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fax: +372 668 0954
e-mail: publications@epbe.ee
post: Eesti Pank
Publications Group
Estonia pst 13
15095 Tallinn
Estonia

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SUMMARY

Macroeconomic and External Environment

Global economic revival led by the United States accelerated in the middle of 2003, providing a positive impetus also to the financial markets: share prices began to rise while profitability of the European financial sector improved. Meanwhile, finding sufficiently profitable investment opportunities was a big issue since interest rates remained low. It was eventually also reflected in declining spreads in riskier bond market segments. Economic recovery also raised the issue of a possible rise in monetary policy interest rates. **Since economic growth in the euro zone is expected to remain moderate, the markets anticipate a rise of 25 basis points as late as at the end of 2004.**

Favourable international **interest rate environment** continued to support domestic demand in Estonia in the third quarter of 2003 and in the first quarter of 2004. Meanwhile demand for Estonia's exports also improved. However, a decline in the deficit of the balance of goods and services was still insufficient for reducing the current account deficit that was extraordinarily large both in international and historical comparison. Estonia's **economic growth** was consistently fast outpacing that of the euro zone several times. **Inflation rate** remained very low due to the absence of external price pressure. In 2004, however, the rate is expected to accelerate moderately mainly because of the rise in administrative prices.

Economic recovery in Europe, though still remaining quite moderate, is encouraging for Estonian **businesses.** Our companies view development opportunities optimistically; meanwhile businesses that are more closely integrated with the European markets see positive synergies in the new economic policy situation. Also real economy indicators inspire hope – industrial output and sales have remained large (average annual growth rates in the first quarter of 2004 were over 10%). Penetration of export markets is significantly influenced by the demand situation, which in recent times has been more favourable in the branches with comparatively smaller export volumes.

Corporate profitability remains good, even though growth in profits has halted compared to 2002. Companies with foreign ownership achieved comparatively better results.

Households' confidence in the future has turned more pessimistic. This was above all reflected by high inflation expectations. Meanwhile the situation in the labour market was consistently improving, and fast income growth has even been regarded as endangering economic balance and competitiveness. However, households' pessimism has been shown in the results of surveys (increased conservatism when purchasing durable goods) but not in retail sales nor in the activity in the housing market.

In conclusion, the external and macroeconomic environments fully support financial deepening in Estonia as well as growth in financial assets and liabilities of businesses and households.

Corporate Financial Conduct and Risks

Foreign capital, whose growth in some branches outpaced that of domestic bank loans and leasing facilities, played an important role in the Estonian corporate **financing structure** (50%). Meanwhile, favourable interest rates have induced some businesses to use domestic sources of financing increasingly more. Regardless of the form of financing, the areas of business focusing more on the local market (real estate, construction, and commerce) have received relatively more financing during the past year. Soaring direct investments into the export-oriented manufacturing is a clear sign of the manufacturing potential.

Commercial real estate risks are mainly related to the office blocks that are about to be completed and the associated threat of possible growth in vacant office facilities. Active development of commercial space in Tallinn has stopped for the time being while movement to other cities continues. Even though private consumption remains hefty, its reduction (e.g. due to increased loan burden) might put the threats associated with earlier financed sales areas back on the agenda.

Financial Conduct and Risks of Households

As we had presumed in the previous survey, the **net position of** households' **financial assets and liabilities** weakened even further in the first months of 2004: at the end of March loan and leasing liabilities outpaced financial savings by 2.5 billion kroons, i.e. by 11%. The developments so far give no reason to assume that the weakening of the net position might stop. An indication of accumulated risks is the fact that a decline in households' net savings amplifies financial sector risks and endangers macroeconomic stability.

Savings grew in line with the rise in incomes, which may be considered unsatisfactory considering the overall rate of financial deepening.

Regarding households, a significant phenomenon is the replacement of savings with housing investments that are mainly financed through bank loans. In a situation where **financing real estate purchases with loans is viewed as a way of saving** the principal risk lies in the fact that in the loan-taking euphoria high level of amortisation of the underlying assets (e.g. of older apartments) and possible liquidity problems during the loan period might not receive much attention. **The return on real estate investments might eventually turn out to be smaller than expected and even lower than earnings on liquid financial assets.**

The growth in households' **debt** is a pan-European phenomenon; in several new Member States the pace of loan growth has been considerably faster than in Estonia during the past year. Nevertheless, Estonian households' loan growth relative to GDP is one of the fastest, considering the present debt level, and falls behind only the respective figures of the United Kingdom and Ireland.

Assuming that housing purchases made at the end of 2003 and at the beginning of this year were partly prompted by the fear of price rise associated with the EU membership, it is not very likely that the rate of loan growth would accelerate at the second half of the year. Assuming that interest rate competition between banks is currently manifested only in a very limited market segment (families with comparatively higher incomes), it might actually materialise. Meanwhile banks also attract increasingly more borrowers with inferior payment ability, and loan conditions offered to these clients are not as favourable as it might seem on the basis of banks' advertising campaigns[1].

Taking into consideration favourable loan conditions offered by the banks, the **loan-servicing capability** of households is currently quite good, which is also certified by the high quality of loans. According to a financial obligations survey carried out by Ariko Marketing early this year, depending on the income group, more than 10 per cent of the residents with loan liabilities might have comparatively tight family budgets. The increased loan burden might reduce consumption to a certain extent, but it can presumably be compensated by the wealth effect manifested by the rise in asset prices. It is also possible that part of the housing loans have been taken for consumption purpose.

Due to extensive demand underpinned by favourable loan environment **price rise in some housing market segments** has been faster this year than in 2003, amounting to 20%. Considering the fact that most of the transactions have been made with residential space that is rather depreciated, the secondary market may lose its liquidity in the longer term (or in case of systemic payment difficulties of households). Meanwhile the situation has remained stable in the market of new apartments, but if the number of available new apartments plunges, this might create a supplementary pressure towards a rise in the prices of standard apartments.

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[1] Also a rise in interest rate differences between riskier and less risky loan projects indicates that the latest advertisting campaigns have been targeted mainly at more solvent clients.

Banking Sector

The bigger than expected **profitability** in the banking sector indicates high efficiency and successful expansion of business activities. Halting decline in spreads upholds profit outlooks of the banks, even though in the short run such decline continues due to competitive pressure as well as the depreciation of the portfolio. The confidence credit associated with the EU accession along with a rise in the sovreign rating as well as credit ratings of banks has provided an opportunity to reduce financing costs and continue aggressive portfolio expansion. Besides, the return is also supported by increasing service fee income primarily from payment card transactions and electronic channels.

The threats associated with fast loan growth have not yet materialised. Regardless of the fast growth in loan burden the **quality of loans** has not deteriorated. Meanwhile the overall positive picture has also been affected by the soaring share of housing loans since the resulting high level of secured loans enables to reduce expected loan losses. On the other hand, loan-servicing is being supported by declining interest costs as well as growth in real earnings. An indication of such development is the **growing risk tolerance of banks**, which is reflected in more active financing of the sectors that have so far been under special attention (trade, commercial real estate) and entrance into riskier markets.

The surging ratio of **external financing** dictated by fast loan growth has made banks' liabilities increasingly fickle. In order to balance it out, the banks have started to apply more flexible liquidity management by replacing bonds with reverse repurchase transactions, which offer fast turnover. Such developments make the banking sector more vulnerable to the risks arising from the external environment, particularly interest rate and liquidity risks. **An analysis of possible risk scenarios has shown that if the current dynamics continues, just a 3.5% interest rate rise in external financing (assuming that the price of assets will not change) will be sufficient for the banks to descend to the loss threshold year-on-year.** For the capital adequacy ratio to fall to the minimum level the price of external financing should rise 10%, i.e. increase by more than 7 percentage points from the current level.

Notwithstanding the assumption that in case of difficulties parent banks would extend them unconditional help, the changed structure of assets and liabilities sets higher requirements to internal risk management of the banks.

Securites Market and Other Financial Intermediaries

The **bond market** remained passive both in terms of new issues and secondary market turnover. A certain rise in the issues of minor issuers whose loan quality is lower is noticeable against the backdrop of a general decline in the volume of issues, which indicates that in the expansive liquidity environment investors' risk premiums have dropped.

Similarly to the other stock exchanges in the Central and Eastern European countries that have joined the European Union, a fast rise in **stock prices** accompanied by a certain growth in turnover continued on the Tallinn Stock Exchange, and the market value of the shares traded there soared almost by 60% year-on-year. However, further price rises are restricted due to the limited volume of liquid shares arising from strategic stakes and the high level of prices. Because of the significant share of major shareholdings the departure of companies from the stock exchange was a dominant phenomenon.

Growth in **investment funds** has slowed down since the second half of 2003. Due to surging Central and Eastern European stock exchanges and a recovery in the stock markets of developed countries, investors' interest has switched from funds that invest into bonds, whose returns have declined, into stock market funds offering higher yields but also higher risk levels. The volume of II pillar pension funds, which have posted stable growth, reached the threshold of a billion kroons by the end of 2003, thus gaining a more significant role in households' savings. Due to strict investment restrictions and scarce domestic portfolio diversification

opportunities the investments of mandatory pension funds have been predominantly channeled to foreign markets.

In the conditions of extensive domestic demand, **the insurance sector** increased operating volumes significantly, which, accompanied by rising efficiency, considerably boosted profitability. Due to recovery in major stock markets and tougher competition in the investment and pension products market, also insurance companies have started to boost their stock positions.

Payment Systems

Eesti Pank's **settlement system of interbank payments** worked efficiently and safely. All the glitches in the computer system were eliminated reasonably fast, the rate of processing was high and did not endanger financial stability. Regardless of the soaring number of interbank payments, the share of such payments among all payments made through the banks have declined due the high concentration of Estonia's banking sector.

The structure of **payment methods** used in Estonia today is similar to that of the Nordic countries, even though Estonia still falls behind the EU average regarding electronic payments per inhabitant. Meanwhile Estonia has more automated teller machines per person than there are in the Nordic countries. The changes in the financial behaviour of the people are above all related to the tempestuous development of Internet banking and bank card payments. Regarding utilisation of Internet banking facilities, Estonia is at the forefront in Europe, also the use of bank cards in paying for purchasing is fast approaching the Nordic level. Banks gain from the popularity of card payments since service fee incomes go up.

Summary. Financial Stability Risks

Taking into consideration the increased loan burden of families, a decline in real income due to the accelerating inflation rate in the second half of 2004 as well as the beginning of the interest rates growth cycle in Europe, the message of Eesti Pank released in autumn 2003 about the negative side effects of the loan burden is still topical. Concerning fast growth in the loan burden, Estonia also stands out in international comparison. Even though studies do not indicate a strong connection between the level of debt and financial crises, an increased debt burden makes the accounts of households more vulnerable and aggrevates other macroeconomic problems (deterioration of the external balance, decline in corporate profitability, a possible decrease in private consumption, etc.).

The impact of the measures adopted in autumn 2003 on curbing the demand and supply of housing loans remained weak. Although the message received quite broad coverage in the media, it was followed by no obvious results. According to the Financial Supervision Authority, banks updated their crediting standards already a year ago after receiving a previous letter signed jointly by Eesti Pank and the Financial Supervision Authority. This joint letter probably did not considerably change the risk behaviour of banks, rather reminded them of the fact that the risks have remained. Although there is currently no reason to have doubts about the conservatism of loan-issuing conditions at banks, housing loans sales show that it was premature to claim that there were not many solvent clients left. **By the end of April, i.e. in just a third of the year, banks had achieved an average of 42% of the loan growth predicted for the current year. Hence the behaviour of banks was dominated by group-level sales objectives and codes of practice.**

Eesti Pank's proposals to hedge risks in the retail loan market and review state measures that promote borrowing were not supported by the Government of the Republic. Eesti Pank maintains the view that in the current market situation where credit availability is good the government's policy might above all focus on

helping single social groups (e.g. by restricting the target group of Kredex' products) or contribute to reducing the vulnerability of the public to interest risks[2]. If the current policy is maintained, we must hope that while fast economic growth continues and the increase in residents' earnings outpaces a possible rise in interest costs, there will be no major problems in loan-servicing. **Meanwhile the society at large takes upon itself possible social risks associated with high loan burden (e.g. losing residential space), which might emerge under a different economic development scenario.**

The upcoming accession to the EU made the housing market unusually active at the beginning of 2004. Thus there is a slight possibility that loan demand might decrease in autumn. Meanwhile escalating competition between banks promotes sustained loan growth. The pressure on the banks' income base is also strong because of high interest rates. Bank owners' earnings expectations keep supply conditions favourable and any restrictions on resourses, which would reduce the possible loan volume, are not foreseen in the near future.

All in all, Estonia's financial stability can be currently evaluated as good. There have been no significant problems in the operations of the financial sector, nor are such problems foreseen in the near future. Meanwhile fast growth in households' loan burden and possible associated adverse side effects involve risks which must be acknowledged and actively dealt with. **Since problems might rather emerge on the borrowers' side, the government plays a determining role. The state policy supporting the housing market needs to be updated: borrowers motivation must be channeled from its current focus on obtaining a loan to such a behaviour that would promote management of loan risks.**

In order to earn big profits also in the current low-interest conditions, the banks have – by way of new development – turned their attention to markets involving higher risks. Whether entering riskier markets with the support of lower risk margins brings expected revenues will be evident in the more distant future.

[2] For example, the Treasury of the United Kingdom is planning measures to motivate people to take out loans with fixed interest rates.

I GLOBAL ECONOMY AND ESTONIAN ECONOMY

External Environment

Global Economic Cycle

Late summer and early autumn in 2003 was the turning point in the global economic cycle. After a standstill in all major economic areas the economy started to recover again. The recovery was the briskest in the United States, where annual economic growth amounted to 3.1%, as well as in Japan (2.7%). The recovery was the slowest in the euro zone, where economic growth was just 0.4%. Growth rates slowed down also in Finland and Sweden where production volumes declined. Economic growth forecast for the United States in 2004 stands at 4.6% while the economy of Japan is expected to grow by 2.8% and that of the euro zone by 1.7%[1].

Annual **industrial production** growth indicators, which had been negative in the meantime, also turned positive at the start of 2004, amounting to 2.7% in the United States and to 2.1% in the euro zone (see Figure 1.1). In Sweden, too, growth in industrial production accelerated again. In Finland, however, product output has in some months even declined.

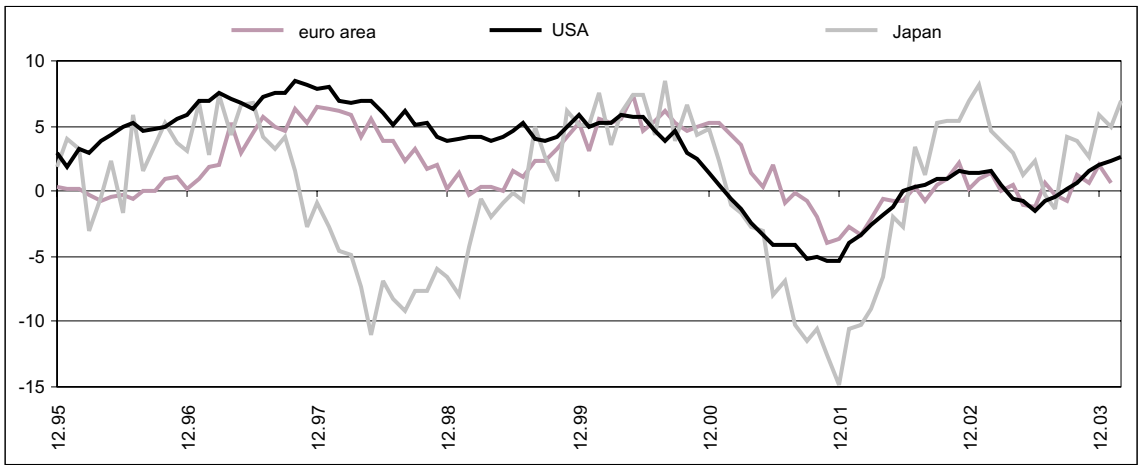

Figure 1.1. Annual growth in the industrial production of the euro area, the United States, and Japan

In the countries posting faster economic growth also **employment** has gone up. For example, in the United States unemployment fell from 6.3% in June 2003 to 5.7% in March 2004. In the euro zone, however, unemployment has remained stable at 8.8% since 2003. In Finland, too, unemployment has remained on the 2003 level, but has grown in Sweden (in February the unemployment rate was the highest in four years – 5.6%). **Consumption readiness** of households was strong both in Finland and Sweden in 2003, but due to the deterioration in the labour market the confidence of Swedish households has declined.

[1] Consensus Forecasts, March 2004.

Meanwhile increased economic activity did not manage to halt further growth in **the budget deficit** in the United States and the euro zone. In the United States, the deficit soared to 3.6% of GDP by the end of 2003 while in the euro zone the budget deficit in Germany and France outpaced the 3% limit established by the Growth and Stability Pact. Besides the countries above, the European Commission forecasts a deficit in excess of 3% also to Italy, the Netherlands, Portugal, and Greece in 2004.

Inflationary pressure in larger economic areas was insignificant. Even though rising commodity prices (crude oil rose to the highest level in 13 years in March while the commodity prices (CRB index) shot up the highest point in 7.5 years) put pressure on the input prices of US companies[2], much of the effect was offset by cheap imports from Asia. In the United States, annual growth in consumer prices slowed down to 1.7% in February-March 2004 while in Japan a slight deflation (up to -0.5%; see Figure 1.2) was sustained at the end of 2003 and at the beginning of 2004.

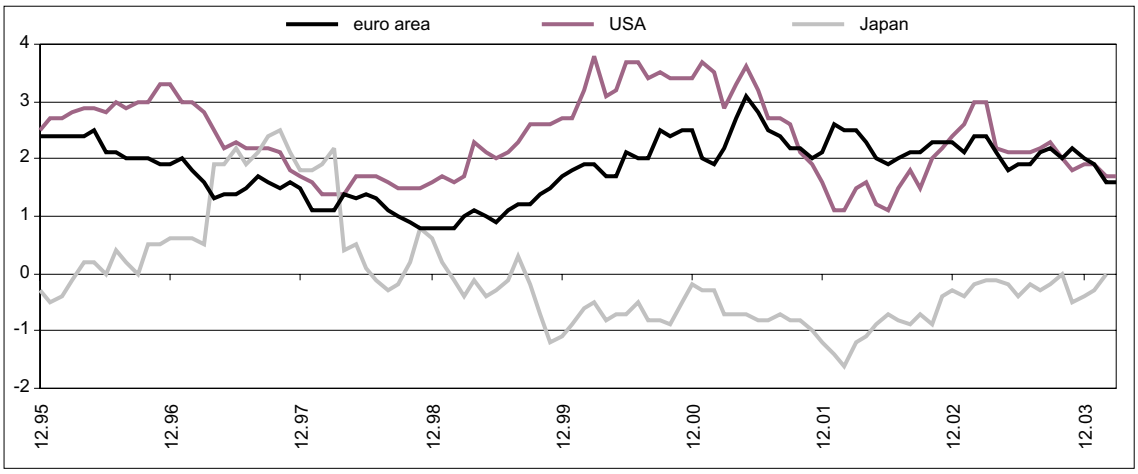

Figure 1.2. Consumer prices in the euro area, the United States, and Japan (%)

In the euro zone, the inflation rate declined to 1.6% by February-March 2004, which was the lowest level since 1999. Finland's inflation rate was among the lowest in the euro zone and arising from the changes in the currency exchange rate and taxation, in March the country posted a slight deflation (-0.4%) for the first time ever. Also in Sweden, where the inflation rate had stood at a comparatively stable level of 2% in 2003, the indicator has consistently declined in 2004 (stood at 0.4% in March). Therefore Sweden's central bank reduced key interest rates on 1 April by 50 basis points – to 2%.

International Financial Markets

Stock markets have witnessed a growth trend in recent quarters, which has been underpinned by global economic recovery and improved outlooks. Summing up the period under review[3], growth in Finnish stock prices compared to the average of the euro zone and Sweden remained rather modest (see Figure 1.3). This was partly related to the announcement concerning a slump in Nokia's sales. On a global scale, further rise in the stock markets at the end of the first quarter was hampered by the fear that the growth phase of the economic cycle might run out in 3–6 months. Besides, heightened political tensions in Iraq and the terrorist attack in Madrid had a certain negative impact on the markets. Owing to the growth phase of the economic cycle, principal indicators should still encourage stock investors in the near future; meanwhile some markets might differ greatly from the rest.

[2] Due to the decline in the dollar exchange rate the pressure on the input prices of euro zone companies was immaterial.
[3] The review covers developments from 30 September 2003 to 14 April 2004.

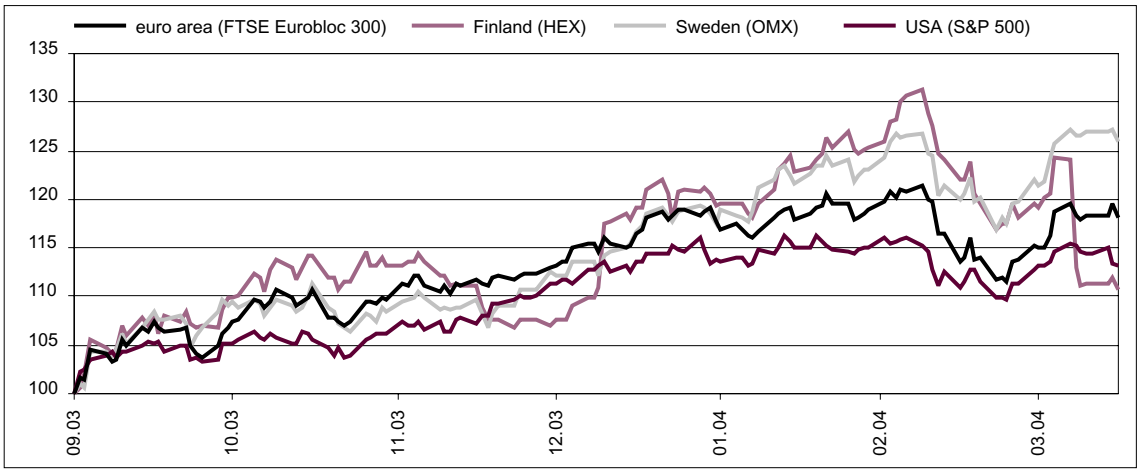

Figure 1.3. Stock indices in the United States, euro area, Sweden, and Finland (30 September 2003 = 100)
Source: EcoWin

Money markets. Central banks' monetary policies vary in different countries, depending on the course of the recovery process:

- The European Central Bank and the central banks of the United States and Japan maintained neutral monetary policy, estimating possible risks to economic growth and inflation as being relatively balanced;
- Central banks in the countries showing faster economic growth (Australia, New Zealand, and the United Kingdom) embarked on tightening their monetary policies by raising key interest rates;
- The central banks of Sweden, Norway, and Canada lowered key interest rates by 75 basis points.

Short-term (3 months) interest rates in the United States remained roughly on the previous level (see Figure 1.4). Future transactions show that by mid-April the market had assumed that key interest rates would rise by 25 basis points by September 2004 and by 50 basis points by November-December. In the euro zone, the 3-month interest rate fell since the market had assumed for a while that the key interest rate might be lowered in 2004 because of slow economic growth. By mid-April such a prospect had essentially been replaced by an expectation that with some 80% certainty the European Central Bank would raise its key interest rate by 25 basis points in the fourth quarter of 2004.

10-year interest rates fell in the United States, the euro zone, and Sweden until mid-March 2004 to be followed by a swift rise because of the US labour market indicators (see Figure 1.5).

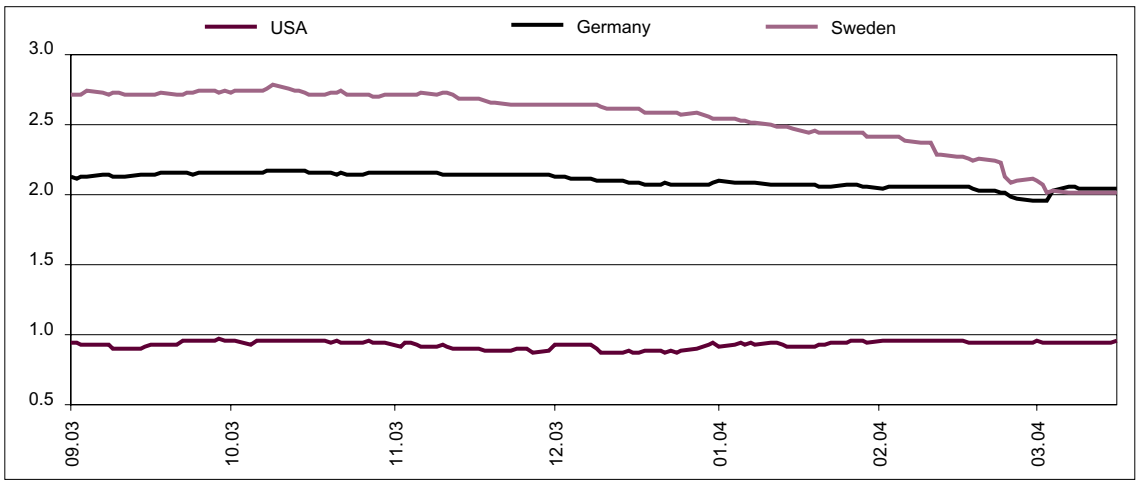

Figure 1.4. 3-month interest rates in the United States, Germany, and Sweden (%)
Source: EcoWin

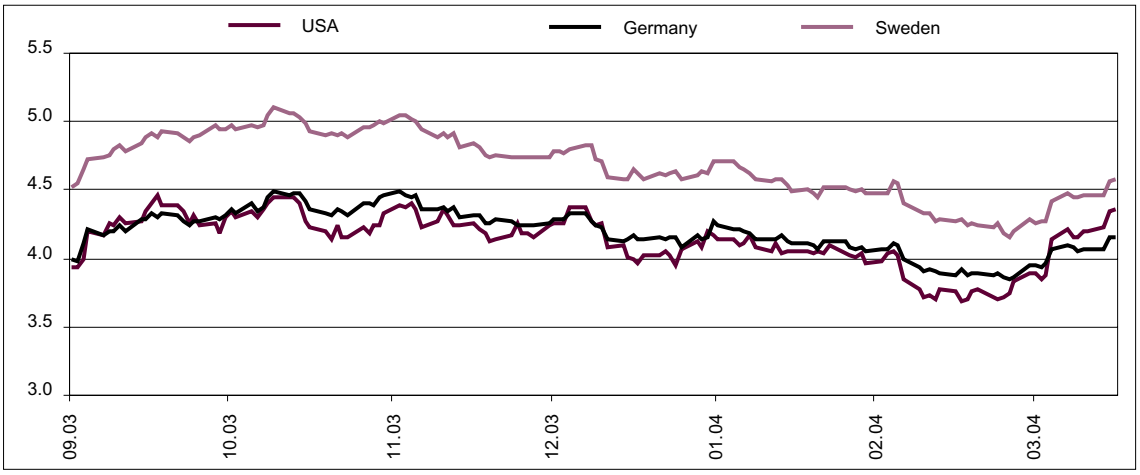

Figure 1.5. 10-year interest rates in the United States, Germany, and Sweden (%)
Source: EcoWin

In the currency markets, the US dollar continued to drop against other leading currencies in the fourth quarter of 2003. The trend weakened in the first quarter of 2004, contributing to major fluctuations in several currencies. Four principal factors can be distinguished in the change of the euro exchange rate:

- The euro zone is lagging behind in the current economic cycle while economic activity has considerably increased in the United States and Asian countries;
- Changes in interest rate differences have been unfavourable to the euro since expectations of a higher key interest rate have shifted towards a later period;
- According to the data from recent months, capital has flown out of the euro zone;
- The status of the euro as a lower-risk currency compared to the dollar weakened because of the terrorist act in Madrid.

The Swedish krona weakened against the euro until the end of March 2004. Loosening of the monetary policy on part of the central banks partly contributed to the process. In April the krona began to strengthen again due to weakening fundamental euro indicators (see Figure 1.6).

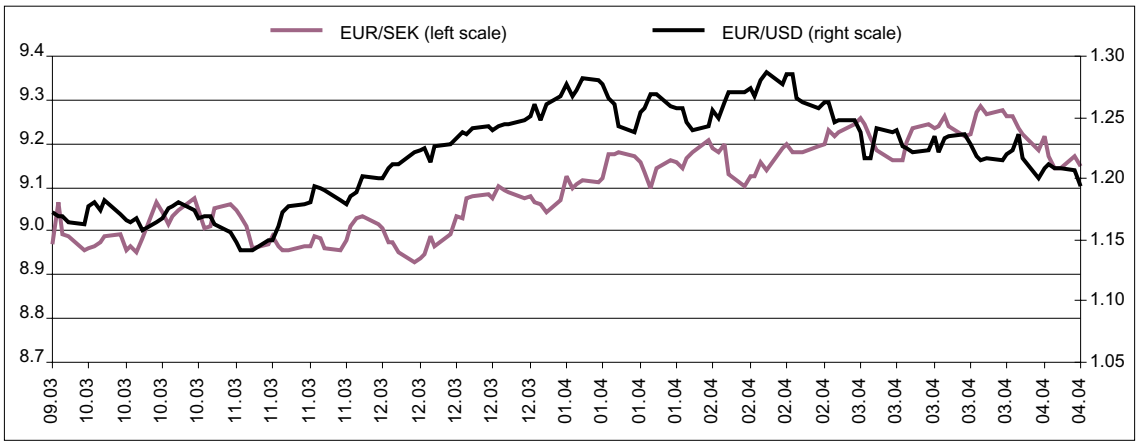

Figure 1.6. Exchange rate of the euro against the Swedish krona and the US dollar
Source: EcoWin

Estonian Economy and Macroeconomic Risks

Economic Growth and External Balance

In the second half of 2003 **the pace of economic growth** started to recover gradually, achieving a near-potential level in the fourth quarter (5.7%). **All in all, Estonia's economic growth outpaced that of the**

euro zone by 4.4 percentage points in 2003, which indicated that comparatively fast convergence was sustained also against the backdrop of sluggish global economy (see Figure 1.7).

Favourable international interest rate environment consistently supported domestic demand in Estonia. Meanwhile the balance of payments statistics indicates that the expansiveness of domestic demand has somewhat declined: even though **foreign trade** deficit was larger in the second half of 2003 compared to the preceding period, it was compensated by growth in the balance of services surplus. As a result, the goods and services deficit, i.e. the rate by which internal demand exceeded the gross domestic product, declined to 9% of GDP in the second half of the year.

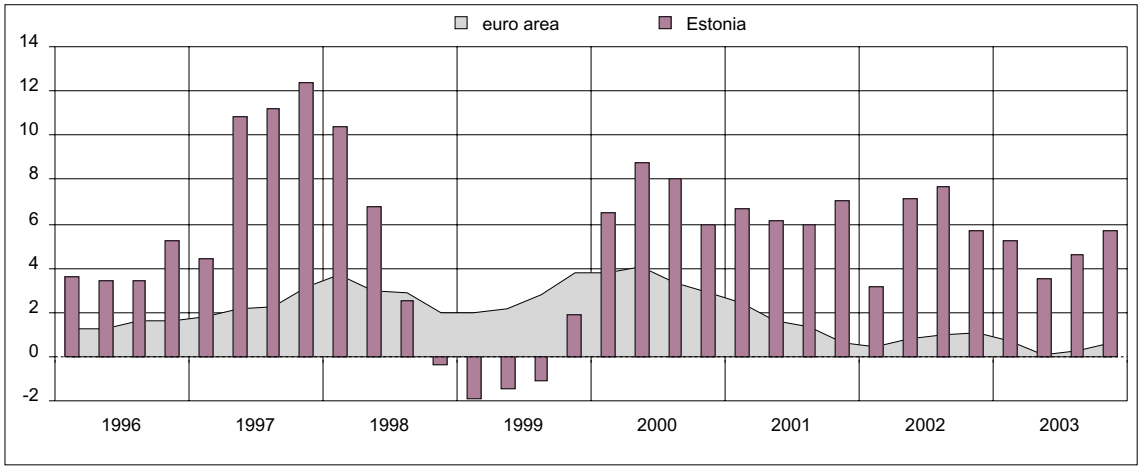

Figure 1.7. Real growth of GDP by quarters (%)
Sources: Statistical Office of Estonia; Eurostat

However, a certain decline in the deficit regarding goods and services was not sufficient to offset the increase in the outflow of net earnings, which is why the **current account deficit** soared to 13.7% of GDP (see Figure 1.8). Also Estonia's investment position deteriorated: compared to the end of 2002 the foreign debt to the GDP ratio surged by some 10 percentage points (to 75% of GDP). **In order to balance out the economy it is vital that the balance of savings and investments would improve and that internal demand driving the debt obligations would halt in the coming periods.**

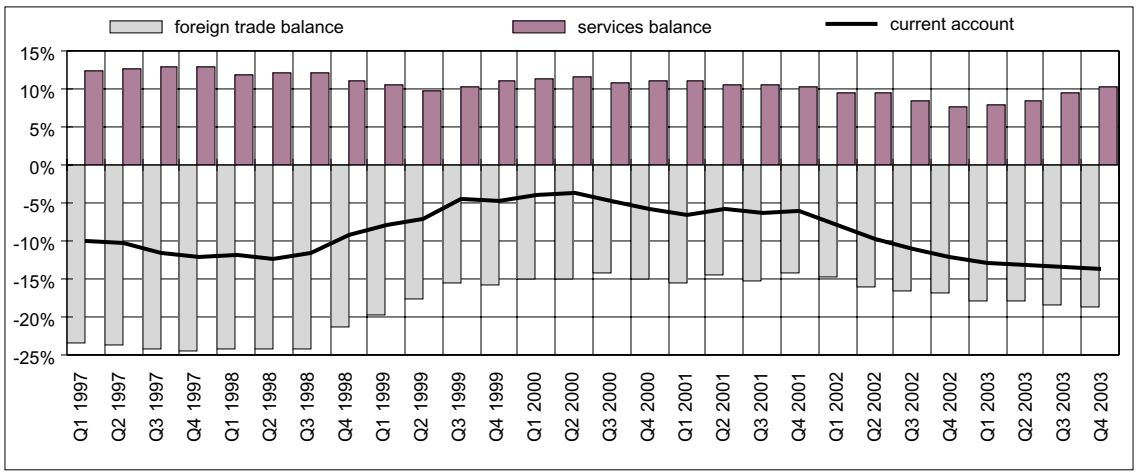

Figure 1.8. Foreign trade balance, services balance, and current account balance relative to GDP (4-quarter average)

Of demand components, economic growth was traditionally mostly supported by private consumption and soaring investments. While **private consumption** increased in line with GDP, **investment** growth rate was demonstrated by the rise in the respective ratio to around 33% of GDP. Similarly to earlier periods, the second half of 2003 saw mainly investments into domestic areas of business (including major one-off energy and transport projects). Faster growth in investments into the closed sector covered the decline in investments into branches more directly related to manufacturing for exports.

