revenue and expenditure in the next periods, we must take into consideration that one of the most important objectives of the state fiscal policy is limitation of the state budget fiscal deficit. Despite the fact that the budget deficit existence on the allowed level nowadays is not considered as government's negative action, however, limitation of the state budget fiscal deficit in medium-term and creation of the equalised budget in long-term period is an important task because of many reasons. Implementation of the strict fiscal policy allows decreasing the deficit of Payment Balance Current Account that is an important the state economical development indicator. The current account deficit has a decreasing trend in Latvia, despite the mentioned

fact its level still is very high (7.2% of GDP). The next problem that is related with the state budget fiscal deficit is its financing. The state very often takes loans both on internal and external financial markets to finance the state budget deficit. The state debts and operation costs must be covered by the budget expenditures or by the new loan. The total amount of debts compiled 570 millions lats in 2000 in Latvia, but in 2001 according to the plan it could be about 720 millions lats. The debts operation costs already are too high and in 2001 it will compile 44 millions lats, here also we must take into account not big amount of the Latvian state budget at all. Impressive increasing of the position no doubt leads to decrease of assets for the financing of the rest budget programmes.

Thus, to successfully solve the state budget fiscal deficit decreasing must be achieved consequence between the political decisions and the state financial resources available. The planned by Latvian government fiscal deficit in 2001 is 1.7% of GDP, in 2002 it could be below 1% of GDP and non-deficit budgets are expected after 2002. That is appointed in partnership agreement between Latvian government and IMF. The agreement was concluded for 1.5 year.

To achieve all the planned targets Latvian government came to an agreement on new approach for the budget expenditure planning. Working-out the state budget 2002 the government is planning to introduce the so-called "zero budget" in the state expenditure. It means that all the state budget financed institutions must prove again necessity of each demanded lats in a way of working-out a new assets demand report and spending nothing from the past years programmes. At the present economical situation in Latvia such the approach could allow creating the optimal state budget expenditure share not asking for the additional financing in a way of attracting new loans. However, taking into consideration the fact that such a method isn't considered as necessary and effective one as well it asks for the investment of big finance amount and titanic work, the Latvian government decided to plan the state expenditure on the past year basis. Large number of the state budget financed institutions than before will be responsible to present more detailed information on all the expenditure positions. First of all that is relevant to the special budgets, where appropriate assets never have been strictly supervised. It must be noted that the special budget is a share of the state budget, which is created by the revenue for the specially specified purposes. The special budgets also are created by gifts and

donations that should be spent according to the purpose of such the revenue. For example, such the purpose revenues are the state social insurance obligate payments.

The budget planning objectives is not only to find economised assets, but also to achieve the situation, when the yearly budget would be worked-out on the basis of changes in economical situation. So, for example, Finance Ministry specialists point the very strange fact that together with decreasing of the unemployment level in Latvia the budget expenditures for the temporary public job are increasing.

It is decided to plan the budgets more transparently in the next years. Because of that, such institutions as the State Control, Latvian Employers Confederation and others public institutions will be engaged in the budget working-out process. According to the Latvian government opinion spending of each santims in the budget expenditure must be approved. Society must be sure that the government fairly and rationally spends taxpayers' money. That could be achieved if on the budget working-out stage the full information presentation and collaboration with the society representatives takes place.

We can conclude that the Latvian government must solve a number of problems concerning the state budget effective planning. Taking into consideration the certain economical situation in the country and the fact that the state budget planning procedure in Latvia is rather new, there exist some difficulties in the introduction of the medium-term and long-term planning.

So far as Latvia created its budget in a way of planning the fiscal deficit, the state total debts in 2000 exceeded 0.5 milliard lats. In this extent an important the state finance management function is the state debts management. According to Latvian law the state debt is total amount of those debts that is covered by the state budget assets. Since 1995 the state total debts in Latvia are increased by a half, that is by 191.4 millions lats. The debt decreased in a small pace in 1997 and 1998, when the state budget didn't have the financial deficit – deduction of the state current expenditure and revenue. However, as a result of economical crisis in Russia in 1998 the Latvian state debt in 1999 increased by 37% and it compiled 510.7 millions lats (3.8% of GDP). While the state economy was becoming more stable the state total debt increased only by 11.6% in 2000. In addition, the state takes loans more at the internal financial market and as result the share of internal debt in the total state debt compiled 39.1% or 222.9 millions lats. In the future the government

is planning to increase the loans share at the internal market even more so far while the internal debt share in the total debt will compile 50% and the same share leaving for the external debt. According to the plan the total debt in 2001 will increase, because the budget is accepted with the deficit and it must be financed on the loans account.

Thus, at the moment the bigger share of the total debt belongs to the external debt. That is created by the loans from the international capital market and international finance organisations (The World Bank, IMF). The last ones accept loans only for the implementation of the certain programmes in Latvia. Amounts of these credit resources are much bigger than attractive ones at the financial market. In addition, as in the end of 2000 42.9% of the state external debt (148.7 millions Lats) was further given as loans to enterprises and self-governed territories. Ensuring the most optimal the state debt management the Latvian government is planning to decrease the share of the external debt in the total one. That will allow decreasing the risk on currencies fluctuations and will give an opportunity for development of the local finance market.

The purpose of the debt management is to achieve smoother and divided into equal stages the debt payback schedule. So far, as the Latvian government isn't planning to take big loans, in the next 3 years it must pay back only those credits, which has depreciative paying-back schedule. It is planned to pay back 20.3 millions lats of the external debt in 2001, than 23.3 millions lats in 2002, 24.3 millions lats in 2003, 145.8 millions lats in 2004 and average 18 millions lats yearly up to 2022. Thus, financially difficult for the Latvian government will be the year 2004, when should be paid in 1999 appeared euro-bonds with the total nominal value of 225 millions EUR. One can conclude, that paying-back of the state debt from the state budget's assets isn't possible, because of limited financial resources. Thus, we can doubt concerning the Latvian government's objective to equalise the state budget. Despite the fact that the Latvian state debt is treated as relatively small (13.2% of GDP), we should take into consideration that Latvia is a small country and not yet economically developed one. Because of that, creating the state financial policy we should point out both economical and political factors, which could negatively influence both the state financial and economical situation.

