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Bank of Estonia

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SUMMARY

External environment and the Estonian economy

The liquidity situation in international financial markets, as well as interbank confidence have improved further over the past half a year. Several signs refer to the withdrawal of the recession in both the USA and euro area. However, central banks are unlikely to undertake a rapid tightening of monetary policy in the light of low inflation, the continuously weak outlook and growing unemployment. As a result, money market interest rates in the euro area will remain at a very low level in 2010.

According to Eesti Pank's autumn forecast, the Estonian economy will stabilise next year and resume growth thereafter. The baseline forecast scenario expects real GDP growth to amount to 1.4% in 2010 and to 4.7% in 2011. External demand is assumed to pick up, which will give a strong boost to growth. If Estonia is able to meet all the criteria necessary for the adoption of the euro as of the start of 2011, the related increase in credibility will lay a strong foundation for growth in investment activity. The income of Estonia's companies and households will be more modest in the near future, but this will be somewhat alleviated by the low level of consumer prices and interest rates.

Financial behaviour of companies and households and related risks

The **corporate sector** markedly reduced its financial liabilities in 2009, whereas domestic loans declined more than foreign ones. Although the financial position of enterprises has slightly improved owing to the reduction in debt, the growing number of bankruptcy petitions shows the financial situation is tense. Since risks accumulated differently across sectors in previous years, construction and real estate companies are facing the severest financial difficulties at the moment.

The financial behaviour of **households** has become notably more conservative over the past year. Households' loan-based expenditure has been notably curbed, yet, their deposit volume has remained stable irrespective of tense budgets. Negative economic developments have reduced the monthly income of numerous households with a loan burden and also weakened their loan servicing ability. At the same time, owing to the low level of the key interest rates, monthly loan repayments are smaller for both companies and households. However, if the tense economic situation persists, the resources accumulated in good times will be exhausted and payment difficulties may increase.

The developments of the **office space market** in Tallinn were in the past half-year impacted by the large amount of new office spaces due to active real estate development activity in recent years. At the same time, economic difficulties have decreased companies' solvency and their need for new office spaces. As a result, the vacancy rate is expected to grow in the near future, whereas rental prices are likely to fall. On the other hand, compared to Nordic capitals, there are relatively few office spaces in Tallinn, so demand for them should recover in the long term.

Transaction activity in the Tallinn **housing market** has picked up in the second half of 2009, but the pace of price movements is somewhat slower. It is easier for households with an average income to acquire an apartment now than in previous years, although lending conditions have become stricter. Looking ahead, demand for both new housing and the renovation of old dwellings is likely to resume. With this in view, construction companies are likely to start their first new development projects next year.

Banking sector

The 2009 performance results of the **consolidated banking groups of the banks operating**

in Estonia have to a great extent been influenced by the need to write down both the non-financial sector loan portfolio and goodwill. In order to ensure credibility, banking groups have increased their capitalisation by extending share capital and including subordinated loans. In addition, banking groups have ceased to pay dividends or decreased the volume of dividends paid.

Looking ahead, posting losses in the next quarters cannot be excluded, but the income base and the level of capitalisation allow to expect that the groups will manage with the need to write down possible new overdue loans.

The continuation of national support programmes has reinforced the banking groups' opportunities to attract funding from markets. However, in most cases this has been done without using the national support measures. The decline in the price of the funds borrowed also shows that risks have diminished.

In the **Estonian market**, the past quarters' activity of banks has been most affected by weak credit demand and the increase in overdue loans. The rapid growth in the volume of **loans overdue for more than 60 days** inhibited in mid-2009 and the volume of such loans even decreased in the autumn months. Overdue loans accounted for more than 6% of the banks' loan and leasing portfolio at the end of October. Write-downs by banks made up some 4% of the value of the non-financial sector's financing portfolio, which means that more than 60% of the overdue loans are already covered by provisions.

Because of weaker credit demand, the banks' need for **additional funds** has declined. Although tensions in the international financial markets have abated and parent banks are able to offer their subsidiaries and branches in Estonia funds at a price close to that of the interbank money market, the local branches of the groups have continued to include deposits at relatively high interest rates.

Since the volume of new loans issued is markedly smaller than in previous years, it is difficult for banks to increase the net interest income without reducing interest expenses. At the same time, it is likely 2010 will be **profitable** for most of the banks, although several banks may post losses in the first half of the year due to write-downs and low interest income.

The average **capitalisation** of the banking sector has increased somewhat in 2009, amounting to 21.4% by end-September (14.5% for groups). This has been caused by both the increase in own funds on account of the addition of audited profits and the decrease in risk-weighted assets. The latter is largely dependent on the transfer of the two largest banks operating in Estonia to the internal ratings based method for calculating the capital requirements for credit risk and to the advanced measurement approach for calculating operational risk. At the start of 2010, capitalisation growth will be supported by the fact that restrictions on the decrease in risk-weighted assets enforced for the period of transfer to the new methods will expire at end-2009.

Other financial markets

The very low **bond market** activity characteristic of previous periods was triggered by two large emissions: that of the city of Tallinn and the emission performed to restructure the GILD Arbitrage Venture Capital Fund. The market capitalisation of bonds declined by 20% year-on-year, to 10 billion kroons, most of which was composed of bonds with a high credit risk.

The transaction activity and prices in the **Tallinn Stock Exchange** were boosted by TeliaSonera AB's announcement in August concerning the acquisition of Eesti Telekom. This caused the stock exchange index to rise by 33% and the capitalisation of the market grew to 32 billion kroons by end-September. The average daily turnover increased by nearly threefold on earlier months.

Since turbulences in international financial markets have eased, the average annual yield of most of the **investment and pension funds** has gone up. Their asset volume also grew in the past half-year, mainly owing to the price rise. Although the state ceased to contribute to the second-pillar pension payments at the start of the summer, more than a third of those having the second pension pillar have expressed the wish to continue paying their instalments in 2010.

Because of the low economic activity, interest in **insurance** has abated. However, insurance companies have managed to post profits owing to increased investment income and relatively good technical results. Although life insurance activity indicators refer to market stabilisation, non-life insurance is likely to continue to decline in the near term.

Payment and settlement systems

Since an increasing number of people receive their income into bank accounts, the number of bank customers and the users of various payment channels has increased. In general, payers prefer to use one payment instrument they have got used to. The choice of payment channels also depends on habits and convenience, but security, comprehensiveness and the cost of a payment have become more important in recent years.

The value of payments has been decreasing in Eesti Pank's settlement systems – the value of retail payments has declined to the level of mid-2007. The settlement systems functioned smoothly and there were no events to pose a risk to financial-sector stability. Within the overseer's assessment, Eesti Pank analysed the ECSD's plan to start settling claims arising from securities transactions in euro and concluded the transactions would not be accompanied by risks to the functioning of the settlement systems.

Assessment of financial stability and risks

The international liquidity environment has further improved compared to half a year ago, but the confidence of market participants is still fragile. The extensive support measures of central banks and governments have supported the liquidity of the financial sector and stimulated the economy. Once the measures are withdrawn, it is important to avoid significant setbacks to the credibility of the financial sector and to the functioning of the economy, both of which have been restored in the course of the past year.

The parent banks of the banks operating in Estonia have in recent quarters been able to raise funds from the markets at a price lower than before, and in several cases, also without the help of the national support measures. The sufficient capitalisation of banks also means that **risks to financing the Estonian economy have decreased.** At the same time, the risk assessment of international investors regarding the Baltic region has not much improved and the Estonian economy is still vulnerable to risks from neighbouring countries. Estonia's steady course towards joining the euro area will significantly help reduce liquidity and financing risks.

If confidence and thus also competitiveness in the Estonian credit market grow, it is possible banks will be more flexible in credit conditions, which means loan margins may decline somewhat. In the light of the current very low key interest rates, credit conditions are not the key factor why borrowers have postponed their investment and consumption decisions. Domestic and external demand have been very weak throughout 2009, so enterprises and households have curbed their consumption and investment and resorted to internal reserves. If demand improves, credit growth can be expected to pick up no sooner than in the second half of the next year.

The credit risk has materialised in a smaller extent than it was anticipated in spring. This is partly related to the fact that both borrowers and banks have been more active in preventing problems and in finding solutions to maintain the loan servicing ability. It is likely the growth of the accumulation of overdue loans took mostly place in 2009 and the volume of such loans will grow much more slowly in the future. Although the share of the loans overdue for more than 60 days in the aggregate portfolio of banks remained at 6.4% for several months in a row in the autumn of 2009, Eesti Pank's assessment is the indicator will reach 8% in the spring of 2010 due to the continuously weak economic environment.

The banks' conservative assessment of credit risk is expressed in the high share of write-downs. If the situation of borrowers improves along with the resumption of growth, the recovering share of the stock of provisions for loan losses will be available to be taken into account as earnings, thus it will support the profitability of banks and their capitalisation in the new growth cycle. The need to write down loans will be notably smaller next year. Irrespective of the ongoing pressure on net interest income, it is possible the banking sector as a whole will post a small profit by end-2010.

To sum up, **risks to financial stability have decreased compared to spring**. Risks to financing the economy have slightly withdrawn and the quality of loans has been better than anticipated. At the same time, regardless of some optimistic signs, it must be noted the impact of exiting the global financial crisis on the European financial sector and economy is not yet clear. The income level of Estonia's households and enterprises will also remain low year-on-year. This will, in turn, tighten budgets, which means the borrowers' capability of servicing their debt will remain the greatest threat to financial stability in Estonia.

I FINANCIAL BEHAVIOUR OF COMPANIES AND HOUSEHOLDS AND THEIR RISKS

COMPANIES

Business situation

Confidence

The **economic confidence indicator**, calculated by the Estonian Institute of Economic Research, has somewhat improved in the second half-year. Nevertheless, the confidence indicators for all economic sectors remain significantly below the average for the previous periods (see Figure 1). Improvement can, above all, be seen in expectations, with the assessment of the current situation still being quite negative.

In **manufacturing**, the utilisation of production capacities dropped to nearly 60% this year.[1] Even though negative growth in utilisation of production capacities has ceased, the under-utilisation of production capacities will condition an increase in the share of fixed costs as well as deterioration of the companies' financial position. Compared to the beginning of the 2009, the confidence of manufacturing companies has somewhat improved in the second half-year, with respect to both the output and the number of orders. Nevertheless, manufacturing still faces an unfavourable environment, with below-average volume of orders on both the domestic and the external market.

Corporate investment and economic indicators

In many sectors, low demand has conditioned a nearly 30% drop in **industrial production**, year-on-year. The drop was faster in the first half of the year, decelerating in the second half.

Negative growth in demand and unexploited production resources reduce the investment need. In the first half of the year, the volume of **investment** decreased by a total of 31%, with the negative growth accelerating in the second quarter (see Figure 2). Investment in manufacturing decreased by over 45%. The decrease was somewhat offset by a near 40% growth in

Figure 1. Confidence indicators of Estonian companies

Source: Estonian Institute of Economic Research

[1] In 2006, the utilisation of production capacities was 80% in manufacturing.

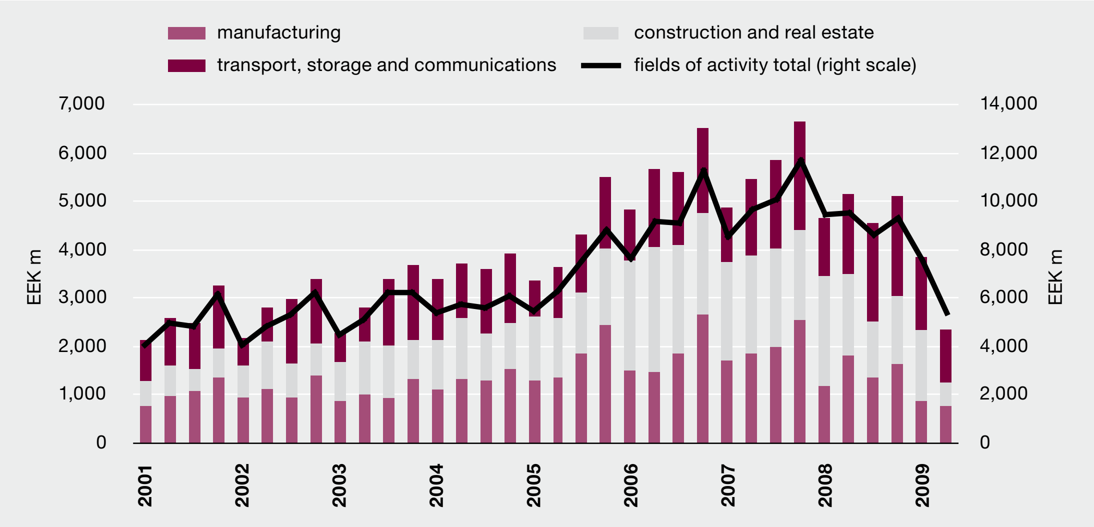

Figure 2. Corporate fixed investment

Source: Statistics Estonia

investment in the energy sector. Investment in the wholesale and retail sectors has contracted around 64% owing to negative growth in turnover. The revival of investment will take more time than the recovery of sales volumes, as any improvement in demand will first be followed by the utilisation of the available under-exploited fixed assets.

Corporate debt

The growth in **total corporate debt** ceased in the last quarter of 2008. At the end of the second quarter of 2009, the debt was 10 billion kroons (6%) smaller than at the end of 2008 (see Figure 3). In relation to GDP, the debt burden has still grown beyond 90%, as GDP has shrunk even more.