Inflation

External price pressure continued to decline in the second half of 2003. Besides modest global demand, the inflation rate was kept low also by a rise in the nominal exchange rate of the euro against most major currencies as well as declining food and fuel prices. Of domestic factors, an additional inflation-curbing element was the absence of a rise in administrative prices. The joint effect of the listed factors curbed annual consumer price rise to 1.3% (see Figure 1.9) in 2003.

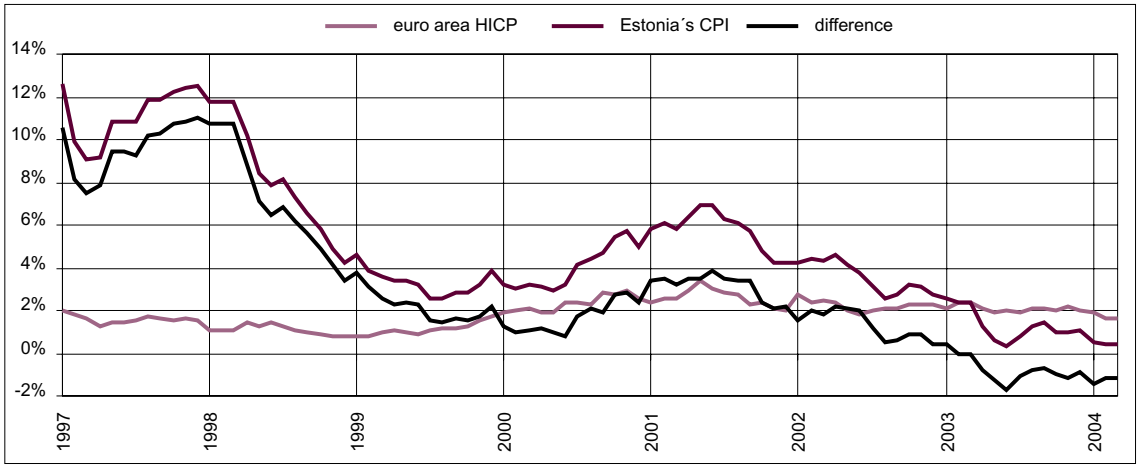

Figure 1.9. Annual growth of consumer prices in Estonia and the euro area
Sources: Statistical Office of Estonia; Eurostat

Regardless of high inflation expectations that had characterised the beginning of 2004, pressure on price rise was absent in the first four months. The effect of the factors that had supported low inflation rate last year (strong euro, weak demand environment, stable oil price in euros) has not yet faded.

Corporate Business Situation

Confidence

According to the Estonian Institute of Economic Research, Estonian companies became more optimistic about their development outlook in the autumn and winter of 2003 (see Figure 1.10). The positive trend continued also at the beginning of 2004. Differently from earlier, this time the growth in optimism was based not directly on the indicators reflecting demand (e.g. the number of orders in domestic and foreign markets) but above all on estimates of future periods.

The indicators collected in March 2004 show that the estimates of all the monitored branches of economy have improved compared to December, though partly due to seasonal reasons. However, since the estimates of industrial, construction, and trading companies alike were higher than in March 2003, one might conclude that economic activity has grown even if seasonal factors are left aside.

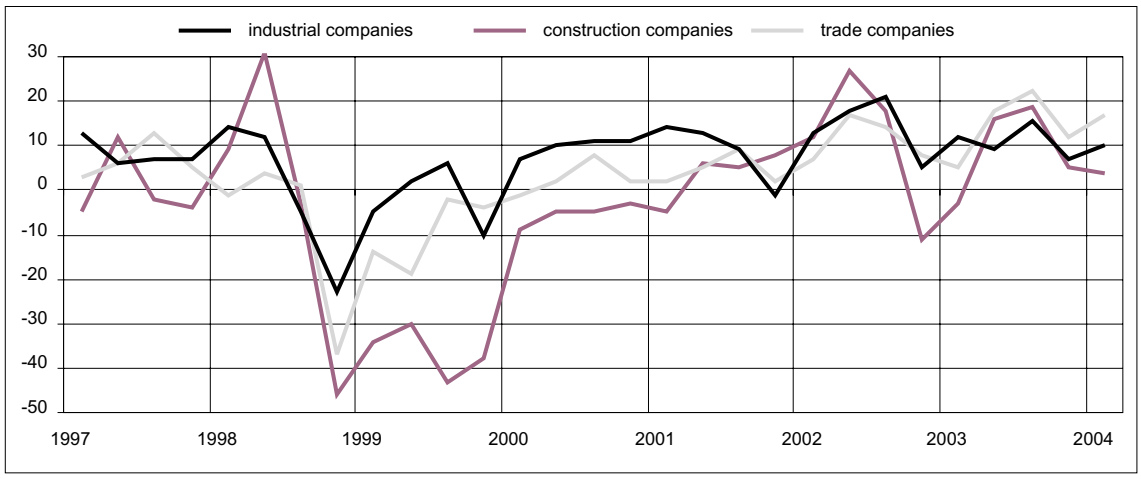

Figure 1.10. Confidence indicators of Estonian companies
Source: Estonian Institute of Economic Research

In the second half of 2003 also external demand estimates of **industrial companies** became more optimistic (see Figure 1.11). A more positive estimate of production and staffing needs in the following months has most likely been based on the positive synergy resulting from the accession to the EU.

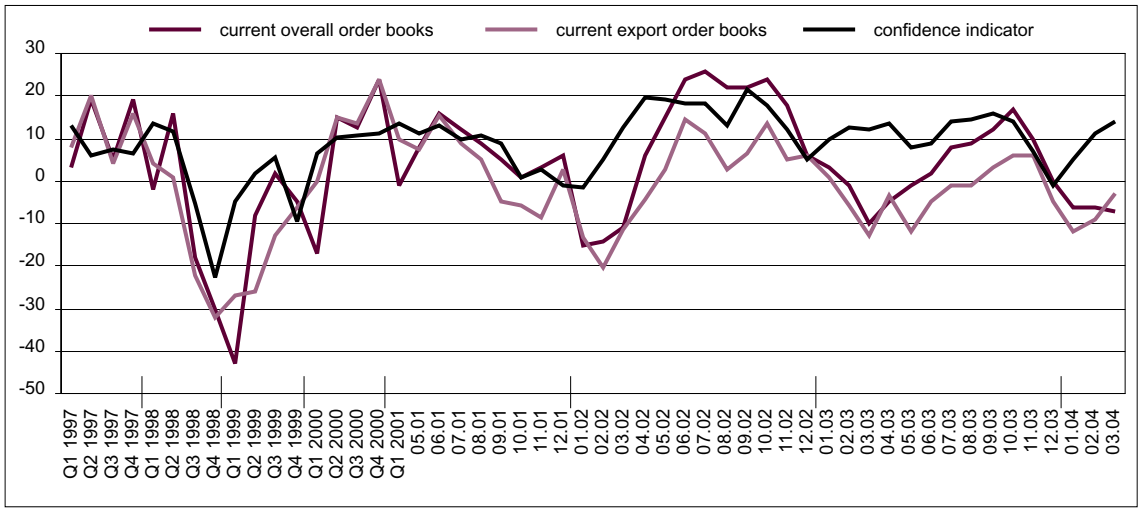

Figure 1.11. Production demand of industrial companies and confidence indicator
Source: Estonian Institute of Economic Research

Industrial Sales and Investments

The development of real indicators verifies that the confidence indicators reflecting the expectations of companies are valid. In the second half of 2003 both exports (from 9.2% in the first half of the year to 10.8%) and sales (from 9.3% to 10.8%; see Figure 1.12) accelerated in the manufacturing.

Due to diverse demand in different branches **growth in exports** was very different per commodity groups and target countries. While exports in chemicals, metal, and mineral products soared by more than 20% and that of machines and equipment as much as 33%, growth remained more modest in more export-oriented branches (timber products 8%, furniture 14%, and textiles 1.5%). Meanwhile direct exports in food products even showed negative growth (-1%).

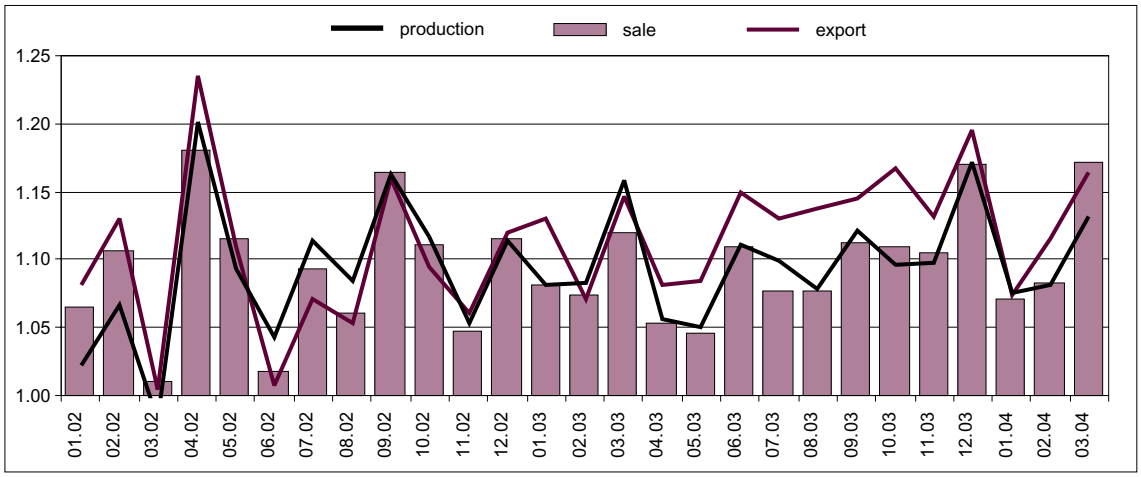

Figure 1.12. Production and sale indices of manufacturing
Source: Statistical Office of Estonia

Corporate **investments** statistics shows that investments into primary sector branches declined. Investments into secondary sector branches (including manufacturing) remained approximately on the level of 2002, meanwhile investments into the traditionally significant branches for Estonia's exports – timber, paper, and furniture production – were smaller in 2003 than they had been in previous periods (see Figure 1.13). Investments into transport, storage, communication, energy, gas and water supply, and construction increased.

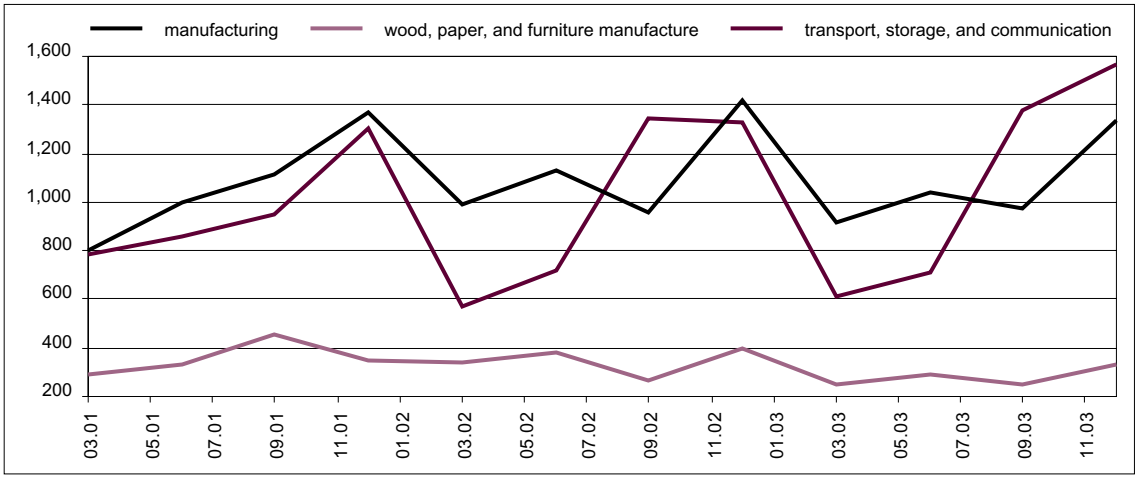

Figure 1. 13. Investments in tangible fixed assets (EEK millions)
Source: Statistical Office of Estonia

New Companies and Bankruptcies

In December 2003 the **number of bankruptcies** (see Figure 1.14) that had remained stable for several months shot up again. Still, there were fewer bankruptcies (238) than in the preceding three years. Also the first quarter of 2004 was characterised by a larger than average number of bankruptcies. More than a third of the bankrupted companies were operating in the construction business. Termination of operations was most likely related to the specifics of the branch and does not indicate serious problems in the area.

In 2003, most of the **new companies** were born in commerce (50% of all the new companies) but the rate of growth was the fastest (121%) in the construction business. By the end of the first quarter of 2004, the number of trading companies had grown by 346 from the first quarter of 2003.

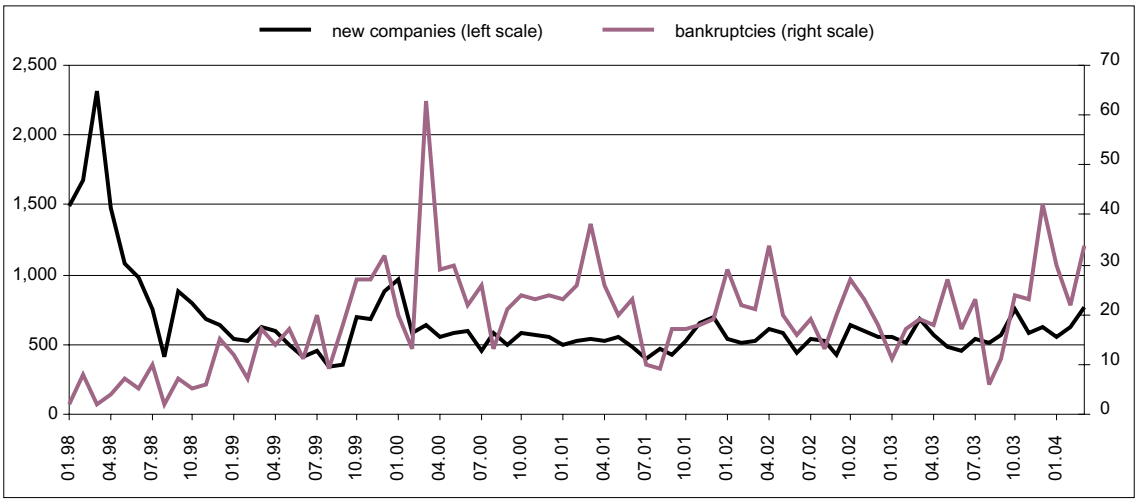

Figure 1.14. New companies entered in the commercial register within a month and bankrupt companies

Corporate Profitability

According to preliminary estimates, overall corporate profitability was quite high in 2003. This is indicated by comparatively good sales figures and also corporate optimism reflected by industrial confidence indicators.

In 2003, growth in corporate profitability was liable to have remained smaller than that of GDP: **nominal GDP** increased by 7.5% in 2003, but the concurrent rise in **operating surplus and mixed income** was 5%. Also preliminary financial indicators verify a halt in profit growth. In the core business areas of the economy **total profitability** declined to a certain extent. Compared to 2003, hotels and catering sector as well as local and foreign companies operating in agriculture showed more modest results.

Economic Situation of Households

Labour Market

In 2003, positive developments occurred in the labour market: compared to 2002, the residents were more active and employment increased while unemployment declined. The average annual **unemployment rate** fell to 10%, which is the lowest in five years (see Figure 1.15). The decline in the **number of registered unemployed** continued to fall also in the first quarter of 2004, which enables to predict a further fall in unemployment.

Employment growth accelerated in 2003, amounting to an annual average of 1.5%. Compared to 2002, an average of 8800 employed were added to the workforce. Growth was the largest in manufacturing, construction, and health care. Meanwhile the biggest decline in employment occurred in agriculture and commerce.

Regardless of the record low inflation rate, fast **wage growth** continued in 2003, which amounted to an annual average of 9.7% (see Figure 1.16). The wage increase was the fastest in the servicing sector, but the rise amounted to 9.6% also in manufacturing.

Accelerated growth in labour costs is particularly inadvisable because of the cyclical decline in overall economic growth, and it was an additional source of economic imbalance in 2003. **Bringing wage rise in line with profitability growth is a key issue in the coming periods.**

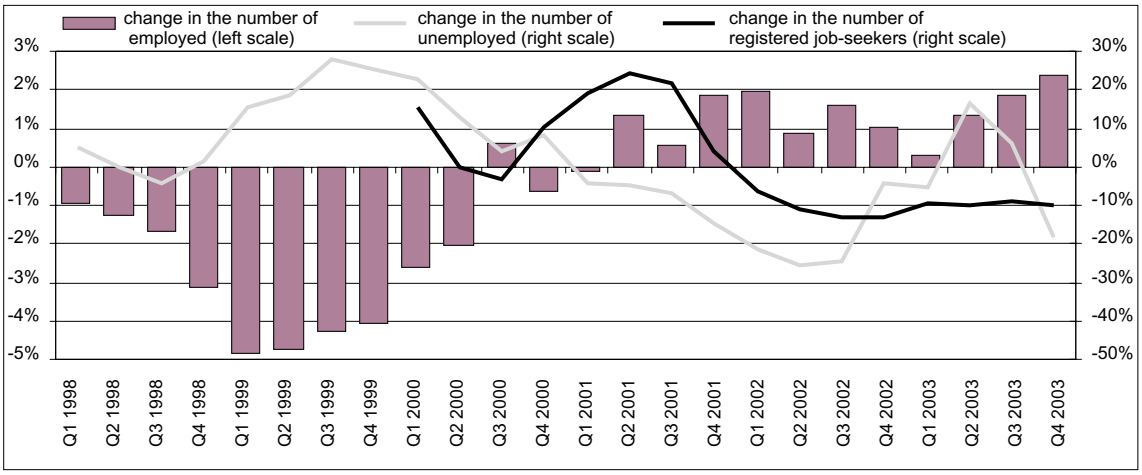

Figure 1.15. Annual change in the number of employed and unemployed persons and registered job-seekers
Source: Statistical Office of Estonia

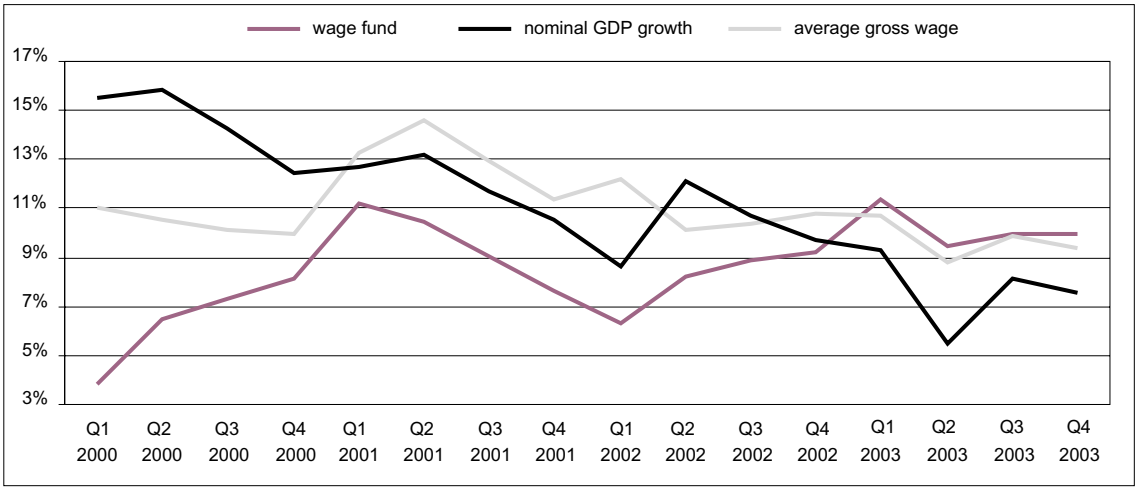

Figure 1.16. Annual growth of average wage, wage fund, and nominal GDP growth
Source: Statistical Office of Estonia

Confidence and Family Budget Surveys

After a prolonged peak the trend in the **household confidence indicator** issued by the Estonian Institute of Economic Research turned negative as of mid-2003. According to estimates, household confidence was reduced mainly because of high inflationary expectations related to the EU accession. Meanwhile the fear of becoming unemployed decreased (see Figure 1.17).

According to **the household budget survey carried out by the Statistical Office,** net income of a household member soared by 12% in 2003 while expenditure grew by 3%. Average expenditure accounted for 91% of the income. The share of food and housing costs declined further – to 45.5%. The biggest rise occurred in communication and transport spending. Even though due to some differences in methods[4] household member statistics does not cover total private consumption[5], the slowdown in regular consumer spending might still indicate an indirect relationship with the increased repayment of housing loan liabilities.

[4] The survey of the Statistical Office does not show loan payments as costs, nor have loans been shown as income. Neither does expenditure include costs related to obtaining housing nor car leasing payments.
[5] Statistical differences are significant: (1) GDP private consumption growth in 2003 was 7.6%; according to household statistics, however, it was 3%. (2) The difference in volume was as much as 1.5 times.

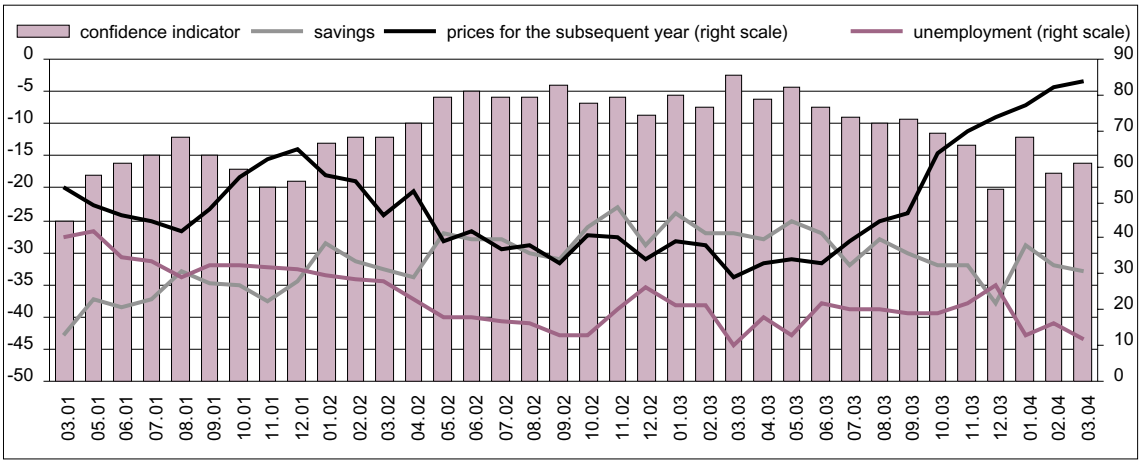

Figure 1.17. Consumer confidence indicators
Source: Estonian Institute of Economic Research

According to the estimates reflected in the **Estonian Institute of Economic Research consumer barometer,** the intentions of private persons to make big investments (buying a car, buying or building a house; see Figure 1.18) have significantly declined in recent periods. If such intentions materialise in real terms, the more balanced conduct of households might become a key factor in balancing out the whole economy.

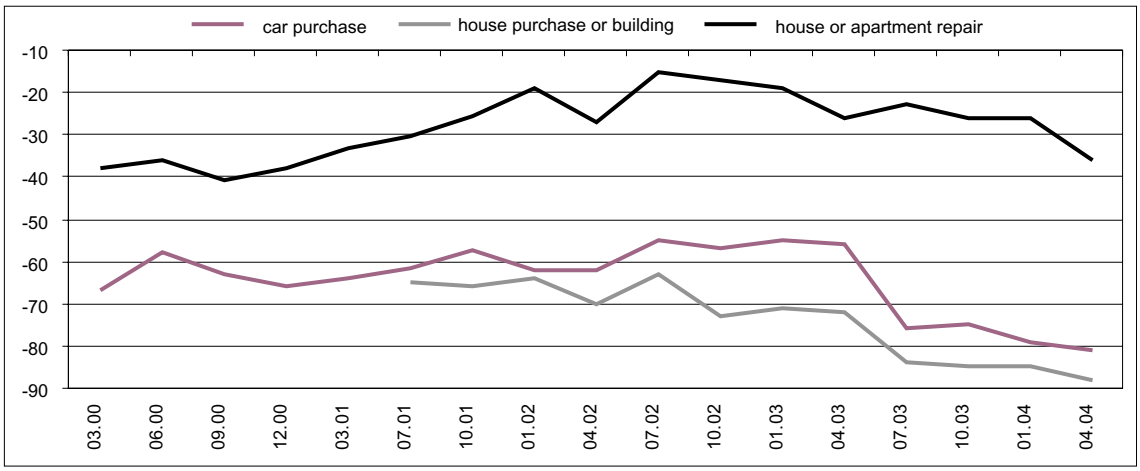

Figure 1.18. Households' cost estimates
Source: Estonian Institute of Economic Research

Structure of Financial Intermediation and Financial Deepening

Expansive monetary policy environment has also been reflected in the **financial deepening** in recent years. Low interest rates have promoted more extensive borrowing while saving is not very attractive. Extensive loan demand on part of private persons, which is being affected by favourable interest rates (loan burden as a ratio to GDP has increased by 5.7 percentage points in the last four quarters) has played a major role in the 9.6 percentage point growth (57.2% to GDP in the first quarter of 2004) in the loan burden of the entire real economy sector.

Banking continues to dominate in the structure of Estonian financial intermediation, however, while the rate of bank loans went up consistently both in 2003 and in the first quarter of 2004, the rate of leasing financing

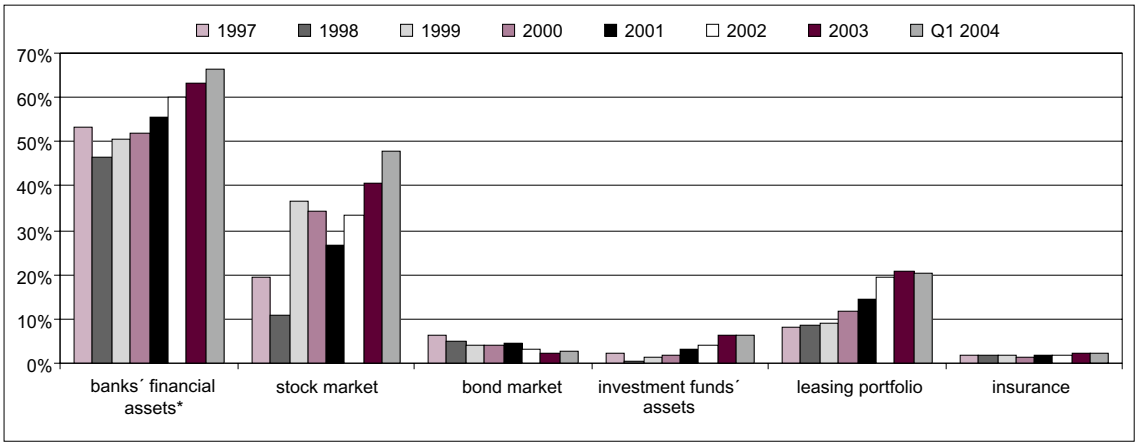

Figure 1.19. Structure of financial intermediaries (% relative to GDP)
* except loans issued to financial institutions (mostly leasing companies)

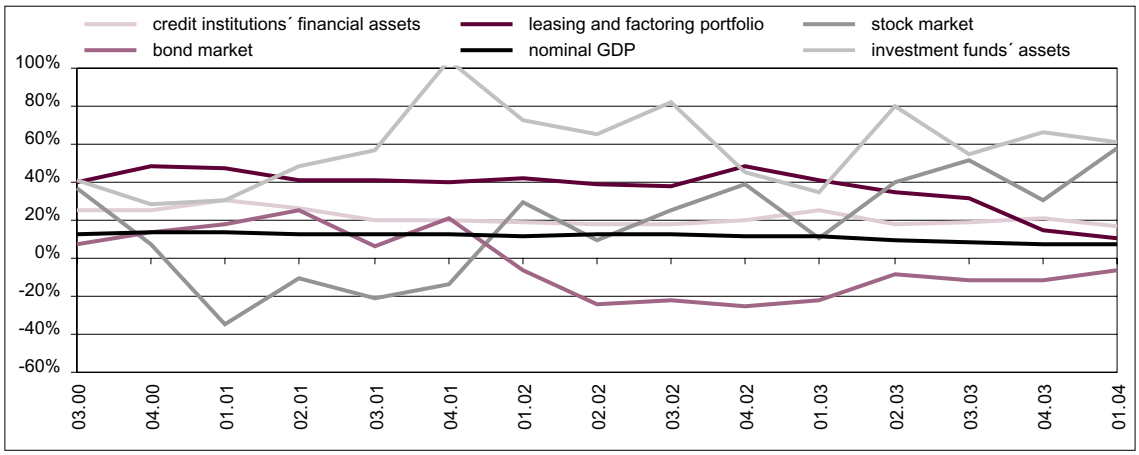

Figure 1.20. Yearly growth rates of financial assets and nominal GDP

began to slow down in the second half of 2003 and the same trend continued also in the first quarter of 2004 (see Figures 1.19 and 1.20).

Estonian securities market witnessed soaring **share prices** in 2003; such trend continued at a brisk rate also in the first quarter of 2004. This boosted stock market capitalisation relative to GDP in four quarters by 16 percentage points – to 48%. But Estonian **bond market** showed little activity both in 2003 and in the first quarter of 2004.

A significant role in the accelerated growth in the assets of **investment funds** has been played by mandatory funded pension funds. Having grown by more than a billion kroons in 12 months the II pillar pension funds accounted for as much as 17% of the consolidated assets of the funds at the end of the first quarter of 2004. Compared to earlier fast growth, the volume of money market and interest funds has remained more stable since the second half of 2003.

Even though Estonia's **insurance sector** soared by more than 25% in a year, the volume of insurance relative to GDP still remains modest. A significant boost in growth can be seen in the life insurance market where premiums collected from capital insurance and unit-linked life insurance products (including voluntary funded pension) have gone up significantly.

Background Information

THE EFFECT OF PRIVATE SECTOR DEBT BURDEN ON FINANCIAL STABILITY[6]

Several central and eastern European countries have recently witnessed rapid private sector loan growth. In the countries whose objective was to join the EU (including Estonia) rapid debt growth was above all boosted by the initially low debt burden and great expectations of foreign capital holders. This represents normal financial deepening since convergence of income levels presumes faster growth in financial assets.

High debt level is considered to be a factor threatening financial stability mainly for two reasons:

1. Loan-servicing costs require sustained economic growth since in the period of economic slump loan-servicing becomes expensive. Increasing loan repayment in turn can aggravate depression.

2. High loan level can be a preliminary indicator of financial crisis. A large loan burden of the private sector could exacerbate other macroeconomic problems and indirectly create prerequisites for a crisis.