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Summary

1. *Creation of the stable and necessary public environment in the modern developed market economy is ensured by the state regulative activities. So, the state financially economical relations take an important role in market relations and their regulation. These relations are reflected in creation, allocation and spending of the assets fund that is necessary for the state.*
2. *State budget definition is closely related with the state finance. That is the main state assets centralised fund for ensuring of the state functions implementation. One of the most important budget's tasks is to support optimal implementation of the government function in a way of effective spending of financial resources and achieving the maximally positive results. The task's successive implementation depends on the state organised finance management system that is the state financial policy's determinant.*
3. *The state finance management function in Latvia is implemented with the State Cash-Desk that ensures the state budget realization and the state assets supervision. It must be noted that since 1993 Latvian State Cash-Desk is implementing thorough work concerning the government financial assets administration – the state budget implementation take place according to the common account principle, it is stated registration of the state financed institutions' debts as well self-governed territories' finances are included into the common state public finance management and reports system. In the future the State Cash-Desk will start its work concerning the state capital shares management in enterprises.*
4. *It must be started creation of the medium-term plans within the state budget planning in Latvia. That will ensure an effective the state finance management. The medium-term state expenditure structure*

shows us the possibilities for the state budget revenue and expenditure in the future within the existing financial policy.

- 5. An important task for the Latvian government is limitation of the state budget deficit that allows to decrease the deficit of Payment Balance's Current Account as well the state debt and its operation costs related with the budget deficit financing.*
- 6. Working-out the state budgets for the years coming, the Latvian government decided to plan the state expenditure on the basis of the past years, demanding detailed information on all the expenditure positions from the larger number of the state financed institutions. It is decided to ensure higher level of transparency in the budget planning process.*
- 7. The special feature of the state debt management in Latvia is a big share of external debt in the total state debt – 60%. The Latvian government is planning to decrease it to 50%. That will help to decrease the risk concerning the currencies fluctuation and will give an opportunity for development of the local finance market. Besides that, the purpose of the debt management is to achieve smoother and divided into equal stages the debt paying-back schedule.*

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THE COMPARATIVE ANALYSIS OF FOREIGN DIRECT INVESTMENT CLIMATE IN THE BALTIC COUNTRIES

В статье анализируются инвестиционные среды для иностранного инвестирования в Балтийских странах и даются некоторые предложения по поводу его стимуляции. Сперва проведен анализ ситуации иностранного инвестирования в Литве, Латвии и Эстонии в соответствии с макроэкономическими и микроэкономическими факторами. Раскрыты основные факторы, стимулирующие и тормозящие иностранные инвестиции. Проведен анализ инфраструктурной, социальной, правовой, экономической и финансовой среды для инвестиций в трех странах. В конце осуществлено сравнение основных проблем иностранного инвестирования в Литве, Латвии и Эстонии.

Introduction

The lack of internal capital and other strategic resources during the reorganisation of planned economy determined the importance of foreign investment into countries of Central and Eastern Europe, including the Baltic States.

Though countries of Central and Eastern Europe have similar problems, the flows of foreign direct investment to these countries significantly differ. Hungary, the Czech Republic and Poland received the greatest share of foreign investment. Meanwhile, the amount of foreign investment having been received by the Baltic States was nine times lower. The amount of investments depends on the size of the country, economic growth, commercial relations and other factors. No doubt, countries of Central and Eastern Europe (CEE) differ from the Baltic States according to these characteristics. However, comparison of similar countries makes it obvious that the FDI stock per country is different. Though Lithuania is the biggest country among the Baltic States, it received the lowest amount of

foreign investment per capita. A question may arise: what factors influence such unequal distribution of foreign investment? Investment agencies in all Baltic States advertise the same advantages of investment: political and economic stability, perfectly developed infrastructure, cheap labour force and unique location between Eastern and Western markets. Although economic advantages in Lithuania are similar to those in Estonia, the amount of foreign investment per capita is twice lower than in Estonia.

The purpose of this article is to evaluate the investment climate in Lithuania and to compare it with the situation in other Baltic States – Latvia and Estonia. The comparison of the Baltic States will help to answer the question why, Estonia and Latvia managed to attract more investment than Lithuania despite their similar economic advantages. This paper would confirm the hypothesis that the amount of investment is inseparable from the investment environment. The analysis will help to reveal the weak points of Lithuania's economic policy.

Foreign direct investment and it's influence on the country's economy

The gradual disappearance of barriers for the free movement of capital in Europe has widened international co-operation and intensified international competition giving a more important role for foreign direct investment. Foreign direct investment is especially important for the countries of Central and Eastern Europe (CEE) as it helps finance economic transition.

The countries of CEE relate many hopes to foreign investors. It is believed that foreign investment will create new working places, will raise qualification of local workers and will reduce unemployment in the country. It is hoped, that due to FDI more modern technologies will be implemented, the quality of goods and services will be risen and competitiveness of local agents will be increased. Local companies seeking foreign partners expect to take over their developed markets abroad, networks of distribution channels and business contacts. Foreign investors are expected to replenish the empty government budget via privatisation programs and to restructure bulky state-owned enterprises. FDI finances a substantial share of domestic investment for countries that have limited access to international capital markets and improves their external balances. To sum up, from the viewpoint of host country the benefit of FDI seem to be evident.

In different sources FDI is often called an engine of economic growth (2, 11, 14, 15). This can be seen from the Solow's decomposition of growth, which indicates the economic growth, is related to technological progress, the rate of capital accumulation and the growth of labour input. An empirical research (1) has proved that FDI stimulates economic growth because it provides new technologies and increases the general accumulation of capital in the host country. However, in order for FDI to take part in the growth of economy, certain conditions are required.

First, countries that receive technologies via FDI must have well trained human capital in order to be able to adopt advanced knowledge. Since technological process is the main factor for the long-term economic growth, the lack of highly qualified human capital may hinder economic growth via FDI. Second, foreign investment has to be more productive than the domestic investment in order to bring technological progress. Higher efficiency of FDI may be observed in cases when more progressive methods of management and advanced technologies are implemented in combination with the lower labour costs in the country. Moreover, foreign investment induces domestic investment. By using new technologies, local enterprises can increase their productivity and win some additional financial resources for capital investments.