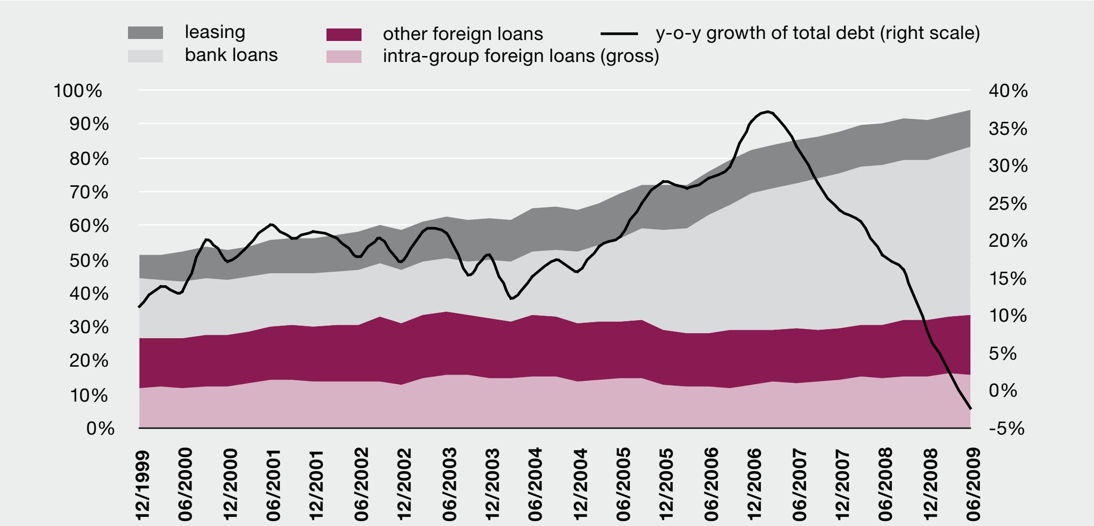

Figure 3. Corporate debt (% of GDP)

Source: Eesti Pank, balance of payments statistics

When evaluating the loan stock of Estonian companies, we must also consider the credit provided by local companies to foreign-based ventures, including companies of the same consolidation group. If we deduct the credit issued to foreign ventures from the borrowings of Estonian companies (i.e. use net indicators), the corporate debt in relation to GDP is an estimated 15 percentage points smaller, with the annual debt growth thus showing a larger decrease (–2% gross *vs.* –6% net).[2]

By **economic sectors**, credit issued to the real estate, construction and business services sector is still the biggest contributor to total corporate debt. A major structural displacement occurred already in 2005, when the loan stock of these fields of activity posted much stronger growth than in other sectors (see Figure 4).

In the first half of 2009, the real estate, construction and business services sector, which also includes the loan stock of holding companies, was still the biggest contributor to total debt (see Figure 5). The external loans of the sector grew by a total of 1.3 billion kroons.[3] The external debt of other sectors increased as well, by a total of 1 billion kroons.[4] The credit volume of the transport sector and the trade sector, on the other hand, has decreased in the past six months, which is in line with non-financial sector data.[5]

As regards the sources of corporate debt, mention must be made of the fact that the stock of domestic loans has shown a relatively bigger decrease than that of external loans. In the manufacturing sector, which is more sensitive to external demand, the drop in domestic credit has been offset by intra-group credit resources.

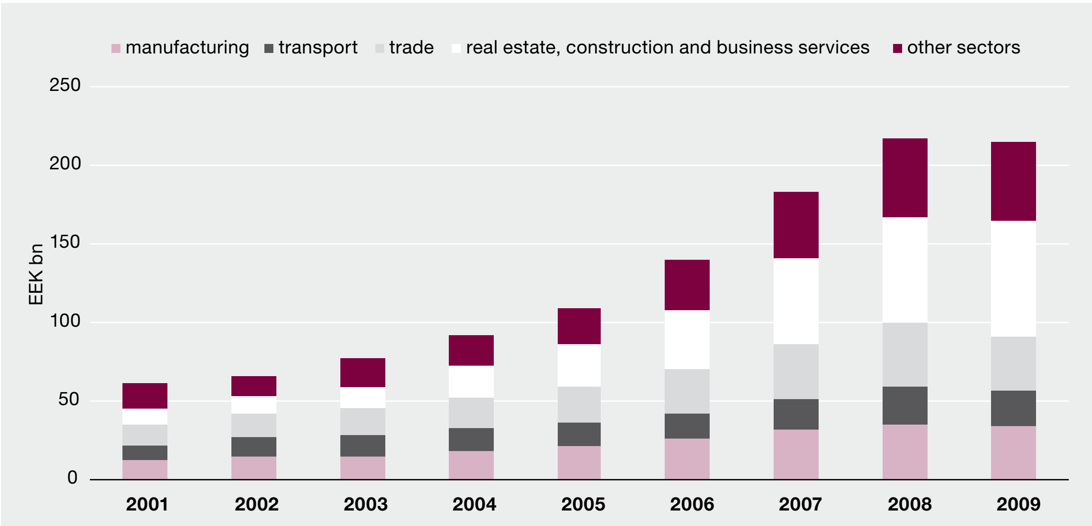

Figure 4. Sectoral breakdown of total corporate debt (as at end-June 2009)

Source: Eesti Pank, balance of payments statistics

[2] Intra-group (gross) borrowing may also be increased by the financing strategy of Estonian ventures and their parents: instead of allowing small local companies to issue securities on the local securities market to raise funds, parent companies raise a large volume of funds on the financial markets, directing these funds to the local companies through credit.
[3] The loan stock of the real estate sector increased by approximately 0.9 billion kroons (long-term loans) and that of other business activities by 1.1 billion kroons (long-term loans and debt securities). Growth in that sector was offset by the 0.7 billion kroon decrease in the trade credit of construction companies.
[4] The stock of long-term loans obtained in the electricity, gas and water supply sector increased by approximately 0.6 billion kroons.
[5] The annual growth of the retail sector dropped from –7% in 2008 to –11% in mid-2009; the inventories of the trading sector decreased from 10% to –23%.

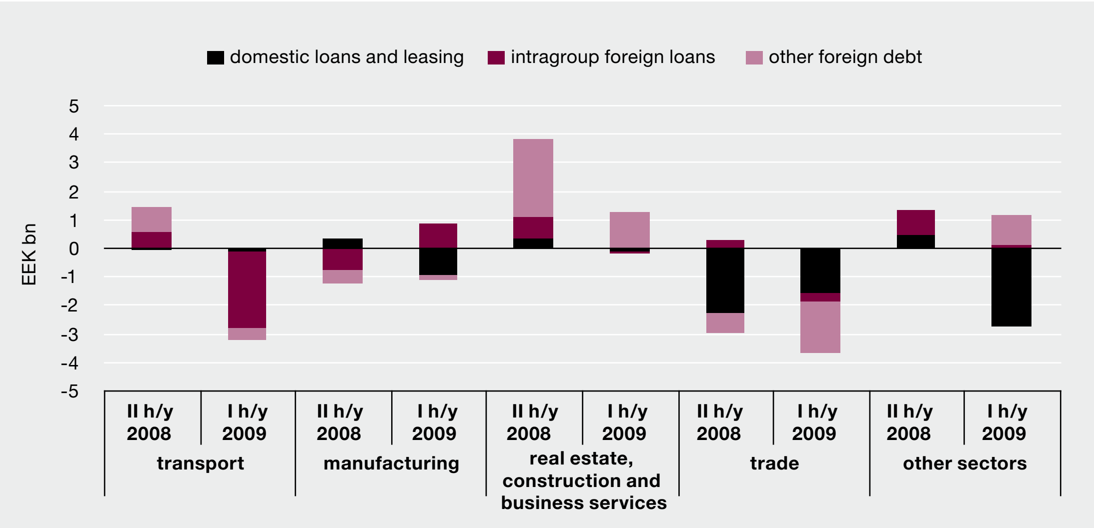

Figure 5. Changes in total corporate debt

Source: Eesti Pank, balance of payments statistics

The **domestic corporate debt** posted negative growth already in the last quarter of 2008, with the annual growth turning negative in the second quarter of 2009. The lease stock has declined quicker than the loan stock.

The weakening economic activity has conditioned a decrease in credit turnover (see Figure 6). Month-on-month, the stock of new corporate loans dropped considerably at the beginning of 2009 and remained at low levels thereafter. The stock of new credit in relation to GDP has shown a significant decrease (from 19% in Q3 2008 to 11% in Q3 2009), indicating a greater exploitation of internal buffers (including reduction of inventories).

As regards **economic sectors**, the trade sector has witnessed a decrease in credit turnover (–59%) in the first nine months of 2009,

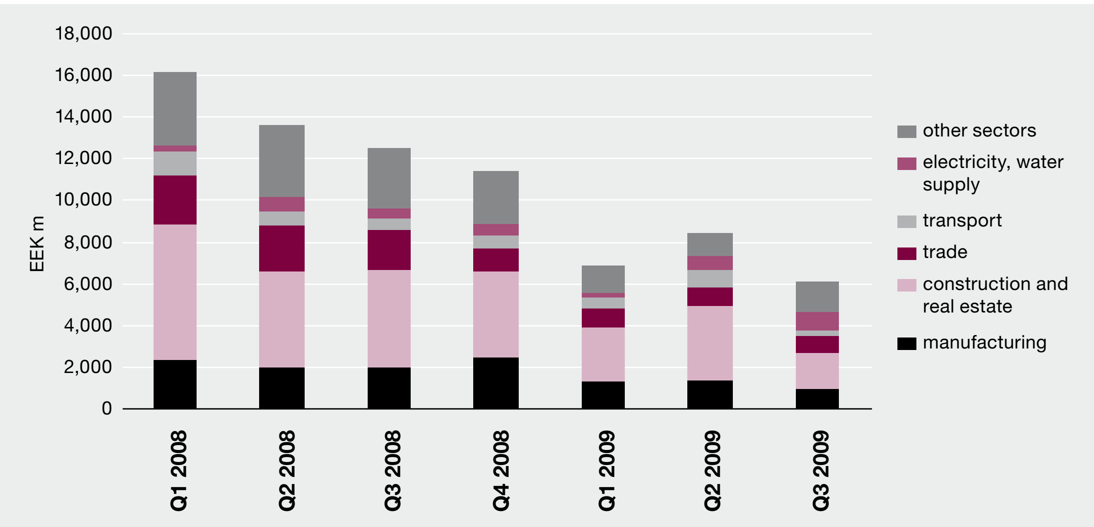

Figure 6. Corporate quarterly credit turnover

compared to the same period last year. At the same time, the credit turnover of the real estate and construction sector has declined by 50%, and that of manufacturing companies by 43%.

The share of mortgage loans in total credit turnover (38%) has decreased by 10 percentage points from the previous period, while the acquisition or development of real estate still remains the primary purpose of the loan. Evidence of the reduced investment demand can be seen in the remarkable decrease in loans obtained for purchase of fixed assets: in the third quarter of 2009, the corresponding credit turnover only amounted to 235 million kroons (in 2008, an average of 1 billion kroons). Overdraft has decreased by a third, on average.

Financial position and saving

The **net financial position**[6] of companies improved in 2009, rising from the record-low 5% at the end of 2008 to 8% by the end of the second quarter of 2009 (see Figure 7). Both the financial assets and financial liabilities contracted, with the extensive decrease in financial liabilities, in turn, improving the net financial position. Amid deteriorated economic environment, companies have repaid their loans while cutting the volume of new loans. Over a period of six months, financial liabilities decreased by a total of nearly 21 billion kroons.

Even though the economic situation has deteriorated, companies have not made extensive use

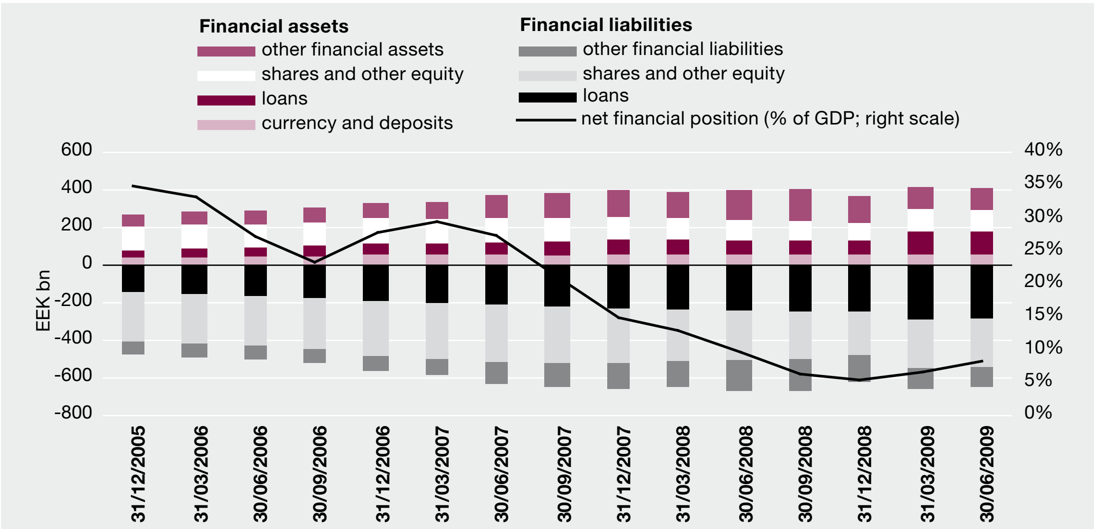

Figure 7. Corporate financial assets and liabilities and net financial position

Source: financial accounts of national accounts, Eesti Pank's calculations

[6] Net financial position is the difference between financial assets and the financial liabilities. Equity capital is deducted from its financial liabilities.

of their savings. The stock of **deposits** in local banks has remained above 50 billion kroons throughout the year. Time deposits have been more popular since the end of 2008, as they produce higher returns. At the end of the third quarter, time deposits accounted for 41% of total deposits.

Profitability

Sales incomes dropped by 22% in the first half of 2009, compared to the same period last year (see Figure 8). The decline in sales incomes and the increase in the share of fixed costs conditioned a decrease in **total profits**: the total profit for the first half of 2009 was 64% lower than a year ago. Profits shrank faster in the first quarter, when companies had not yet brought their expenditure into line with the drop in demand. Even though year-on-year revenues have contracted, the speed of contraction has somewhat slowed. **Total profitability** (the ratio of total profit to sales revenue) dropped from 7% in the second quarter of 2008 to 4% in the second quarter of 2009.

Bankruptcies and new companies

The **number of bankruptcies** has significantly grown in 2009. In 2008 an average of 20 companies went bankrupt every month, whereas in the first nine months of 2009 this figure doubled (see Figure 9). The real estate and construction sector saw the biggest number of bankruptcies, albeit the number has gone up in all sectors. A monthly average of 130 bankruptcy petitions was filed this year, with the numbers remaining stable in the first ten months of the year.