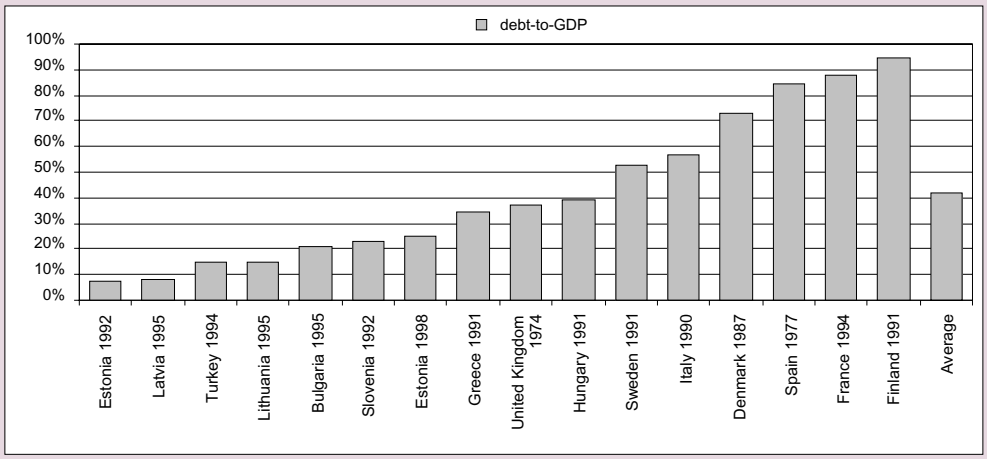

Figure 1.21. Indebtedness prior to banking crisis in different European countries

Experience shows that there is actually no such critical debt level at which the number of crisis episodes would increase. An analysis of the private sector debt level (the ratio of private sector loans[7] to GDP) before banking crises in European countries in the last decades of the last century shows that historically banking crises have occurred at very different debt levels (see Figure 1.21). Therefore debt level in itself cannot be considered a single indicator characterising financial stability.

Meanwhile rapid growth in the debt level might lead to inflated current account deficit, consumption and investment booms, stock exchange and real estate market bubbles etc., thus increasing overall economic instability. Such developments make a country's economy more sensitive to external shocks and amplify their destabilising effect.

An analysis carried out on European countries demonstrated that if the level of debt in a country is higher, the financial crisis might last longer and bring about considerably more adverse effects regarding economic growth.

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[6] The conclusions have been derived from a study conducted in Eesti Pank in April 2004, *Critical Level of Debt?* (authors Lenno Uusküla, Peeter Luikmel, Jana Kask).

[7] Private sector loans in this particular case are only the loans issued by the banking sector since due to the restricted availability of information the data might not be otherwise comparable. Considering the structure of the financial sector, such debt burden indicator is somewhat smaller than the indicator encompassing all financing forms.

II
CORPORATE AND HOUSEHOLDS' FINANCIAL BEHAVIOUR AND RELATED RISKS

Companies

Financial Position and Saving

The net position of financial assets and liabilities mediated by banks and leasing companies has turned even more negative due to the comparatively large loan growth of corporations. At the end of March 2004 corporate financial liabilities to local banks boosted financial assets by some 20 billion kroons (see Figure 2.1).

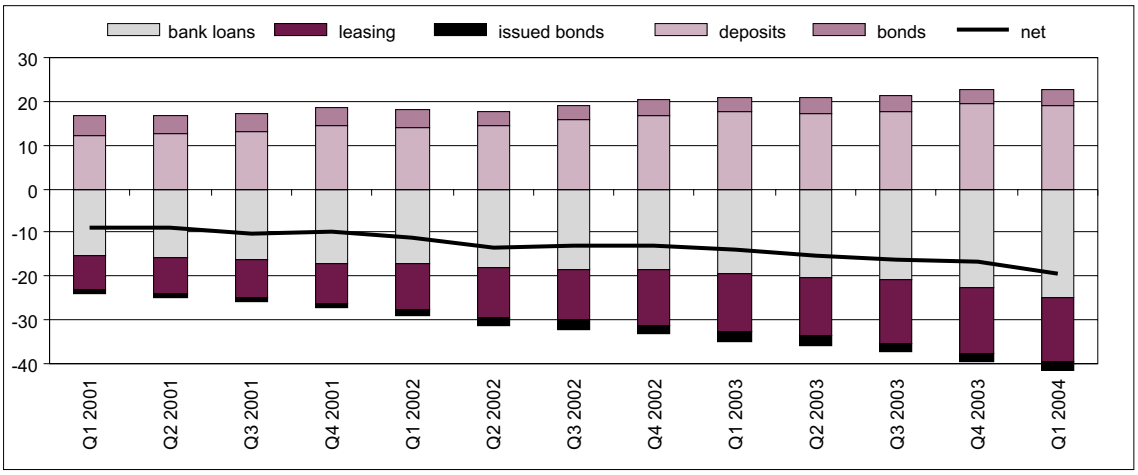

Figure 2.1. Corporate financial assets and liabilities vis-à-vis domestic banks and leasing companies (EEK billions)

Growth in the deposits of local companies (the average rate in 2003 was 16%) can be considered satisfactory. This reflects comparatively good sales results in past periods. The growth in deposits was more modest in the first months of 2004, but that was related more to the strong base value in 2003 than to essential changes in the placement of liquid corporate resources or to other business decisions.

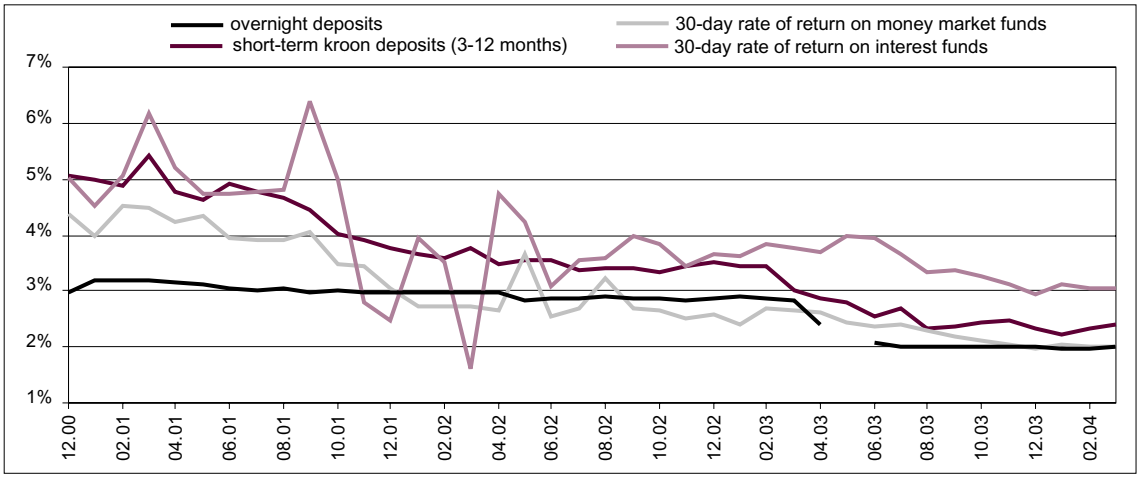

Figure 2.2. Interests on corporate short-term kroon deposits and rates of return on money market and interest funds

Regardless of low interest rates (see Figure 2.2), the share of corporate time deposits remained comparatively large (29% at the end of March 2004). The return offered by interest funds, which stands some 70 basis points higher, has not been very attractive during the past six months so that the funds managed by local fund managers[1] would be more extensively utilised for cash flow management instead of (tax exempt) deposits.

Corporate Debt

When the size of corporate debt and its dynamics is assessed, besides loan offering by the local financial sector also the significant role of foreign capital flows in corporate financing has to be taken into consideration. The average share of **foreign loans** in the liabilities of the real economy sector has stayed at 50% since the end of 1998. 36% of such foreign loans account for credit issued within business groups and are reflected as direct investments.

Besides business financing through debt capital, also **foreign equity investments** have surged. As a result of the large inflow (+17 billion kroons) total foreign equity investments outpaced the volume of foreign loans in 2003 (in earlier years the ratio had been in favour of loan capital; see Figure 2.4).

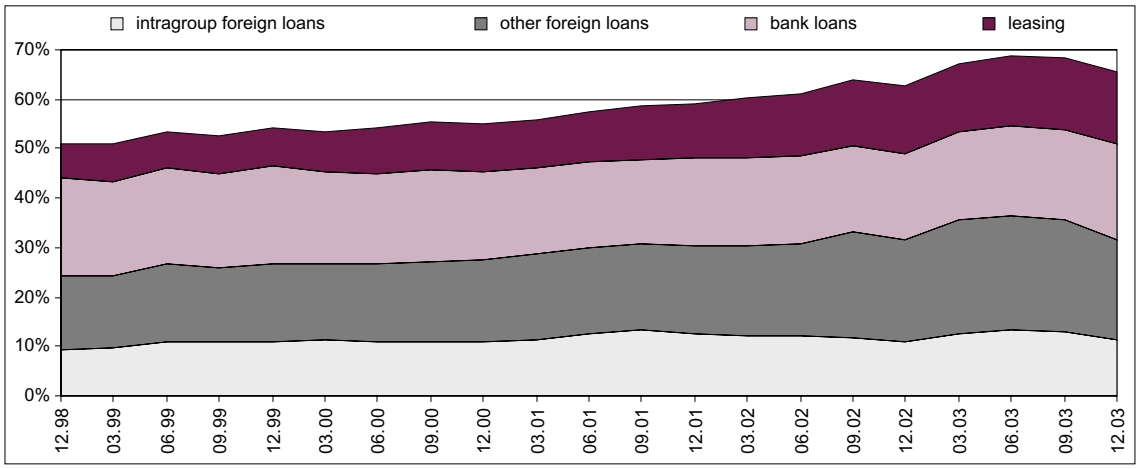

Figure 2.3. Corporate debt (% relative to GDP)

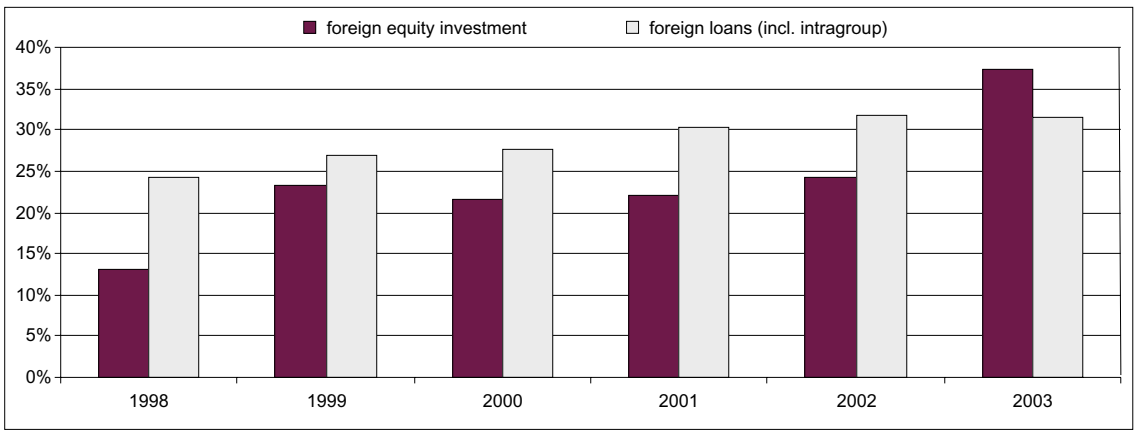

Figure 2.4. Foreign share in Estonian enterprises (% relative to GDP)

[1] In the period from 30 September 2003 to 31 March 2004 corporate demand and time deposits increased by 0.3 billion and 1.3 billion kroons respectively, and interest funds by 0.2 billion kroons while money market funds declined by 0.3 billion kroons.

The structure of financing has been very diverse in different business sectors. **The support of the domestic financial sector has remained to be enlisted mostly in the real estate and construction sector** (accounts for approximately 65% of the total debt) **both in comparative and absolute terms**, meanwhile in the transportation and communication sectors financing has been predominantly based on foreign loans (see Figure 2.5). Domestic and foreign capital has spread more or less equally in the processing industry. At the end of 2003, the volume of foreign direct investments was the biggest in the processing industry.

In 2003, foreign direct investments increased mostly in commerce, real estate development and construction, as well as in the mining industry and industry at large. The top three remained the same also regarding debt obligations, but here the real estate and construction sector clearly dominated over other areas.

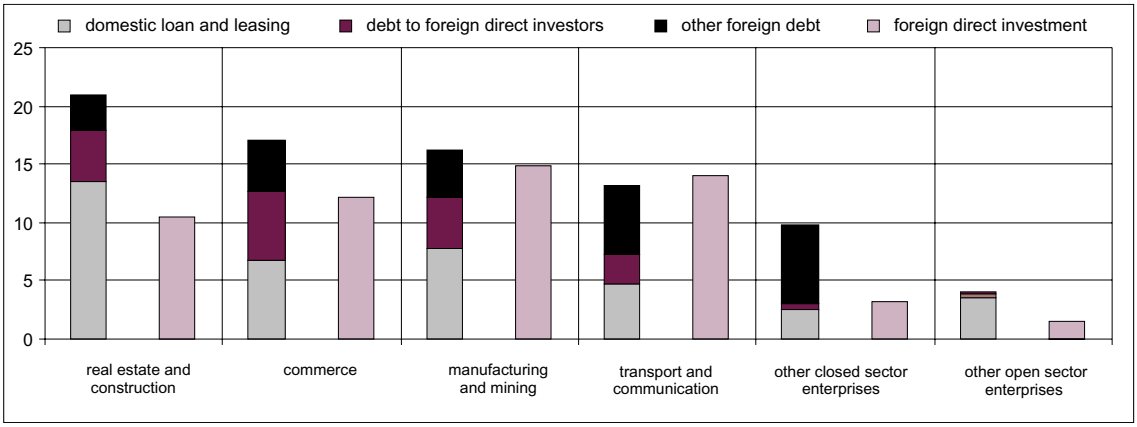

Figure 2.5. Structure of corporate financing at the end of 2003 (EEK billions)

Debt Mediated by Domestic Financial Sector

Macroeconomic environment has been comparatively favourable so as to promote growth and high quality of corporate loan portfolios. Annual growth in domestic debt mediated by the local banking and leasing sector, which amounted to almost 20% at the end of March 2004 (see Figure 2.6), can be considered quite extraordinary compared to other regions in Europe.

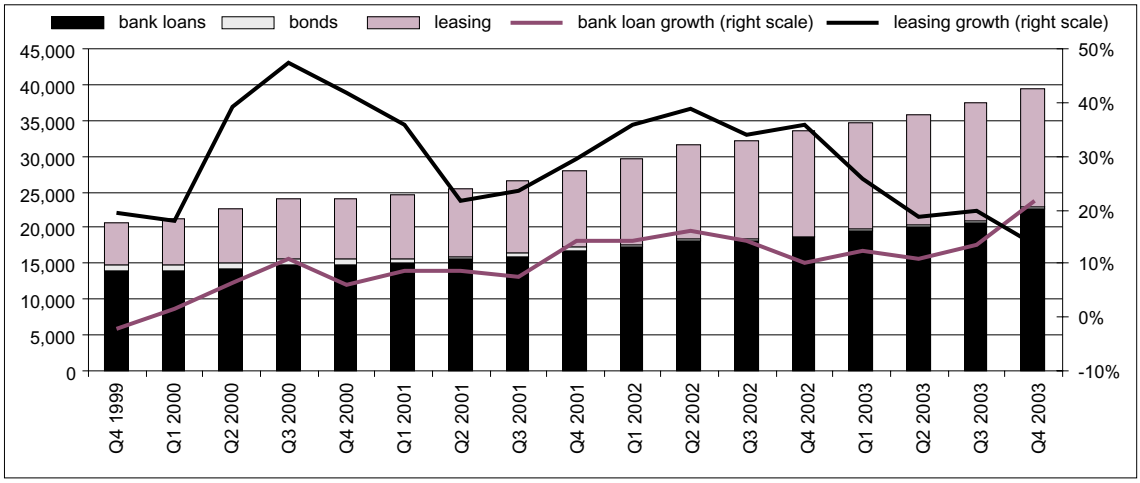

Figure 2.6. Corporate debt to domestic banks and leasing companies (EEK millions, left scale) and debt growth (right scale)

Meanwhile it has to be taken into account that in several instances loan growth was either related to major individual projects by infrastructure companies or occurred in the sectors mainly focused on domestic demand (real estate and trade). In the processing industry, credit demand remained comparatively modest (annual growth 6.2% at the end of March).

Due to major individual transactions carried out in the transportation sector in the first months of 2004 the share of bank loans in the overall domestic corporate debt burden soared to 60%. Leasing financing is still the most wide-spread in agriculture (63% of the projects) while some two thirds of industrial sector projects have been financed by bank loans. The domestic securities market still plays a marginal role in attracting resources (see Chapter IV).

Surging corporate loan burden has been promoted by the low level of interest rates. As a matter of fact, the loans offered by banks are half as cheap now than they were three years ago. The interest rate on long-term loans stood at less than 5% in March 2004 (see Figure 2.7). Even though one should not underestimate the role of single large deals in shaping the low interest level, a favourable interest environment is still present in most areas of activity.

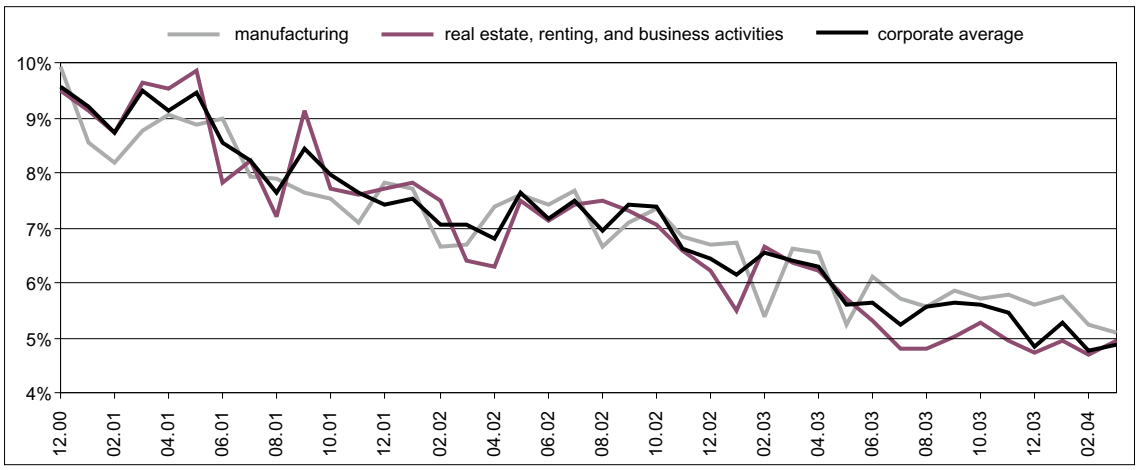

Figure 2.7. Long-term interest rates of enterprises

Households

Financial Position and Saving

The net position of households' financial assets and liabilities, which turned negative at the end of 2003, deteriorated further during the first months of 2004 (see Figure 2.8). From the macroeconomic aspect shrinking household net savings reflect a strong pressure on the current account deficit while giving an additional boost to increased foreign debt through extensive domestic loan demand. On the level of an individual household a decline in savings restricts room for manoeuvre, if borrowing conditions deteriorate or incomes fall.

Annual growth in deposits had slowed down to a very low level by the end of 2003 (9.4%; see Figure 2.9), which is comparable to the level it stood at during the period of pessimism after the 1998 banking crisis. Even though deposits have grown at a rate comparable to the rise in income, it is still insufficient considering the overall trend of financial deepening. Meanwhile the share of time deposits has remained close to 40%. Since the level of interest rates is low, it indicates that attractive opportunities for placing funds are scarce, meanwhile it also shows certain inertia in choosing savings options.

Among financial assets with small liquidity the balance of collected life insurance premiums stood at 1.3 billion kroons at the end of 2003, of which around half were related to supplementary funded pension insurance.

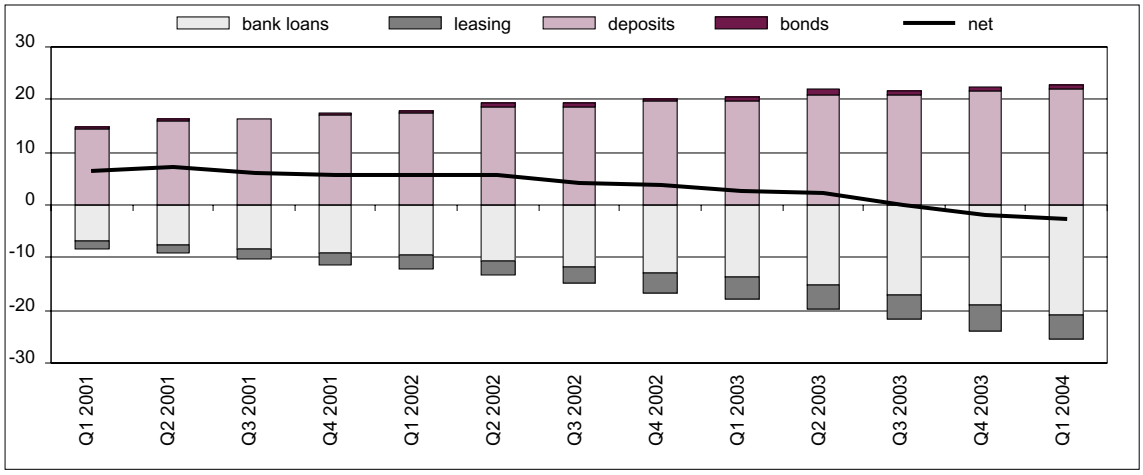

Figure 2.8. Financial assets and liabilities of households vis-à-vis domestic banks and leasing companies (EEK billions)

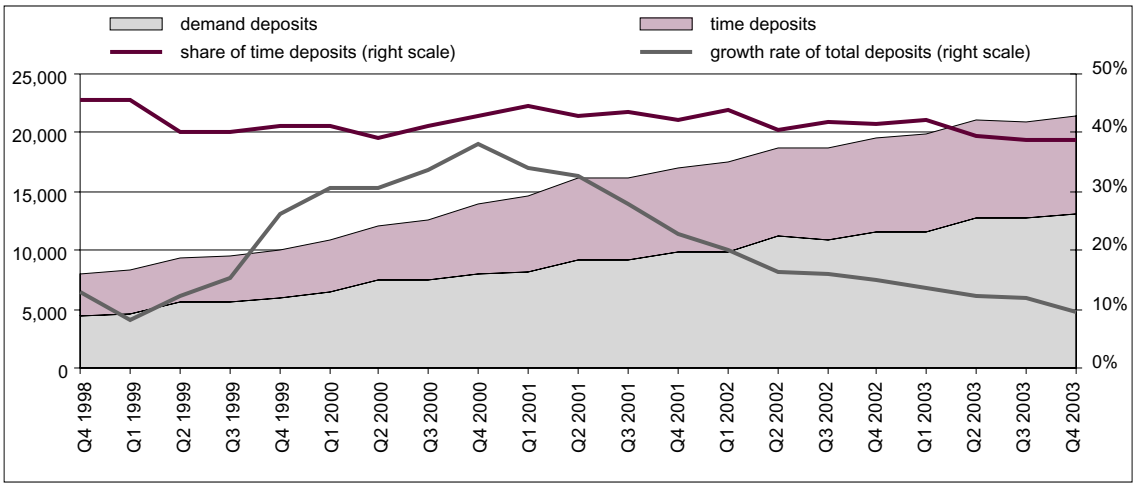

Figure 2.9. Households' deposits in domestic banks (EEK millions) and deposit growth

Background Information

HOUSEHOLD SAVING

The foundation for the three-pillar partly pre-financed pension system effective in Estonia was laid in 1998 with the Pension Funds Act offering voluntary pension investment opportunities. In 2002, the Funded Pensions Act legalised also mandatory funded pension funds.

While supplementary funded pension insurance (III pillar) has developed rather modestly, active signing up with the mandatory funded pension system has outpaced the expectations of both the government and market participants. 351,000 people, i.e. approximately 60% of the working population, had joined II pillar pension funds by the end of the third sign-up period on 31 October 2003. Such popularity of pension investments has raised the question whether

and to what extent the spread of pension products is going to affect household saving and its structure.

Inherently to a typical banking-centred transition economy, the savings of Estonian households are predominantly in deposits. The share of other **savings instruments** amounts to just 18% of all financial assets (see Figure 2.10).

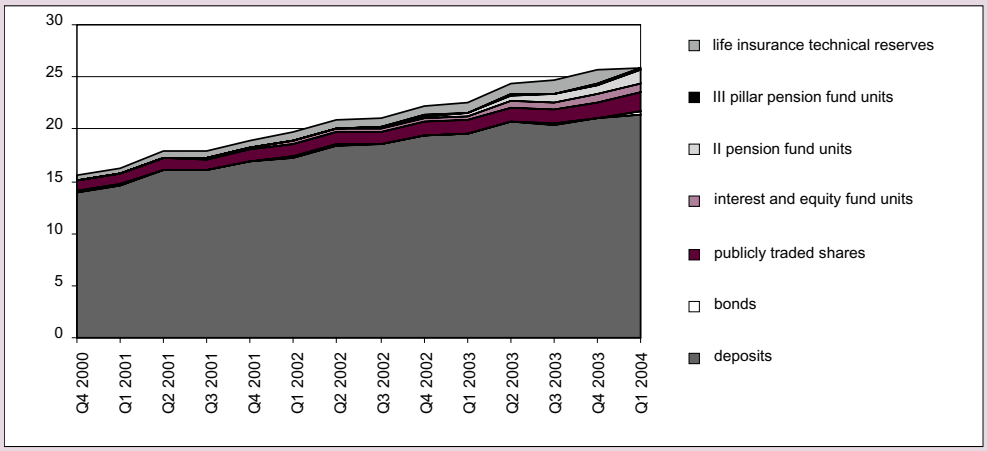

Figure 2.10. Financial assets of households (EEK billions)

The accumulated volume of resources placed through both II and III pillar pension facilities (pension savings) is estimated to amount[2] to 8% of households' financial assets. With regard to the structure of households' savings portfolio, households have started to replace deposits by investment fund units besides pension investments since 2002, which mainly indicates continued financial deepening related to the development of the financial market.

Since the beginning of 2001 also the liabilities related to housing investments have posted a solid growth. Absolute growth in financial assets, which has remained on the same level for three years while liabilities have increased progressively (see Figure 2.11), also indicates **replacement of savings with housing investments.** An understanding that purchasing real estate with a loan is a way of saving is widespread among households. The principal risk here is that in the loan-taking euphoria high level of amortisation of the underlying assets and possible liquidity problems during the loan period might be left unattended.

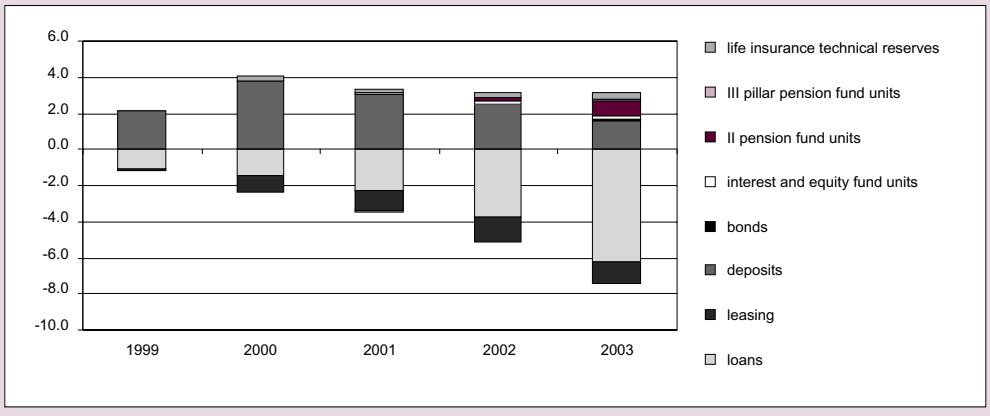

Figure 2.11. Changes in financial assets and liabilities of households (EEK billions)

[2] Estimates have been provided about pension savings since there are no accurate data about which part of the life insurance contracts have been concluded as tax-deductible investment insurance, i.e. pension investment.

Even though the **propensity to save** estimated on the basis of households' financial assets has increased consistently (see Figure 2.12), in a transition economy like Estonia growth in the propensity to save is above all affected by the wealth effect, according to which saving increases in line with rising incomes and along with the decline in the share of unavoidable expenditure (above all food and housing). Here the effect of the pension reform cannot be observed yet. It is assumed that households treat all financial assets as luxury goods whose elasticity to income is above one. In other words, if income is higher, the share of unavoidable expenditure is smaller, which creates improved prerequisites for saving growth.

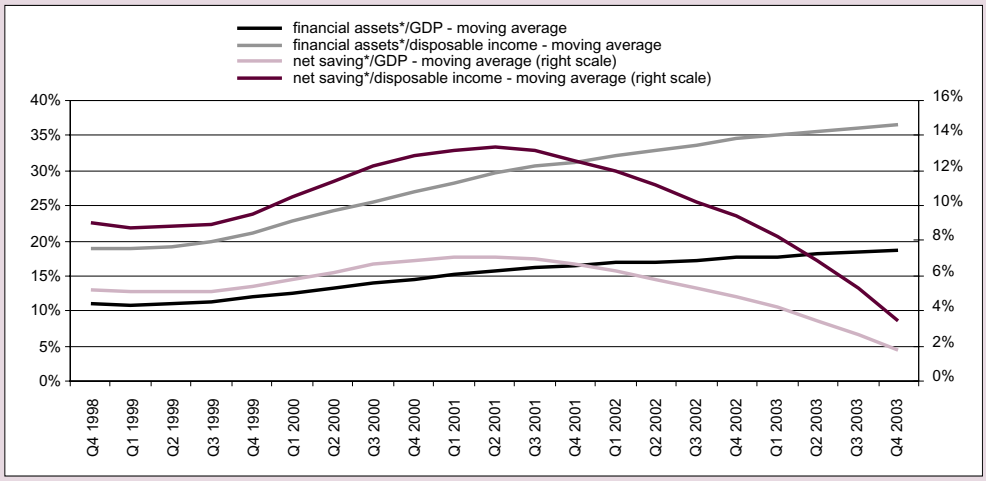

Figure 2.12. Dynamics of households' saving behaviour 1998–2003
* excl. publicly traded shares

The effect the pension reform has on saving depends on whether funded pension plans are seen as replacement or complementary goods to voluntary investment schemes, i.e. whether the propensity to save grows as a result of pension investments or remains stable. Even though it is too early to assess whether funded pension is a replacement or a complementary product compared to alternative investment schemes, due to the low level of income both voluntary and mandatory pension systems have the prerequisites for becoming replacement goods to voluntary saving schemes. Meanwhile application of the pre-financed pension insurance has undoubtedly supported and accelerated financial deepening by boosting the awareness of investors.

Households' Debt and Loan-Servicing Ability

The data for the first quarter of 2004 demonstrated that the fast rate of households' loan growth has not yet subsided (see Figures 2.13 and 2.14). Annual growth in the loan and leasing portfolio has remained at 45% since the summer of 2003; meanwhile housing loans have soared by an average of 55% during the past year and a half. Considering the large credit volume in the past periods, it is possible that in the second half of the year the pace will slow down. Meanwhile certain inertia from extensive (housing) loan demand prior to the accession to the European Union might reflect also in the data of later periods.