FDI in the Baltic States as compared to other regions

Foreign direct investment to CEE countries is an important means for stimulating competitiveness of industry and the growth of economy. Since transition started, FDI flows to CEE countries were steadily increasing. The FDI stock as a percentage of GDP in 1998 was almost reaching the average of the world and equal to the average of developed countries. However, it was almost twice lower than the average of developing countries (Table 1).

The reason, why CEE countries stay behind other developing regions in terms of the accumulated FDI stock, could be that CEE became open for foreign investment relatively recently. Therefore the accumulated stock of FDI cannot be very high. Various factors are to blame, why FDI stock is not higher. A prolonged economic decline of transition period, late privatisation, bureaucratic barriers and the lack of experience in encouraging business in CEE countries lessened the enthusiasm of investors. It should also be taken into account that while estimating

investment for CEE, the countries of Commonwealth of Independent States (CIS) were included into calculation, that lowered general amount of FDI. An average amount of investment per capita in the CIS is more than eight times lower than the average of the leading CEE countries (Table 2).

Table 1

Foreign direct investment in the world in 1998

Region	FDI stock/GDP, percent
The world	13.7
Developed countries	12.1
Western Europe	17.6
European Union	17.3
North America	10.5
Other developed countries	4.3
Developing countries	20.0
Africa	21.1
Latin America and the Caribbean	24.0
Asia	20.2
Western Asia	7.6
Central Asia	25.6
East, South and South-East Asia	23.3
Basin of the Pacific Ocean	29.4
Developing Europe	12.1
Central and Eastern Europe	15.7

Source: United Nations. World Investment Report. 2000.

CEE countries differ significantly in their ability to attract FDI (Table 2). According to the investment's amount per capita, the leaders of the entire region are Hungary and the Czech Republic. Estonia occupies the third position and is followed by Latvia. Lithuania is only the seventh.

Such a distribution of investment to CEE countries depends on many factors. The countries of Central Europe like Hungary and the Czech Republic, though they belonged to the command economy, they had closer relations with Western Europe.

Table 2

Cumulative FDI in CEECs in 1989-1999

(Country)	FDI stock	FDI per capita
1. Hungary	17770	1764
2. Czech Republic	14924	1447
3. Estonia	1604	1115
4. Latvia	2100	866
5. Croatia	3234	716
6. Slovenia	1400	701
7. Lithuania	2012	545
8. Poland	20047	518
9. Slovak Republic	2111	391
10. Bulgaria	2332	284
11. Romania	5647	252
12. Russia	10344	71
13. Belarus	681	67
14. Ukraine	2751	55

Source: EBRD. Transition Report. 2000

This factor helped them to stabilise their economies and to ensure a more benevolent environment for the foreign investors.

Since the aim of this paper is to compare the investment climate in the Baltic States, it is worthwhile investigating the development of FDI flows into the three countries (Table 3). Until 1995 Lithuania received very little FDI compared to Estonia and Latvia. In 1996 foreign investment to Lithuania increased twice compared with the previous year and Lithuania started to catch up its neighbours. However even the privatisation of telecom in 1998 did not bring Lithuania to the leading position in the region. Finally Lithuania remains the last according to the FDI stock in the Baltic region as it can be seen from Table 3.

Table 3

FDI inflows in the Baltic States in 1995 – 2000, millions USD

Country	1993	1994	1995	1996	1997	1998	1999	2000*
Lithuania	30	31	72	152	328	921	478	295
Latvia	50	279	245	379	515	303	331	300
Estonia	156	212	199	111	130	574	222	250

Source: EBRD. Transition Report. 2000

* National statistics

As it was mentioned at the beginning of the article the differences in distribution of FDI depend on various factors. In the next part of the article the main factors that determine foreign investment climate in the Baltic States will be analysed. The decisive determinant is the national FDI policy: it can open or close doors for foreign investors. FDI policies are often coordinated with international trade policies. FDI environment is sensitive to developments of microeconomic and macroeconomic policies. In order to get a good picture of foreign investment climate in the Baltic States all those factors have to be discussed.

National FDI policies

The national FDI policy defines the priorities of the government in respect of foreign investors. There is a clear tendency of liberalisation of foreign investment in the world (19). That tendency was mainly provoked by two reasons. First, with the increase of the international production, multinational companies began integrating their units of production and realisation, which created the need for liberalisation of FDI policies. Second, developing countries competing for foreign capital made their FDI policies more liberal.

FDI studies provide three basic elements of FDI liberalisation (19):
strengthening of positive standards for treatment of foreign investors;
removal of discriminative barriers for foreign investors;
safeguarding a proper functioning of market economy.

The first condition is related to the guarantees provided for foreign investors. There are several kinds of guarantees in the international practice: guarantees for stability of the investment regime; guarantees for fair compensation in case of nationalisation or expropriation of property, guarantees for transference of profits and guarantees for remittance of capital (22). Guarantees diminish investment risk, insure investors for acts that violate their property rights.

The second condition supplements the first by introducing equal, non-discriminatory treatment for foreign and local investors. It means that the same laws, the same tax privileges are applied to all investors and there are no exclusive subsidies for local producers. These principles in the national policy of FDI liberalisation are replenished and consolidated by international agreements concerning FDI. They grant the local policy

the international dimension. In order to attract more foreign investors, countries sign bilateral investment protection agreements and agreements for avoiding double taxation.

The third condition of FDI liberalisation requires that prices as well as trade are liberalised and that proper regulatory basis, including property rights is established. This principle has to assure fair competition among producers in a country. That means that state subsidies are removed and free market entry and exit are ensured.