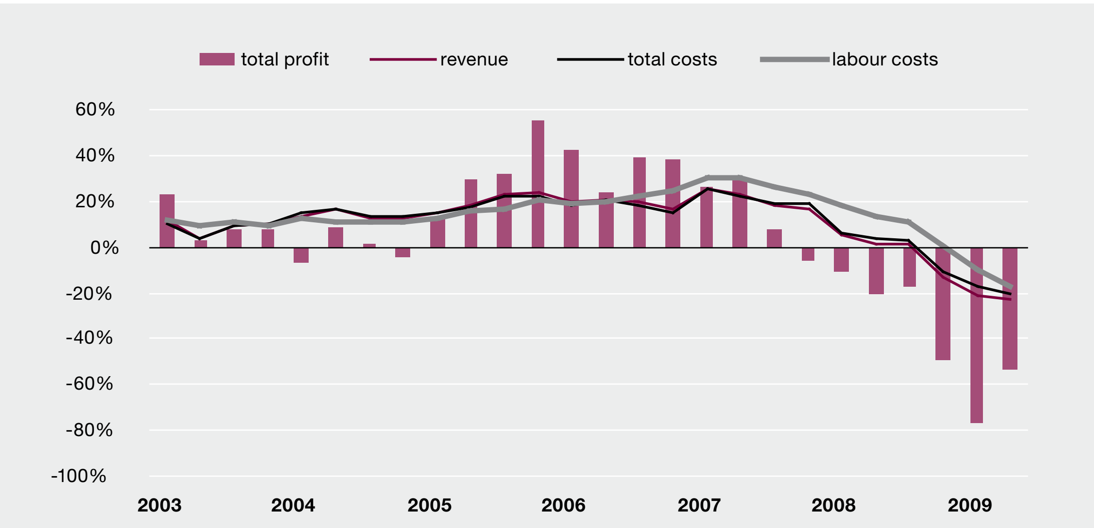

Figure 8. Annual growth of companies' economic indicators

Source: Statistics Estonia

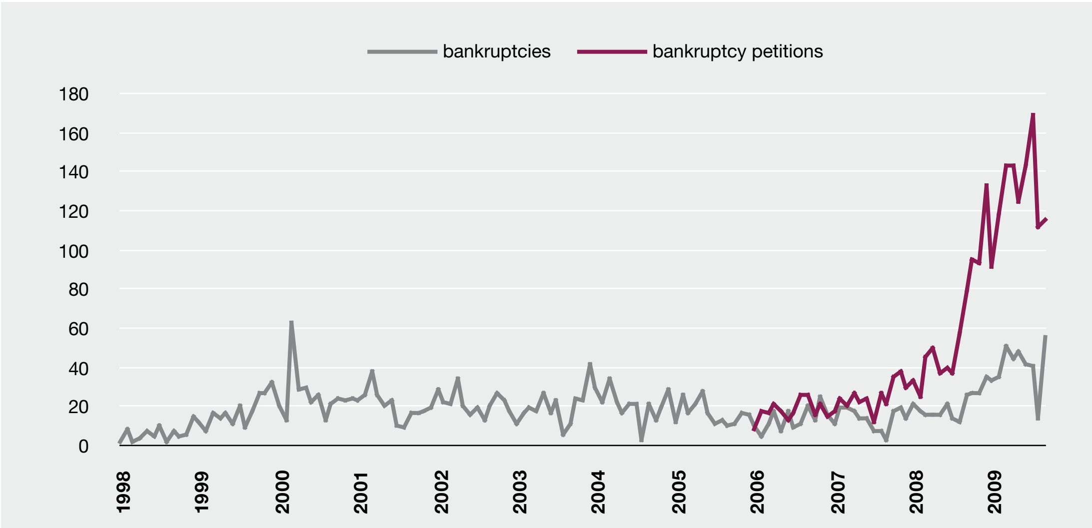

Figure 9. Bankrupt companies and bankruptcy petitions submitted to courts on a monthly basis

Sources: Estonian Enterprises Register, Courts Information System

At the same time, the establishment of new companies has increased in field of real estate, construction and business services, where 50% more companies, on average, were founded per month compared to 2008. An average of approximately 10% fewer companies were established per month in the trade sector, compared to last year.

Loan repayment ability

The different financial leverage of the economic sectors is evident in the **long-term liabilities to gross operating surplus**[7] ratio of companies. In the real estate sector, this indicator has remained high throughout 2000–2007. Despite

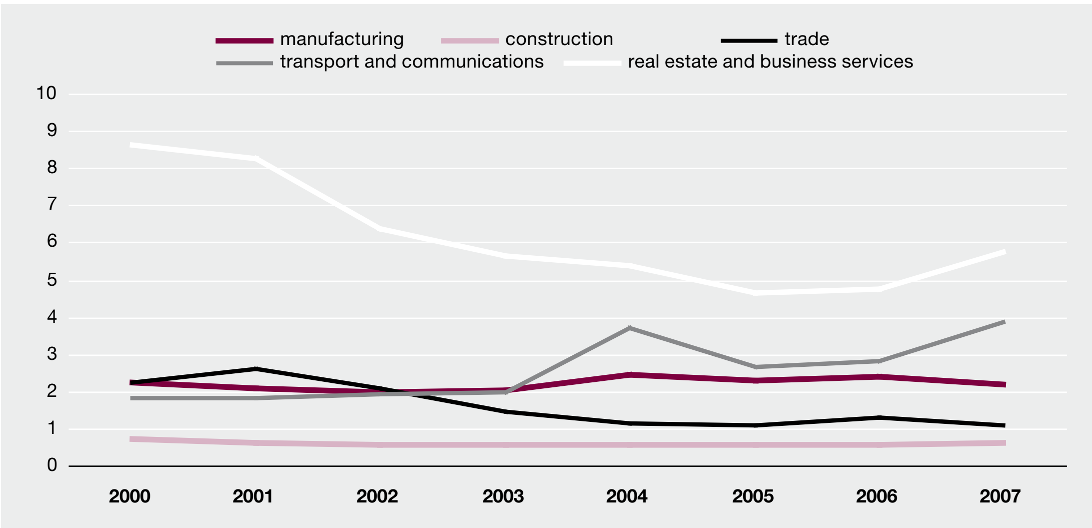

Figure 10. Long-term liabilities to gross operating surplus by sectors (times)

Source: Statistics Estonia, Eesti Pank's calculations

[7] Gross operating surplus (total profit) = revenue – direct cost of sales. Interest costs are covered from gross operating surplus, among other things.

the drop conditioned by a major increase in profit margins (from 17% in 2002 to 33% by the end of 2006), a significant deterioration in financial leverage could be seen in 2007 (see Figure 10). This was especially evident in small and medium-sized companies (with up to 100 employees), whereas major companies (with over 100 employees) showed an improvement. Additional loan capital was also raised in the trade sector in order to purchase inventories to serve the increasing demand. In other sectors, no major changes occurred in the long-term liabilities to gross operating surplus ratio in the period. Thus, the current financial strength is rather different across the sectors.

The **debt-to-equity ratio** of companies has somewhat decreased after reaching the level of 110% at the end of 2008. This is due to loan repayment and the reduction of debt. At the end of the second quarter, the ratio stood at 108% (see Figure 11). The **ratio of liquid financial assets to short-term debt** has decreased over time. This has been mainly due to an increase in the share of short-term debt in total debt. However, over the first half of 2009 the liquidity indicator has remained on par with the end-2008 figure. The long-term debt-to-equity ratio is nevertheless very high, indicating a tense financial situation in the entire sector.

The fall of the Euribor has had a positive effect on the loan repayment ability. Given that a large part of the loans have been denominated in euros, the lowering of the key interest rate has significantly reduced loan interest costs. At the end of the third quarter of 2009, monthly **interest payments** were 40% smaller than a year ago (see Figure 12). Interest payments are on par with 2007, despite the significantly bigger loan portfolio. Had the key interest rates remained on last year's top level, quarterly interest payments would be approximately 740 million kroons higher than they currently are.

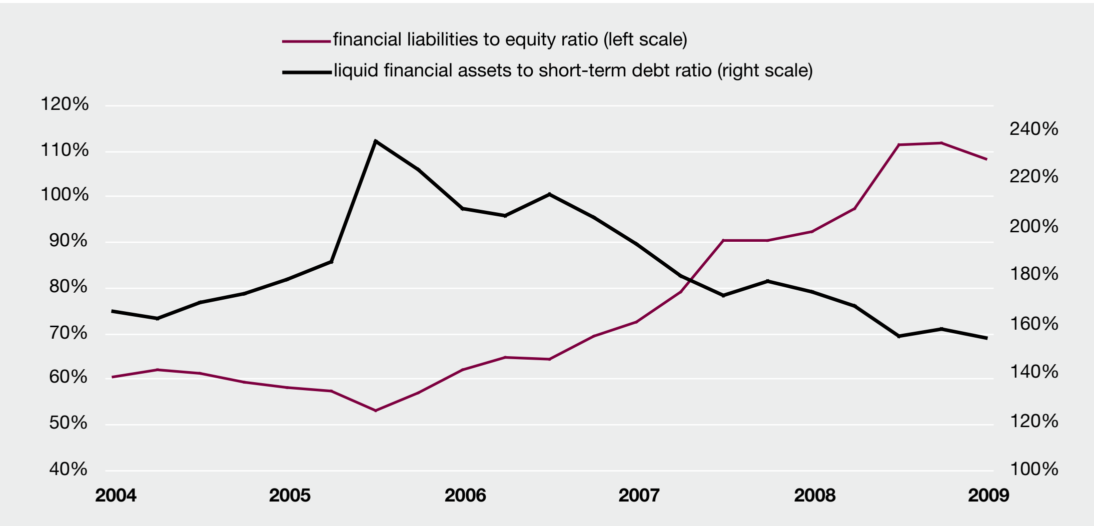

Figure 11. Financial ratios of non-financial companies

Source: financial accounts of national accounts, Eesti Pank's calculations

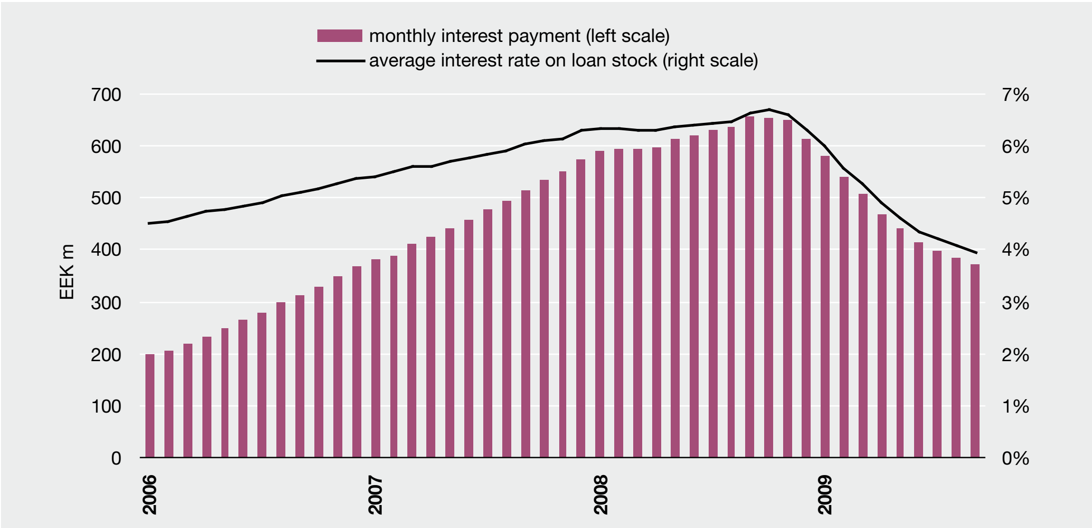

Figure 12. Monthly interest payments of corporate loans

Source: Eesti Pank's calculations

HOUSEHOLDS

Economic situation

The **confidence** of households dropped to a historical low[8] in March, showing signs of recovery thereafter. Fear of unemployment and the resulting decrease in income has slightly diminished. Despite growing unemployment, expectations regarding economic developments in the next 12 months have improved. This indicates a possibility that the sudden loss of confidence at the beginning of the year was partly conditioned by uncertainty about the future, caused by the rapid economic decline. A majority of the households still lay importance on saving and plan no major purchases in the next 12 months. Consumption is also hampered by expectations of further price falls (see Figure 13).

The continual growth of unemployment has had the biggest negative effect on household confidence. The **number of the unemployed** exceeded 100,000 in autumn, with the growth of unemployment significantly decelerating in the second half of the year (see Figure 14). According to the autumn 2009 forecast of Eesti Pank, unemployment is expected to increase further in the first half of 2010; the average **unemployment rate** for 2010 is forecasted at 16.6%. Unemployment is partly facilitated by social guarantees that accompany the status of being unemployed, which motivates people to register as job-seekers.[9]

The biggest decrease in **employment** can be seen in sectors where demand has rapidly eased. Nearly a third of the decrease has been generated by the construction sector, where the employment rate has dropped by over 40%. Manufacturing is yet another sector struggling with above-average unemployment growth. The huge number of unemployed labour with previous work experience provides for cheaper use of labour once demand is restored. The new Employment Contracts Act, which entered into force in July, significantly reduced the employer's expenditure upon dismissal of employees.