Fast loan growth has led to a surging debt level: at the end of the first quarter of 2004 the debt of households amounted to some 22% relative to GDP and to 39% of the disposable income. Compared to

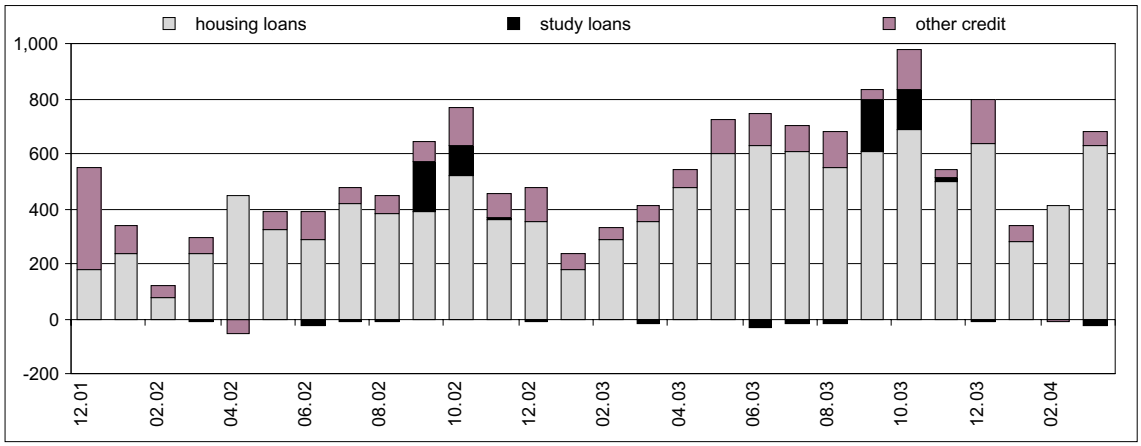

Figure 2.13. Monthly growth of domestic credit to household sector (EEK millions)

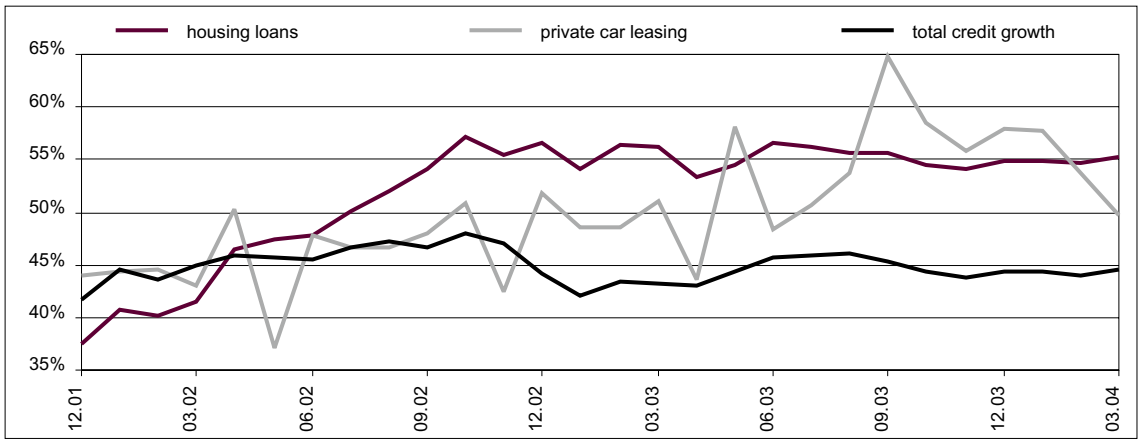

Figure 2.14. Annual growth of domestic credit to household sector

the EU average, there is still a lot of room for growth, even though Estonia has moved briskly closer to the countries with lower debt levels (see Background Information, pp. 31–33). Among the Central and Eastern European countries the debt burden of Estonia's households is indisputably the highest, arising mainly from the significantly larger volume of housing loans (see Figure 2.15).

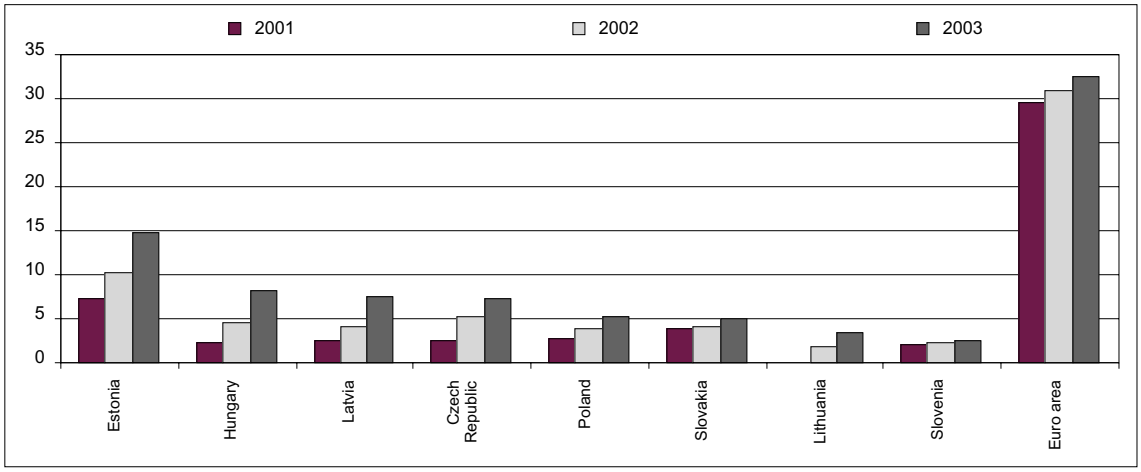

Figure 2.15. Housing loans relative to GDP in CEE countries and the euro area (%)

Loans taken out to purchase or renovate residential space account for 73% of the outstanding loans of private persons. Meanwhile it is also the largest segment in the loan and leasing portfolio (at the end of March 2004 housing loans accounted for 28% of the real sector loan and leasing portfolio; a year ago the indicator was 23%).

Consumer credit accounts for about 17% of the debt of the households (27% together with study loans) while car leasing amounts to 40% of all consumer loans. Differently from housing loans, a slowdown in the growth of consumer credit has been evident as of the last quarter of 2003. Compared to large retail sales figures, the utilisation of consumer loans was quite moderate, thus this can be seen as use of the wealth effect in the short-term view – rising asset prices compensated for consumption limits arising from the rising debt level.

Background Information

GROWTH IN THE INDEBTEDNESS OF ESTONIAN HOUSEHOLDS COMPARED TO OTHER EU COUNTRIES

Growth in household loans in recent years can be considered a global phenomenon – due to low interest rates the high rises in debt levels and rates (particularly regarding housing loans) are noticeable in many countries.

The **debt level** in the new EU Member States is considerably lower than in old Member States: while in 2002 the average household debt to GDP ratio in the EU stood at 52%, in most accession countries the respective indicator remains below 20% (see Figure 2.16). Estonia stands clearly out among the new Member States with its debt level nearly reaching that of the old EU Member States.

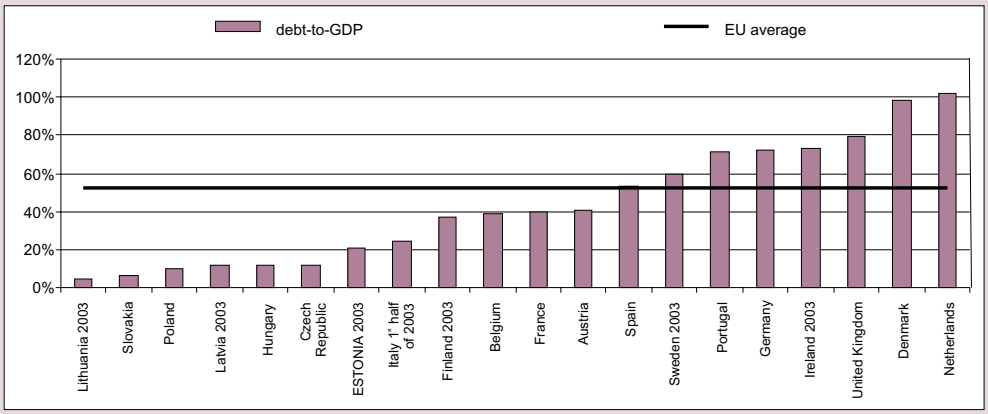

Figure 2.16. Households' debt level at the end of 2002

When analysing the debt and income level of households and changes in this in relation to GDP a certain **connection between the harmonisation of the income level accompanying economic growth and the rate of loan growth characterising changes in the debt level** becomes evident (see Figure 2.17). Concurrent fast growth in the indicated indicators has occurred in most of the countries that have joined the EU, particularly in the Baltic States. Meanwhile it cannot be regarded a development characterising just the past year since annual growth in outstanding loans in these countries (except Poland) has been higher than 20% since mid-2001 (see Figure 2.18) at least.

An analysis of the rate of growth in household borrowing and the debt level of the respective country shows an inversely proportional connection between these indicators. This indicates

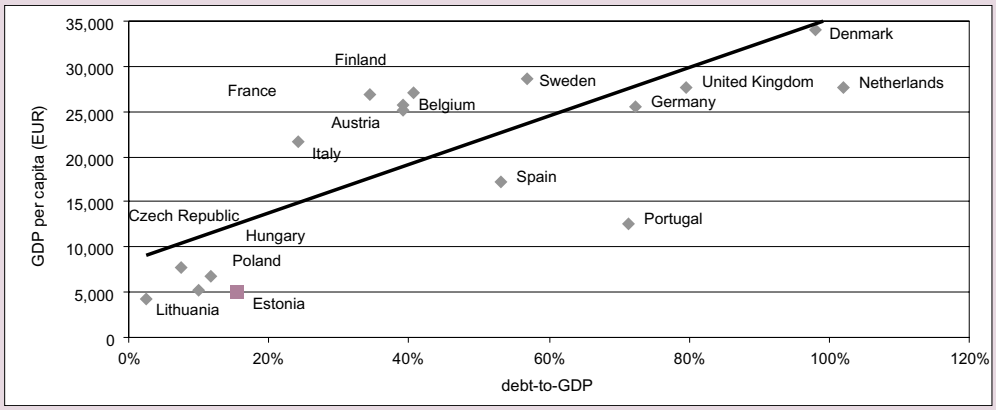

Figure 2.17. Debt level versus GDP per capita in 2002

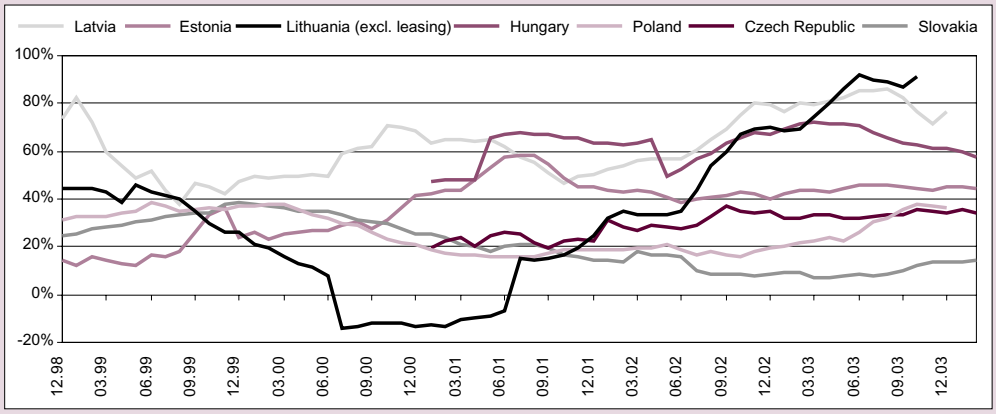

Figure 2.18. Credit growth in some new EU Member States

that true economic convergence requires faster financial deepening (see Figure 2.19). Since market liberalisation in the accession countries occurred quite recently, also the base level is very low there. Meanwhile the issue as to whether growth in household (and also corporate) debt in Central and Eastern Europe is sufficient for structural adaptation with the EU or whether the pace might be unsustainable on a country level certainly warrants a separate study.

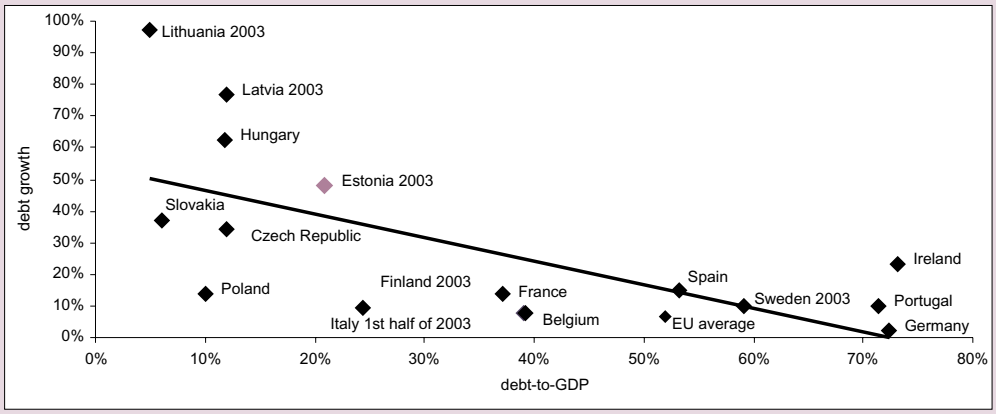

Figure 2.19. Debt level (2002 unless otherwise indicated) and its growth rate (2003) in EU Member States

A comparison of relative growth helps to obtain an improved understanding of the topic. If **growth in households' debt** is viewed **as a ratio to the nominal GDP of the preceding period,** it is evident that even though the pace of loan growth has recently been the fastest in Lithuania, Estonia firmly holds the leading position among the accession countries regarding relative growth in the level of debt (see Figure 2.20). Very strong respective indicators have been posted by several developed countries, including Ireland, the United Kingdom, and Spain. Besides the economic environment (expectations of individuals represent a demand-side factor), the indicator characterising the rate of financial deepening is also significantly affected by supply-side factors arising from the financial sector behaviour, i.e. competitive aggressiveness and the situation in the financial sector (fewer restraints).

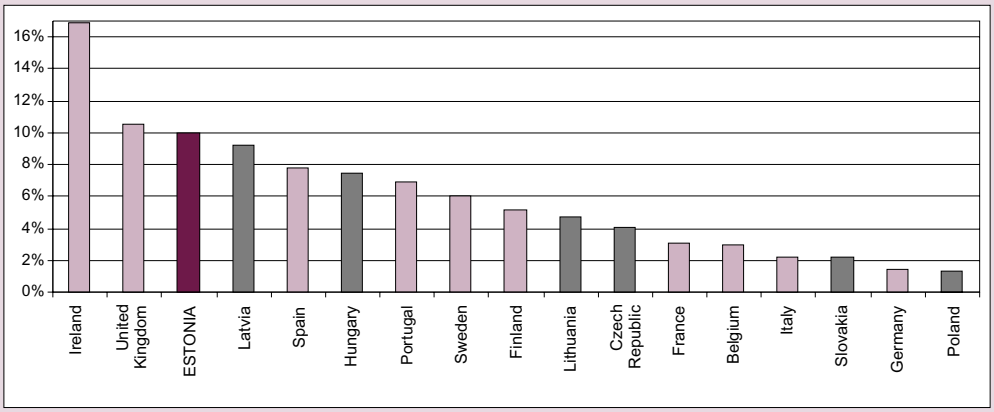

Figure 2.20 Debt level growth to GDP

Loan Conditions

After arriving at the historically lowest interest rates in the summer of 2003 the average interest rate on new housing loans in the market has remained at 5% (see Figure 2.21). Since most of the loan contracts carry a floating interest rate the interest rate dynamics of the outstanding loan portfolio does not differ considerably from that of new loans (at the end of March 2004 the interest rate of the housing loans portfolio stood at 5.4%).

Estonia's average housing loan interest rate is some 60–70 basis points higher than the respective euro zone indicator while the price difference compared to, e.g. Finland is more than 180 basis points

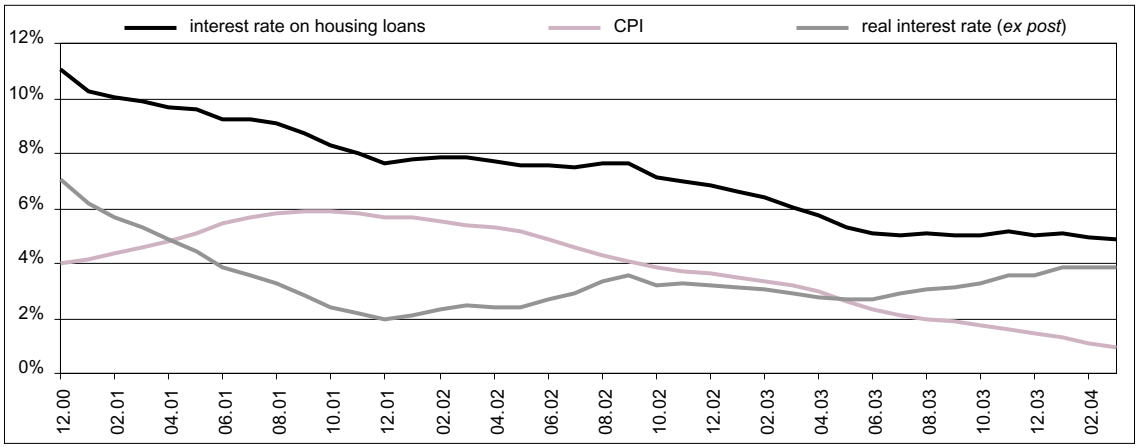

Figure 2.21. Nominal and real interest rates on housing loans and consumer price index

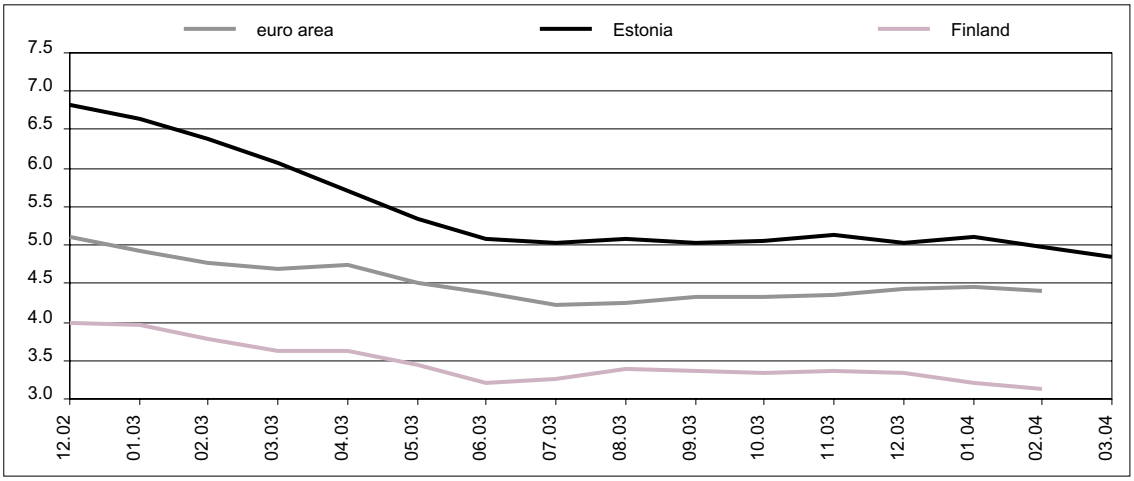

Figure 2.22. Interest rates on housing loans in Estonia and euro area (incl. Finland; %)

(see Figure 2.22). Impacted by the low level of interest rates in the Nordic countries, housing loan interest rates are very low also in the other Baltic countries, particularly in Lithuania.

Credit availability has not changed from the autumn of 2003. The level of required self-financing and minimum income have remained the same in principle. The decision made by some banks to raise the minimum earnings requirement is more related to the real estate price dynamics than to essential restraints on the supply side.

State policy and support systems[3]. Retail borrowing has also been supported by the government policy. In 2003, the volume of housing loans backed by KredEx grew by 1.1 billion kroons, and as a result such loans amounted to 16% of the total loan portfolio at the end of the year. According to the 2003 annual report, *since 2001, around 10,000 young families, specialists and tenants, who had lived in houses returned to their rightful owners, have improved their living conditions with the assistance of KredEx.* In 2003, two housing loan sureties totalling 85,000 kroons were disbursed.

Households' Loan-Servicing Ability

Regardless of the fast growth in outstanding loans, households' quarterly interest payments on loans have not considerably changed. In 2003, the local financial sector earned some 1.6 billion kroons of interest income from households' loans and leasing facilities; in the first quarter of 2004, the respective sum was 430 million kroons. Owing to consistently growing incomes and low interest rates, the interest burden of Estonian households has remained stable at 2.4–2.5%.

It is more complicated to estimate households' **total loan-servicing costs,** which include also principal payments beside interest liabilities. Family budget questionnaires have yielded very different results – starting from 7% (EMOR's B-monitor) to 17% (Ariko Marketing). **Based on aggregate banking statistics and macroeconomic indicators, households' principal and interest payments amounted to more than 12% of the disposable income at the end of 2003.**

Even though the aggregate indicator refers to a comparatively low debt burden, the budgets of some families might be quite tight. A financial obligations survey carried out by Ariko Marketing in January-February 2004 highlighted that 68% of the families with liabilities regarded their loan-servicing cost to be low or reasonable (i.e. it required up to 19% of their income). However, more than ten per cent of the families with loan liabilities spend more than 30% of their net income on servicing loans.

[3] Information about reimbursement of the interest paid on housing loans in 2003 will be available only in August 2004, which is why the overall impact of the state support system on the housing loan market in 2003 can be examined in the autumn 2004 analysis.

III
BANKING SECTOR STABILITY AND RISKS

Strategic Development in the Banking Market

After more than three years without change new banks have again entered Estonia's financial market. On 10 March 2004 Parex Banka, whose interests lie in financing transit-related business activities in Estonia was issued a permit to set up a branch. In April 2004 Vereins- und Westbank AG submitted an application to open a subsidiary so as to offer project and trade financing services to medium-sized and large companies.

Nevertheless, at the end of 2003 and at the beginning of 2004 market development was mostly affected by the same players, meanwhile competition was the toughest in the housing loan market (see Figure 3.1). In 2003, mainly medium-sized banks that offered particularly favourable housing loan interest rates gained market share. A growth advantage of such banks was also the hitherto small size of the portfolio and the large share of new loan contracts, which is why they were not particularly restricted by a future decline in earnings arising from refinancing older loans.

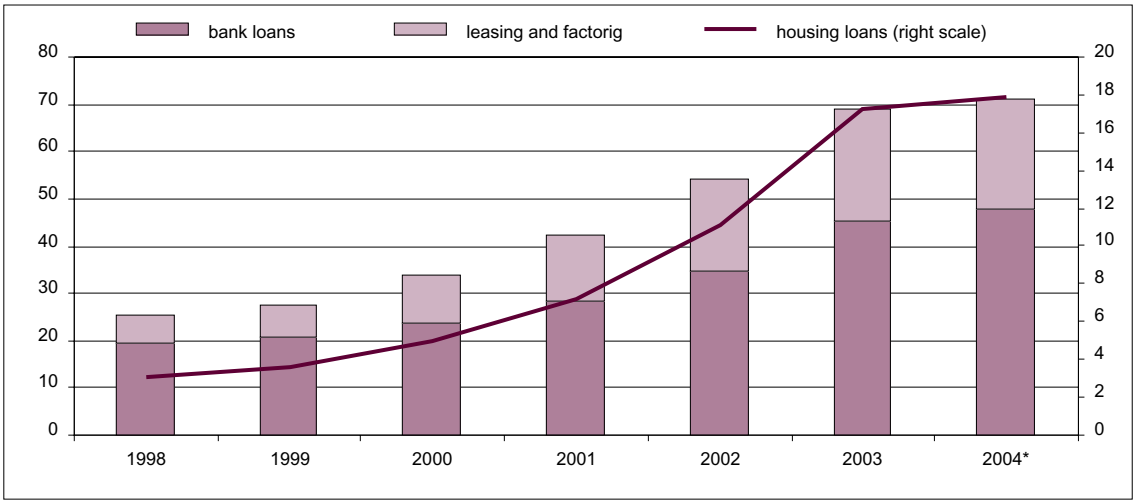

Figure 3.1. Loan and leasing portfolio including housing loans (EEK billions)
* data for Q1

Latvian, Lithuanian, and Russian financial services markets assumed an even more important role for Estonian banks. Besides Hansabank, also Ühispank, which has announced that it is going to re-launch leasing operations in St. Petersburg, is heading for the Russian market. Expansion enables large banks to secure their sustained growth on account of the large scale of operation and development of business areas offering better profitability.

On the group level the investment operations that are not restricted to limited domestic savings but involve mediation of the growing number of EU-expansion-related foreign investments support income from service fees and are assuming an increasingly more important role. In 2003, SEB embarked on intermediating investments to the Baltic region via Ühispank and is planning to establish an Eastern European competency centre in Estonia in the future.

Capital Adequacy

The solo capital adequacy indicator fell to 14% in March (the primary equity adequacy declined to 13.2%), which is the lowest level in the past three years (see Figure 3.2). Besides the 17% per cent year-on-year rise in risk positions, also dividends paid out in the first quarter affected the decline in capital adequacy. The share of trading portfolio and currency risks in banks' risk profile dropped and in March accounted for less than 8% of all weighted positions open to risks (see Figure 3.3). Meanwhile the minimum capital requirement for covering foreign currency risk amounted to 160 million kroons or just 0.14% of all positions open to risk.

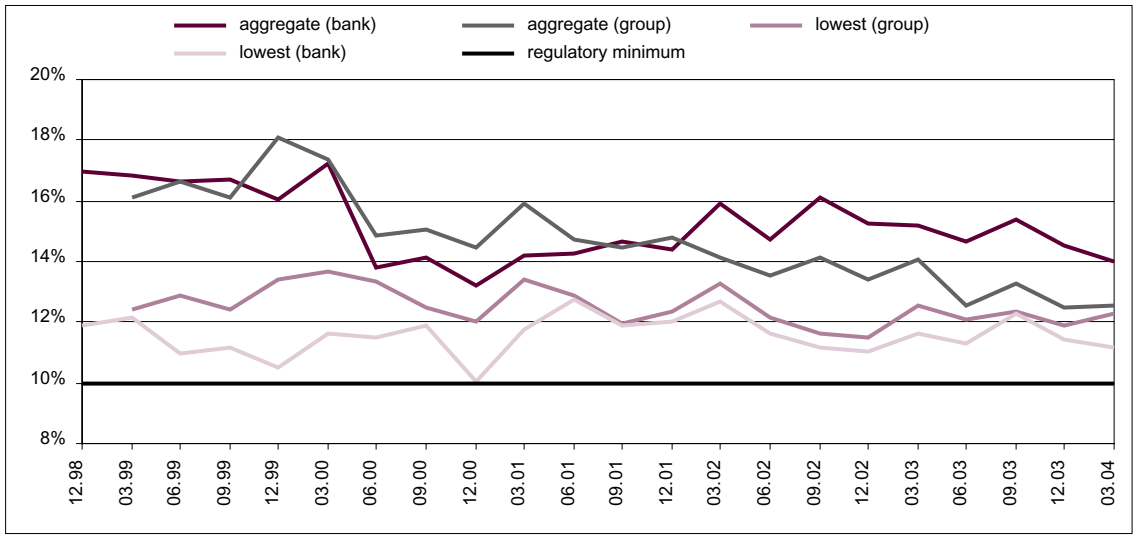

Figure 3.2. Capital adequacy

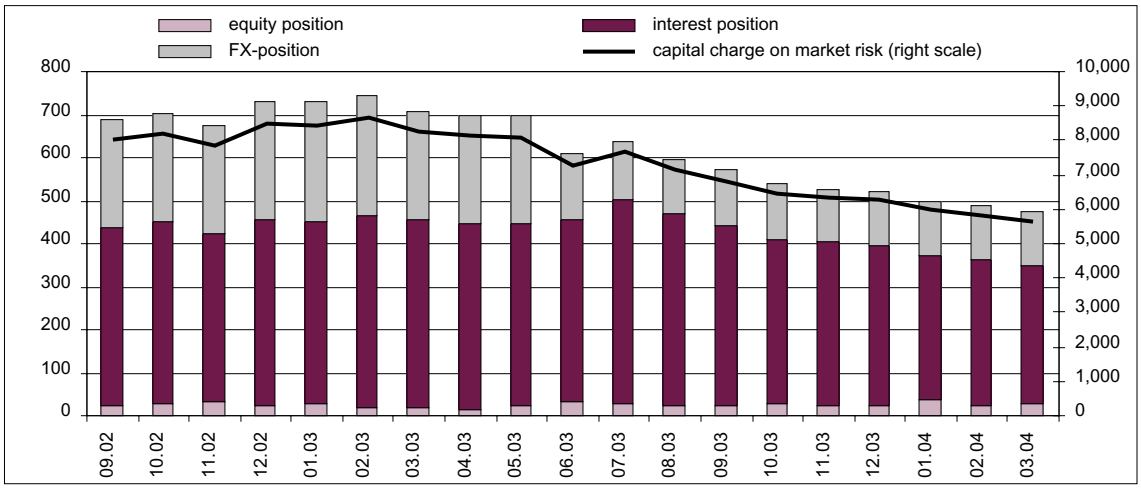

Figure 3.3. Exposures to market risk (EEK millions; left scale)

Consolidated capital adequacy remained on the level comparable to the end-of-year indicator – 12.55% (the respective figure for primary equity stood at 11.5%) in the first quarter. Growth in positions open to risk has accelerated and in the first quarter the year-on-year rate was 32%. Such robust growth was compensated by a large profit recorded as own resources.

Annual profits of all larger banks had been accounted as own resources by March, therefore adequacy should decline in the second quarter in line with the rate of growth in risk assets. Meanwhile a slowdown in the decline in the spread (possible drop in the price of external financing) provides good opportunities for boosting profitability, which will enable to bolster owners' equity in the second half of 2004. In the medium term the banks are interested in reducing capital costs due to the competitive pressure from the European Union.

Asset Quality

The continually lower risk level of the loan prortfolio is also reflected in the banks' statistics of overdue loans. The ratio of loans overdue more than 60 days measured against total loans fell from the average of 1.4% in 2003 to 0.9% in the first quarter of 2004. The ratio of overdue housing loans, which account for a major share of the loan portfolio (32%), was just 0.66%. The solvency of households has been underpinned by low interest rates and slow inflation, which boosts disposable income.

Besides overall improvement in loan quality arising from a structural change, the share of overdue claims fell fast also in higher-risk loan segments, particularly regarding loans related to commercial real estate and trade as well as consumer loans (see Figure 3.4). Regardless of the weak external environment the quality of export-oriented sector loans improved, supported by the transportation sector. The share of long-term (more than 60 days) overdue loans actually rose slightly in the export-oriented sector. While in 2003 the share of overdue loans was clearly the largest in the consumer loans sector, now the ratio has declined to the same level with industrial sector credit – to 3.85% and 3.83% respectively.

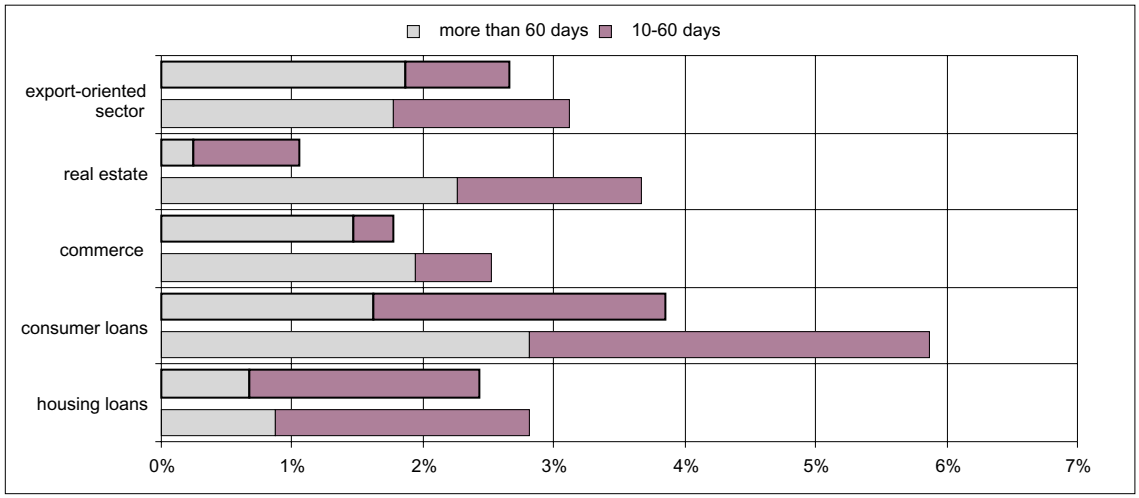

Figure 3.4. Overdue loans in 2004* (upper) and 2003 (lower) by economic sectors
* 3-month average

Due to fast growth in the **housing loans** portfolio the volume of loans overdue more than 60 days was almost as large as that of business loans in the first quarter, amounting to approximately 100 million kroons (see Figure 3.5). Overdue **consumer loans** remained at 40 million kroons, regardless of the high growth in the loan portfolio. Regarding **business credit,** the volume of overdue loans declined most in the real estate sector arising from clearing up payment difficulties of a few large real estate projects. In the **export-oriented sector** the development was controversial: in transportation overdue loans were minimal, meanwhile the balance of overdue loans in the industrial sector has increased since the second quarter of 2003 and amounted to 140 million kroons in the first quarter of 2004.