The Baltic countries differ according to the liberalisation of their FDI policies. While in Estonia and Latvia the laws, regulating foreign investment were liberal starting from 1991-1992, in Lithuania the status of local and foreign investors was equalised only in 1995 (29). That explains why, the FDI into Lithuania in the initial stages was much lower compared to the neighbouring countries. In order to comply with requirements of the European Union (EU), foreign investment was further liberalised in Lithuania in 1999 by the new Law of Investment (24). The only barrier that remains under question in Lithuania is land purchase. The Constitution of the Republic of Lithuania does not allow foreign investors to acquire agricultural and forestry land. Estonia has no restrictions against foreign ownership of land except in the border area. Latvia is moving towards a similar liberal policy (17). In order to access the EU, Lithuania will need to eliminate the remaining restrictions.

FDI liberalisation policy covers not only laws regulating foreign investment. The laws enabling proper functioning of market economy have to be existent (19). Following the Russian crisis of 1998, Lithuania applied some protective measures like subsidies and soft loans in order to cushion social and economic consequences of the crisis (7). That undermined fair competition principles and increased public expenditure. Mainly because of those reasons Lithuania was not ranked as a functioning market economy in European Commission's Regular Progress Report of 1999. Latvia and Estonia maintained appropriate policy responses concerning the Russian crisis, therefore they have been acknowledged as functioning market economies already in 1999. Afterwards the protective measures introduced after the Russian crisis were largely removed in Lithuania. Following the European Commission's report of 2000, Lithuania can be regarded as a functioning market economy. The proper legal base concerning bankruptcy and restructuring procedures has been installed recently in Lithuania and is not yet supported by efficient implementation practice. In Latvia and Estonia the legislative framework for market economy is largely in place and enforcement is already increasingly adequate.

Despite high level of liberalisation of FDI policies, FDI stock in the Baltic States is not very high. While studying the relationship between FDI flows and agreements concerning investment's protection and promotion as well as other variables (19), it turned out that the size and growth of the market as well as stability of currencies much more influential foreign investment. Open FDI policies are a necessary but not a sufficient host country determinant.

International trade policy

Policy of foreign investment is often co-ordinated with trade policy. Relationship between them may be of two kinds: trade and FDI may substitute or complement each other. In the first case foreign companies decide to invest into a country in order to avoid high import tariffs. In this case, FDI growth may reduce the trade between countries. Foreign investment can also stimulate trade (2). Often foreign companies choose to invest in a country in order to produce there. Such investment may stimulate import of machinery and intermediate goods for the plant in a host country. Also, if the investor intends to use the host country for supplying neighbouring countries, the investment will increase the volume of export. Thus, foreign investment may affect trade in both directions.

In case of the Baltic countries the second case is more suitable. Following ratification of Europe Agreements with the EU, trade regimes have been liberalised in all Baltic countries. That led to the significant increase of export share to the EU in all countries (Table 4). Liberalisation of trade did not diminish FDI from the EU countries. FDI continued to grow (Table 3) and most of it came from the EU: more than 50 percent in Latvia, about 70 percent in Lithuania and almost 90 percent in Estonia (41, 42, 43).

The Russian crisis impelled the further redirection of trade from East to West in all countries. That tendency is very evident in Lithuania. Export share to the EU increased by 12 percent in 1999. However in 2000, differently from Latvia and Estonia, export share to the EU began decreasing in favour of the Russian markets. That demonstrates that Russia remains an important market for Lithuanian export. Dependence on the Russian market caused severe reduction of export volume in Lithuania. While in Estonia exports decreased by 4.6 percent and in Latvia by 5.6 percent as a result of the Russian crisis, Lithuanian exports decreased by 24 percent. The small and open economies

like the Baltic countries are increasingly dependent on behaviour of export. In Lithuania more than 50 percent of GDP is created namely by income received from export (47). Thus, with the decline of export the decline in gross domestic product can be also observed.

Table 4

Export share to the EU in the Baltic States, percent

Country	1995	1996	1997	1998	1999	2000*
Lithuania	36.4	32.9	37.5	38.0	50.1	47.6
Latvia	44.0	44.7	48.9	56.6	62.5	66.0
Estonia	56.7	56.8	62.4	66.7	72.7	74.1

Source: National statistics

Macroeconomic environment

The macroeconomic environment influences many variables that are important for investors. Monetary and fiscal policy ensures the parameters of economic stability in the country. Monetary policy in a country determines the *price of currency* and the *stability of exchange rate*, which, in its turn, sets the price for the property in the country, the value of repatriated profit and competitiveness of export. The cheaper is the country's currency in respect of other countries, the cheaper can the investor obtain property, the more competitive his goods are. However, the profit earned in the country becomes lower. Fluctuation of exchange rate determines the risk of investment. High *inflation* has a negative influence on the competitiveness of goods produced in a country and it reduces enterprises' profits. Macroeconomic policy influences *interest rates*, and consequently the costs of capital in the country. *Balance of current account, foreign debt and government budget balance* influence capability of the country to pay off repatriate profit of foreign companies in foreign currency. Fiscal policy has a direct influence on FDI through *taxes*. Taxes, in their turn, influence profitability of investment plans, therefore, the tax policy is a very important factor in risk analysis. Successful macroeconomic policy leads to economic growth that is reflected in *gross domestic product*.

Exchange rate

The Baltic States rely on the fixed exchange rate regime. In Estonia and Lithuania currency boards were introduced (38, 40). Latvia pegged

its exchange rate to the basket of currencies (39). Fixed exchange rates helped to stop hyperinflation and to stabilise economies. The pegging of litas to dollar and introduction of the currency board was the right decision in 1994. However, since introduction of the euro litas started to appreciate together with dollar and caused problems for Lithuanian producers. Products manufactured in Lithuania started to lose their competitiveness in the markets of the EU countries. Most enterprises exporting their production to the EU were forced to reduce prices of their products. A great part of foreign investment to Lithuania is export-oriented therefore, the appreciated litas must have a negative impact on FDI. Situation became even more complicated after Russia devaluated its rouble in respect of dollar in 1999. The currencies in Latvia and Estonia, as well as most countries of CEE are pegged to the German mark or a currency basket, while Poland has chosen a free fluctuation of exchange rate. Thus, their goods have been more competitive in the EU markets. Even though litas is pegged to dollar, Lithuania managed to increase its exports share to the EU (Table 4). The Bank of Lithuania has committed to re-peg litas to euro not earlier than in the second half of 2001 keeping exchange rate of the day of re-pegging (40). This commitment reduced the uncertainty for foreign investors, although the transition period before litas will be re-pegged gives room for interpretations.