[8] The time series of the consumer confidence indicator published by the Estonian Institute of Economic Research are available since 1992.
[9] At the end of October 2009, there were approximately 80,000 registered unemployed persons (i.e. 12% of the labour)

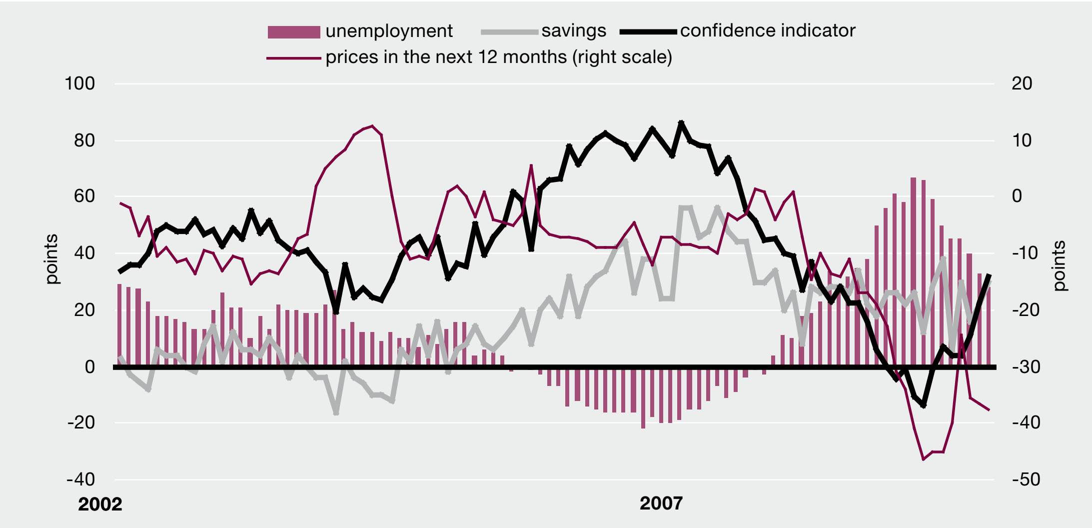

Figure 13. Consumer confidence indicators

Source: Estonian Institute of Economic Research

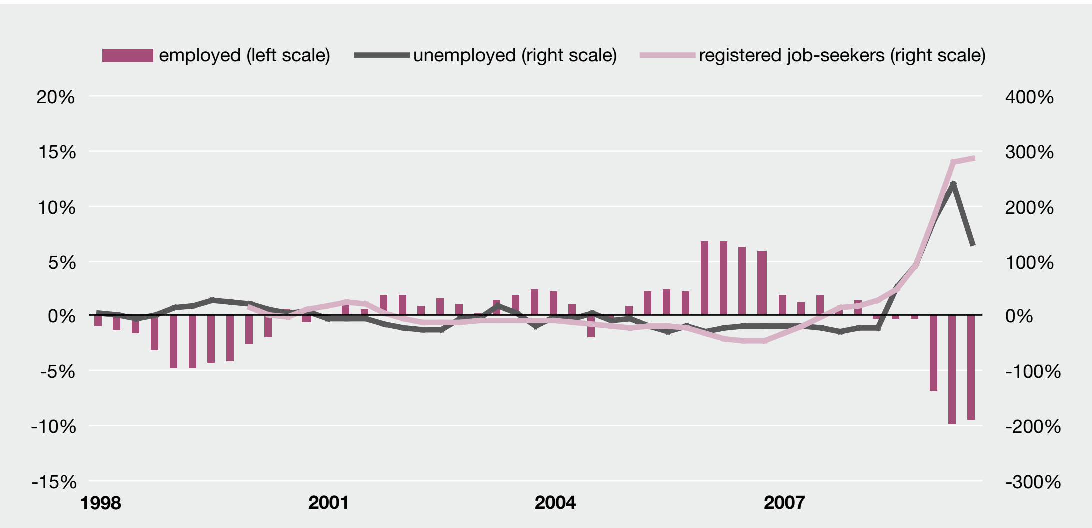

Figure 14. Annual change in the number of the employed, unemployed and registered job-seekers

Source: Statistics Estonia

Still, this has not caused a significant change in the number of redundancies. The cut-down on expenditure related to the adjustment of staff numbers should encourage employers to recruit new employees as soon as demand is restored.

The increase in average wages was reversed already at the beginning of the first quarter of 2009. Year-on-year, **average gross wages** decreased nearly 1.5% in the first quarter and almost 4.4% in the second quarter. The decline in net wages was somewhat smaller: 1.3% in the first quarter and 4.2% in the second quarter (see Figure 15). High unemployment will most probably continue to exert pressure on wages also in the upcoming quarters.

Figure 15. Average annual wage growth

Source: Statistics Estonia

Financial position and saving

Conservative behaviour, conditioned by uncertainty about the future, is reflected in the indicators characterising the **financial position** of households. In the second half of 2008, the financial assets of households decreased and financial liabilities continued to increase, whereas in the first half of 2009 these trends reversed (see Table 1). Supported by growth in deposits, household financial assets increased by 2.7 billion kroons, while financial liabilities decreased by 2.3 billion kroons (see Figure 16).

Due to the unfavourable situation on the capital markets, the portion of deposits in the household financial assets has grown, while the portion of equities and other shares as well as net technical provisions has diminished. The decline in household financial liabilities is, above all, caused by a decrease in borrowings. Over the last six months, the net financial position of households has improved from –2.6% to –0.6% of GDP.

The cautious behaviour of households has reduced consumption expenditure. The resources thus made available are primarily invested in

Table 1. Quarterly changes in financial assets and liabilities

	Q1 2008	Q2 2008	Q3 2008	Q4 2008	Q1 2009	Q2 2009
Financial assets	2455	5189	-2646	-4237	465	2272
Currency and deposits	2127	4466	-440	-34	-22	255
Shares	2665	553	-973	-1173	-485	222
Mutual fund shares	-748	-28	-612	-912	-102	99
Insurance reserves and net equity of pension funds	-1633	1014	-404	-1853	557	1584
Other financial assets	43	-815	-218	-265	516	112
Financial liabilities	4953	4581	2067	-75	-1761	-578
Loans obtained	5274	3646	3127	285	-1620	-859
Other financial liabilities	-322	935	-1060	-360	-141	281

Figure 16. Household financial assets and liabilities

savings. Household **deposits** have grown in the past six months, despite the reduction in incomes. Compared to the previous periods, households have started to prefer time deposits as the form of saving (see Figure 17) more frequently. The dynamics of household loans and deposits in the last few months indicates a further improvement in their financial position.

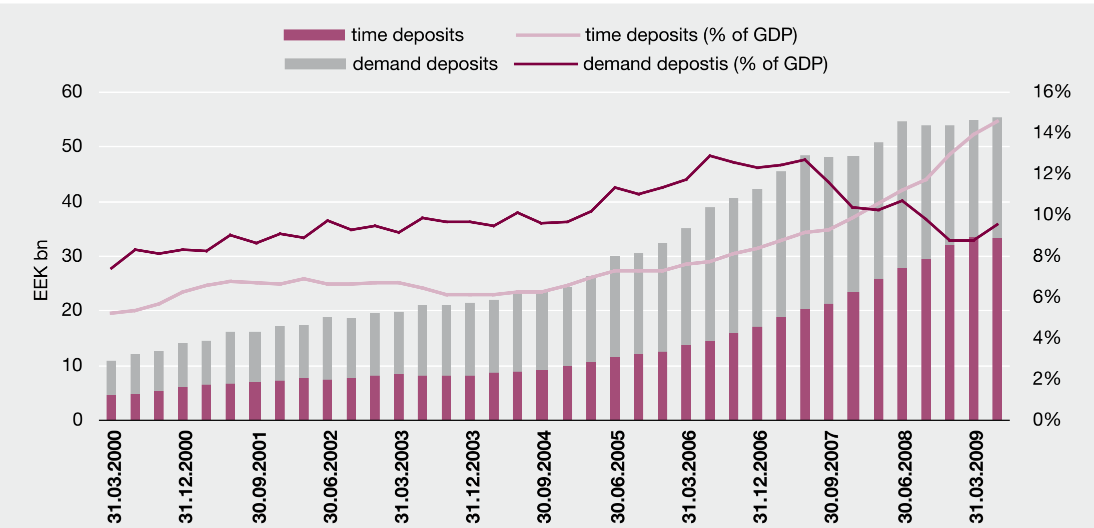

Figure 17. Household deposits

Household debt

Debt burden

Due to the rapid increase in loan volumes in 2005–2007, the debt burden of Estonian households and the ability to repay the loans obtained has become an important issue. Even though the loan and lease stocks have decreased over the year, the household debt burden has nevertheless grown. In September 2009, household loans and leases accounted for 53.6% of GDP. According to the Eesti Pank autumn forecast, this figure will climb to 56.4% by the end of 2010.

The growth in household debt burden has been caused by a significant decrease in disposable incomes and GDP. Even though the Estonian household debt burden is lower than in many Western European countries, it is still among the highest in Central and Eastern Europe. The difference between Western European and Estonian households is most distinct when taking into account their financial assets (i.e. savings). Unlike Western European households, Estonian households' financial assets barely cover their financial liabilities, which raises a question about their ability to fulfil liabilities in difficult times.

Mortgage loans comprise 77% of the financial liabilities of Estonian households. The increase in the stock of mortgage loans that took place in 2005–2007 was accompanied by a rapid increase in real estate prices. By autumn 2009, the median housing prices had dropped to the level of 2004. Considering the stock of mortgage loans obtained during the period of rapid growth in real estate prices, we can assume that about half the mortgage loans issued during that period are backed by collaterals that are of lower value than the loan obtained. For many households with mortgage loan this means that their real estate cannot be sold in the near future without incurring losses. After years of exceptional growth in the housing market we can now expect the loan stock to grow in line with standard demographic processes (see also background information *Will debt burden hamper economic growth?*).

Loans and leasing

The stock of household loans started to decrease in the fourth quarter of 2008, with annual growth turning negative in the second and third quarters of 2009. Given the different credit conditions (in particular different loan maturities), the biggest decrease was recorded, as expected, in the segment of household consumer loans and car leases. The stock of consumer loans has shrunk by 1.8 billion kroons since the beginning of 2009, and that of car leases by 690 million kroons. As mortgage loans have an average maturity of 25 years and annual depreciation is relatively low, the mortgage loan portfolio has, despite its huge volume, decreased by nearly 1.2 billion kroons from the end of 2008.

The **turnover of loans and leases** gives a more up-to-date overview of the development of the households' loan and leasing market. Year-on-year, the stock of new loans issued to households – the monthly credit turnover – has decreased by 42%. The stock of other household loans – the consumer credit turnover – has declined by 21% and mortgage credit turnover by 65% (see Figure 18). The car lease turnover has decreased in line with the mortgage credit turnover.

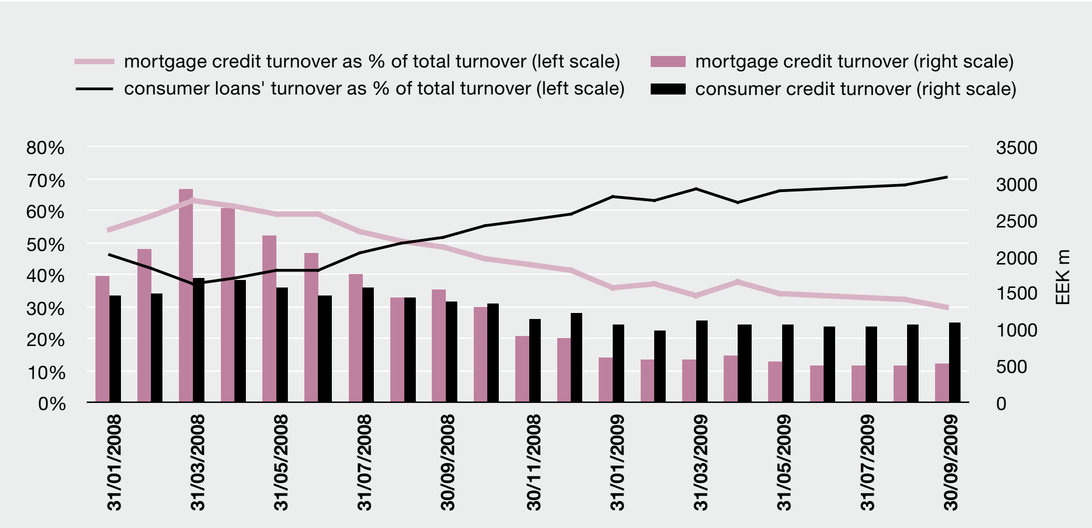

Figure 18. Structure of new household loans

The data on new household loans and leases clearly indicates that households have significantly reduced loan capital-based expenses in the uncertain economic climate. Rather than incurring major expenses (e.g. on the purchase of a housing or a vehicle), loans are, above all, obtained for covering current expenses and managing capital flows. The mortgage credit turnover, as revealed by the real estate statistics for the first three months of 2009, is not surprising: the turnover has significantly decreased, along with the real estate prices and the number of real estate transactions. Even though the housing market has revived in recent months due to favourable prices and more flexible credit conditions, the number of transactions should be much higher to maintain the current loan stock.

In 2009, households who have obtained a mortgage loan have preferred significantly shorter **loan maturities**. At the beginning of 2008, for example, when the real estate market was still highly active, loans with a maturity of over 25 years constituted 62% of the total of new mortgage loans issued. In September 2009 this indicator stood at 39% (see Figure 19). One of the reasons behind shorter maturities is the lower price of real estate. At the same time, borrowers have changed their own preferences with respect to the term of the loan liabilities, and are willing to spend a bigger portion of their monthly income on loan repayment.

According to the Eesti Pank autumn forecast, the stock of consumer loans will increase as soon as households feel more confident. The reversal of the decrease in wages and employment will play an important role here. The prospects of joining the euro area should not be ignored either. The Eesti Pank autumn forecast expects the monthly increase in consumer loans to turn positive in the second half of 2010. The stock of mortgage loans will decrease in 2010, but not as much as in 2009.

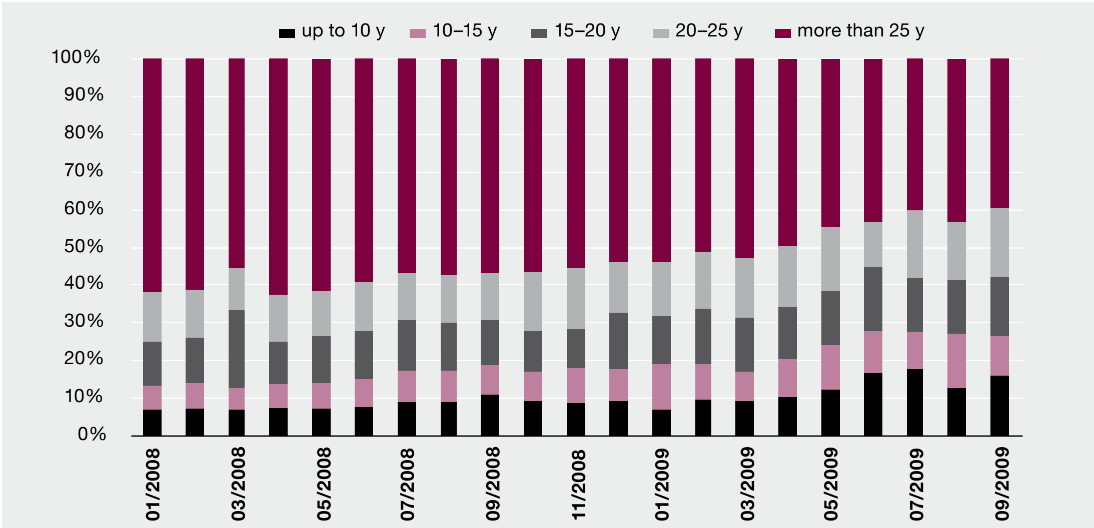

Figure 19. Breakdown of new mortgage credit by maturity

Loan repayment ability

Data on the financial behaviour of households still confirm that households with credit are better off than average Estonian households. According to the F-monitor survey conducted by TNS Emor in August 2009, 44.1% of the households with a loan earn a monthly income of over 5,000 kroons per member of the household. The corresponding indicator for all Estonian households is 34%.