The decline in the share and aggregate volume of overdue loans indicates that banks have started to monitor

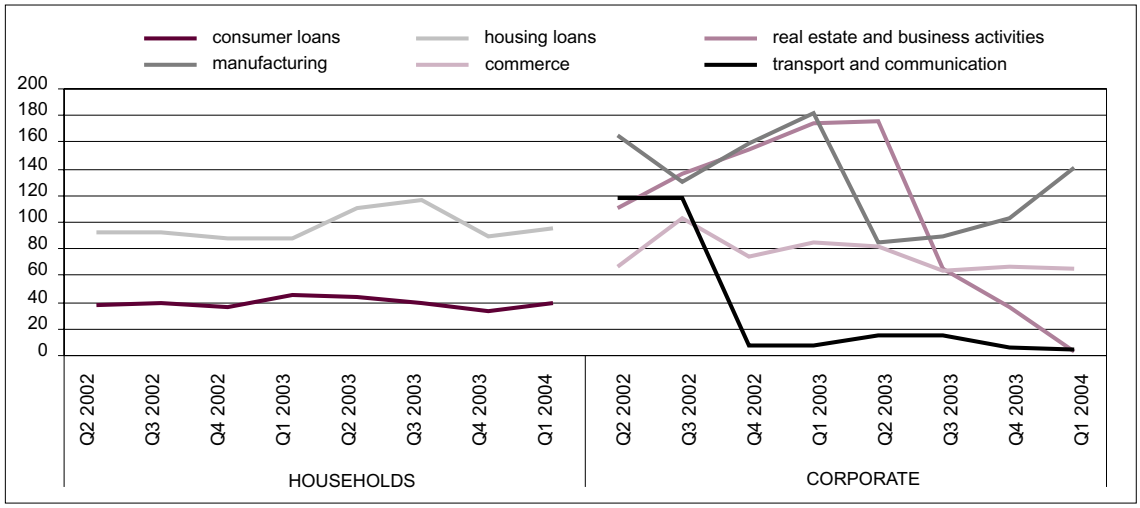

Figure 3.5. Dynamics of overdue loans (over 60 days) by loan sectors (EEK millions)

loans more efficiently, paying attention to potential problems as early as possible. Since it is inefficient for the banks to hold on to overdue claims, they try to restructure such claims as fast as possible.

The volume of loan provisions fell in the first half of 2003, above all due to small loan losses. In the third quarter, net loan write-down expenses were particulary small, which is why the balance of provisions shrank by more than 50 million kroons (see Figure 3.6). Since the last quarter of 2003 the quarterly volume of loan losses has been limited to some 100 million kroons. Comparatively small loan write-offs from the balance sheet have not contributed to the decline in the balance of provisions. Meanwhile the year 2003 differed from previous years for its modest volume of cleaning up the balance sheet at the end of the year (slightly above 60 million kroons). At the end of 2001 the respective figure was 140 million and at the end of 2002 it stood at 260 million kroons.

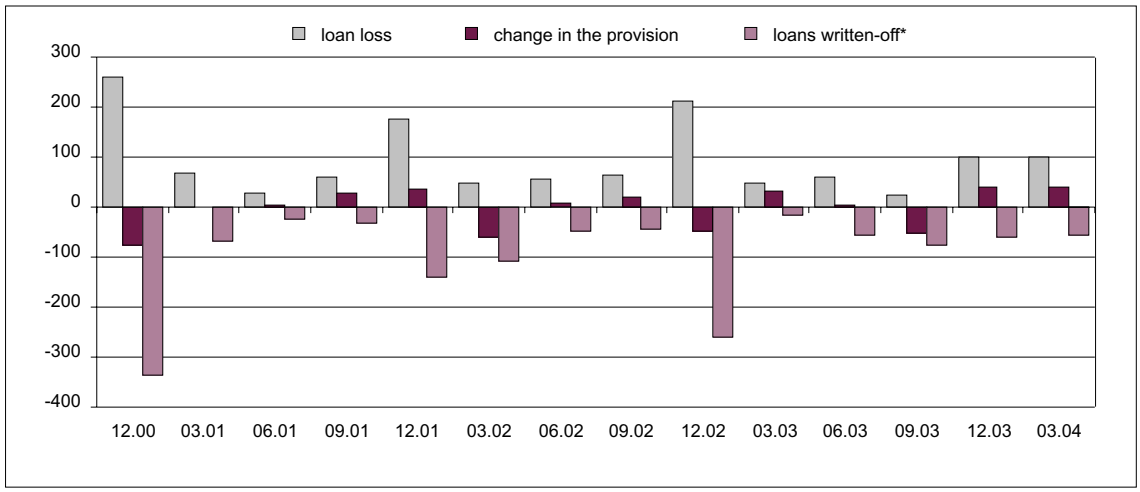

Figure 3.6. Structure and dynamics of doubtful loans (EEK millions)
* including revaluations

Compared to the end of 2003, losses from leasing facilities were somewhat smaller at the end of the first quarter of 2004 while banks' loan losses increased. The aggregate loan loss remained at the level as it had been at the end of the year (300 million kroons). Considering the surge in the loan and leasing portfolio, the ratio of losses in the portfolio fell to 0.4% (see Figure 3.7).

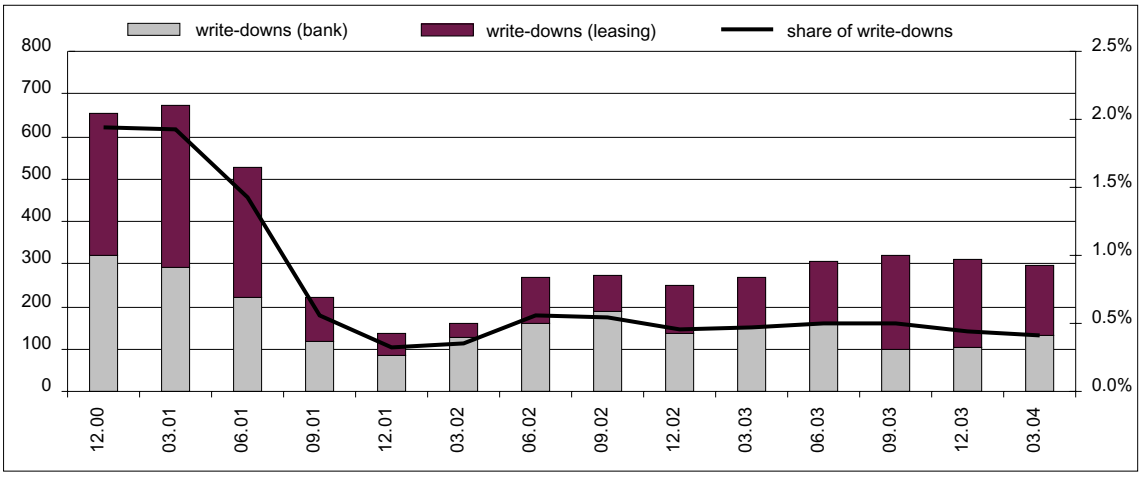

Figure 3.7. Write-downs of loans and leasing (EEK millions, left scale) and their share in the loan and leasing portfolio (%, right scale)

If consolidated loan loss ratios of Estonian and EU25 banks are compared, it becomes evident that the loan quality of Estonia greatly exceeded the EU25 indicator in 2002 since its net claim write-downs were extraordinarily small after serious clean-ups of the balance sheets. In 2003, Estonia's loan loss was comparable to the European indicator, but somewhat higher than the respective national indicators in 2001 and 2002 (see Figure 3.8).

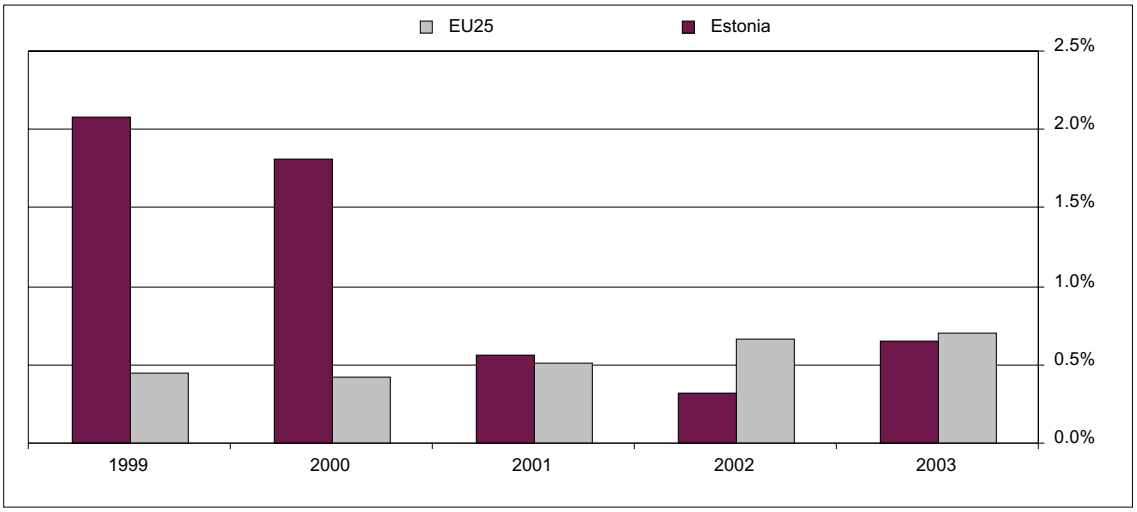

Figure 3.8. Ratio of loan loss to gross loans in Estonia and the EU (%; consolidated)

The median housing loan interest rate fell to 4.6% by the end of March 2004, which marked a decline of just 0.3 percentage points from the second quarter of 2003 (see Figure 3.9). Meanwhile the interest rate on a fourth of the loans with the highest interest rate (and also of higher risk) remained at 5.6%, which reflects the risen risk margin in that loan segment.

Tempestouos growth in housing loans has boosted the share of mortgages in the structure of collateral to two thirds. The share of construction pledges has fallen significantly since more and more building loans have been backed by mortgages (see Figure 3.10). Since the relative importance of securities collateral is also quietly growing, the share of pledges sensitive to fluctuations in the price of underlying assets rose from 69% to 72% in a year. The growing volume of overdraft facilities increased the share of

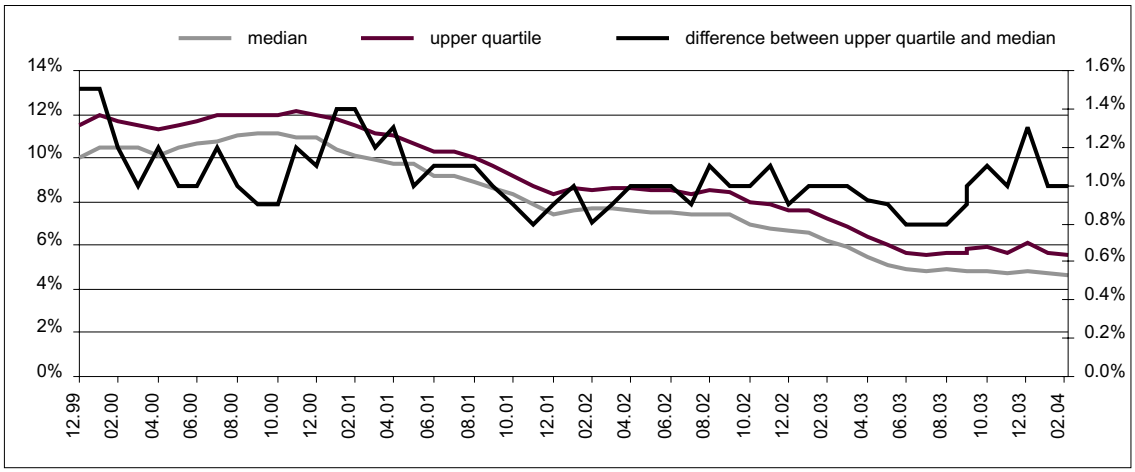

Figure 3.9. Housing loans: median interest, upper quartile (left scale), and difference between upper quartile and median (right scale)

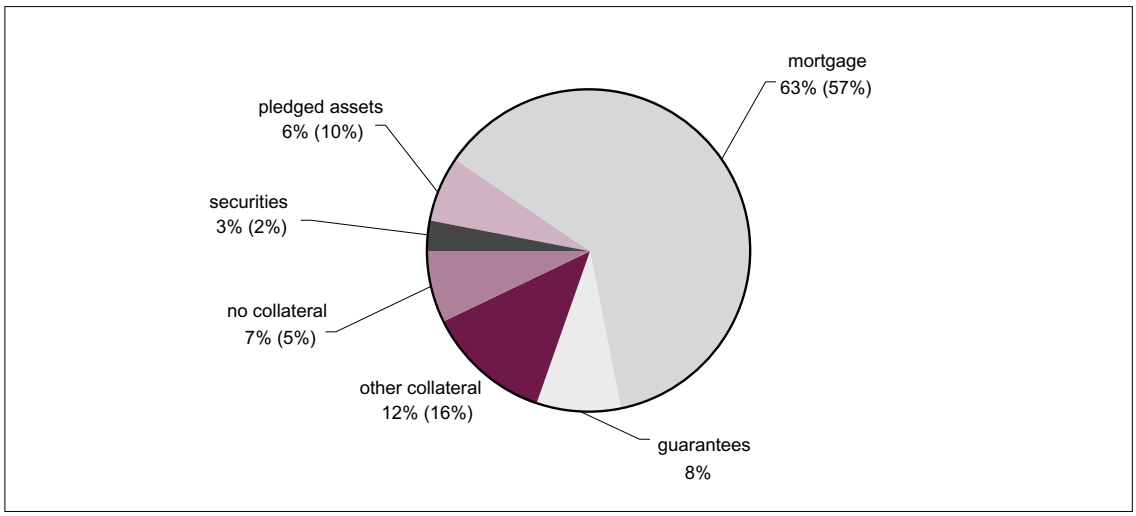

Figure 3.10. Loan collateral at the end of March 2004 (March 2003 indicators in brackets)

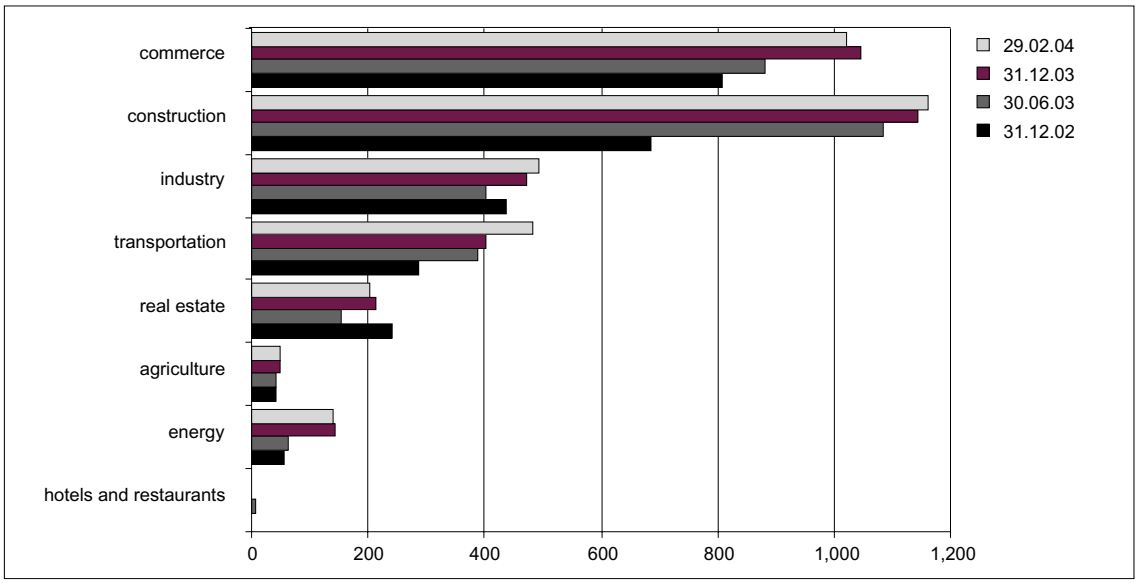

Figure 3.11. Guarantees issued by banks by economic sectors (EEK millions)

unsecured loans. This development was also affected by the fact that banks took charge cards over from leasing companies. In the case of unsecured loans the banks make crediting decisions mainly on the basis of a customer's cash flow history, which can be analysed increasingly in more detail. Besides, many claims in this category are subject to restrictions while the banks have the opportunities to unilaterally limit the resources available to a customer.

The volume of guarantees grew at the same rate as the loans – by an average of 28% in the first quarter of 2004. The amount of guarantees was the largest in construction and commerce (see Figure 3.11). Also the volume of guarantees given to transportation companies surged in February. While the amount of guarantees has grown consistently in construction, a decline was seen in commerce from March to September 2003. After a surge in October the guarantees given to trading companies have remained at around one billion kroons. Meanwhile the volume of guarantees did not increase in the real estate sector.

Efficiency and Profitability

Solo Profitability of Banks

Arising from the fast growth in the loan portfolio and a somewhat stalled decline in margins the banks were able to manage the decline in net interest income. Interest expenses were kept low due to parent bank financing. **In 2003, the banks posted an aggregate net profit of 1.5 billion kroons** (see Figure 3.12). Based on the moving average of four quarters, the 12-month net profit in the first quarter was even 13 million kroons higher. Hence the solo profit of banks is increasing consistently. In the last quarter of the year the profit was boosted mainly by the earnings made on equities in subsidiaries. Due to surging fee incomes the growth in administrative costs arising from disbursing annual bonuses could not affect net profits. The more stable service fee income components are earned on card turnover and administrative fees. Arising from the favourable situation in the securities market, major profits were made on finance transactions in 2003, however, in the past two quarters trading income dropped.

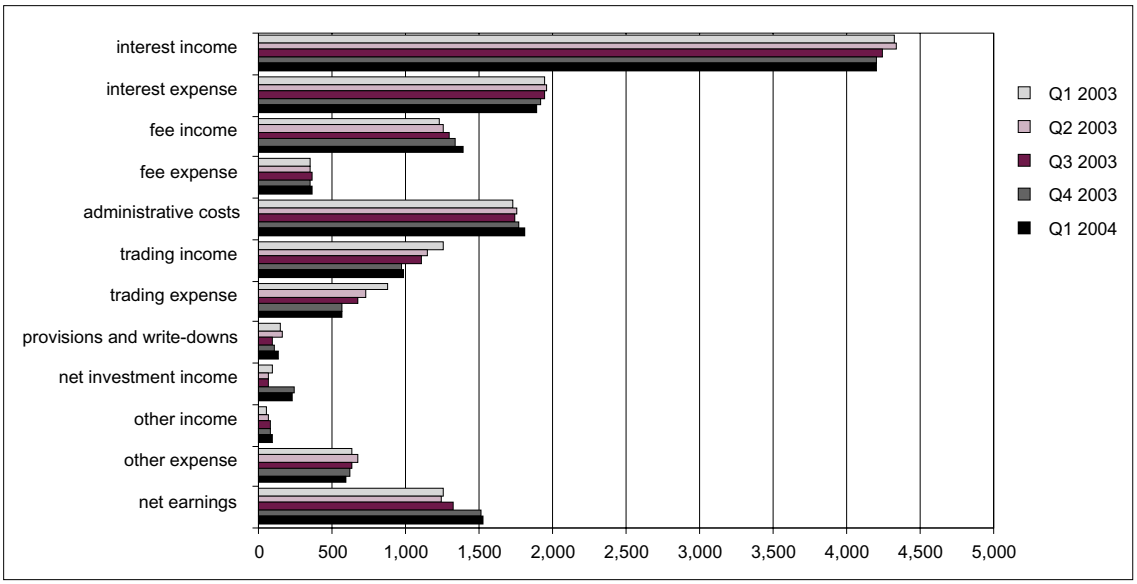

Figure 3.12. Banks' solo annual earnings (4-quarter moving average, EEK millions)

Interest income that had declined in the second half of 2003 showed recovery signs in the first quarter of 2004; meanwhile interest income earned on loans was the highest ever. Besides substantial expansion of the income base, one of the reasons might have been the increasing share of riskier clients,

which translated into higher risk margins. On the other hand, income from liquid assets dropped significantly as a result of a relative decline in the share of liquid assets as well as a change in the structure of liquidity buffers. Since 80% of the interest income is derived from loans, interest income might increase considerably if such development continues. **The particularly aggressive loan policy pursued by the banks, spurred by expectations of an interest rise cycle, might bring about a further decline in interest margins in the short-term.**

Interest expenses dropped moderately on loan instruments and bonds as well as deposits. However, the development was rather diverse in different banks, depending on the method of financing.

Quite expectedly, loan write-downs went up again after an extraordinarily low level in the second half of 2003. Modest growth in loan losses can be expected also in the future, which relates to rising claim volumes as well as a halting decline in the loan-servicing costs of the customers.

Earnings from core activities were the highest in recent years. This was affected by growing income from services fees and trading income as well as lower costs associated with core activities.

Strong profitability boosted a rise in equity and return on assets, even regardless of the surge in assets (see Table 3.1). The cost-income ratio fell to the lowest level ever, indicating strong profitability and successful cost optimisation. The fact that the spread declined to 2.7% highlights the banks' success at maintaining profitability (see Figure 3.13).

Table 3.1. Key profitability indicators (solo)

	2000	2001	2002	Q1 2003	Q2 2003	Q3 2003	2003	Q1 2004
Return on equity	8.04%	20.71%	11.91%	12.67%	12.20%	12.61%	14.15%	13.81%
Return on assets	1.18%	2.66%	1.55%	1.62%	1.54%	1.56%	1.70%	1.63%
Cost-income ratio	72.49%	53.26%	61.58%	58.52%	56.49%	55.78%	53.01%	52.94%
Net interest margin	4.26%	3.89%	3.59%	3.43%	3.32%	3.08%	2.91%	2.78%
Spread	4.05%	3.69%	3.44%	3.28%	3.18%	2.94%	2.78%	2.66%

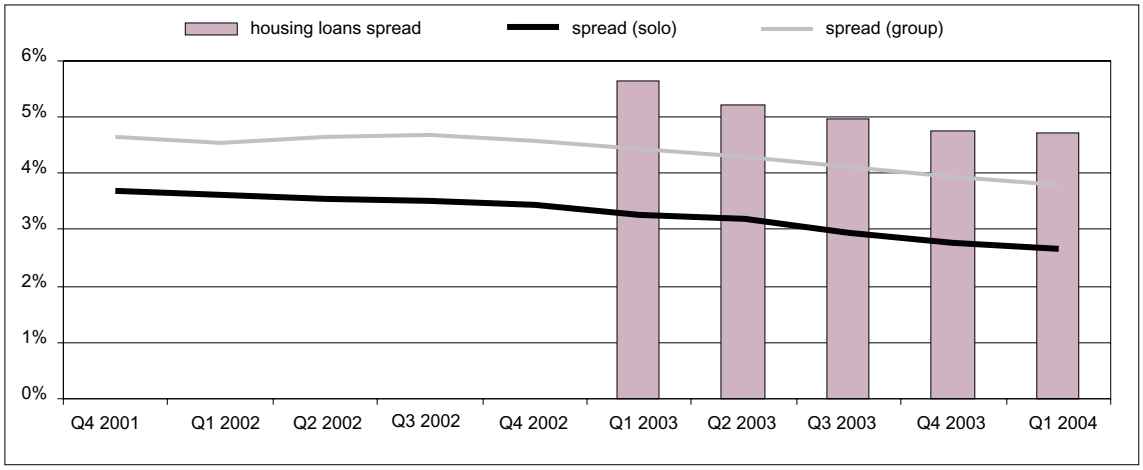

Figure 3.13. Spread (4-quarter moving)

Profitability of Leasing Companies

Also the profit of leasing companies has consistently increased: in 2003 it stood at 756 million kroons and the four-quarter moving average rose to 784 million kroons in the first quarter of 2004 (see Table

3.2). Leasing companies are more dependent on interest income than banks, which is why the development of interest rates is a key profit factor. In the first quarter, net interest income was smaller than at the end of the year, which was the first decline after the Russian crisis. Also service fee income dropped in the first quarter. Despite reduced administrative costs, structural profit was smaller than in previous periods. Another reason for the modest leasing indicators was the integration of leasing activities into banks' business line as a result of which both the size of the portfolio and income have dropped. Compared to the second half of 2003, the loss from writing down claims fell significantly (by 42 million kroons), which in turn boosted net profit.

Table 3.2 Profitability of leasing companies

	Q4 2001	Q1 2002	Q2 2002	Q3 2002	Q4 2002	Q1 2003	Q2 2003	Q3 2003	Q4 2003	Q1 2004
Net interest income	586.4	646.6	712.9	755.0	791.0	827.4	860.9	884.5	904.2	893.1
Net fee income	157.6	167.4	179.3	191.1	205.5	210.7	216.6	202.6	186.5	174.0
Administrative costs	-148.7	-144.5	-152.2	-144.9	-152.8	-161.5	-164.6	-169.55	-152.6	-158.5
STRUCTURAL PROFIT	**595.3**	**669.5**	**740.1**	**801.2**	**843.7**	**876.6**	**912.9**	**917.6**	**938.1**	**908.6**
Provisions	-49.9	-34.4	-104.4	-87.1	-113.0	-114.7	-149.3	-219.887	-207.761	-165.666
Net trading income	-1.6	-1.5	-7.4	-8.9	3.1	1.7	6.7	7.4	18.7	19.7
Other operating income (net)	25.7	16.5	20.4	17.1	12.6	7.8	1.2	4.8	8.8	21.7
TOTAL NET PROFIT	**569.5**	**650.1**	**648.7**	**722.4**	**746.4**	**771.4**	**771.4**	**710.0**	**757.9**	**784.3**

Consolidated Profitability

Banking groups ended the year 2003 with a record profit of 2.7 billion kroons. In the first quarter of 2004 returns rose even faster, this is why the cumulative four-quarter moving average rose to 2.9 billion kroons. All profit entries supported profitability, except administrative costs, which rose slightly. The biggest profit boost came from net interest income (see Table 3.3). This was based on increasing interest income, which even a modest growth in interest expenses could not stall. Also income from service fees as well as trading income grew. The expenses that had increased at the end of 2003 due to loan write-downs stabilised.

Table 3.3. Key revenue and expenditure items (on group basis)

	Q4 2001	Q1 2002	Q2 2002	Q3 2002	Q4 2002	Q1 2003	Q2 2003	Q3 2003	Q4 2003	Q1 2004
Net interest income	2,840.1	3,030.1	3,198.0	3,309.9	3,386.6	3,444.8	3,475.9	3,476.0	3,484.2	3,539.7
Net fee income	1,013.3	1,089.0	1,145.5	1,219.6	1,310.8	1,374.1	1,466.2	1,520.6	1,568.5	1,626.6
Administrative costs	-1,979.0	-2,230.7	-2,375.3	-2,404.0	-2,442.1	-2,370.0	-2,340.6	-2,332.8	-2,336.7	-2,382.5
STRUCTURAL PROFIT	**1,874.4**	**1,888.4**	**1,968.2**	**2,125.5**	**2,255.4**	**2,448.9**	**2,601.6**	**2,663.8**	**2,716.0**	**2,783.8**
Provisions	-65.3	-47.3	-57.6	-50.1	-48.3	-125.3	-277.0	-410.1	-439.6	-442.7
Net trading income	530.9	552.5	510.0	484.0	463.0	463.8	539.0	559.6	573.1	619.8
Other operating income net	-35.0	-66.6	-81.0	-93.3	-98.9	-115.4	-102.5	-95.5	-128.2	-115.2
OPERATING PROFIT	**2,305.0**	**2,327.0**	**2,339.6**	**2,466.1**	**2,571.2**	**2,672.0**	**2,761.1**	**2,717.8**	**2,721.3**	**2,845.6**
Other net earnings	-598.4	-641.5	-738.4	-732.8	-697.3	-646.4	-701.0	-672.4	-672.6	-668.8
TOTAL NET PROFIT	**1,706.6**	**1,685.6**	**1,601.1**	**1,733.3**	**1,873.9**	**2,025.6**	**2,060.1**	**2,045.4**	**2,048.7**	**2,176.8**

As for return ratios, the pace of decline in interest margins stabilised, which boosted profitability. Extensive loan growth reduced return on assets; meanwhile return on equity was still over 20% (see Table 3.4).

Table 3.4. Key profitability indicators (on group basis)

	Q4 2001	Q4 2002	Q1 2003	Q2 2003	Q3 2003	Q4 2003	Q1 2004
Net interest margin (leasing)	11.01%	9.22%	8.87%	8.47%	8.11%	7.83%	7.48%
Net interest margin (banks)	3.83%	3.99%	3.80%	3.61%	3.31%	3.09%	3.01%
Return on assets	2.18%	2.21%	2.31%	2.30%	2.24%	2.16%	2.21%
Return on equity	20.20%	20.45%	21.26%	21.07%	20.65%	20.10%	20.63%
Spread	4.66%	4.58%	4.43%	4.30%	4.11%	3.94%	3.82%
Cost-income ratio	60.81%	60.69%	57.48%	53.85%	52.47%	51.95%	50.96%

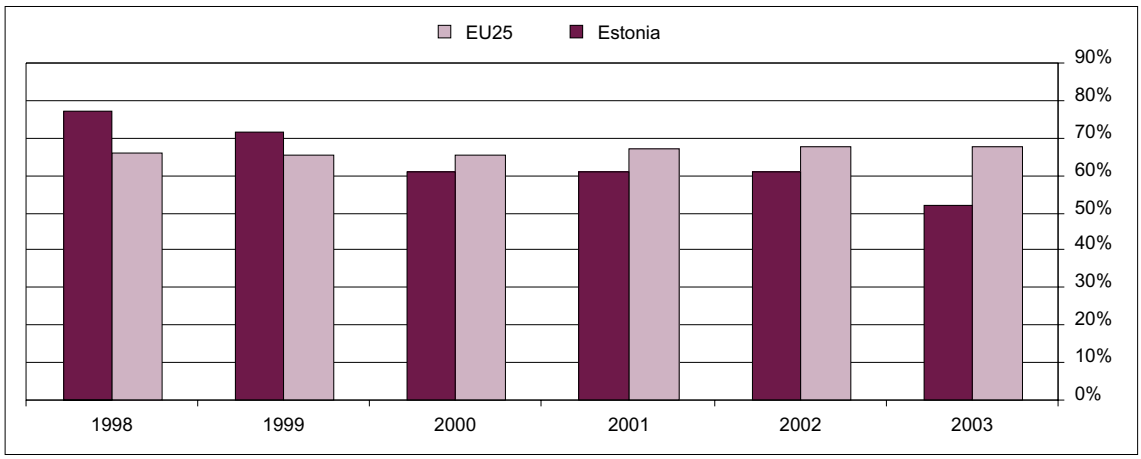

Figure 3.14. Cost-income ratio (consolidated)

The consolidated cost-income ratio of Estonian banks has been below the respective European level since 2000 when the impact of the Russian crisis began to decline (see Figure 3.14). Meanwhile in the EU the cost-income ratio has gone up. This may be associated with the problems of German banks. Large profits boosted the indicator of the Estonian banking sector to a very strong level of 51% at the end of 2003.

Background Information

PROFIT SENSITIVITY SCENARIO ANALYSIS

The share of foreign loans in banks' liabilities accompanying extensive credit growth makes such liabilities more interest-rate sensitive than before. Therefore the banking sector is more vulnerable to possible increases in the price of resources. The following scenario analysis provides an overview of profit sensitivity regarding the price of external financing, should loan quality deteriorate.

Deterioration of loan quality has to be assumed in order to establish an understanding of the co-effect of different risks, which is inherent to cyclical development. Banks' indicators from the first quarter of 2004 have been taken as the base scenario of the analysis. A required prerequisite for the risk scenario to materialise is that loan interest rates should remain constant. In reality such a situation might be caused by extremely tough competition as a result of which banks make concessions when choosing customers, which would damage loan quality, meanwhile loan interest rates do not rise and loan growth remains fast because

of low interest rates and competition. Risk scenarios have been drawn up on two different credit risk levels, considering double and triple growth (to 0.8% and 1.2%) in the current risk expense (0.4%). Besides, this simulation also monitors the impact of loan growth on the interest rate sensitivity of the profit regarding external financing since a constant 10% growth in deposits is assumed.

Table 3.5 Profit sensitivity scenario analysis

Scenarios	Risk expense	Loan growth	Growth in deposits	External financing			Net profit
				Share	Interest	Interest growth	
Basis	0.4%	28%	10%	37%	2.6%	-	1,512.43
I	0.8%	15%	10%	42%	7.3%	7.3%	0.00
II		20%		47%	6.4%	6.4%	
III		25%		52%	5.7%	5.7%	
IV		28%		55%	5.3%	5.3%	
V		30%		57%	5.1%	5.1%	
VI		33%		60%	4.8%	4.8%	
I	1.2%	15%	10%	42%	6.2%	6.2%	0.00
II		20%		47%	5.5%	5.5%	
III		25%		52%	4.9%	4.9%	
IV		28%		55%	4.6%	4.6%	
V		30%		57%	4.4%	4.4%	
VI		33%		60%	4.2%	4.2%	

With 0.8% risk expense the critical interest rate threshold of external financing is 5.7%, if annual loan growth is 25%, i.e. a situation in which interest rates would be over 3 percentage points higher than at present. If the price of external financing rises to that level, the total net profit of the banks will be used to cover the liabilities that have become more expensive. If the risk expense is 1.2%, i.e. three times above the current level, a price rise of just 2 percentage points in external financing is sufficient so that external resources required for financing the 25% loan growth would swallow the whole net profit.