Inflation

The move towards market economy and liberalisation of prices in 1992 caused hyperinflation in all Baltic countries, which was highest in Lithuania reaching up to 1020 percent (34). A survey of Lithuanian enterprises has shown that inflation harmed businesses the worst during 1990-1994. The currency board arrangement of 1994 helped to curb inflation in Lithuania (Table 5). Estonia adopted the currency board already in 1992 and managed to stabilise inflation earlier than Lithuania. Latvia started to reduce inflation in 1993 when a fixed exchange rate regime was established. The Russian crisis has caused an excess supply of goods in internal market and a decrease in prices. Therefore annual inflation in 1999 reached the lowest levels in all Baltic countries. In Lithuania, the low level of inflation reflected the weak domestic demand and appreciation of litas. When recovering after the Russian crisis, prices went up again. Higher prices are mostly related to the increase of fuel prices (and prices of telecommunications services in Lithuania) (28). This makes a negative impact on the economy, because

upward price pressure is related not to the increase of demand, but to the increase of costs.

Table 5

Inflation in the Baltic States, percent (annual averages)

Country	1993	1994	1995	1996	1997	1998	1999	2000*
Lithuania	410.2	72.2	39.7	24.6	8.9	5.1	0.8	1.0
Latvia	109.2	35.9	25.0	17.6	8.4	2.8	2.4	3.1
Estonia	89.8	47.7	28.8	23.1	11.2	8.2	3.3	4.0

Source: IMF. International Financial Statistics Yearbook. 2000.

* National statistics.

Interest rate

Mistrust in the national currency and local financial institutions as well as high inflation rate caused very high interest rates in the Baltic States until 1996 (Table 6). Due to the lack of financial control, majority of banks managed to attract deposits offering high interest rates, however, later they were not able to make profitable investments and went bankrupt. Banking crises occurred first in Estonia in 1992 and 1993, then in Latvia and Lithuania during 1995 – 1996 and again in Latvia in 1999 due to the Russian crisis (4). Banking crises caused increases in loan interest rates. After consolidation of banking system interest rates went down, but still remained much higher of international level. After the banking crises private banks were reluctant to lend to private sector because of strict prudential rules. Financial system has developed better in Estonia, which experienced banking crises earlier. Since 1999 Estonia has been acknowledged having the strongest banking sector in the Baltic States (5). Nominal interest rates in Estonia reached their lowest level in 1999.

Table 6

Short and mid-term interest rates in the Baltic States, percent

Country	1993	1994	1995	1996	1997	1998	1999
Lithuania	91.9	62.3	27.1	21.6	14.4	12.2	13.09
Latvia	86.4	55.9	34.6	25.8	15.3	14.3	14.20
Estonia	27.3	23.1	16.0	13.7	19.8	16.6	8.70

Source: IMF. International Financial Statistics Yearbook. 2000.

It also has to be mentioned that interest rate is not an essential variable for foreign investors, because large international companies have broader choice of capital sources than local agents do.

Current account

In the early years of independence current account surplus reflected a weak domestic demand in the Baltic countries. After economic recovery, the increased internal demand has prompted import and has caused high current account deficit (CAD) (Table 7). Estonia experienced an extremely high CAD in 1997, parallel with 11.4 percent economic growth. While Estonia succeeded to curb its CAD in 1999, current account deficits in Lithuania and in Latvia remained very high until 2000, when strict fiscal policies started to give results. The decrease of CAD in Lithuania in 1999 reflected a sharp decline of external demand and moderate domestic demand.

To run high CAD without having exchange rate risk is possible, when there are high FDI inflows, export volumes are increasing, a sufficient amount of foreign exchange reserves is available and external borrowing is unrestricted. Currency boards in Estonia and Lithuania and the pegging of Latvian currency to SDR basket of currencies safeguard stability of national currencies. However, worsening external balances may lead to speculative attacks, which bring stability of fixed currency regime under question (37).

Table 7

CAD and GDP ratio in the Baltic States, percent

Country	1993	1994	1995	1996	1997	1998	1999	2000*
Lithuania	-3.3	-2.2	-10.2	-9.2	-10.3	-12.2	-11.2	-6.0
Latvia	6.9	-2.4	-0.4	-5.5	-8.1	-11.1	-10.3	-6.8
Estonia	1.3	-7.1	-4.4	-9.4	-12.4	-9.2	-5.7	-6.8

Source: IMF. International Financial Statistics Yearbook. 2000.

* National statistics.

State financial indicators

Increased external borrowing puts pressure on foreign exchange reserves and therefore creates exchange rate risk. Transition related reforms require substantial financial resources, thus foreign borrowing

has been increasing in all Baltic countries (Table 8). Lithuania has accumulated the largest external debt among the Baltic States. Estonia managed to reduce its external debt in 1999. One of the major reasons for expansive external borrowing is high public expenditure, which is reflected in government budget deficits. In the first years of independence fiscal deficits and high expenditure were related to the large public sector. Currently the public sector expenditures correspond to those of the EU countries. The analysis of government expenditures and revenues prove Lithuania to be the most spendthrift economy among the Baltics (Table 9). The Russian crisis harmed government budgets in all three Baltic States, especially in Lithuania. The government tried to buffer social consequences of the crisis by increasing public expenditure. Great part of public expenditure went to inefficient state owned enterprises in order to prevent them from bankrupting (7). The fiscal situation in Lithuania was further complicated in 1999, when the government promised loans and special benefits to the US investor Williams International in order to make "Mazeikiu Nafta" oil refinery a more attractive privatisation package. In order to finance public expenditure the government borrowed from international financial institutions, which led to further increase of external debt. As from 1999 Lithuanian government tightened its fiscal policy and government budget deficit was reduced in 2000. Reducing fiscal balances remains a challenge for all Baltic States. The governments can't rely on privatisation receipts since privatisation of large state-owned objects is almost completed. Furthermore accession to the EU will require additional expenditure for compliance with environmental standards, improvement of transport infrastructure, building institutional capacity and other.