Evaluating the loan repayment ability, the changes of the borrower's financial position over the loan period must be considered. The results of the TNS Emor survey indicate that the income of households with mortgage credit has decreased over 20% in 2009. This, in turn, has changed the percentage of households with mortgage credit by income brackets. The portion of households earning a monthly income of over 10,000 kroons per household member has remained the same, whereas the loan burden of average-income households has decreased and that of lower-than-average-income families has increased (see Figure 21).

The share of household income allocated to monthly loan repayment has also increased. In 2008, 10% of the households allocated over 40% of their income to repay loans, whereas in 2009 the respective figure was 15%. As regards households with mortgage credit, the share of families who use more than 40% of their monthly income for loan repayment has increased from 16% in 2008 to 26% in 2009. On average, households with loans allocated 26% of their net income for loan and interest payments (24% in 2008).

Another indicator describing the situation of households that have a mortgage credit is their ability to save. Comparing the savings of households without loans and those with loans reveals that, in their own opinion, 34% of the households with loans and 28% of those without loans would not be able to save any money, should it be necessary. The savings of households that have taken a housing loan are also somewhat smaller.

The **decrease in the 6-month Euribor key interest rate** has somewhat eased the monthly loan burden of households. Over the last year,

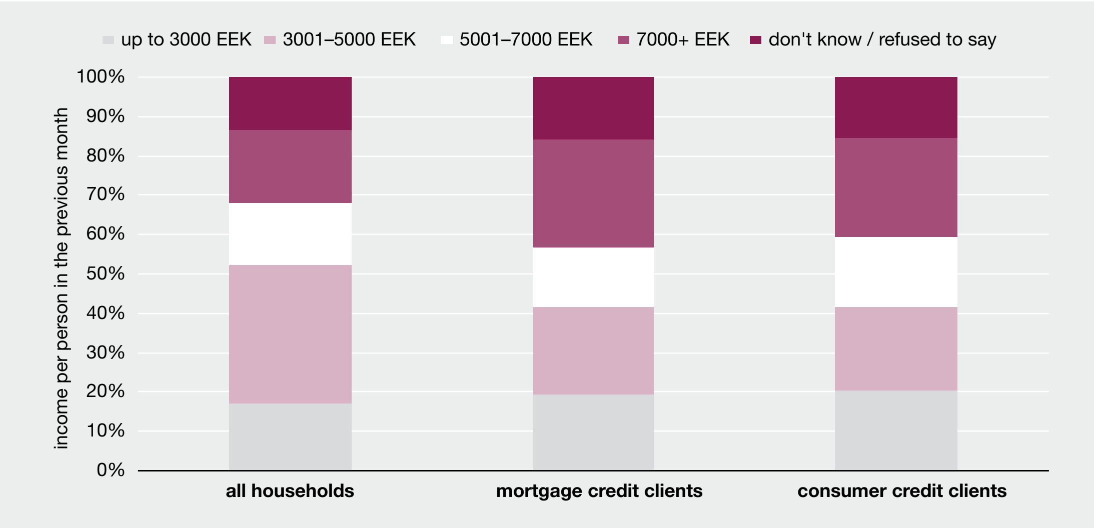

Figure 20. Distribution of households by income brackets

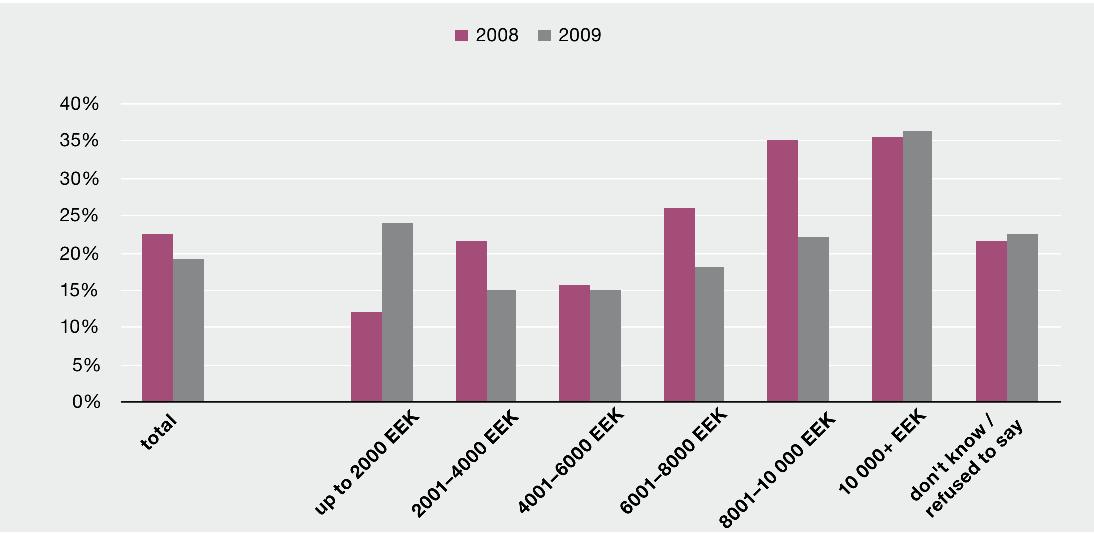

Figure 21. Income distribution of households with mortgage credit

the Euribor has dropped by 4.2 percentage points. The average interest rate of the household loan stock has decreased from 7.1% to 4.4% (see Figure 23). The fall in the Euribor has, thus, had a significant effect on the monthly loan repayments of households.

As the drop in the key interest rate has affected a number of households with loans, the quarterly **loan interest payments** have decreased from 2 billion kroons in the third quarter of 2008 to 1.2 billion kroons in the third quarter of 2009. In the third quarter of 2008, interest payments

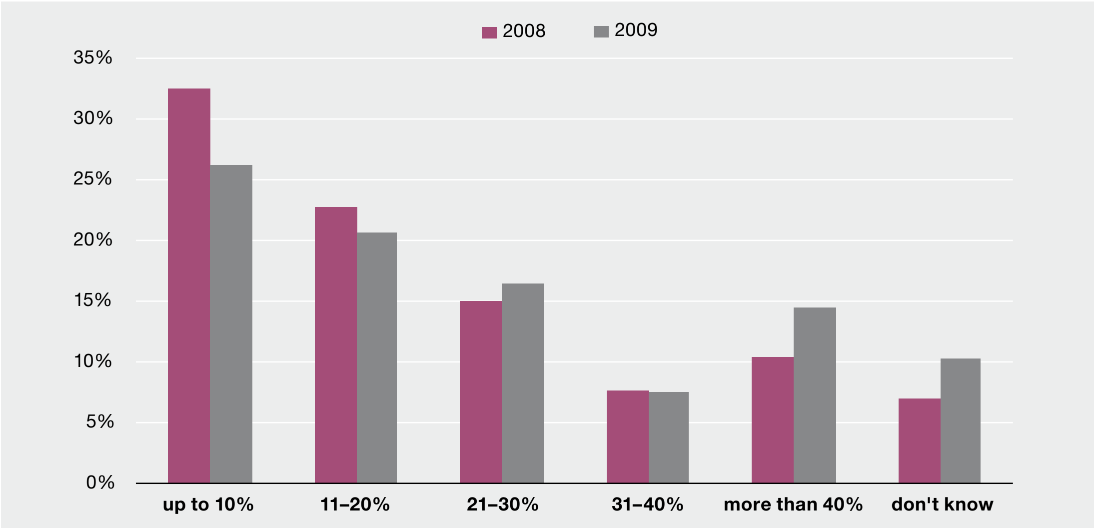

Figure 22. Monthly loan payments as a ratio of households' net income

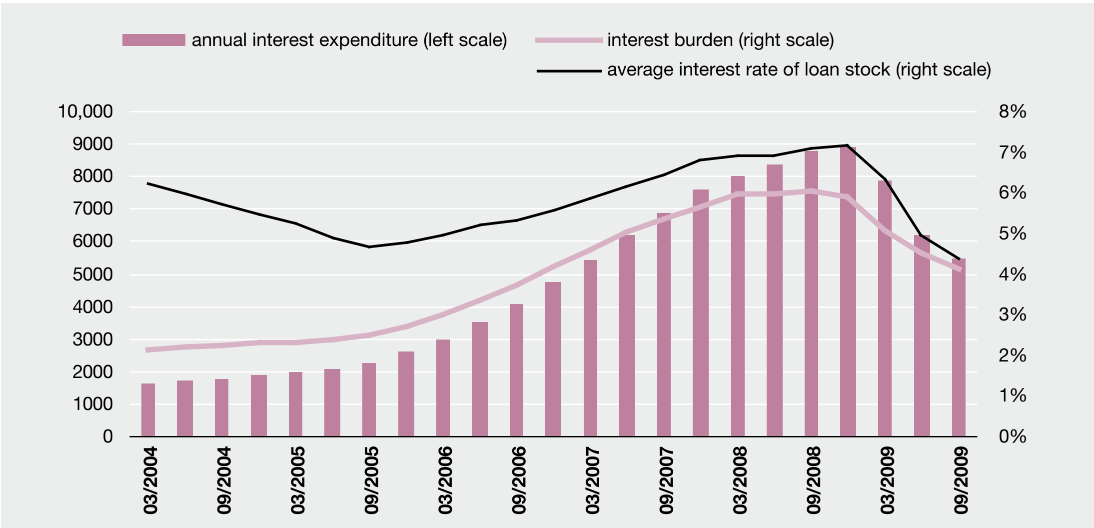

Figure 23. Interest burden of households

amounted to 3.5% of GDP (7.1% of the disposable income), whereas in the third quarter of 2009 the figure stood at 2.5% (4.4% of the disposable income).

On the whole, the share of borrowers forced to cut down on their budgets in the changed economic environment has apparently increased. The savings of these households are likely to be rapidly depleted. The low interest rates have so far supported the loan repayment ability of households. However, considering the current labour market situation, the amount of overdue loans is expected to grow slightly.

WILL DEBT BURDEN HAMPER ECONOMIC GROWTH?

The debt burden of Estonian households and companies has shown rapid growth for the past five years, reaching a relatively high level of 140% of GDP. This indicator is a bit lower than the euro area average, and primarily the debt burden of Estonian households is smaller than the average for Nordic countries (see Figure 24). However, comparing the debt burden of different countries, the various structural factors involved must be considered. Therefore, the relative debt burden may not be an appropriate indicator for evaluating economic vulnerability and growth potential.

Above all, the f**actors affecting the debt burden and the debt structure** should be borne in mind. In the case of Estonia, a period longer than the last four years has to be examined. In the first years of the 21st century, the stock of household loans was small, caused by relatively conservative loan conditions as well as households' cautious loan behaviour given the previous credit experience. As soon as the prospect of accession to the European Union became a reality, a remarkable change occurred in the consumption and investment behaviour. On the one hand, this was caused by optimistic expectations regarding the future, and, on the other hand, by declining interest margins and tight competition between the banks pursuing rapid growth in the mortgage loan sector that provides them with a stable income base.

The boom time growth in domestic demand can partly be explained with the accumulation of previously postponed expenditure. This could have been a one-off development. Therefore, there is no reason to presume that the high level of domestic consumption and investment will be promptly recovered. From now on, the housing market will be primarily shaped by demographic processes characteristic for a developed market and rely on the amendment of living conditions, which is made possible by increasing incomes. For example, the young purchase relatively cheaper housing, whereas the more prosperous households can afford

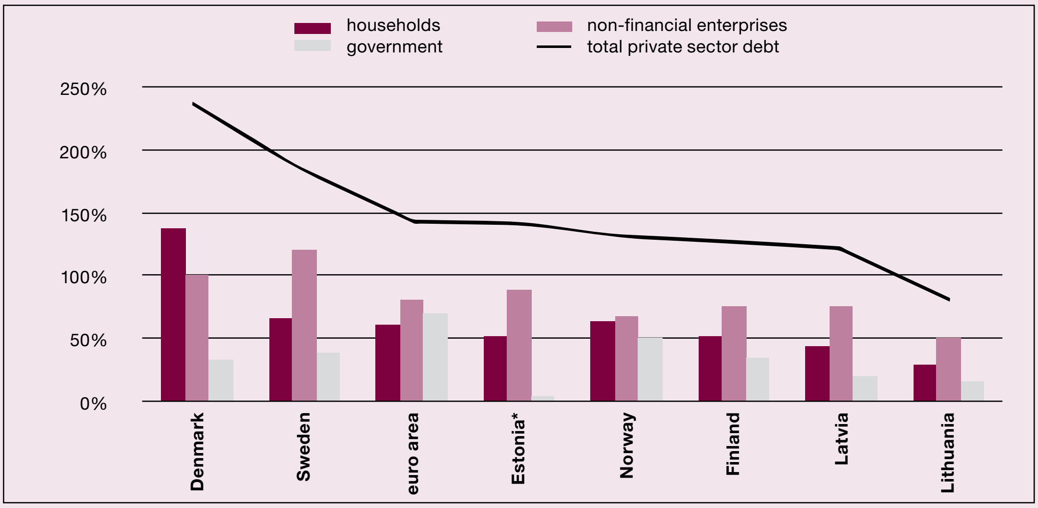

Figure 24. Indebtedness of Estonia's economy as a ratio of GDP at end-2008

Sources: Eurostat, European Central Bank, Eesti Pank

* estimate (quarterly financial accounts)

more for themselves. In addition, more people will be likely to need credit for renovation purposes.

Due to the strong growth in demand for high-quality real estate, also growth in corporate loan stock mostly concerned sectors related to real estate. The growth of indebtedness was relatively faster in other domestic demand oriented fields as well, especially trade. The loan burden of export companies, on the other hand, showed relatively modest growth. Neither did their debt ratios point towards a risk exposure as great as that of other sectors. At the same time, there were still export companies who pursued the significantly more profitable real estate business alongside their main activity in the boom times.

The scale of damage and its long-term impact created by the economic boom, led mainly by one economic sector, is revealed during economic depression. **Even though the recession has caused problems with the repayment of debts in Estonia, and the loan losses of the local banks have increased, this will probably not have a major effect on the establishment of future loan conditions.** The credit supply of subsidiaries and branches will depend, above all, on the capitalisation and funding conditions of the whole group, as well as on their outlook of the entire region.

The ability of companies and households to adjust to the changing economic structure will play an important role in the next few years. Considering how much the Estonian economic structure has changed in the past decade, the main question lies in **whether the flexibility which has sustained economic development in Estonia so far will prevail in the conditions of lower economic convergence**. Further economic growth will largely depend on the increase in external demand. As the Estonian economic model is based on internationally integrated goods and financial markets, it is unlikely, considering the developments on the housing market, that a new growth phase in Estonia would be driven by domestic demand.