Assuming that the base scenario in maintained, i.e. loan growth is 28% and risk expense 0.4%, an interest rate rise by 3.5% would lead banks to the loss threshold, which means that for the banks to fall on the loss threshold, interest rates should be more than 6%. The banks would fall to the level of minimum capital adequacy (10%), if interest rates on external funds rose by 7–8 percentage points to 10–10.5%.

The factors provided in this analysis certainly affect the banks differently, and taking into consideration the maturities of claims and liabilities, the outcome might differ from the simplified treatment above. But such a calculation provides a perception of the sensitivity of profit to credit risk, loan growth, and accompanying external financing.

Liquidity

Interest Environment and Foreign Confidence

The expansiveness arising from the external environment has kept the interest rate level low, even though the downward trend has stalled since the second half of 2003 (see Figure 3.15).

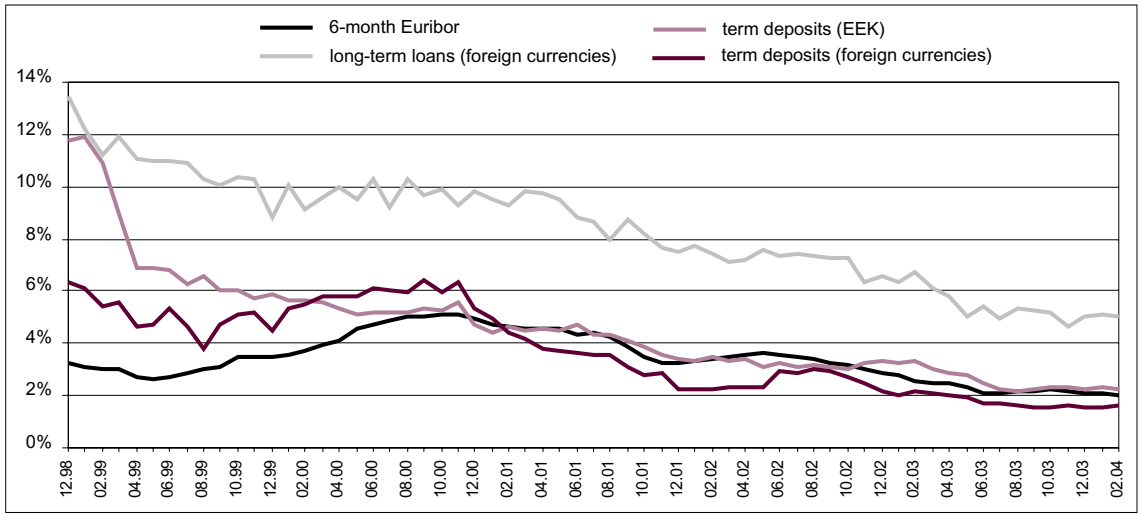

Figure 3.15. Interest rates on deposits and loans

In parallel with the open liquidity environment the ratings of Estonian banks as well as that of the overall economic environment have gone up. In April 2004, Fitch raised Estonia's sovereign rating in reference to the country's accession to the European Union by two notches – to A+. Simultaneously, in the aftermath to raising the short-term rating Fitch also lifted Hansabank's long-term rating in November 2003. Besides EU perspectives, the agency highlighted cooperation with the parent bank. In February 2004 Moody's lifted the long-term deposit rating of Ühispank, a member of the SEB Group, to A1, explaining it by boosting the ratings of the sole owner of the bank, SEB AB, and the important role that the latter plays in managing Ühispank. Hence the evaluation of foreign experts greatly relies on the strong ties of the Estonian banking sector with Nordic parent banks that are increasingly more important financiers of Estonian banks due to sluggish growth in local deposits (see Figure 3.16). Higher ratings are expected to bring external financing risk margins further down, which will contribute to balancing more expensive liabilities arising from the growth in the share of loan-based resource.

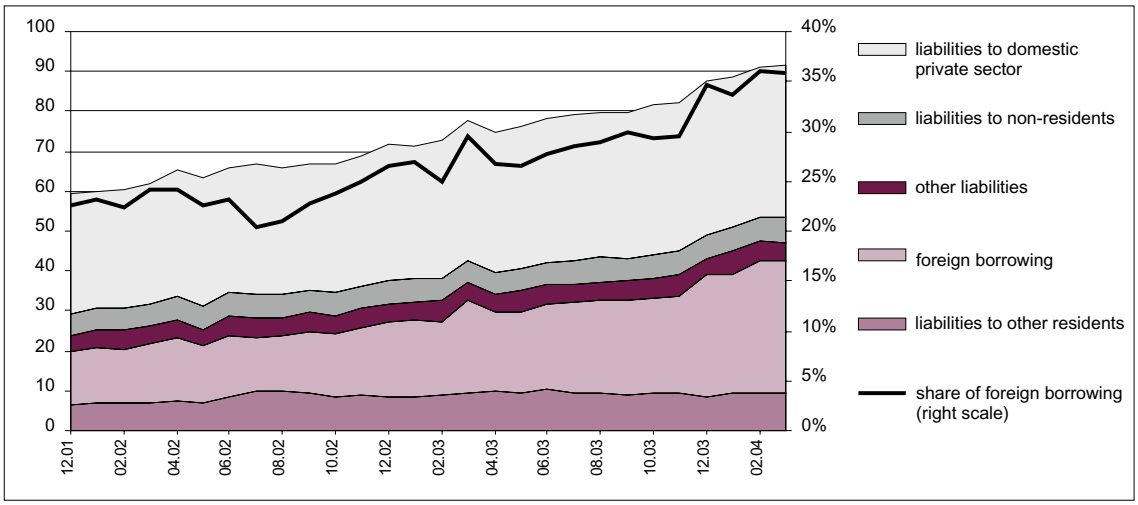

Figure 3.16. Banks' liabilities and share of foreign borrowing (EEK billions)

Financing the Banks

Rapid growth in external borrowing that had lasted for 1.5 years was thrown in full swing in December 2003 in connection with Hansabank's short-term Eurobonds issue. **Average year-on-year growth in external borrowing as a monthly average stood at more than 60%, which boosted the share of external financing to 36% of all liabilities at the beginning of April** (see Figure 3.17).

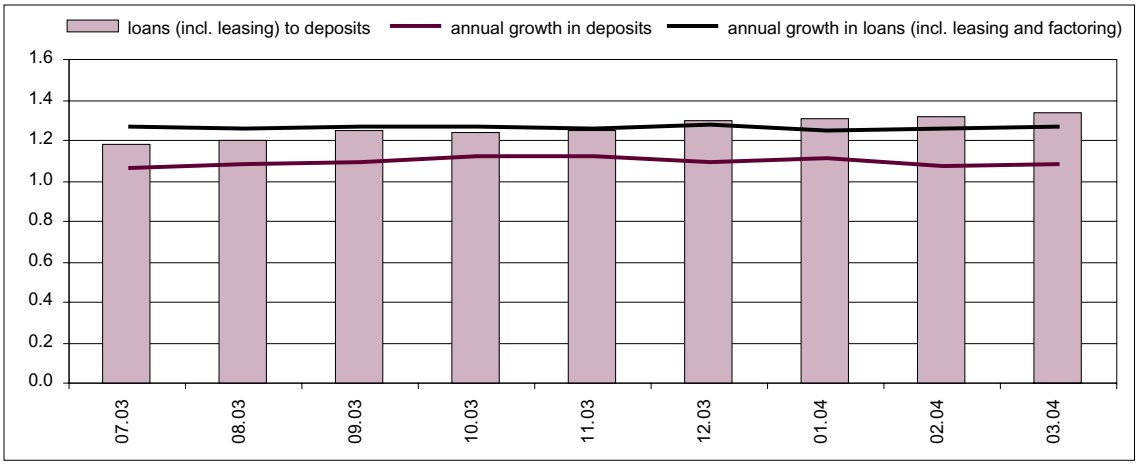

Figure 3.17. Loans to deposits ratio and dynamics

As of March 45% of external loans had been obtained from parent banks. Yet the share of parent banks in financing the banks declined slightly in relation to the above-mentioned bond issue, which strongly boosted market-based resources.

It is evident from the structure of banks' external borrowing that parent banks provide mainly short-term financing based on deposit resources. Meanwhile 90% of the turnover of the resources with a maturity less than a year and inter-bank deposit resources is covered by parent banks. At the same time most long-term and bond-based liabilities are tied to market conditions.

Since the choice of instruments that parent banks use for financing their Estonian subsidiaries differs significantly from market-based financing, it is difficult to compare their prices. But short-term, mainly deposits-based financing excludes risks for the parent bank that maintains the option of either refinancing the claims or restricting financing[1].

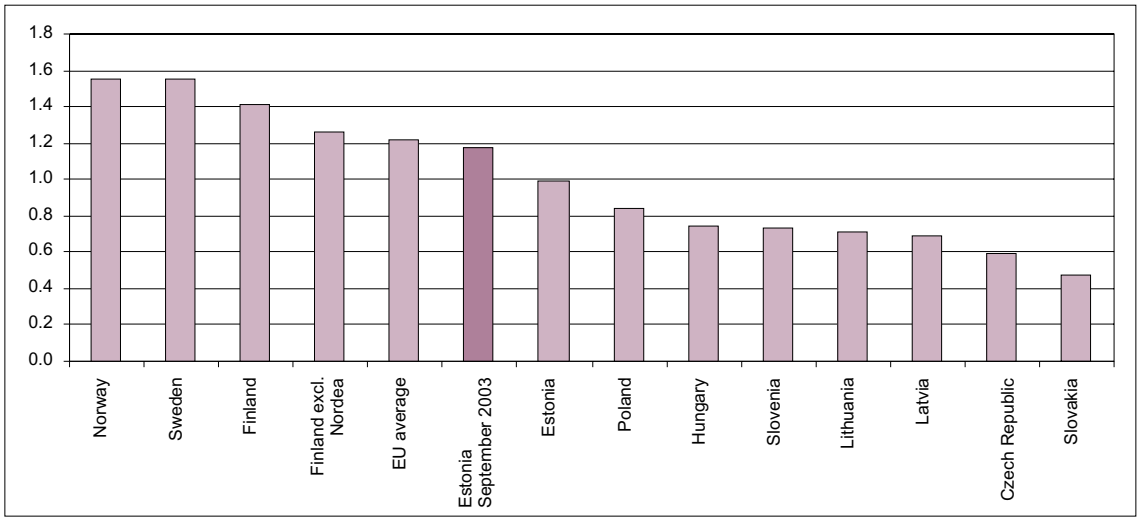

Figure 3.18. Loans to deposits ratio in Estonia and other EU countries in 2002
Source: BankScope

Due to Hansabank's long-term Eurobonds issue in March 2003 and a modest increase in deposits the share of short-term liabilities dropped significantly. Even though a short-term bond issue carried out in December

[1] A financing scheme based on parent bank's short-term resource enables to optimise costs.

temporarily suspended the trend, 57% of external loans were still long-term at the end of the first quarter of 2004. At the end of March liquid foreign assets covered short-term external liabilities by 105%, however, prior to the short-term bond issue at the end of the year the respective ratio had been over 150%. Also in the longer term the indicator in March was one of the lowest.

Borrowing (incl. leasing) has outpaced deposits already since 2002, and during the past two years the prevalence of loans has surged (see Figure 3.18). Tumultuous growth in loans at the beginning of the year accompanied by a simultaneous reduction in deposits translated into a particularly sharp difference. More than 3.5 billion kroons attracted from external sources in December gave another boost to loan growth that had stabilised at the second half of the year. At the end of March loans outweighed deposits by as much as a third.

If we compare the structure of financing Estonian banks to the EU average, one can still see a large share of customer deposits, regardless of loan-based financing that has significantly grown in recent times (see Figure 3.19). While customers' assets account for more than 60% of the liabilities engaged by Estonian banks, the EU the respective figure stands at just 50%. The difference is the biggest in the share of inter-bank financing. While in the EU inter-bank resources account for as much as a quarter of total financing, in Estonia the respective figure is just one tenth.

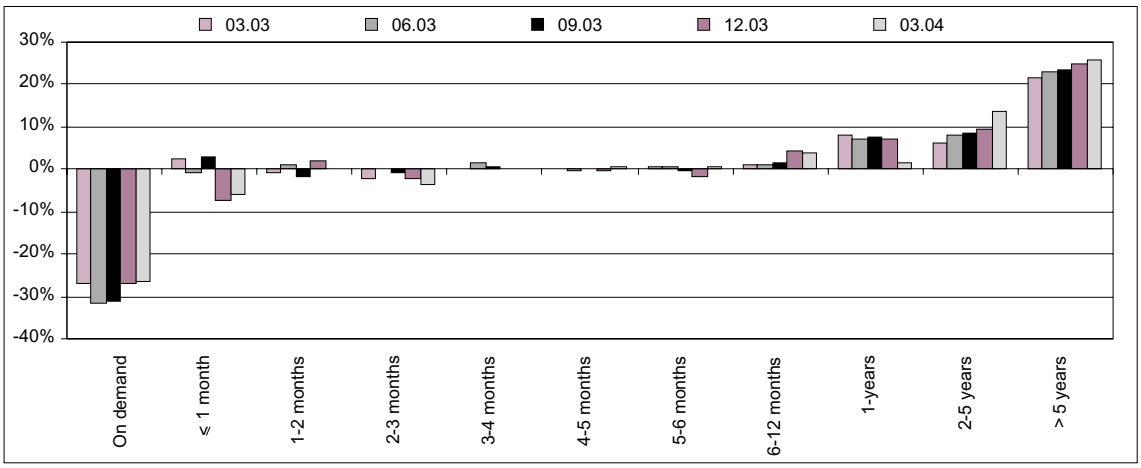

Figure 3.19. Banks' net liquidity position by remaining maturities (% of assets)

Liquid Assets

Following a temporary liquidity surge in relation to Hansabank's long-term bond issue in March 2003 the share of broad liquidity aggregate (claims with maturities less than a month) in current liabilities has consistently declined. While in 2003 the liquidity ratio stood at 53.5%, the average of the first three months in 2004 was 44.8%. Besides a decline in the share of short-term claims also bigger fluctuations in current liabilities, which are significantly affected by the banks' financing schemes changing from being deposit-based to being more loan-based, are a reason behind such development. After Hansabank's short-term bond issue in December the aggregate liquidity ratio fell by 3 percentage points.

Besides, the structure of liquid assets has become significantly more concentrated regarding instruments. More than before, the liquidity reserve is based on foreign deposits and reverse repos, whose share has increased above all at the expense of liquid bonds. Also the share of other short-term assets that do not meet the liquidity portfolio criteria has dropped. Hence the share of highest-liquidity assets has increased; meanwhile the broad liquidity aggregate has declined. The movement towards higher-liquidity instruments

indicates the wish of the banks to optimise liquidity management through the use of more operative instruments, which is necessary for balancing the increasingly more volatile liabilities.

The net positions of liabilities and claims pursue the trend of lengthening regarding assets with maturities over 5 years (see Figure 3.20). This is related to the robust growth in the portfolio of long-term loans, above all due to housing loans. Meanwhile on the liabilities side the negative net position has sooner shortened, again mainly because of the short-term bond issue held in December, as a result of which the share of demand deposits has declined while that of short-term debt obligations has increased. Of liabilities maturing in less than 3 months only approximately 40% have been covered with assets with the same maturities; meanwhile liabilities with maturities over 5 years have been covered with assets by more than 12 times.

Background Information

LIQUIDITY RISK AND MANAGEMENT

Liquidity has been defined as a **bank's ability to finance asset growth and meet expiring liabilities.** Liquidity plays an important role not only for depositors-investors who want to be sure of the bank's ability to disburse money in due time, but also to borrowers who need consistent financing or extension of current financing.

Liquidity management is one of the most important activities of a bank, which also has a **systemic dimension** since liquidity problems in one bank may hurt the whole financial system. Concerning the latter, the role of the inter-bank money market and its weight in the system is particularly important. In Estonia, mutual positions of local banks are marginal; meanwhile more than 99% of inter-bank claims and liability positions are related to foreign banks. An overwhelming part of these are carried by the Nordic parent banks.

Also on a global scale banks have become more **dependant on massive interest-sensitive resource flows** instead of deposits. Such a trend makes liquidity management particularly important for banks. In Estonia, too, the relative importance of financing based on borrowing from foreign banks has grown. A string of studies has concluded that notably short-term institutional loan positions condition the openness of banks to market risks and confidence crises. This phenomenon has been regarded as one on the principal factors behind the Asian crisis.

Liquidity Management and Regulation

There is no universal or best approach to liquidity regulation. Most frequently it is being regulated with the **liquidity ratio** whose computation methods differ in various countries (see Table 3.6). In theory, the ratio of short-term assets to short-term liabilities, which has to guarantee that the latter are at least covered (≥ 1), is viewed as liquidity ratio. Since banks issue mainly long-term loans and hold short-term liabilities by way of deposits, in order to balance the liquidity ratio the banks must also hold liquid assets and attract long-term resources through loans. Mainly cash, reserves placed with the central bank, bonds issued by the central bank and central government, deposits with maturities up to a month, in some countries also money market fund units, marketable bonds and partly also other claims with outstanding maturities below one month are treated as liquid assets. Besides the liquidity ratio, some countries (Korea, Indonesia) have imposed foreign debt restrictions on banks or encouraged credit lines with international banks (Hong Kong, Indonesia, Argentina, Poland).

Table 3.6. Regulatory liquidity requirements per countries

Countries	Minimum liquidity
Estonia, Spain, the Netherlands, Canada, Greece, Cyprus, Poland, Portugal, Sweden, Hungary, the United States	none
Iceland, the United Kingdom, Czech Republic	case-by-case decision
Bulgaria	8% of deposits
Croatia	30.5% of deposits and borrowed resources (incl. bonds)
Denmark	15% of debt obligations and 10% of the total volume of debt obligations and guarantees
Finland	10% of bank's liabilities, excl. debt to government and central bank
Germany	weighted short-term assets/weighted short-term liabilities ⩾1
France	liabilities due in less than 1 month + owners' equity maturing ⩽ liquid assets and cash
Ireland	25% of total debt of banks
Lithuania, Latvia, Malta	30% of deposits
Liechtenstein	33% of short-term liabilities
Luxembourg	30% of current liabilities
Slovakia	5% of deposits

Pivotal in managing liquidity in banks is the **liquidity gap,** i.e. the difference between the assets to be financed in the future and the disposable resources. The positive difference indicates liquidity deficit[2] while the opposite shows liquidity surplus. In case of deficit a bank's interest-sensitive liabilities increase while with surplus interest-sensitive assets grow. During a certain period a bank's assets and liabilities management may be knowingly targeted at maintaining the liquidity gap. For example, in the conditions of falling interest rates it is useful for a bank to maintain a certain liquidity deficit, while in anticipation of a rise in interest rates it is useful to maintain a liquidity surplus. Commonly banks strive to optimise liquidity reserves since excess financing involves interest risks. Interest income earned on short-term investments is mostly volatile (also because of refinancing), and if it differs from the interest paid on borrowed resources, it may result in significant interest risk. Liquidity deficit meanwhile involves a threat that a bank is forced to attract vital resources at a higher price if necessary.

To a certain extent the objective of securing liquidity[3] is also met by the minimum reserve requirement, which is 2% of the reserve base according to the European Central Bank standards. The minimum reserve requirements in the accession countries are considerably higher, meanwhile Estonia's reserve requirement ratio is the highest also among the latter (see Table 3.7).

Table 3.7. Minimum reserve ratios in new EU Member States

Country	Minimum reserve ratio
Estonia	13%
Cyprus	7%
Lithuania	6%
Latvia	3%
Malta	4%
Slovakia	3%
Czech Republic	4%
Hungary	5%

[2] Long-term or anticipated future disbursements are not currently covered by liquid resources.

[3] Meanwhile constraints must still be considered. E.g. upon meeting the minimum reserve requirement the daily minimum level in Estonia must not fall under 40% of the total volume of the claim.

In order to promote efficient liquidity management, the Basel Committee on Banking Supervision has worked out fourteen advisory principles (BIS, 2000):

1. A bank must observe daily liquidity management strategy.
2. Liquidity management strategies and policies must be approved on the highest management level in a bank.
3. The management must participate in carrying out liquidity management procedures.
4. A bank must have an adequate system of information, surveillance, control and reporting of liquidity management.
5. A bank must have a system of gauging and surveillance of current compliance with the net liquidity requirement.
6. Liquidity analysis must involve evaluation of stress scenarios.
7. In the course of liquidity management the prerequisites of cash-flow movement must be checked sufficiently frequently.
8. Sufficient attention must be paid to market access and diversification of liabilities.
9. A bank must have internal operating guidelines for liquidity crisis situations.
10. A bank must have in place a system of gauging, surveillance, and control of the liquidity positions in different currencies.
11. Uncovered net cash-flow positions in different currencies must be regularly re-evaluated.
12. A bank must have internal liquidity risk management controls.
13. A bank must release information about liquidity.
14. Banking supervision authority must provide an assessment of liquidity management in banks.

IV
MONEY AND SECURITIES MARKET

Money and Capital Market

Money Market

The turnover of the Estonian kroon money market did not change significantly in the fourth quarter of 2003 and in the first quarter of 2004 (see Figure 4.1). The turnover of Estonian kroon derivative transactions was consistently below that of short-term kroon-denominated loans, which indicates the small currency risk of the kroon. The high credibility of the Estonian currency is also reflected in the fact that the forward difference between the euro and the kroon remained at 50 basis points across various maturities.

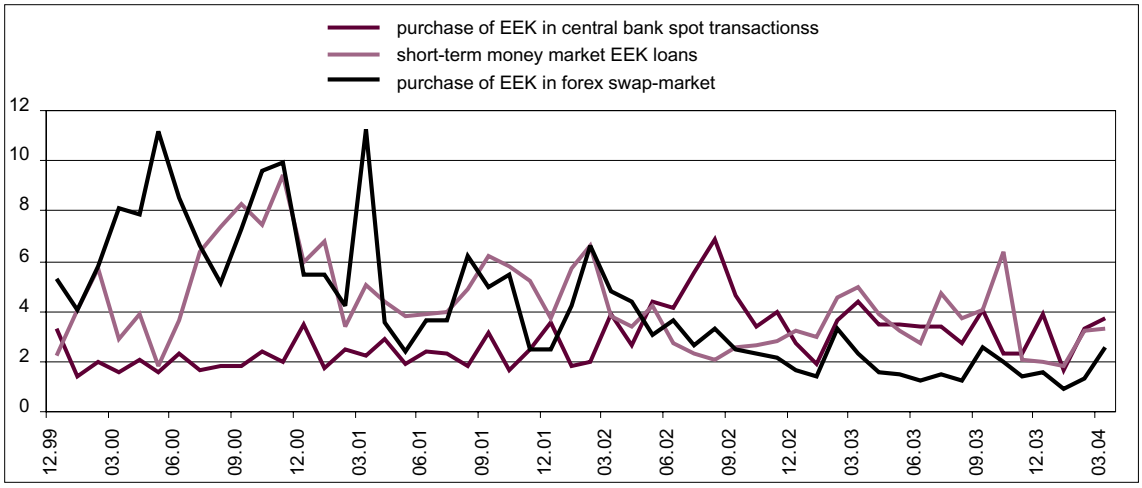

Figure 4.1. Supply of EEK liquidity in Estonian money markets (quarterly turnover, EEK billions)

Transactions by non-residents continued to dominate in the Estonian money market. In 2003, transactions by residents accounted for approximately a third of short-term kroon loans and some 40% of foreign currency swaps (see Figure 4.2). As was expected, the most active participants in the short-term kroon loan market were Finnish, Estonian, and Swedish banks, and at the end of 2003 also Latvian banks. Non-resident credit institutions participate in the Estonian kroon short-term loan market primarily through risk-hedging transactions carried out on behalf of their clients.

Due to the sustained expansionary monetary policy in the euro zone the interest rates on short-term kroon loans in the Estonian money market remained very low at the end of 2003 and at the beginning of 2004. Money market quotations of the Estonian kroon also sustained the low level established at the second half of 2003, similarly to the quotations in the euro area money market (see Figure 4.3). The spread between Talibor and Euribor remained at an average of 50–60 basis points, depending on the maturities. Above all, this reflects changes in Euribor since Talibor varied little (see Figure 4.4).

Estonia's money market remains stable, and kroon liquidity in the financial sector is strong. Banks' settlement buffers with the central bank were consistently in excess of the daily mandatory minimum reserve. Also after amendments to the procedure concerning minimum reserves entered into force on 1 March 2004[1] the banks have smoothly met the reserve requirement.

[1] As of 1 March 2004 cash is not taken into account upon meeting the minimum reserve requirement of the banks.

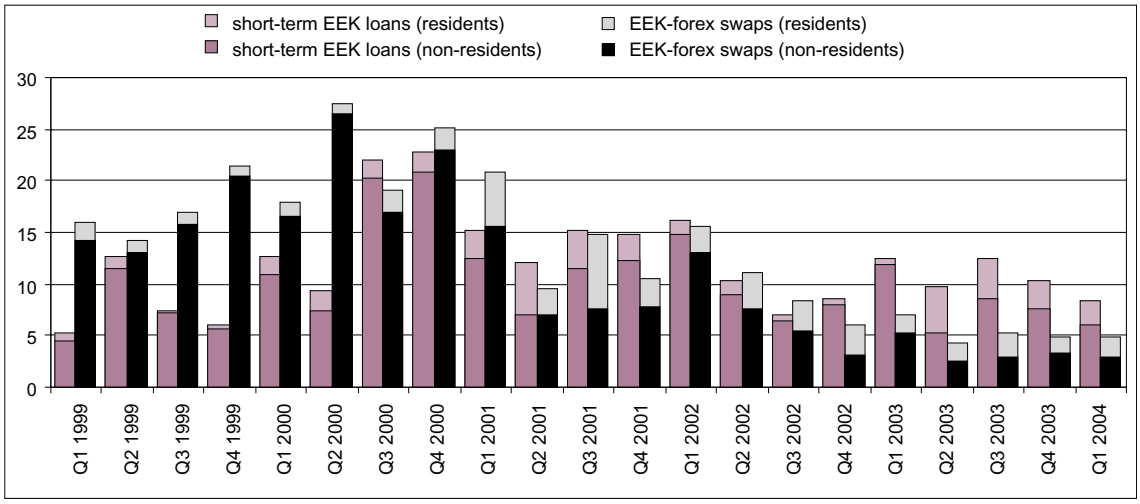

Figure 4.2. Turnover of EEK loans vs turnover of EEK-forex swap transactions (EEK billions)

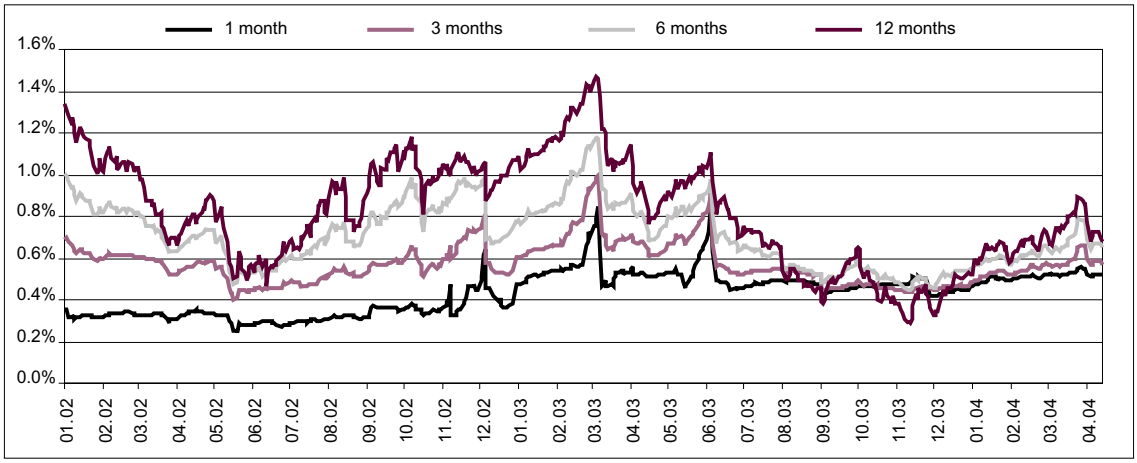

Figure 4.3. Difference between money market interest rates of the Estonian kroon and the euro (percentage points)

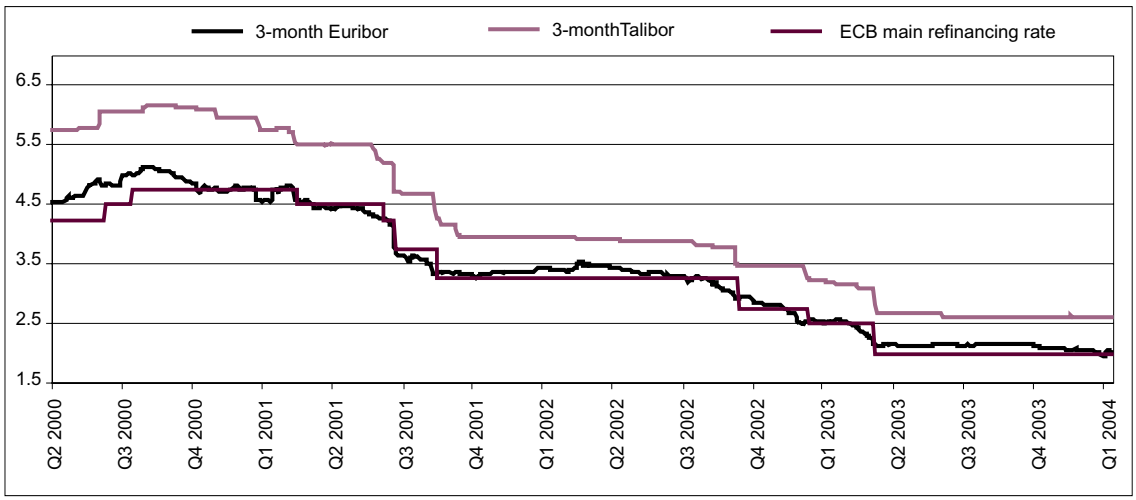

Figure 4.4. Money market interest rates of the Estonian kroon and the euro

The yield of five-year Eurobonds issued by Estonia's government changed in the international markets in line with the yields of the bonds issued by other euro area governments. The difference between the yields of Estonia's Eurobonds and Germany's Eurobonds of comparable maturity remained stable at 35–40 basis points.

Bond Market

Regardless of the expansive liquidity environment, the domestic bond market trading remained modest (see Figure 4.5). The volume of bonds issued in the primary market declined by 40%, reducing market capitalisation to 2.9 billion kroons by the end of 2003. The shrinkage in the market was caused by reduced volumes of bond issues by residents and non-residents alike. Of residents, banks and financial institutions remained the most active market participants; upon financing the real sector the bond market still played a marginal role.

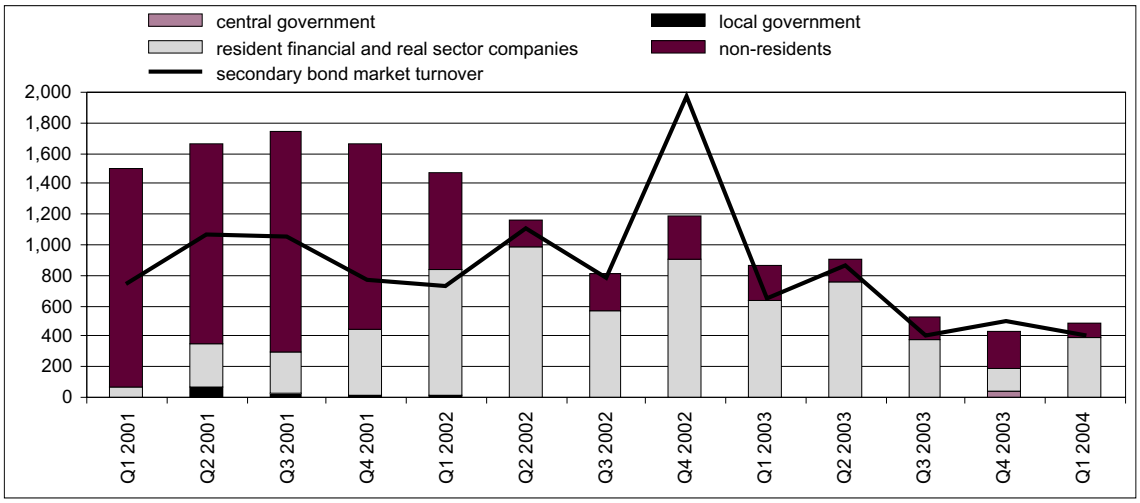

Figure 4.5. Volume of quarterly issued bonds and secondary bond market turnover (EEK millions)

Major issuers who have been in the market for a longer period of time continued to use the bond market mainly for flexible engagement of short-term capital, which is why the maturity breakdown of the bonds issued did not change. Approximately 85% of the bonds issued were with a maturity less than a year, of these every fourth was with a 3-month maturity. Smaller and lesser-known companies preferred to issue bonds with longer maturities, taking advantage of the favourable liquidity environment so as to attract longer-term capital. **Due to the favourable environment new smaller and lesser-known issuers entered the primary market in the second half of 2003.** Since the second half of 2003, similarly to Estonia, the European Union has witnessed bond issues by companies with lower loan quality and a decline in spreads, which indicates that risk premiums demanded by investors have fallen as a result of low interest rates.