Table 8

Gross external debt of whole economy over GDP in the Baltic States, percent

Country	1994	1995	1996	1997	1998	1999
Lithuania	11.8	12.29	14.25	15.04	17.70	25.5
Latvia	10.2	12.3	10.2	10.6	15.6	21.2
Estonia	8.8	9.39	10.69	25.18	29.0	23.0

Source: IMF. International Financial Statistics Yearbook. 2000.

Table 9

Government revenue over expenditure in the Baltic States, percent

Country	1994	1995	1996	1997	1998	1999
Lithuania	87.17	87.77	86.55	96.74	85.49	78.57
Latvia	91.85	90.29	95.41	100.73	98.16	91.03
Estonia	103.19	97.12	95.33	105.76	99.22	88.70

Source: EBRD. Transition Report. 2000

Taxes

One of the main sources of government revenue is the taxes collected in the country. Taxes imposed on corporate profit determine profitability of business endeavour. In this respect Baltic countries follow different policies. In 1999 Estonia abolished tax on corporate profits (41). The income of Estonian residents is generally subject to 26 percent flat income tax. Latvia keeps both personal income tax and corporate tax rate at 25 percent (42). Until 1999 corporate income tax rate in Lithuania was equal to 29 percent and personal income tax to 24 percent (25). After the Russian crisis the high burden of taxes became unbearable for many small and medium enterprises in Lithuania. In the survey of Lithuanian Development Agency (13), foreign direct investors named taxation system and tax administration the major obstacle to business development. Later the government took steps to improve the business conditions and reduced corporate profit tax rate by 5 points (to 24 percent), while the rate of profit tax for small and medium enterprises was set at 15 percent (26). Besides the Committee for Improvement of Business Environment (the Sunrise Committee) proposed correcting the drawbacks of Lithuanian taxation system that hinder business development (44). Including business expenditure (such as hopeless debts, investment into intellectual property, cost of repairs and some other) into taxed profit was one of the greater constraints, which was named by the Committee. Furthermore, transparency and stability of tax laws is lacking. Investors find it difficult to make long-term corporate plans because of inconsistent interpretation of laws and perpetual changes of tax legislation.

In 2000 the new liberal government in Lithuania proposed abolishing corporate tax. Supporters of this reform expect that after abolition of profit tax more workplaces will be created, production will

increase, and economic recovery will be facilitated. However, opponents are afraid that government budget may lose great share of revenue. The discussions continued into 2001. It seems that corporate tax will remain in Lithuania, but will be substantially reduced.

Gross Domestic Product

GDP describes internal demand and purchasing power of residents that determines realisation of production in a country. As can be seen from Table 10, the transition related recession was the most severe in Lithuania as compared to Latvia and Estonia. Lithuania experienced the hardest times during the Russian crisis as well. According to the survey of enterprises in 1998 low purchasing power was named as a constrain to developing business by 71 percent of enterprises in Lithuania, while in Estonia and Latvia the relevant figure was about 65 percent (30). In 1999 the situation in Latvia and Estonia improved while in Lithuania it continued to deteriorate. Therefore in 2000 comparatively slower growth of economy could be observed in Lithuania.

Microeconomic environment

Microeconomic environment influences market structure and business organisation. For example, *privatisation policy* defines the size of the public sector, i.e. state's ability to regulate economy. *Competition policy* should ensure equal work conditions for all foreign and domestic agents and to protect them from monopolies. *Labour policy* influences labour market functioning. Labour force qualification, productivity, average earnings are important variables, which determine competitiveness of products produced in a country. All these policies are more or less related to investment profitability and risk that's why we will briefly examine their influence.

Table 10

GDP changes in the Baltic States, percent

Country	1993	1994	1995	1996	1997	1998	1999	2000*
Lithuania	-16.2	-9.8	3.3	4.7	6.1	5.1	-4.1	2.2
Latvia	-14.9	0.6	-0.8	3.3	6.5	3.6	0.1	5.1
Estonia	-8.5	-1.8	4.2	4.0	11.4	5.5	-1.1	5.0

Source: IMF. International Financial Statistics Yearbook. 2000.

* National statistics.

Privatisation policy

The shift from state to private ownership in the Baltic countries has largely advanced since 1994 as it can be seen from Table 11. The share of private sector in GDP has risen from 5-10 percent in 1991 to 65-75 percent in 1999. It should be noted that Baltic countries took different positions towards foreign investors during privatisation of state-owned assets. Foreigners were not legally allowed to participate in the initial stage of privatisation in Lithuania. Meanwhile Latvia and Estonia did not exclude foreign companies at the beginning of privatisation and received more foreign investment.

Although privatisation is close to completion in the Baltic States, it has often been not transparent and guided by political interests. Privatisation of Lithuanian oil refinery "Mazeikiu Nafta" has been criticised due to lack of transparency related to conditions of sale, exclusion of other competitors from participating in the tender and granting loans and special benefits to the US investor Williams International. After elections in 2000 the new government was unwilling to keep promises to Williams International, which undermined the confidence of foreign investors. Political tensions have been constraining remaining privatisation in Latvia. Due to conflicting objectives of industrial groups and the government the privatisation of the remaining large state-owned enterprises was delayed (4). This leads to collapse of the government in 2000. Thus despite the growth of the private sector, the governments, especially in Lithuania and Latvia, tend to regulate the market in line with their own interests, i.e. budget needs, even if this means violating the principles of fair competition and equal rights.

Table 11**Private sector share in GDP, in percent**

Country	1992	1993	1994	1995	1996	1997	1998	1999
Lithuania	20	35	60	65	70	70	70	70
Latvia	25	30	40	55	60	60	65	65
Estonia	25	40	55	65	70	70	70	75

Source: EBRD. Transition Report. 2000

Competition policy

One of important competition policy elements is regulation of the state aid. Subsidies for local manufacturers not only diminish competition, but also waste state budget. Soft government loans have been largely abolished in the Baltic States. Although some large state-owned enterprises remain being subsidised by means of postponed payments of taxes. This problem has been especially obvious in Lithuanian after the Russian crisis, when public companies lobbied the state for support (36). Such support only prolonged their agony and burdened the state budget.