As regards the debt burden, the main concern lies in the resources available for export enhancement. For instance, some companies are willing to dispose a part of their business, which will provide the basis for structural changes. The estimated loan burden of sectors potentially contributing to economic growth is not so encumbering as to hinder the implementation of new business plans or new loan commitments once the external environment recovers. Throughout 2009, loan repayment and new loan commitments have been endorsed by low international interest rates. In economies depending on external demand, as is the case with Estonia, the increase in incomes will help offset the effect of interest rate hikes once the interest cycle turns upward in Europe.

All in all, the hampering effect of the loan burden will mostly depend on the economies' ability to adjust. If the economy maintains flexibility in times of slow growth, the negative impact of a higher debt burden will prove rather temporary. Once the external demand recovers, wise business decisions will help raise competitiveness.

Comparing the relative debt level between different countries, it should be noted that, unlike many other countries, Estonia has virtually no government debt. This means a lower tax burden for the country's companies and households. In other words, unlike in several other European countries, Estonian companies and households are not expected to indirectly pay also the increasing government debt in addition to their own debt.

II BANKING SECTOR STABILITY AND RISKS

Strategic development of the banking sector

Estonia's financial system is predominantly bank-based owing to the smallness of the domestic market (see Figure 1). In the case of companies belonging to cross-border groups, financing is often group-based (see also Section *Corporate debt* on p. 9). Namely, for the sake of economies of scale it is more expedient for groups to raise funds for the entire group and then reallocate the funds among group participants.

The market shares of the banks operating in Estonia did not change considerably over the past two quarters. There are still seven credit institutions, eleven branches of foreign credit institutions and around 250 cross-border banking service providers in Estonia.

Larger banking groups[1]

As the uncertainty around the economy persists, the profitability of the financial groups operating in Estonia has been affected by the need to take into consideration possible future loan losses. Consequently, groups' results largely depend on the needs and principles of loan write-downs (see Figure 2).

Given the increase in loan write-downs, in the past three quarters the profitability of groups has been boosted by income on trading portfolios. Although low key interest rates do not facilitate interest income growth, it is still supported by loans with fixed interest rates, for instance. The share of such loans among total loans issued is higher in the Nordic countries than in the Baltic States. Moreover, banks have increased the cost of new loans.

Groups have made further cuts on the expenditure in the difficult market situation, especially in the Baltic States. At the same time, extensive write-downs of goodwill and fees of participation in national support programmes have increased the operating costs of some groups.

The capitalisation of groups has remained relatively strong regardless of some losses. This year

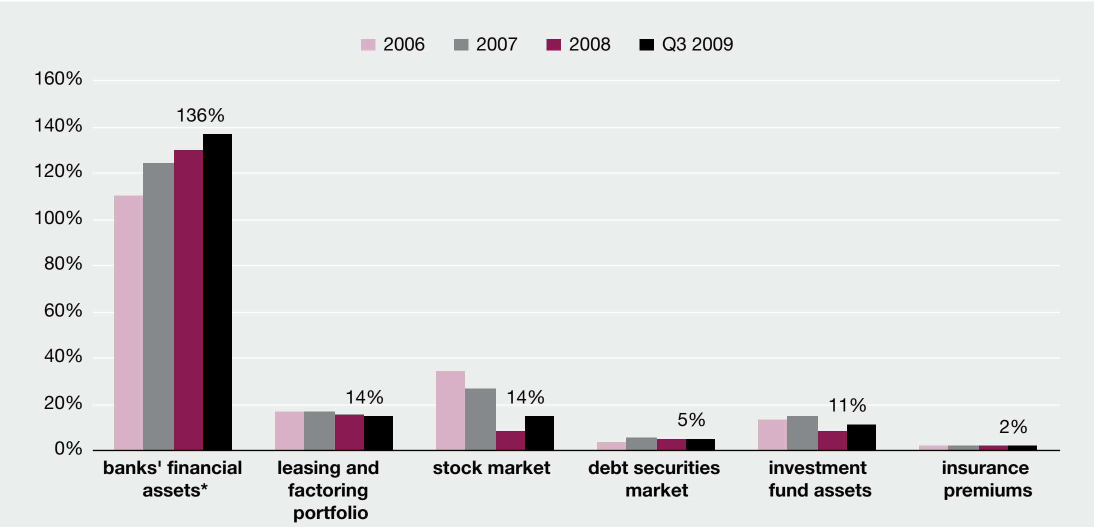

Figure 1. Structure of financial intermediation (% of GDP)

* Excluding assets of subsidiaries and associated companies.

[1] The overview is based on the groups' public statements.

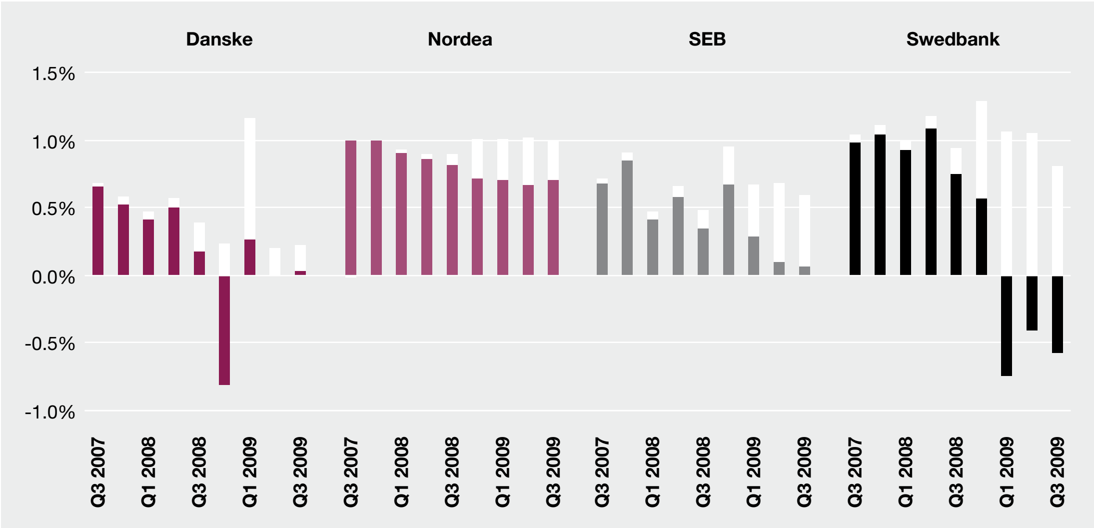

Figure 2. Profitability of banking groups and potential profitability with loan provisions excluded

banking groups also ceased to pay dividends or decreased the volume of dividends paid. In addition, groups have extended share capital by issuing new shares and have included subordinated loans. At the end of 2009, the restrictions on the decrease in risk-weighted assets enforced for the three-year period of transition to the new methods of capital adequacy calculation will expire. Consequently, the capital adequacy ratios should rise in 2010.

Considering the future economic outlook in the operating region of the financial groups present in Estonia, several groups might report a loss also in the near term. However, the income base and high level of capitalisation of banks allow to expect that the groups will manage with the need to write down possible new overdue loans. Increased risk estimates and expectations for improved profitability have entailed stricter lending terms and higher interest rates for customers. Although loan conditions may slightly ease in the future, it is highly unlikely that loan margins will drop to the exceptionally low levels witnessed some time ago.

Funding of parent banks

The systemic liquidity risk of banks has considerably decreased as a result of easing in financial markets and the liquidity measures of central banks. The stabilisation and positive future outlook of the markets has expanded the opportunities and lowered the cost of long-term credit. Banking groups have made use of the improved situation to ensure their liquidity and attract additional long-term funds. Nevertheless, the Swedish government extended its guarantee scheme for bank bonds by six months until the end of April 2010. At the same time, banks have reported successful long-term bond issues without using any national support programmes.

The stabilisation of credit risk assessments on financial markets is reflected by credit default swap spreads, which have dropped to levels witnessed prior to the bankruptcy of Lehman Brothers (see Figure 3).[2] Yields on five-year covered bonds have shrunk by about 50 basis points since the beginning of the year. Interest spreads with risk-free rates have decreased even

[2] However, the market might be quite limited and not liquid for single institutions, which is why this indicator should be treated with some reservation.

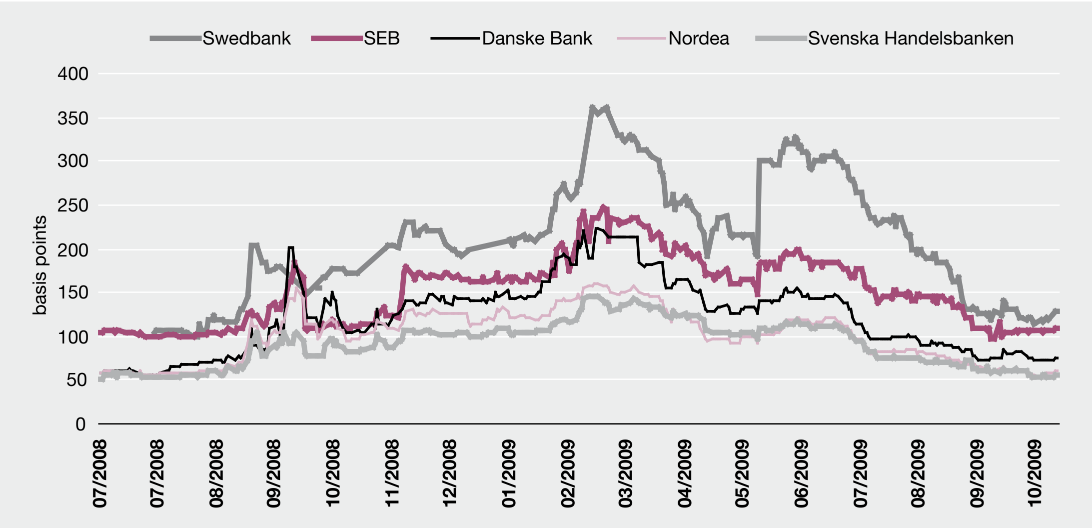

Figure 3. Credit default swap spreads of Nordic banks

Source: Bloomberg

more (by over 70 basis points), which indicates a more favourable price and better availability of funds. The difference between the risk premiums of banking groups has also declined.

The availability and cost of funds are affected by ratings. Over the past six months, the ratings of Nordic banking groups have been somewhat lowered by Moody's, whereas other rating agencies have not changed their risk assessments (see Table 1).

Table 1. Ratings of Nordic banks

	Standard & Poor's		Moody's			Fitch	
	Long-term	Change*	Long-term	Change*	Financial strength	Long-term	Change*
Nordea Bank	AA–	-	Aa2	↓	C+	AA–	-
Svenska Handelsbanken	AA–	-	Aa2	↓	C+	AA–	-
DnB NOR	AA–	-	Aa3	↓↓	C	A+	-
Danske Bank	A+	-	Aa3	-	C	A+	-
SEB	A	-	A1	-	C-	A+	-
Swedbank	A	-	A2	↓	D+	A	-

* Change since the last Financial Stability Review (spring 2009). "-" no change, "↓" downgraded by one notch, "↓↓" downgraded by two notches.

Source: rating agencies

Quality of assets

Banks' **financing portfolios** started to shrink in November 2008 and contracted at a relatively even pace until end-September 2009 (see Figure 4). At the end of September, banks' loan and leasing stock stood at 270 billion kroons, which is nearly 12 billion less than at the beginning of the year. Over the year, the total portfolio decreased 4.6%.

Over half of the financing portfolio still consists of loans issued to the corporate sector. Household loans and leases accounted for 45% of the financing portfolio at the end of September, with housing loans constituting more than a third of the portfolio. The real estate sector holds the largest share among corporate loans and this has not changed with the year (see Figure 5).

The developments in the office space market

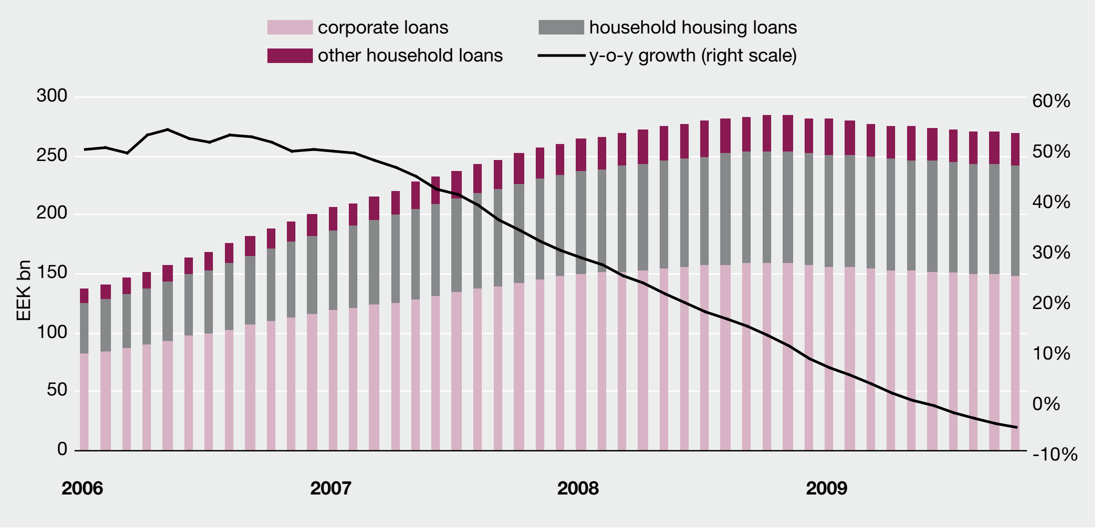

Figure 4. Stock and annual growth of non-financial sector loan and leasing portfolio

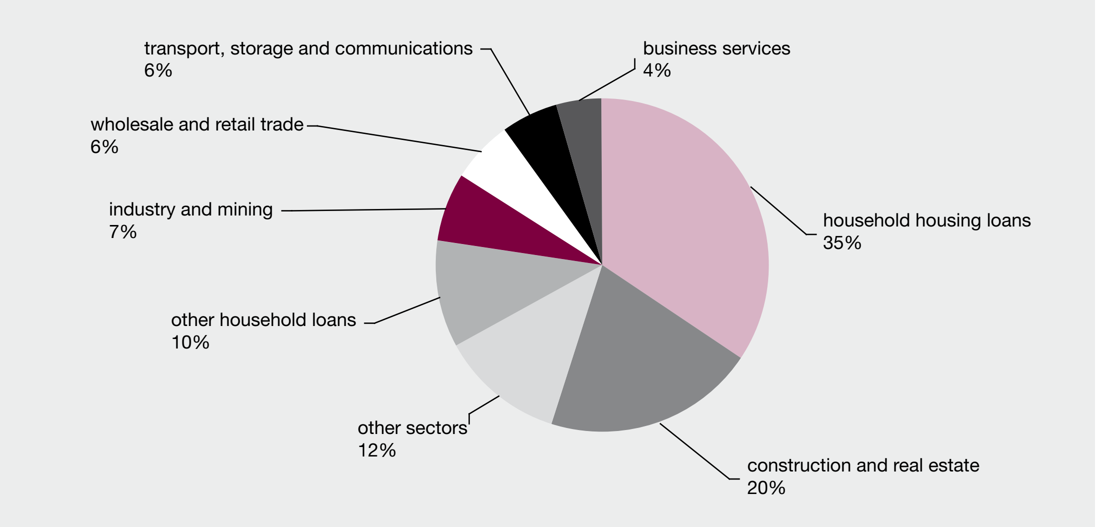

Figure 5. Structure of loan and leasing portfolio as at 30/9/2009

in Tallinn are primarily shaped by the fact that a large number of new spaces have been built in recent years. With the past two years more than a third of the total available office spaces have been established and it is difficult for the owners to find renters for these spaces. On the other hand, the current economic difficulties have reduced companies' need for new space, which is why the number of vacant offices is expected to grow and rent prices to fall in the near term. In the long term, however, the demand for office space should recover.