Most of the bonds are bought to be held, which is why the secondary market is moderate. In line with the decline in the primary market volumes also the turnover of the secondary market declined in 2003 compared to 2002, amounting to 9 million kroons per day. At the beginning of 2004 the market was even more modest (an average of 6 million kroons per day).

In 2003, bonds were again listed on the Tallinn Stock Exchange and by the end of the first quarter of 2004 four corporate bonds had been quoted[2] (see Figure 4.6) with their market value amounting to 495 million kroons, i.e. 17% of the total volume of the bond market. Arising from investment restrictions[3] applied

[2] Tallinna Sadam, Eesti Post, Hansa Capital, and Sampo Pank.
[3] According to the Investment Funds Act in force, funds are allowed to invest 90% of their resources into securities traded only on stock exchanges.

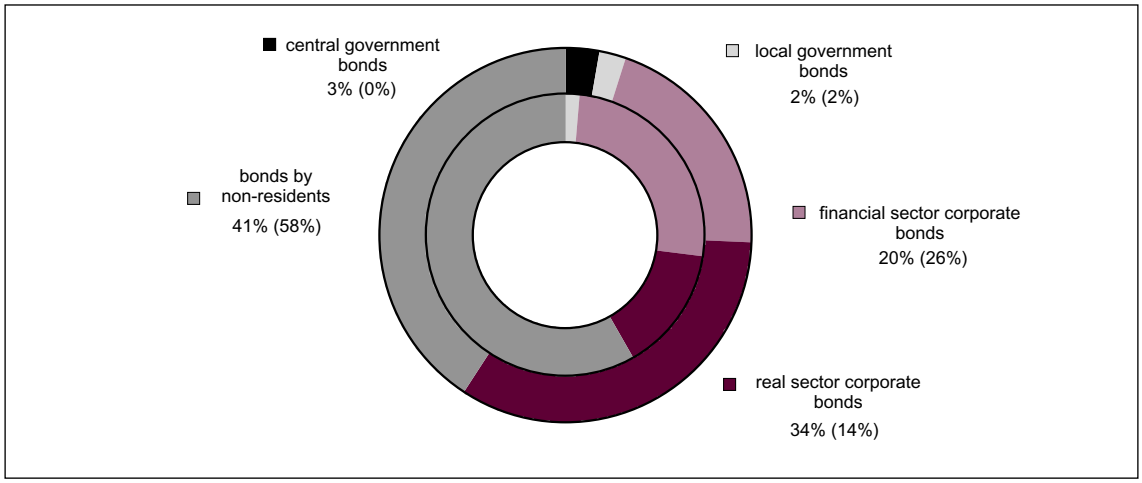

Figure 4.6. Structure of secondary bond market turnover in 2003 (2002 structure in brackets)

to investment and pension funds and also to insurance companies, stock exchange listing attracts interest of a wider circle of investors, which also secures a more favourable interest rate level. Bonds listed on the stock exchange are also predominantly obtained for holding, which is why the turnover of debt securities has remained comparatively small. The average daily turnover in 2003 was 1.1 million kroons and only 300,000 kroons in 2004.

Stock Market

For Central and Eastern European stock exchanges the expectations related to joining the European Union are still topical, which along with increased risk-taking willingness of the investors arising from the lower interest rates spurred a surge on Central and Eastern European bourses in 2003 (see Figure 4.7). Even though the surge ebbed in the fourth quarter, stock indices started to soar again in the first quarter of 2004.

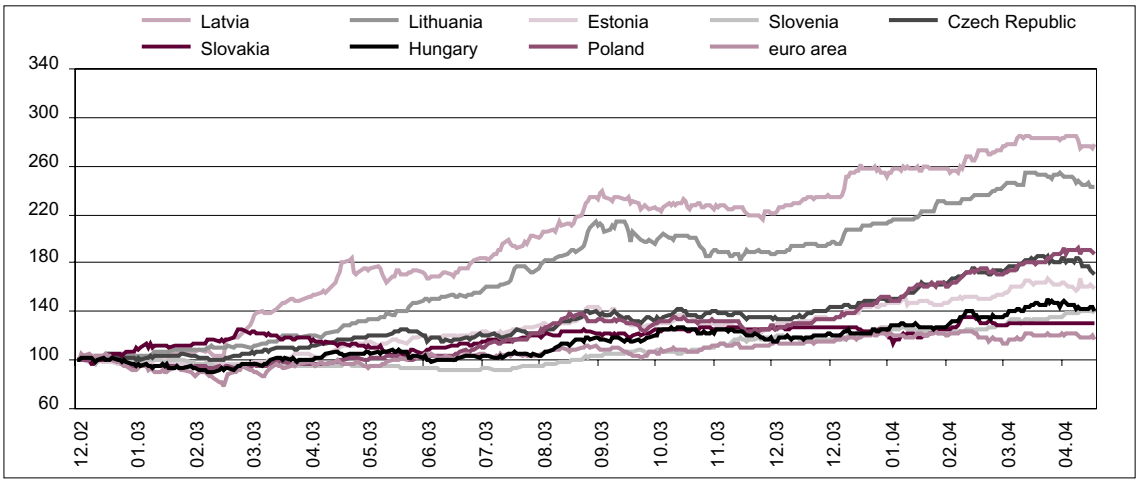

Figure 4.7. Dynamics of stock exchange indices of the new EU Member States in 2003 and 2004 (31 December 2002 = 100)

The Tallinn Stock Exchange index Talse rose by 34% in 2003 (see Figure 4.8). There was some correction in the fourth quarter, but at the beginning of 2004 prices began to rise fast again, and as a result the index stood at 340 points at the end of March, which was 19% higher that at the beginning of the year. This development

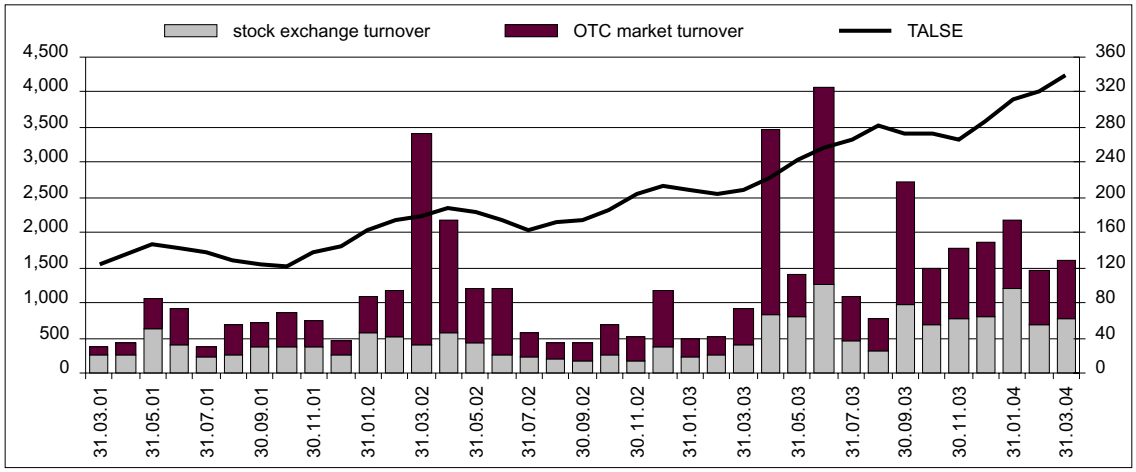

Figure 4.8. Monthly turnover of shares on the Tallinn Stock Exchange and OTC market (EEK millions, left scale) and Tallinn Stock Exchange index TALSE (points, right scale)

brought up the market value of the companies quoted on the stock exchange by 10.7 billion kroons in 2003 and by another 8.9 billion kroons in the first quarter of 2004. The stock exchange capitalisation rose to 56 billion kroons, i.e. to 48% of GDP.

The growth in market activity is also reflected in the increased stock exchange turnover. The average daily turnover in 2003 amounted to 30.6 million kroons, which was twice as much as in 2002. Along with the new price records the average daily turnover rose further in the first quarter of 2004 – to 42.5 million kroons. 94% of the stock exchange turnover accounted for transactions with the shares in three of the four largest listed companies (Hansabank 73%, Eesti Telekom 15%, and Norma 6%). Since the last quarter of 2003 the focus has been even more on the shares in Hansabank (an average of 81% of the transaction turnover).

Market participants are sceptical about a further rise in stock prices, regardless of the fact that Estonia belongs to the European Union investment area since May, which enables foreign funds to expand their positions in the markets of the new Member States. The impediments include the small number of listed companies, small volume of liquid assets arising from strategic stakes[4], and the price level that has climbed high during the past few years.

The share of non-resident investors in the stock market capitalisation stood at around 79–80% in 2003 and in the first quarter of 2004. Resident investors predominantly included financial and real sector companies, who owned 8.7 billion kroons worth of shares listed on the stock exchange, i.e. 15% of the total stock exchange capitalisation. Stock market investments of small individual investors amounted to 1.8 billion kroons, i.e. 3.2% of the total value of listed shares. The growth in stock investments by local investment funds at the expense of other residents in the second half of 2003 reflects certain positions taken by mandatory funded pension funds. However, the share of funds among local stock market investors remains very modest (around 0.5% of the total capitalisation).

Representatives of investment companies have noted that when investing in shares private individuals increasingly prefer more liquid foreign markets. An indication of the retreat of small investors from the domestic stock market is also seen in the fact that while private individuals hold most of the securities accounts with listed shares, the number of such accounts has consistently decreased in years. Meanwhile the number of non-resident accounts has tended to grow during the past couple of years (see Figure 4.9).

[4] Without considering nominee accounts the volume of shares under qualified holding (over 10% of the share capital) amounts to 65% of the total stock exchange capitalisation.

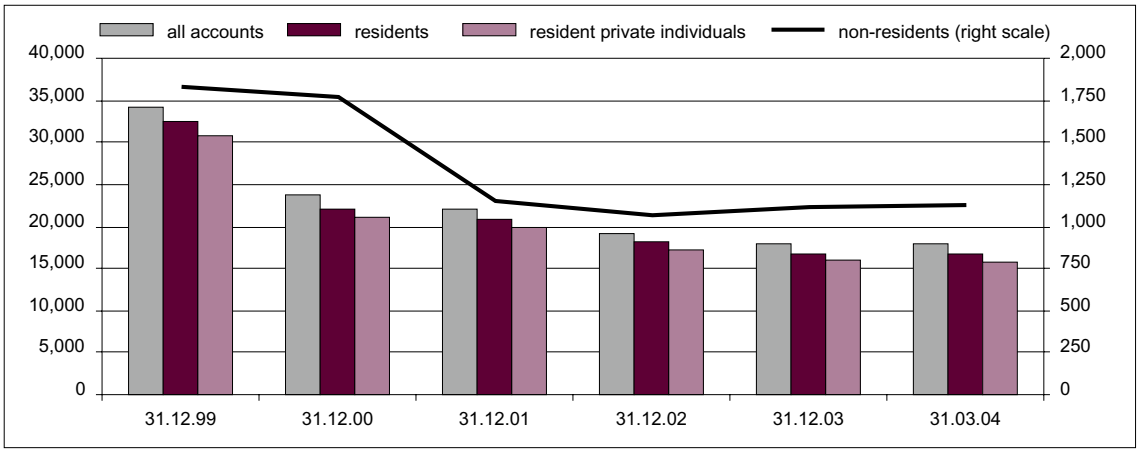

Figure 4.9. Number of accounts holding shares quoted on the Tallinn Stock Exchange

Arising from the fact that several publicly traded companies have strategic majority owners, the predominant trend for the time being is the departure of companies from the stock exchange[5]. There have been no initial public offerings, even though some companies have declared such initial intentions in the press and according to representatives of the stock exchange. It is cheaper for companies to attract capital from alternative sources than from the stock exchange; moreover, attracting capital in the expansive liquidity environment is not a problem.

13 stock exchange members, of whom two are temporarily inactive, have the right to act as brokers. Most of the deals (92%) are brokered by Hansapank and Suprema Securities. A member of the Finnish Sampo Group, Mandatum Stockbrokers, has given up its member status since it is going to trade on the Tallinn Stock Exchange through its Estonian subsidiary, Sampo Pank. As of June also Krediidipank, who brokered just 0.05% of the total market turnover during the past year, is to give up its membership status.

[5] In April the holder of 49% of the Eesti Telekom shares, Baltic Tele AB, a subsidiary of TeliaSonera AB, made a takeover bid to the other shareholders of Eesti Telekom, which accounts for 30% of the stock market capitalisation. Besides, AS Rondam, which took over 95% of AS Estiko has submitted a notice of withdrawing from the stock exchange also as a result of the takeover bid.

V
OTHER FINANCIAL MARKETS

Investment Funds

Owing to consistently low money market interest rates and spurred by delayed interest rate growth expectations the yields of money market and interest funds fell in 2003 (see Figure 5.1), and in line with the decline in total corporate and household savings also the rapid growth in investment funds' assets that had started two years ago slowed down in the second half of the year. Due to soaring real estate prices, both companies and households preferred real estate investments with their higher returns, meanwhile the savings behaviour of households was also shaped by contributions into the pension insurance system.

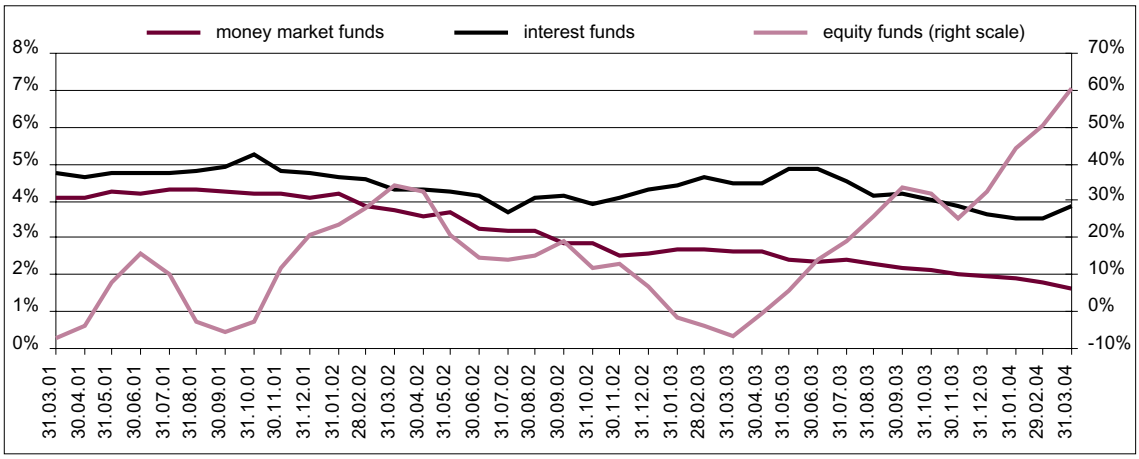

Figure 5.1. Average yield of investment funds (%)

Investors' interest was still primarily focused on the **money market fund** units offering stable returns and liquidity. While at the beginning of 2003 also **interest funds** demonstrated solid growth, in the second half of the year the sustained rise on the stock exchanges in Central and Eastern Europe and the recovery in global stock markets boosted the yields of **stock funds** and spurred interest in stock investments. This translated into a slowdown in the growth of interest funds during the year and a multiplication of equity fund assets amounting to a billion kroons (see Figure 5.2). The supplementary 360 million kroons added at the beginning of 2004 almost balanced out the equity fund assets with the interest fund assets. Besides residents, also non-residents have actively purchased equity fund units.

The share of foreign assets in the funds' assets, which had declined in the second half of 2002 reached its previous level at the end of 2003 (see Figure 5.3). The funds invest 80% of their resources in the markets of old and new EU Member States. Impacted mainly by equity funds, the second half of 2003 was marked by an inclination to invest more in the markets of the new Member States as well as the United States (see Figure 5.4). The total volume of instruments invested in the local stock, bond, and fund markets amounted to 1.35 billion kroons (including 235 million kroons worth of shares and units), i.e. 18% of the funds' assets.

Pension Funds and Insurance

As a continuation of the successful period of signing up with the **II pillar of the pension system**, the mandatory funded pension funds accumulated the contributions of all those who had joined the system in 2002, and as a result the volume of mandatory funded pension funds soared to nearly one billion kroons

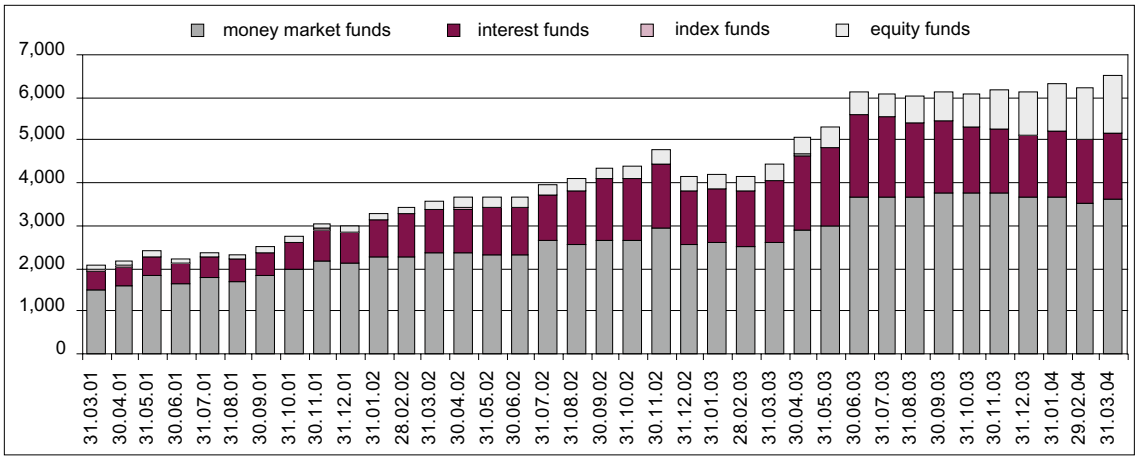

Figure 5.2. Volume of investment funds assets (EEK millions)

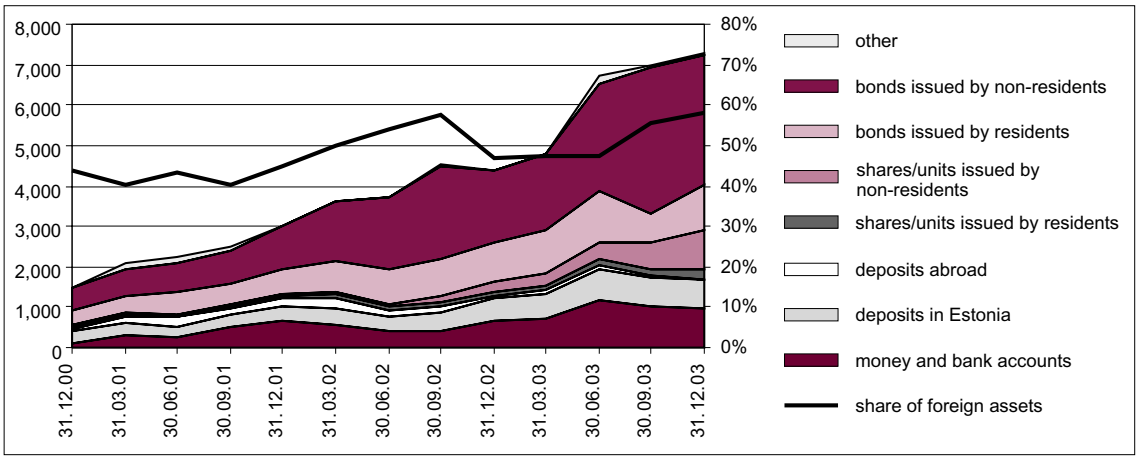

Figure 5.3. Structure of investment and pension funds and the share of foreign assets (%, right scale)

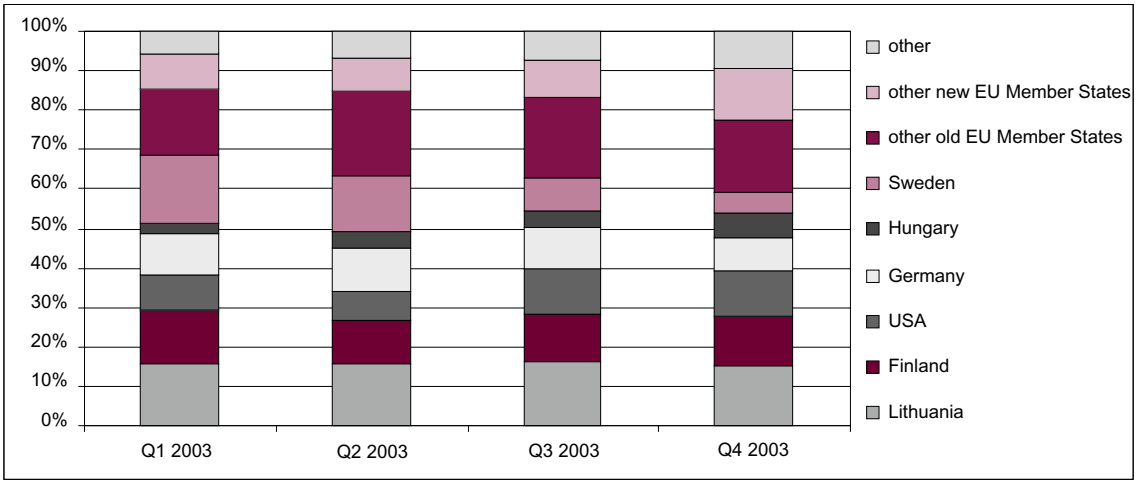

Figure 5.4. Foreign investments of investment and pension funds by residency

by the end of the year. By 31 October 2003 another 143,000 people had joined the II pillar of the pension system, therefore at the beginning of 2004 more than 350,000 employees, i.e. 60% of the working population could start contributing to mandatory funded pension funds. According to the data issued by Pensionikeskus (Pension Centre), the average gross income of residents who had joined the mandatory funded pension system by the end of 2003 was 6,577 kroons per month. Thus, depending on the number of contributors, growth in the II pillar funds since March 2004 can be predicted to be 115–140 million kroons per month, and the total volume of the funds at the end of the year should be 2.3–2.6 billion kroons, i.e. 2% of GDP (see Figure 5.5).

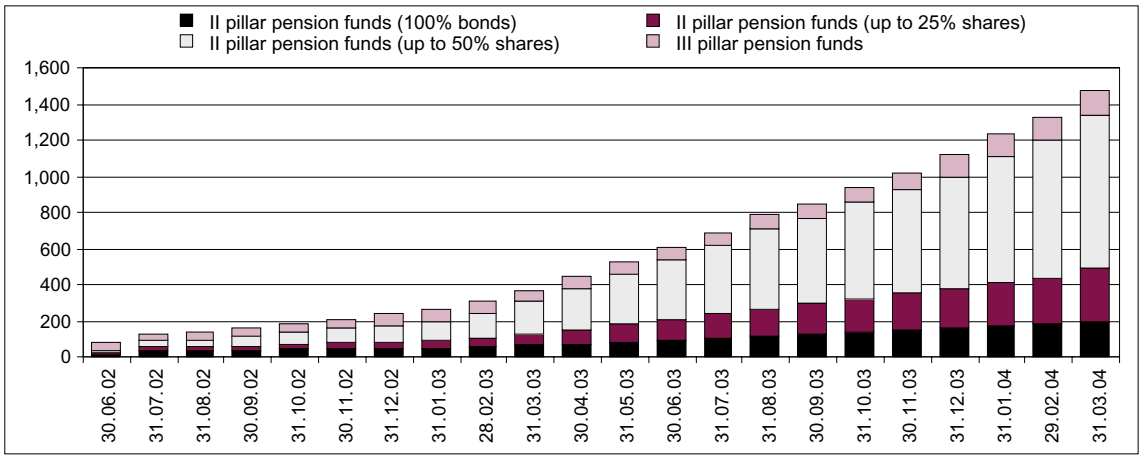

Figure 5.5. Volume of pension funds' assets (EEK millions)

75% of the assets in the II pillar pension funds have been placed in the more liquid foreign markets while the volume of local shares amounts to just 58 million kroons. Therefore one can assume that the II pillar pension funds have contributed only marginally to the rise in the local stock market. In the last two quarters of 2003 it was the acquisition of foreign shares and bonds issued by residents that increased rather than that of local shares (see Figure 5.6).

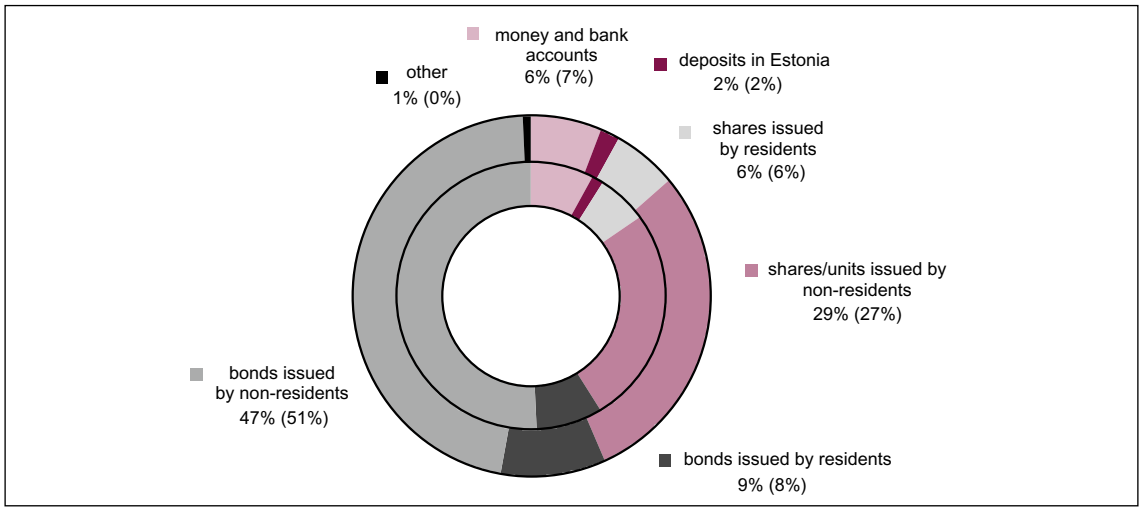

Figure 5.6. Structure of II pillar pension funds' assets at end-2003 (position on 30 September 2003 indicated in brackets)

At the end of the first quarter of 2004 the number of those who had signed up with the **III pillar of the pension system** stood at some 64,700, i.e. 10.7% of the working population, and the volume of assets in the system amounted to 750 million kroons (of which the insurance contracts reserve made up 670 million kroons).

The III pillar investments have mostly taken the form of insurance contracts with funds accounting only for 11% of the pillar, which is why the assets of supplementary funded pension funds stood at just 127 million kroons at the end of the first quarter in 2004. Of supplementary funded pension investments approximately half have been placed in foreign markets, i.e. around a third less compared to mandatory funded pension funds (see Figure 5.7). The underlying reason probably lies in higher transaction costs arising from the small size of the III pillar funds. Therefore the assets of the III pillar funds are more open to the risks of the local securities market, even though the total volume of shares, units, and bonds issued by residents is very modest (32 million kroons).

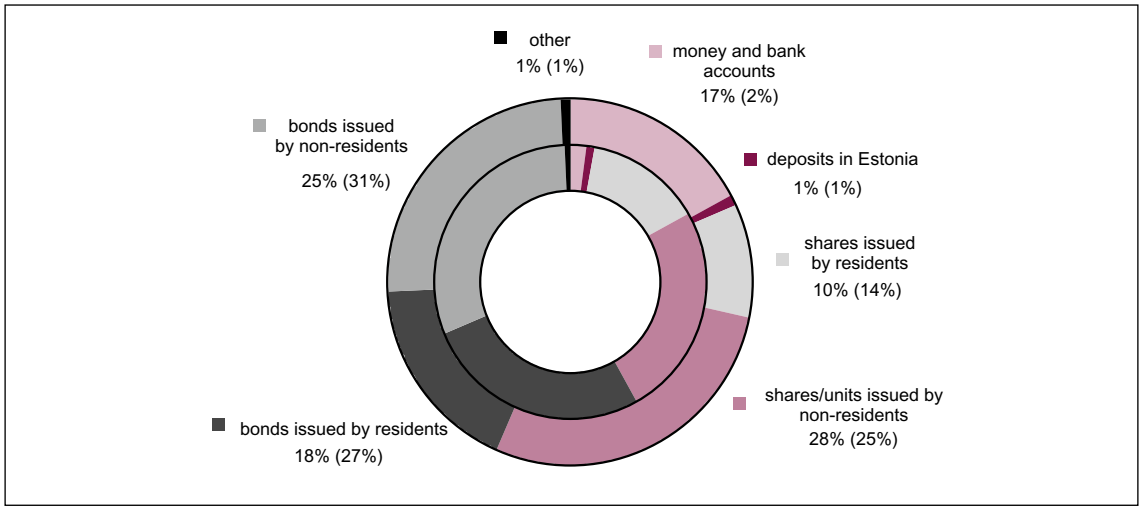

Figure 5.7. Structure of III pillar pension funds' assets at end-2003

Insurance Companies

The increasing domestic demand and the spread of voluntary pension insurance have accelerated growth in the insurance market. According to preliminary unaudited data, **profits from life insurance** soared 3.6 times in 2003 – to 62 million kroons[1] while return on assets grew from 1.6% to 3.7% in a year. This was underpinned by a rise in operating volumes and growing investment earnings, which was related to the changes in financial investment reporting by insurance companies.

Insurance companies collected 570 million kroons in gross premiums in 2003, i.e. 30% more than in 2002 (see Figure 5.8). The overall volume of life insurance premiums was boosted by the premiums collected under unit-linked and endowment insurance policies, which also included tax-deductible pension insurance products. Making use of life insurance contracts for investment purposes has become increasingly popular since it has several benefits compared to alternative facilities[2], and companies have sought to satisfy growing demands by launching several new products.

Contrary to the developments in the Estonian life insurance market, the EU insurance sector has been struggling with low profitability caused by the disproportion of assets and liabilities[3] arising from the large share of long-term contracts with guaranteed interest. Regardless of the recovery in the stock markets, the interest paid on guaranteed-return liabilities of the EU insurance companies is still higher than the current market rates, thus reducing the profitability of insurance companies.

[1] Even though all life insurance companies posted a profit in 2003, their profitability was different.
[2] For example, shares or fund units in an investment portfolio covered by an insurance policy can be replaced without paying taxes on the return. A standard investment portfolio does not provide that option.
[3] The average return on assets in the EU life insurance sector in 2002 was -0.25%.

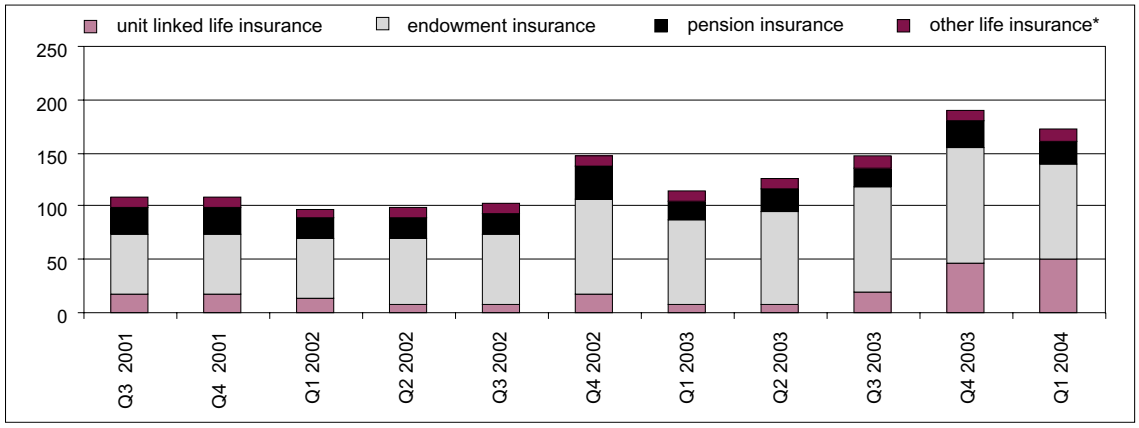

Figure 5.8. Gross premiums collected by life insurance funds (EEK millions)
* incl. marriage and birth insurance, term and whole life insurance, supplementary insurance, and other life insurance

Completion of the reorganisation of the **non-life insurance market** was reflected in the significantly improved profitability, which – according to preliminary unaudited data – soared 3.7 times in 2003 compared to 2002, i.e. to 178 million kroons[4]. Return on assets went up from 2.7% to 7.5% in a year, which was supported by growth in collected premiums as well as the increased efficiency arising from better-managed costs and rising volumes. The profitability was also impacted by improved investment earnings, which in turn were underpinned by a change in the financial investments accounting principles.