The competition policy is very closely related to the privatisation policy. Governmental monopoly can be transferred to the private sector. For example, during the privatisation of Lithuanian Telecom in 1998 the investors received exclusive monopolistic rights in the wired connection services and in this way competition was eliminated (Leontjeva, 1998). The costs of such anti-competitive policy are going up prices and failing businesses. When government supports any industry in the way of tax allowances, subsidies, or other maintenance, it infringes upon the principle of equal opportunity.

Labour policy

The average monthly earnings have been increasing in all Baltic States (Table 12), however they still remain much lower than the EU average. Low labour costs will remain the main competitive advantage in the Baltic countries. Average monthly earnings in Lithuania so far have been the lowest. In order to facilitate economic growth the increase of earnings should be stipulated by growing labour productivity. However earnings speeded up faster than labour productivity in all Baltic republics, (Tables 12, 13). Real labour costs are defined by labour unit costs, which take into account labour productivity. Although labour unit costs were the lowest in Lithuania (Table 14), the reason for that was lower average salary, but not the higher productivity. Although the GDP decreased in all Baltic States in 1999, labour productivity remained almost at the same level because of the decreased number of employed citizens.

It should also be mentioned that foreign investors evaluate not only the price of labour but also its quality. According to the EBRD survey, in this respect the Baltic countries lag behind advanced industrial countries (4). A substantial part of population is not adequately prepared to meet requirements of market economy.

Table 12**Average monthly earnings in the Baltic States, USD**

Country	1993	1994	1995	1996	1997	1998	1999	2000*
Lithuania	41.5	81.3	119.5	155.3	193.5	232.4	246.8	251.9
Latvia	79.4	131.1	166.7	177.6	203.4	229.8	264.6	289.6
Estonia	76.8	140.0	207.2	240.0	249.4	284.5	340.4	359.6

Source: IMF. International Financial Statistics Yearbook. 2000.

*National statistics.

Table 13**Labour productivity in the Baltic States (GDP/employed), USD**

Country	1993	1994	1995	1996	1997	1998	1999	2000*
Lithuania	1.6	2.5	3.7	4.8	5.7	6.5	6.6	7.4
Latvia	2.0	3.4	4.2	5.0	5.2	6.3	6.4	6.8
Estonia	2.2	3.5	5.4	6.5	7.0	8.1	8.3	9.4

Source: IMF. International Financial Statistics Yearbook. 2000.

* National statistics.

Table 14**Labour unit costs in the Baltic States
(average salary/productivity), USD**

Country	1993	1994	1995	1996	1997	1998	1999	2000*
Lithuania	25.5	32.2	32.6	32.6	33.7	35.8	37.3	34.0
Latvia	40.1	38.1	39.9	35.5	38.8	48.4	41.3	42.5
Estonia	34.2	39.7	38.3	36.7	35.6	36.1	41.0	38.2

Source: IMF. International Financial Statistics Yearbook, 2000.

* National statistics.

Legal and administrative business environment

Foreign investment may be attracted by various fiscal, financial, import duty and other allowances. Even if such incentives may look attractive, they will not solve fundamental problems. Problems in

customs, a long company registration process, difficulties in obtaining licences, restrictive labour regulation, excessive bureaucracy and other legal and administrative barriers may put serious obstacles for foreigners. These barriers increase fixed costs, uncertainty and risk.

A comparison the Baltic countries prove that business conditions in Lithuania and Latvia are worse than in Estonia. From Table 15 it can be seen that taxation system, relations with bureaucrats, excessive documentary requirements and customs trouble foreign investors the most. In the similar survey conducted in Latvia, majority of foreign investors and business representatives considered bureaucracy and corruption are major obstacles. Foreign Investment Advisory Service (FIAS) of the World Bank Group drafted the reports on administrative barriers to investment (17, 18). The conclusion was made that business in Lithuania faces relatively more rules, restrictions and regulations than in other Baltic countries and the most Central European countries.

Both countries undertook measures to reduce administrative barriers to investment. Following the conclusions of FIAS report in 1999 Latvian government approved the action plan to improve business environment in Latvia and many of initiatives are under way. In Lithuania the Committee for Improving Business Environment (the so called Sunrise Committee) was established, which identified the problem areas and made recommendation to the government regarding their resolution. However implementation of the proposed measures has been somehow delayed.

Lithuanian Development Agency asked foreign investors to give their judgement on business conditions and administrative barriers in CEE countries. The results of the survey showed that the best conditions for business are in Hungary, the Czech Republic and Poland (Table 16). Estonia is close to the leaders of the region, Slovenia and Latvia follow Estonia and Lithuania occupies the eighth position. The situation in Lithuania has been deteriorating while in Estonia and Latvia it has improved. When comparing Table 15 with Table 2 one can notice that countries occupy similar positions. The countries, where business conditions were seen as more favourable received more FDI per capita.

Table 15

Business conditions in Lithuania

Business condition	Evaluation (1-very good; 5-very poor)	
	1999	2000
Taxation system	3.72	3.91
Relations with bureaucrats	3.58	3.89
Documentary requirements	3.44	3.74
Land rent registration	3.0	3.52
Custom service	3.19	3.6
Company registration	1.91	2.08
Bank activity	2.5	n.d.
Private legal help	1.32	1.74

Source: Lithuanian Development Agency. Results of the investor's survey, 2000.

Table 16

Attractiveness of CEEC according to business conditions

Countries	Evaluation of Business conditions (1-very good; 5-very poor)	
	1999	2000
1. Hungary	2.10	1.73
2. Czech Republic	2.06	2.00
3. Poland	2.09	2.06
4. Estonia	2.18	2.13
5. Slovenia	2.25	2.38
6. Latvia	2.82	2.65
7. Slovakia	2.88	2.93
8. Lithuania	2.80	3.00
9. Romania	3.39	3.38
10. Bulgaria	3.50	3.50
11. Russia	4.21	3.63
12. Ukraine	3.94	3.71
13. Belarus	4.65	4.69

Source: Lithuanian Development Agency. Results of the investor survey, 2000.