The transaction activity in the Tallinn apartment market has gradually grown, but the prices of apartments have dropped by approximately a third over the first nine months of 2009. Consequently, the purchase of an apartment is now more affordable for households with average incomes, even though the loan conditions have tightened. Estonian dwellings are relatively old on average. Thus, the demand for new housing as well as renovation of older residences should also pick up in the long run. Potential purchasers have started to express interest and the first new development projects are already under way. Nevertheless, market participants do not expect a significant rise in apartment prices any time soon.

The quality of the loan portfolio has deteriorated at a slower pace than feared. At the end of September 2009, **loans overdue for more than 60 days** accounted for 6.4% of the total portfolio of non-financial sector loans (see Figure 6). Until July 2009, the stock of overdue loans grew by an average of 0.5 percentage points per month, but after that growth halted. In September and October the stock of overdue loans even decreased. But given the high unemployment rate and weak demand, it is likely that more borrowers will increasingly be facing solvency problems.

The percentage of overdue loans is the largest among corporate credit, totalling almost 12 billion kroons. A positive thing to be noted is that the share of overdue loans of the corporate sector has been rather stable, and the strong growth in overdue loans witnessed at the end of 2008 and the beginning of 2009 has receded. By economic branches, the real estate and construction sectors still had the most loans overdue for more than 60 days: 12.3% of the loan and leasing portfolio as at end-September (see Figure 7).

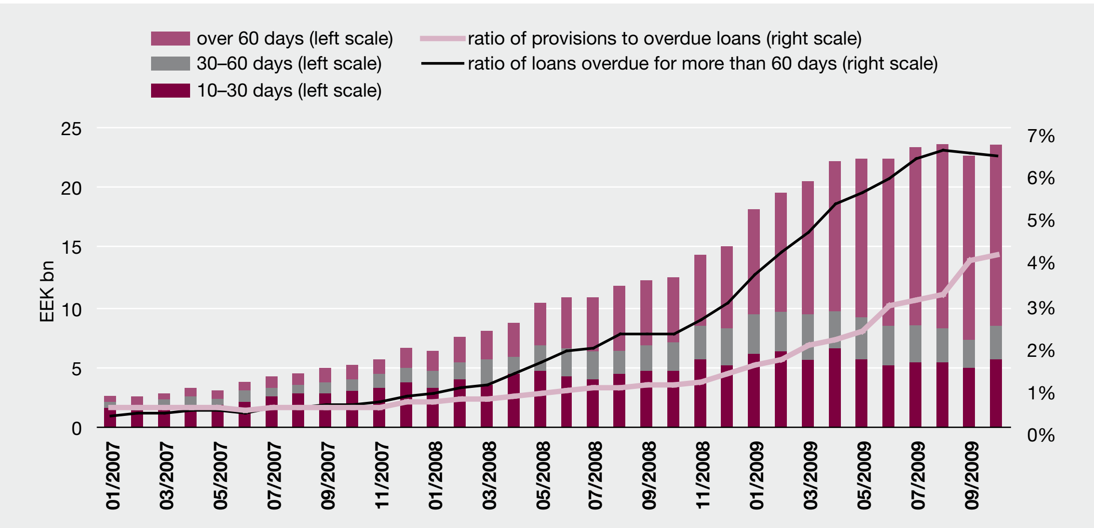

Figure 6. Overdue loans and provisions

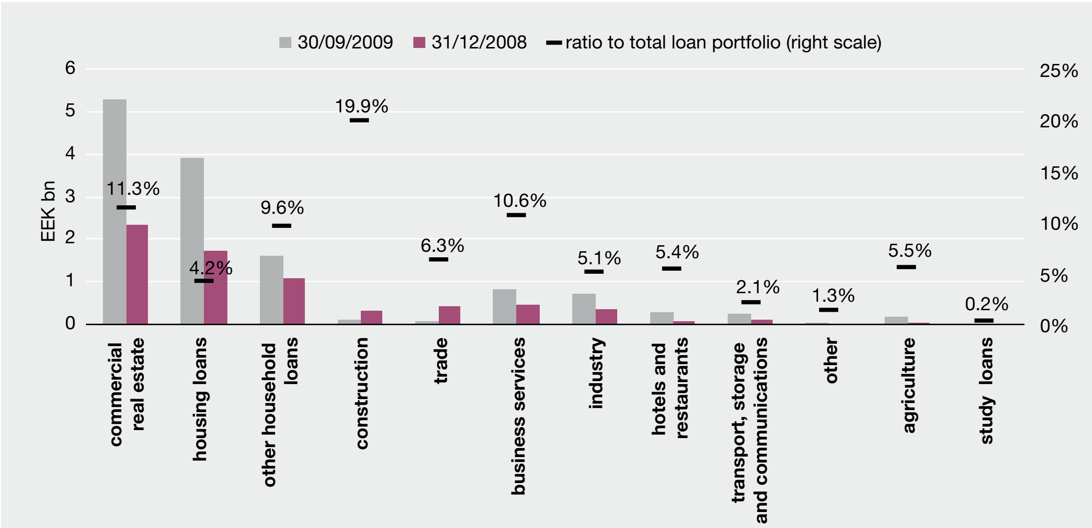

Figure 7. Stock of loans overdue for more than 60 days and ratio of such loans to sector's total loan portfolio as at 30/9/2009

Over the first three quarters of 2009, the stock of overdue loans grew by 8.3 billion kroons in total, with 3.8 billion kroons being loans issued to real estate and construction companies.

Over the past six months, given the high unemployment also the stock of housing loans overdue for more than 60 days has increased by nearly 2.2 billion kroons. At the end of September 2009, these loans constituted 4.2% of the total housing loan portfolio, which is 2.7 percentage points more than a year ago. The share of overdue loans is relatively larger in households' consumer credit, namely 9.6% at the end of September. The respective indicator stood at 5.2% a year ago.

The rapid deterioration of the loan quality and the negative outlook of banks have considerably affected also **provisions for loan losses** in 2009. By the end of September 2009, banks had made provisions in the total amount of 9.2 billion kroons (see Figure 8). 72% of that (6.6 billion kroons) were specific provisions. In September, the amount of loan provisions was considerably affected by bringing a major joint provision made at the group level under the Estonian balance sheet of one large bank. The record high provisions raised the ratio of provisions to loans overdue for more than 60 days to 60% by the end of September.

Banks have been forced to **write bad loans off the balance sheet** because of growing solvency problems and continuous deterioration of the loan quality. This has been an increasing trend in 2009: with the first nine months of the year, 281 million kroons of loans have been written off (see Figure 9). It is a low amount, considering the size of banks' financing portfolios. However, 103 million kroons have been received for previously written off claims. Taking into account that the stock of loans overdue for more than 60 days grew by nearly 8.3 billion kroons in 2009, only 3.4% of them have been written off.

The aggregate indicators of **banking groups** are similar to those of banks. The stock of overdue loans increased relatively much also on an aggregate basis – by about 20.4 billion kroons in the past six months. Rapid growth in overdue

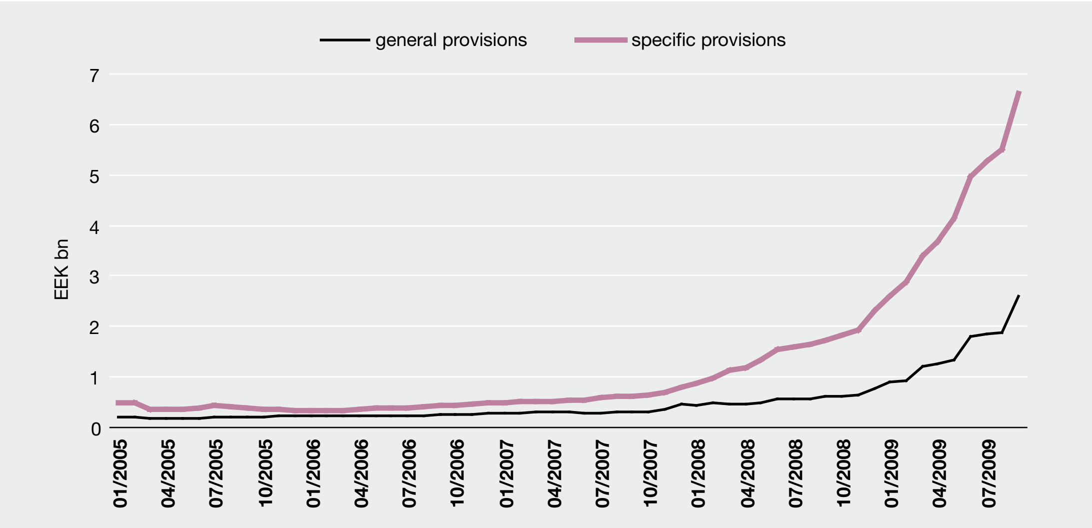

Figure 8. General and specific provisions

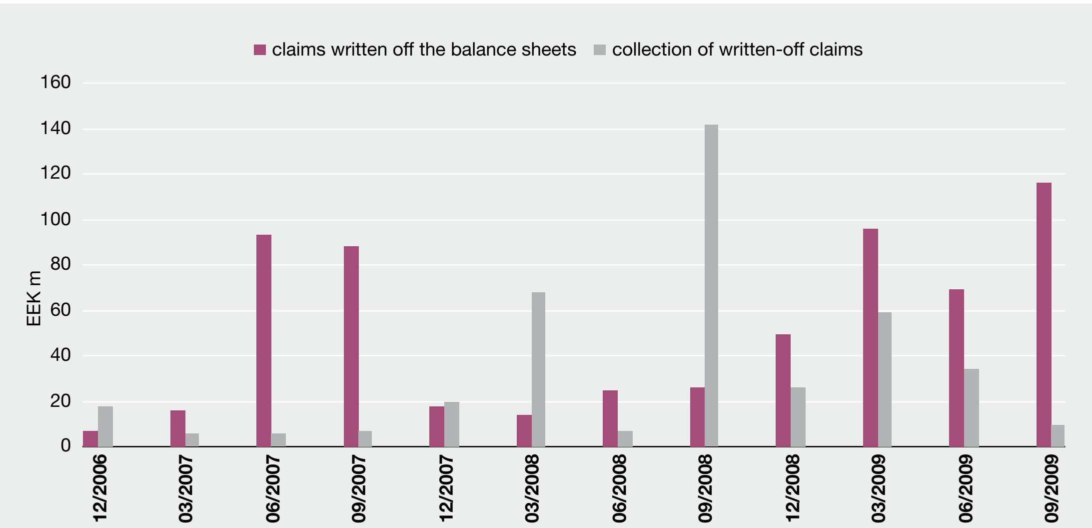

Figure 9. Claims written off the balance sheets of banks and collection of written-off claims

loans, on the one hand, and shrinking loan portfolios, on the other hand, raised the share of loans overdue for more than 60 days to 9.6% of the total loan portfolio (1.9% a year ago). The overdue loans of Estonian residents comprised only 37% of that. The share of provisions made by groups increased to 7.5% of the aggregate loan portfolio (3% in March 2009), with the ratio of provisions to overdue loans going up to 78.3%. (The indicator stood at 52.4% at the end of the first quarter and at 76.4% a year ago.)

FOREIGN CURRENCY LOANS – A PROBLEM OR NOT?

Among other issues, the financial crisis has recently been drawing attention to the question of foreign currency loans. In its latest financial stability report, the International Monetary Fund considered these loans a significant risk for the new European Union Member States. During the public consultations initiated in July, the European Commission made a proposal to enhance the protection of borrowers against currency risks by increasing the banks' capital requirements for granting loans in foreign currencies. The causes of the global financial crisis, however, are not related to currency risks – the rapid growth in loan stock and the resulting problems originated from elsewhere. The current situation does not imply that currency risks were estimated incorrectly. According to Eesti Pank, risks should thus be considered on a broader scale. For EU Member States, it is crucial to keep in mind the overall economic policy framework.

Due to the economic convergence of the European Union, the integration of the European financial markets and the free movement of capital, an increasing number of transactions in the EU are performed in euros, including loans. In Estonia, the share of euro loans is relatively high, especially among housing loans. The percentage of euro loans in banks' loan portfolios started to grow in mid-1990s together with general growth in loan stock, which stemmed from the acceleration of economic growth (see Figure 10). The share of kroon loans in total housing loans has remained small. To date, over 90% of housing loans have been granted in euros.