Increasing non-life insurance premiums indicate a thriving real estate market and successful car sales (see Figure 5.9). In 2003, insurance companies collected gross premiums worth 2.1 billion kroons, i.e. 25% more than in 2002. Meanwhile premiums collected under the voluntary motor insurance facility more than doubled. Of other types of insurance, premiums from general liability insurance, which cover mainly speciality-related (notary, auditors, etc.) and employer liability, outpaced the overall growth rate in the non-life insurance market.

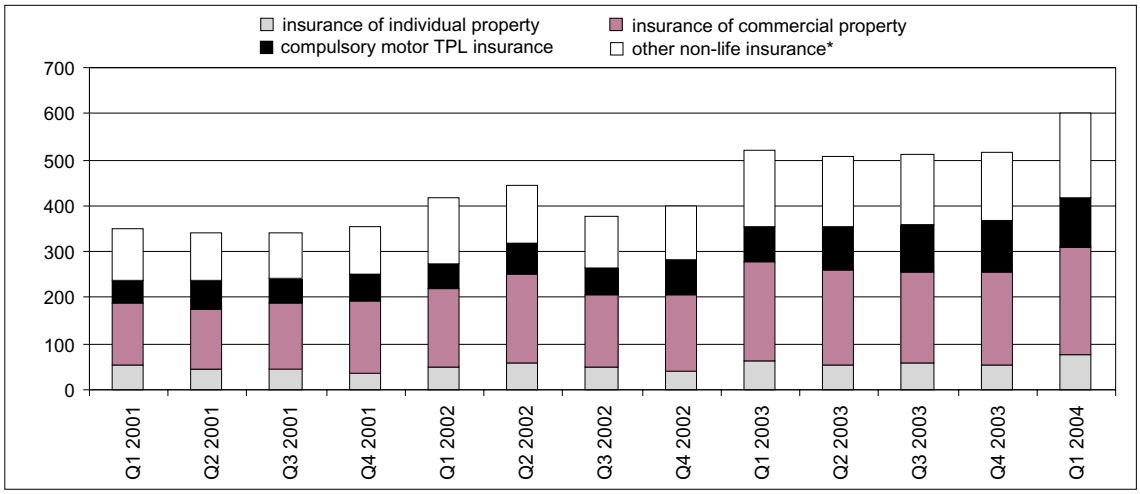

Figure 5.9. Gross premiums collected by non-life insurance companies (EEK millions)
* incl. accident and sickness insurance, travel insurance, insurance for pecuniary loss, goods in transit insurance and other non-life insurance

[4] The profitability in the non-life insurance sector was also very different. The only company to post an annual loss was Nordicum Kindlustus, which took over the portfolio of Nordika Kindlustus, which had terminated its operations in 2002.

VI
PAYMENT SYSTEMS

Interbank Settlement System

An average of 119 payments per day[1] were settled **in the Real Time Gross Settlement (RTSG) System** in the fourth quarter of 2003 and in the first quarter of 2004. Compared to the same period a year ago, the number of payments soared by 26%. The surge came mainly at the expense of customer payments (growth 41%), which accounted for 66% of all real-time payments (see Figure 6.1).

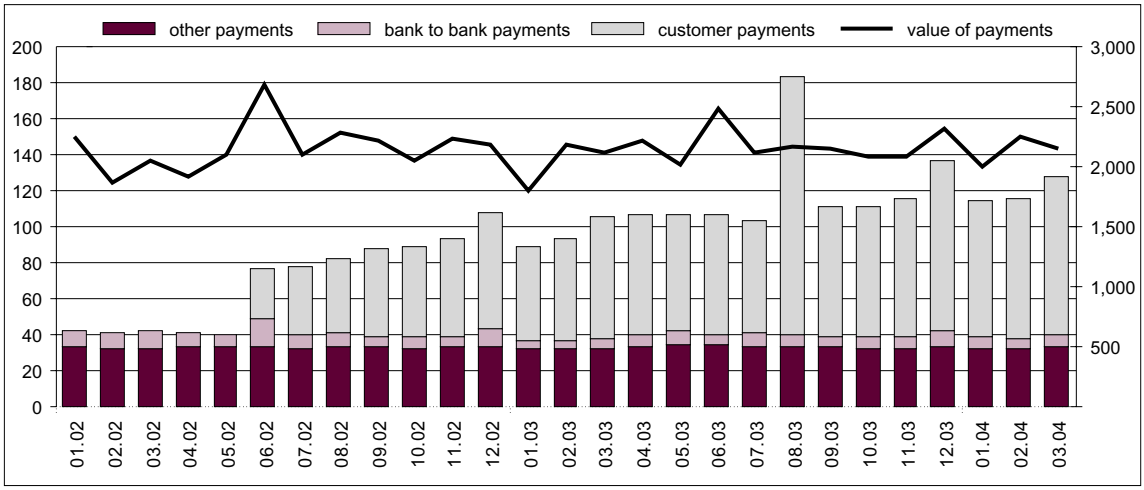

Figure 6.1. Daily volume (left scale) and value (EEK millions, right scale) of payments processed in the RTGS System (monthly average)

The average daily value in the RTGS System during the given period was 2.1 billion kroons. Most of the turnover (66%) accounted for payments related to the collateral transactions in the Designated Time Net Settlement System. Year-on-year, the value of payments settled through the RTGS System increased by 3%. The average volume of RTGS payments was 17.4 billion kroons and that of customer payments 2.3 billion kroons. Year-on-year, the average size of such payments dropped by 18% and 26%, respectively.

In the fourth quarter of 2003 and in the first quarter of 2004, **the Designated Time Net Settlement (DNS) System** settled an average of 69,000 payment per day with the total daily value of 655 million kroons. Year-on-year, the number of payments increased by 11% and the value 14%. The average value of a payment in the DNS System during the given period was 9,500 kroons (see Figure 6.2).

In order to reduce operational risk, general operational sustainability principles have been developed within the framework of the system's technical conditions. Besides, emergency procedure guidelines have been established, which are tested once a year in cooperation with system participants. The most frequent operational disturbances are technical glitches of which the most significant are incidents arising from communication interruptions. For example, on 17 March 2004 the work of the DNS and partly also of the RTGS System was interrupted due to a hardware breakdown in the Uninet system caused by a power failure.

[1] These include payments initiated by bank clients, interbank payments, cash and foreign exchange related payments, collateral transactions in the DNS system, net settlement system transactions, and other payments related to Eesti Pank.

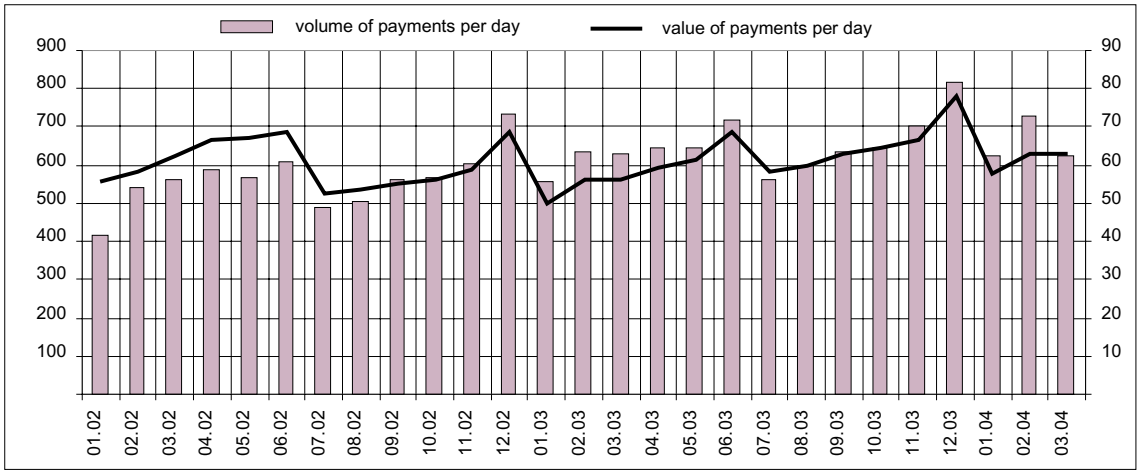

Figure 6.2. Daily volume (thousands, right scale) and value (EEK millions, left scale) of payments processed in the DNS System (monthly average)

In the fourth quarter of 2003 and in the first quarter of 2004 three serious RTGS and four DNS System failures occurred. However, correction of the faults within a reasonable time retained the high operational availability of the settlement systems with the RTGS operational availability standing at 99.89%, which means that during the two quarters the system was unavailable only for an hour and 26 minutes. The respective figures for the DNS System were 99.93% and 38 minutes (see Figure 6.3).

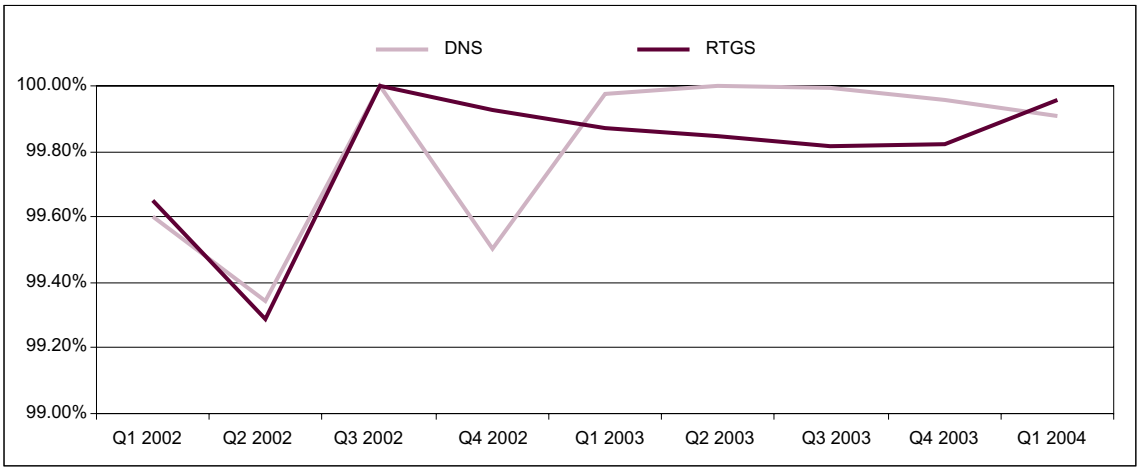

Figure 6.3. Operational availability of interbank settlement systems

Payment Mediation

Payment Environment

During the past year settlement of payments in Estonia has been consistently characterised by a fast expansion of electronic payment channels. Meanwhile the number of less efficient channels – bank offices and post offices – has remained the same or dropped slightly[2] (see Figure 6.4). In 2003, banks concluded over 245,000 Internet banking contracts with clients; by the end of April 2004 the number of such contracts had risen to some 910,000. Considering that Finland, which is known for its e-banking facilities, had around 60 electronic banking (including Internet banking) contracts per 100 inhabitants[3] at the end of

[2] The number of post offices dropped by 31 in 2003, and at the end of the year there were 395 post offices in Estonia.
[3] Sources: Finnish Banker's Association and the European Central Bank.

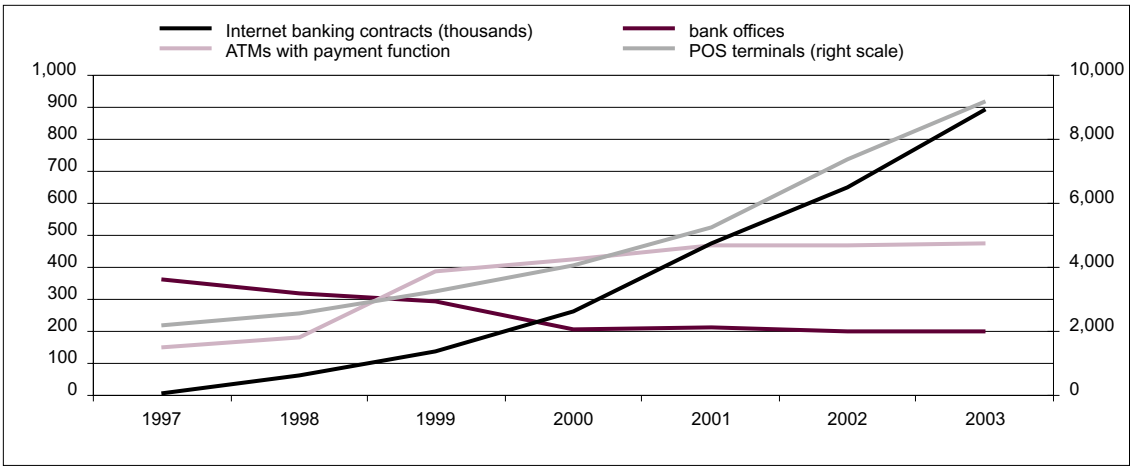

Figure 6.4. Bank channels for retail payments in Estonia at the end of 2003

2003, Estonia with its 67 contracts per 100 residents[4] should be at the forefront in Europe. The number of point-of-sale terminals grew fast in 2003 – by 1,831. At the end of March 2004 approximately 9,000 shops or service companies in Estonia accepted bank cards. By March 2004 the two largest Estonian banks had 17,000 clients with contracts for mobile payments (which the banks had launched at the end of 2002), and 1,320 points of sale accepted mobile payments in paying for goods and services.

Compared to the Nordic countries[5], which are known in the European Union for their information technology development, innovation and efficient financial services, Estonia still has room for growth regarding per capita number of POS terminals. Even though the difference with Finland, Sweden, and Denmark is shrinking fast, the average indicator was still 2.7 times smaller at the end of 2002 (at the end of 2001 the figure was 3.6 times smaller). However, the number of automated teller machines in Estonia per capita is now higher than in Finland and Sweden, and the growth in the number of ATMs will probably not be sustained (see Figure 6.5).

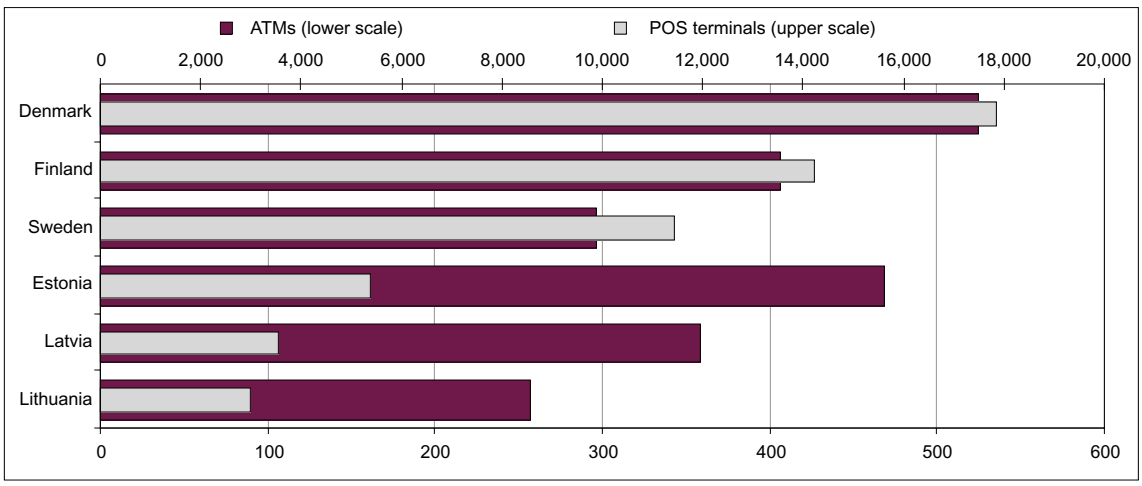

Figure 6.5. Number of ATMs and POS terminals per million inhabitants in selected countries at the end of 2002

[4] As at the end of April 2004.
[5] According to a report on the implementation of the EU Lisbon strategy and competition perspectives, Finland, Denmark, and Sweden have occupied the top three positions among the old EU Member States in almost all categories. According to the same document, Estonia is the first among the new Member States and ranks higher than Southern European countries. Source: World Economic Forum, April 2004.

Payments via Credit Institutions

The number of payments settled through banks soared by 25% from October 2003 to April 2004 compared to the same period a year ago – from an average of 8 million to 10 million transactions per month. The number of domestic payments increased 11% while that of international payments decreased by 15%.

The most popular payment instruments are bank cards and credit orders[6], which accounted for 91% of all payments that were made via credit institutions in the first quarter of 2004 (see Figure 6.6). Due to the growing availability of electronic payment channels, the share of electronic credit orders in the total credit orders has grown year-on-year and amounted to 96% in the first quarter.

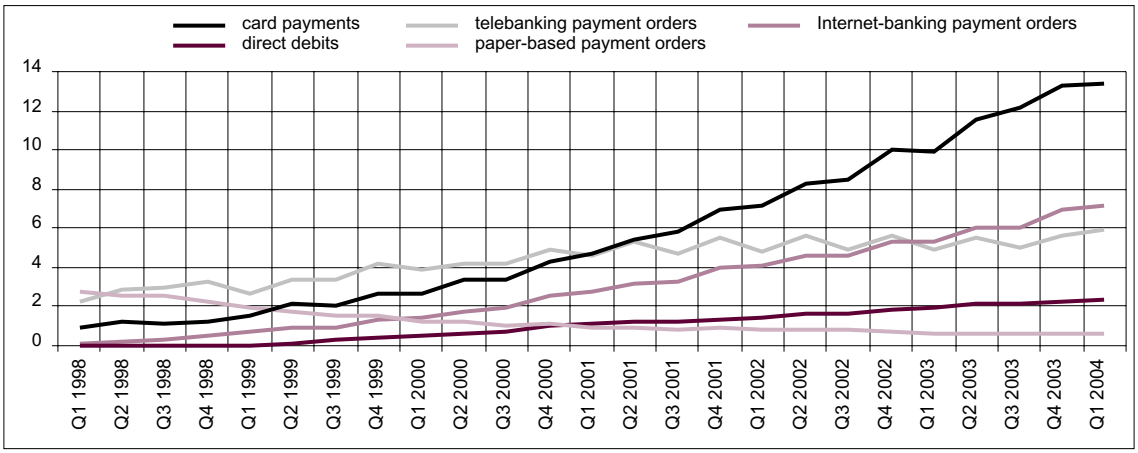

Figure 6.6. Widely used payment instruments by number of payments (millions)

The more convenient, faster, and cheaper direct debit and Internet banking payment orders are used increasingly frequently as alternatives to cash, paper-based, and telephone banking payment orders. The use of such facilities soared by more than a quarter from October 2003 to April 2004.

For credit institutions the increasing number of electronic payments, particularly card payments, settled through their systems translates into the growing income from service charges. In 2003,

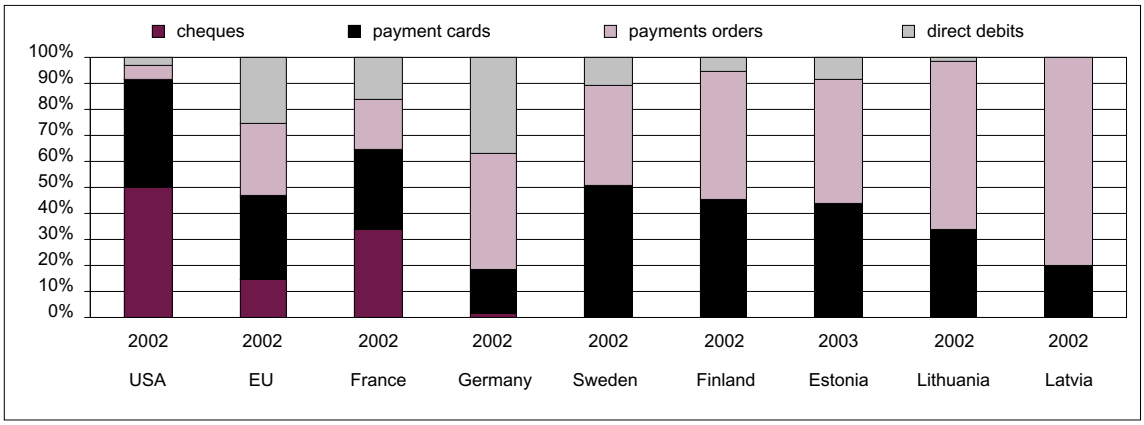

Figure 6.7. Percentages of non-cash payment instruments in the total number of non-cash payments in selected countries

[6] Credit orders include Internet banking, telebanking, telephone banking, and paper-based payment orders and standing orders.

net earnings from card transactions soared by up to a third depending on the bank, and amounted to more than 500 million kroons. Thus for banks with a broad customer base, net income from card transactions accounted for up to a fifth of the consolidated profit.

An average of 78 non-cash payments per person were made in Estonia in 2003[7]. The respective figure for the EU[8], however, was 138 payments per capita. The structure of non-cash payments in Estonia mostly resembles similar systems in Finland and Sweden where mainly payment cards and credit orders are used (see Figure 6.7). Besides, the use of the direct debit facility is also expanding. Similarly to Finland, Sweden, Latvia, and Lithuania, cheques are generally not used in Estonia. Also across the EU the use of bank cards, credit orders, and direct debit is consistently gaining popularity at the expense of the less efficient cheques.

Use of Payment Cards

By the end of March 2004, Estonian credit institutions had issued over 1.2 million payment cards, meanwhile the number of passive cards by which no payments were made rose to 20% (in recent years the figure had remained 16–18%). During the fourth quarter of 2003 and the first quarter of 2004 over 20,000 debit and nearly 25,000 credit cards were issued. The overall share of credit cards grew from 14% at the end of March 2003 to 16% at the same time in 2004. On average, every seventh resident was holding a credit card while every eleventh person made active use of it.

At the end of March 2004 there were 73 actively used payment cards per 100 residents in Estonia, of which 64 were debit and 9 credit cards (see Figure 6.8). Even though the number of actively used credit cards per capita has grown year after year, the indicator dropped by 3% in the first quarter of 2004. The decline may have been caused by the fact that in the course of different card-related campaigns clients had taken out cards from multiple credit institutions but actually use the products and services, including payment cards, of just one bank.

Although more bank card transactions per capita are carried out in Estonia than in other new EU Member States – in 2002 and 2003 the respective figure in Estonia was 25 transactions per person – it is still

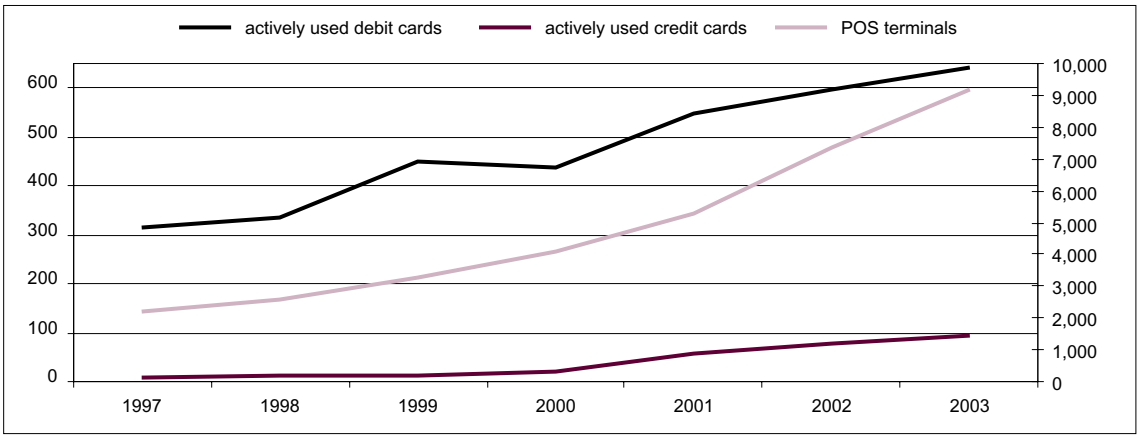

Figure 6.8. Number of payment cards (left scale) per thousand inhabitants and number of POS terminals (right scale) at the end of 2003

[7] Approximately 63 payments in 2002.
[8] The data refers to the old EU Member States. Source: European Commission, April 2004.

on average twice as small as the respective figure in the old Member States. Meanwhile Estonia's card payments value relative to GDP is approximately the same as the average of the old EU Member States (see Figure 6.9).

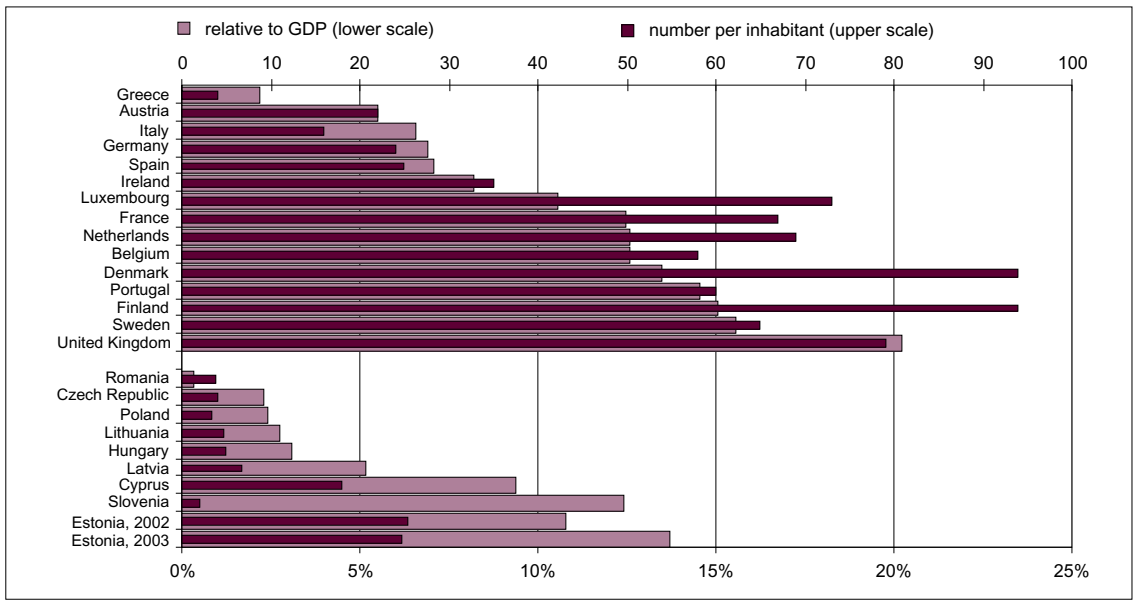

Figure 6.9. Value of card payments relative to GDP and number of card payments per inhabitant in 2002

BACKGROUND INFORMATION

INNOVATIVE PAYMENT METHODS

Europe

The expanding use of new information technologies and a need for payment methods compatible with the e-commerce facilities[9] have prompted the development of increasingly innovative payment methods. Besides banks that traditionally offer payment settlement services, also information technology and telecommunication companies are more and more involved in developing and offering such services. The principal difference between innovative services offered by banks and other service providers lies in the fact that while banks offer commonly known payment methods, e.g. payment orders, direct debit, bank cards (debit and credit cards), and develop such products further, the products of alternative service providers are above all characterised by the use of technologies and systems that have not been used for making payments before. Besides the money of the central bank and commercial banks, also corporate and e-money is used more extensively as means of payment in such settlements (see Table 6.1).

[9] In 2000 e-commerce turnover in the European Union surged by 680%.

Table 6.1. Innovative payment channels and methods common in Europe

Payment channels/ methods	Subcategories	Means of payment	Examples	Extent of use
1. Payment methods requiring Internet use	1.1 Use of bank cards (mostly credit cards) for payment in Internet shops	Commercial bank's money	Verified by Visa (global), e-Carte Bleue (France)	Carte Bleue - 85,000 users in mid-2003
	1.2 Use of e-mail or online channels to forward payment instructions (settlement carried out in standard bank accounts)	Commercial bank's money	CertaPay (Canada), MoneySend and Visa Direct (global)	CertaPay - about 5 million users
	1.3 Payment portal (different payment methods requiring Internet use are chosen by the client)	Commercial bank's money, e-money, or corporate money	Ogone (Belgium), Wire Card (Germany), Debitech, Netgiro and Wallit (Sweden)	Ogone - about 65% of e-money payments; 15 banks have joined
	1.4 Account-based (accounts opened through the Internet with a bank or other service providers) payment settlement services	Commercial bank's money, e-money, or corporate money	Moneybookers and NatWest FastPay (UK), PayPal (US), MinutePay (France), Cartio Micropayments (Holland)	PayPal - 35 million users in 1999; 910,000 users in Estonia in the spring of 2004; 23% of non-cash payments settled via banks
2. Payment methods based on prepayment	2.1 Software-based e-money schemes	E-money	E-cash (Germany)	
	2.2 Card-based e-money schemes	E-money	Proton (Belgium), MiniCASH (Luxembourg), Chipknip (the Netherlands)	0.7% of non-cash payments in the EU, 7% in Belgium, and 5.3% in Luxembourg (2002); Proton - 2.5 million cards issued by the beginning of 2003, over 300,000 payments carried out daily; Chipknip - 17.2 million cards by the end of 2002; over 230,000 payments carried out on a daily basis
	2.3 Prepaid cards	Commercial bank's money, e-money, or corporate money	Paysafecard system (Austria and Germany), WWWBon (the Netherlands), Omnipay Prepagato (Italy)	Paysafecard (Austria) - 40,000 cards issued by the end of 2002
	2.4 and 3.1 Mobile account (based on prepayment; payments made in an account opened with a telecommunications service provider)	E-money or corporate money	DNX MobileMoney and Sonera Shopper (Finland)	EMT (Estonia) - data not available
3. Payment methods requiring mobile phone use	3.2 Use of mobile phones to forward payment instructions (settling carried out in bank accounts)	Commercial bank's money	Paybox (Austria, Germany, Spain, Sweden, and the UK), e-Pay (Finland), Mint (Sweden)	e-Pay - 7,000 users in 2003, market share below 0.5%
	3.3 Settlement of payments initiated via mobile phone upon paying the mobile communication services bill (direct debit or payment order used)	Corporate money	Parkit (Finland)	
4. Payment services based on accumulated payments	4.1 Accumulated payments settled as a total at the end of the agreed period in the client's bank account using direct debit, or in the client's credit card account	Commercial bank's money	Firstgate Click&Buy (Germany)	Firstgate Click&Buy - 1.7 million clients in 2004, over 2,500 companies had joined
	4.2 Schemes under which the accumulated total is added to the bill sent to the client by the provider of telecommunication services (telephone, the Internet)	Corporate money	Deutsche Telekom AG Click&Buy net900 Classic (Germany), w-HA (France)	

Further development of innovative payment methods depends on:

- the confidence that consumers and traders have in using such methods and the speed that the benefits and user convenience of such facilities is acknowledged;
- the speed of achieving the so-called critical mass of users;
- the efficiency of risk management (credit and fraud risks);
- the updating of legal acts supporting safe and efficient use.

Estonia

Mobile payment is a payment method in which mobile telephones are used to initiate payment instructions; the service has been offered in cooperation between Pankade Kaardikeskus (Card Centre of Banks) and commercial banks since autumn 2002. Initially the mobile payment facility was only offered at points of sale (i.e. money transfers to traders), but since mid-March 2004 bank clients have been able to make deals also between themselves.

A customer initiates a mobile payment transaction with a call from his/her mobile phone to the payment system service number managed by the card centre. The parameters forwarded include the trader's code or the beneficiary's telephone number and the amount of transaction. The trader is informed of the concluded transaction through an SMS to his/her mobile phone. If the beneficiary is a private person, the receipt is shown on his/her bank statement. Similarly to card payments, the payer's available resources are checked with the bank servicing the client. In order to conduct such payments, the parties – both the payer and the payee – have to conclude a respective contract with the bank.

The mobile payment service offered by the card centre is available to all clients of the mobile communication operators represented in Estonia and can be used by all banks. Also cross-usage is applied where the payer may be a client of one bank and the payee of another.

Besides traditional money transfers, the mobile payment facility can be used, for example, to pay for services that are based on recording the time, for transactions conducted via self-service vending machines, for tickets, and bookings. For customers, mobile payments are free of charge and they only pay the mobile communication service operator for the call.

In the first quarter of 2004, approximately 2,000 mobile payments with a total value of nearly 95,000 kroons were made. The average amount of payment was around 48 kroons.

The mobile payment facility would certainly become more popular among private persons if a technical solution were developed that would not require a contract with the bank from the payee.