General conclusions

Having examined many factors influencing investment climate in the three Baltic countries, we would like to single out the following weak points of Lithuania:

- ✓ *FDI policy in Lithuania was less liberal in its initial stages than in Latvia and Estonia. Differently from Latvia and Estonia, foreigners in Lithuania were not allowed to participate in the first privatisation stage.*
- ✓ *Lithuania's export and GDP are more dependent on the unpredictable eastern (CIS) markets. The government underestimated the impact of the Russian crisis, which led to painful consequences.*
- ✓ *Hesitation to re-peg litas to euro has been unfavourable for country's exporters.*
- ✓ *Labour costs are increasing faster than productivity, thus price competitiveness is diminishing.*
- ✓ *Not transparent privatisation process, inconsistencies in terms of sale of state-owned objects, the government's ambitions to regulate the market in line with its interests undermine the confidence of foreign investors.*
- ✓ *Plethora of regulations, excessive bureaucracy and frequent amendments of legislation increase unpredictability and impede business development.*
- ✓ *Heavy tax burden and excessive level of control by tax official and inconsistent interpretation of tax regulations hinder business development.*
- ✓ *Difficulties in acquiring land present a serious constrain for foreign investors.*

Some of the weak points mentioned here have been revealed after the Russian crisis. However, it is not reasonable to blame Russia for Lithuania's misfortune. The Lithuanian government did not take adequate steps to promote economic development and to prevent the crisis. Lithuanian economy was often stimulated using governmental investments from privatisation fund or borrowed means. It would be better if these means had been allocated to the infrastructure improvement, small and medium enterprises and innovative projects. Unfortunately, a great share of governmental investment went for supporting unprofitable public companies. By promoting internal consumption and not investing into

country's competitiveness, the Lithuanian government only prompted trade deficit. Euro depreciation against the US dollar broke country's competitiveness and after the CIS market had closed, Lithuania found itself in extremely tough conditions when, the current account deficit went up, state debt increased and foreign currency reserves diminished.

At the beginning the approach towards foreign investment was more hostile than inviting. For some time, foreign investors were excluded from the state privatisation process. The original investment laws did not show amicability for foreign capital. The situation changed when the government finally understood that foreign investment could fill its budget, could help restructure inefficient state-owned companies, create new workplaces and implement new technologies. The foreign investment laws were liberalised and the Lithuanian government started to invite foreign investors when selling public enterprises, which are up to their ears in debts. After privatisation of the Lithuanian Telecom in 1998, foreign investment volume almost doubled. However, it is not reasonable to expect that one deal will save the economy. The next deal was not that successful: the government had to commit to pay debts of "Mazeikiu Nafta"

Despite some corrupt habits, the Lithuanian government is strongly committed to reforms. Sometimes it is difficult to maintain continuity of reforms due to the frequent changes of the governments. However Lithuania's accession to the EU, liberalisation of economy, approximation of legal and administrative measures to those of the EU contribute to improvement of foreign investment climate. Following the World Bank recommendations, Lithuania established the Sunrise Committee whose proposals to reduce administrative barriers to business development were taken into account and are to be implemented.

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Summary

Foreign direct investment (FDI) has been often viewed as catalysis for the economic growth of transition economies. Despite of benefits from FDI, the success of countries in attracting FDI has been mixed. Whereas the amounts of FDI received by Hungary and the Czech Republic are substantial, many other economies have attracted very little FDI. FDI stock per capita in Lithuania is lower not only than that in Hungary and the Czech Republic, but also than in Latvia and Estonia.

In order to explain uneven distribution of FDI in the Baltic countries, the factors that determine foreign investment climate have been analysed. The priorities regarding foreign direct investment are underlined in the state FDI policies. General trends in the Baltic States favour liberalisation of FDI policies. Equal rights for foreign and domestic agents in Lithuania, however, were adopted some years later than in Estonia and Latvia. That explains why the initial FDI flows have been significantly lower in Lithuania than in the neighbouring countries. FDI policies are often co-ordinated with the trade policies. Liberalisation of trade policies in all Baltic States generated more foreign investment, because foreign investors are often engaged in export related projects. Since Lithuania has been the most dependent on the exports to the CIS markets compared to the other Baltic countries, Russian crisis had stronger effect to domestic and foreign economic agents in Lithuania. Furthermore the competitiveness of Lithuanian exports was undermined by the situation of litas appreciating against euro. As a consequence of Russian crisis and diminished competitiveness Lithuania suffered economic decline. Lithuanian government attempts to dampen the negative shock of Russian crisis consequences a serious deterioration of the fiscal balances. Fiscal deficit further led to the increase of Lithuanian foreign debt. Due to those inadequate policy responses towards Russian crisis, macroeconomic stability is perceived as more vulnerable in Lithuania than in Latvia and Estonia.

Privatisation has been often viewed as a tool to attract more foreign direct investment. However Lithuanian government excluded foreign investors from privatisation process in its initial stage. The approach towards foreign investors has changed, however privatisation process remained not transparent. In some cases government attempts to attract foreign investors undermine competition rules.

Legal business environment is very important for both domestic and foreign agents. According to the results of survey completed by Lithuanian development agency the most problems foreign investors encounter dealing with Lithuanian tax system, local bureaucracy, documentary requirements and customs. Lithuania occupies the eight position compared to the other Central and Eastern European countries according to the foreign investment climate. The situation in Lithuania has been deteriorating while in Estonia and Latvia – improving.

To sum up negative factors of foreign investment climate in Lithuania, compared to Latvia and Estonia, the factors are as follows: dependence on CIS markets, weak competitiveness, legal and administrative barriers to business, unfavourable tax system and some other. Empirical findings demonstrate that Estonia and Latvia have been a step forward in reforms and therefore more successful in attracting FDI. Recent favourable changes in legal environment in Lithuania and Lithuania's integration process to the EU suggest that foreign investment climate will improve in the future.