Given the Estonian currency board system and economic policy goals, the denomination of generally long-term housing loans in euros may be considered natural, as their interest rate risk is much lower than that of kroon loans (see Figure 191. The exchange rate of the Estonian kroon has been stable since the adoption of the kroon thanks to the currency board system. Estonia has set a goal to introduce the euro as soon as all the necessary requirements are met. After accession to the European Union, Estonia joined the exchange

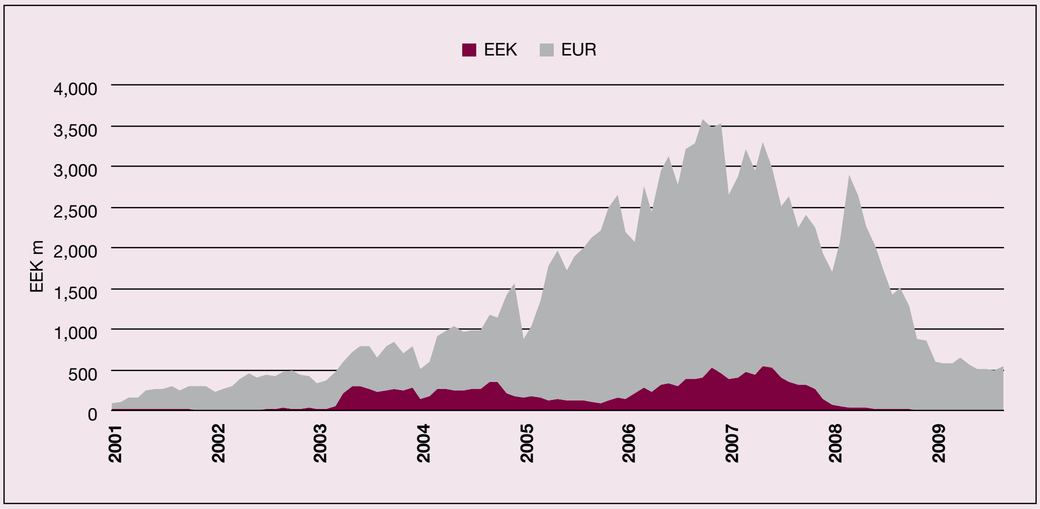

Figure 10. New housing loans by currency

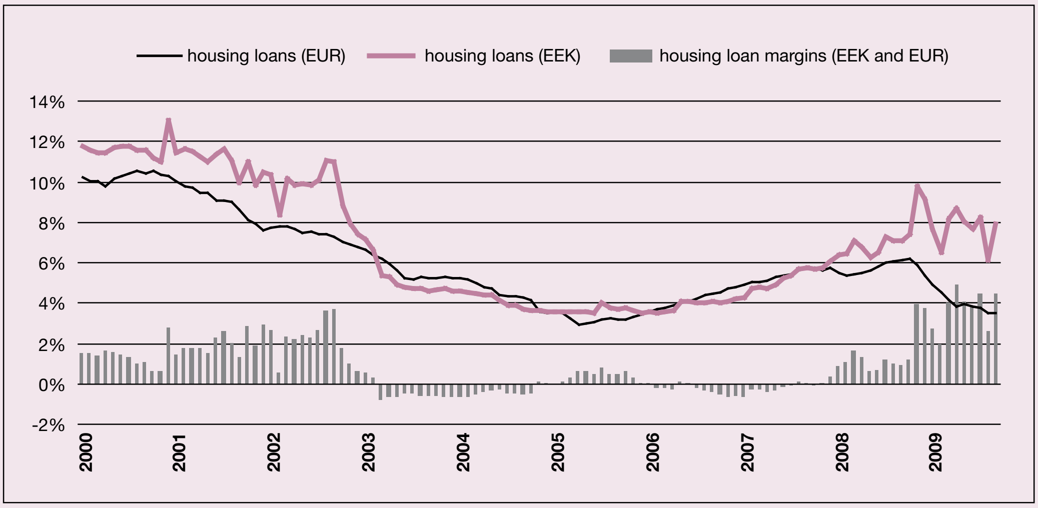

Figure 11. Interest rates on housing loans

rate mechanism ERM II, which is a prerequisite for joining the euro area. This policy is supported by the strong fiscal position of the Estonian government sector and reliable banking sector. Based on the latest economic forecasts, Estonia has good prospects to adopt the euro in 2011. Thus, the euro would become Estonia's domestic currency.

In a sense, household and corporate foreign currency loans may require greater attention in Member States with floating exchange rates, where these rates largely depend on market expectations. Meanwhile, it is essential to keep in mind that the single market framework and the Treaty of the European Union have set out that Member States reduce the fluctuation of their exchange rates and adopt the euro. Thus, the countries have to join the exchange rate mechanism ERM II at some point to fix their exchange rates to the euro. Consequently, euro-denominated loans granted in countries that have joined the ERM II and are preparing to join the euro area cannot be regarded as a significant source of risks.

In the context of market economy, creditors must be able to assess risks, including currency risks, and be interested in the solvency of borrowers, as the risk profile of borrowers directly influences the capital requirements of creditors. The current situation does not indicate that currency risks were estimated incorrectly or that foreign currency loans were conducive to irresponsible borrowing.

The analysis of the loan portfolios of Estonian banks indicates that the quality of euro housing loans has been higher than that of kroon loans. Kroon loans have entailed greater interest rate risks, as the changes in risk assessments during the global crisis have resulted in considerably higher kroon interest rates. Thus, the share of overdue loans among kroon loans is over three times bigger than in the case of euro loans – in September 13.1% and 3.7%, respectively (see Figure 12).

Using the Euribor as a reference for the interest rates on euro loans has provided Estonia with additional stability in the economic crisis, as the interest rates on euro loans have been substantially steadier and cheaper compared to the interest rates on kroon loans. The fixed

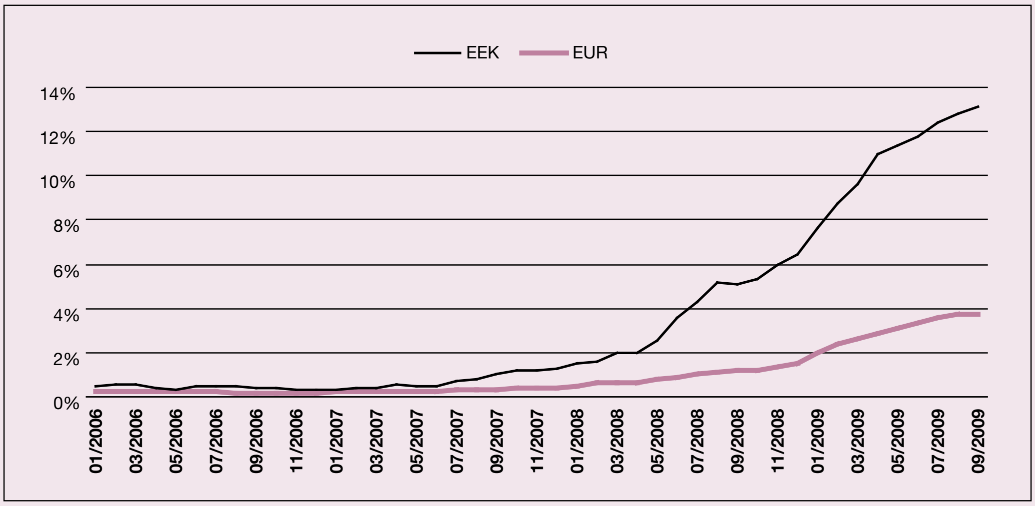

Figure 12. Percentage of housing loans in euro and kroon overdue for for more than 60 days

exchange rate has also enabled to rapidly pass over the effects of the loosening EU monetary policy to Estonia. The current drop in the Euribor has significantly eased the situation of borrowers. Lower interest rates have helped borrowers save about 3 billion kroons, i.e. 2% of disposable incomes, this year. This has helped to alleviate the negative effect of the recession and avoid a more rapid deterioration of the loan portfolio.

In conclusion, it is obvious that the currency risk is only one of several risks that pose a threat to creditors and borrowers. The reasons for the current financial crisis are not related to foreign currency loans, nor have they caused substantial damage. Thus, there is no reason to treat the currency risk separately of other risks. The analysis of financial stability and the impact of the crisis has to be comprehensive. The assessment must include a broader spectrum of risks (interest rate risk, the price volatility of underlying instruments, etc.) and their impact on different economic agents must be assessed correctly. Measures for strengthening financial stability can be efficient only when they draw from an analysis that includes all risks and adequately consider the specifics of economic policy frameworks.

Capital adequacy

The **average capitalisation** of the banking sector has somewhat grown with the first three quarters of 2009: to 21.4% from 18.9% at the end of December 2008 (see Figure 13). The respective indicator of banking groups was 14.5%. The lowest capital adequacy ratio on the market was 14%, recorded at the end of September 2009. Thus, the capital adequacy of banks operating in Estonia is still higher than the minimum capital adequacy requirement established in Estonia, which means that banks have enough capital to cover the loan losses (see also background information *Stress test of the banking sector*).

Changes in banks' own funds and risk-weighted assets are presented in Table 2.

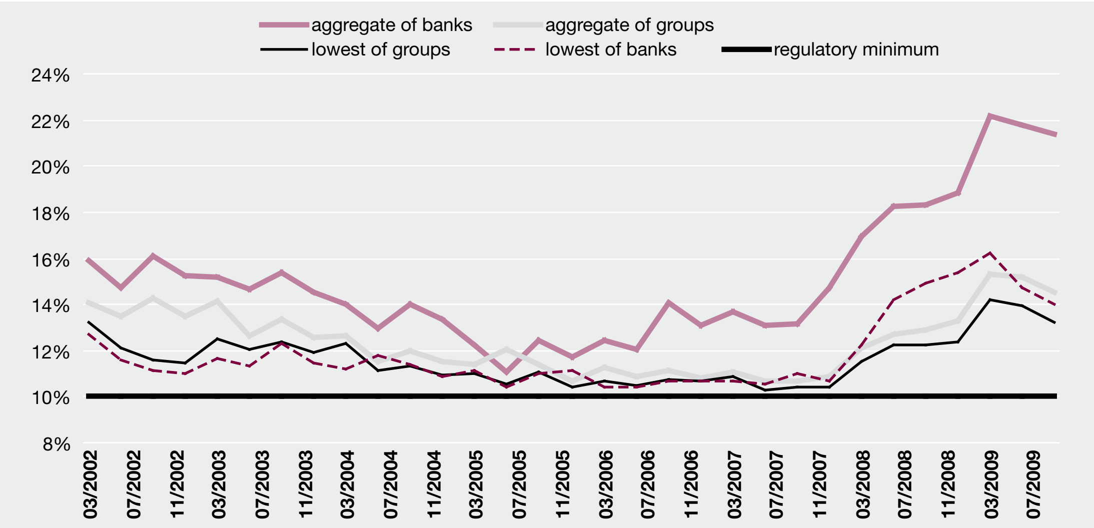

Figure 13. Capital adequacy ratios of banks and banking groups

Table 2. Changes in risk-weighted items (EEK bn)

	30/09/2008	31/12/2008	31/03/2009	30/06/2009	30/09/2009
Tier I own funds	24.3	24.4	27.2	26.5	25.4
Tier II own funds	10.7	10.8	10.8	10.8	10.9
Deductions	0.3	0.3	0.9	0.5	0.3
Own funds in capital adequacy calculation	34.7	34.9	37.1	36.7	36.0
Credit risk	152.1	150.7	141.4	140.2	140.1
Other risks	5.8	5.1	5.4	7.4	10.1
Operational risk	7.1	7.1	7.2	7.8	7.7
Additional risk assets in the transition period	24.4	22.1	13.3	12.9	10.3
Risk weighted items	189.4	185	167.3	168.3	168.2
Banking sector average capital adequacy	18.3%	18.9%	22.2%	21.8%	21.4%
Lowest capital adequacy indicator	14.9%	15.4%	16.2%	14.7%	14.0%

The decline of the capital adequacy ratio of banks has been caused by an increase in Tier 1 own funds as well as a decrease in risk-weighted assets. Banks have included the profits from previous periods in their capital buffers, and thus the level of **Tier 1 own funds** has grown by 1.1 billion kroons since end-September 208 (1 billion kroons during 2009).

The decrease in **risk-weighted assets** primarily stems from lower capital requirements to credit risk. The requirement has decreased over the year mainly because two major banks have introduced the internal ratings based method for calculating the capital requirements for credit risk. At the start of 2010, capitalisation growth will be supported by the expiration of the restrictions on the decrease in risk-weighted assets enforced for the period of transition to the new methods at end-2009.

The credit risk capital requirements have been outlined in Table 3. The table shows that in 2009 capital has been released primarily on account of a decline in the credit risk capital requirements to retail claims.

Table 3. Credit risk capital requirements (EEK bn)

	30/06/2008	30/09/2008*	31/12/2008	31/03/2009**	30/06/2009	30/09/2009
Credit institutions, investment funds and local governments	22.3	20.9	23.3	24.7	24.3	27
Other companies	68.6	64.4	62.8	87.2	86.8	84
Retail claims	79.5	60.6	58	24.1	23.3	23.6
Claims in delay	1.7	1	1.7	1.1	1.4	1.4
Other assets	6.2	5.2	4.9	4.3	4.5	4.1
Total credit risk capital requirements	**178.2**	**152.1**	**150.7**	**141.4**	**140.2**	**140.1**

* SEB Pank started to calculate credit risk capital requirements based on the internal ratings based method.
** Swedbank started to calculate credit risk capital requirements based on the internal ratings based method.

The purpose of using the internal ratings based approach is to increase the risk sensitivity and measurement adequacy of the capital required for credit risk. Granting of the authorisation depends on meeting the minimum requirements provided by legislation, including the reliability of internal risk assessment methods and the daily implementation of good practice in credit risk management.

If a credit institution introduces IRB for calculating the capital requirement for credit risk, or AMA (Advanced Measurement Approach) for calculating the capital requirement for operational risk, the volume of risk-weighted assets may sharply decrease. Therefore, restrictions have been set for the transition period in respect of the decline in risk-weighted assets. This means that when the volume of risk-weighted assets calculated according to the new methods will be lower than 80% in 2009 compared to risk-weighted assets calculated on the basis of earlier methods, the 80% limit must be applied when calculating banks' own funds. The transition period will end in 2010 and the stock of risk-weighted assets of respective banks is expected to decrease further, which will increase the average capital adequacy ratio of banks.

Over the first nine months of 2009, risk-weighted assets have shrunk by 16.8 billion kroons in total. The decline in credit risk capital requirements comprises 10.6 billion kroons of that. At the same time, the restrictions on the decrease in risk-weighted assets enforced for the transition period have decreased by 11.8 billion kroons. The capital requirements for operational risk have increased by 0.6 billion kroons and those for other risks by 5 billion kroons. The latter largely stems from increased currency risk.

STRESS TEST OF THE BANKING SECTOR

A stress test was conducted for the baseline scenario and the negative risk scenario of Eesti Pank's autumn forecast to identify the potential impact of either scenarios on the local banks and subsidiaries of foreign banks operating in Estonia.

Scenarios of the stress test

According to the **baseline scenario of Eesti Pank's autumn forecast**, the economic cycle will turn at the end of 2009. 2010 will see the stabilisation of economy and growth is expected to recover in 2011. The baseline scenario expects 1.4% growth in 2010. Unem-

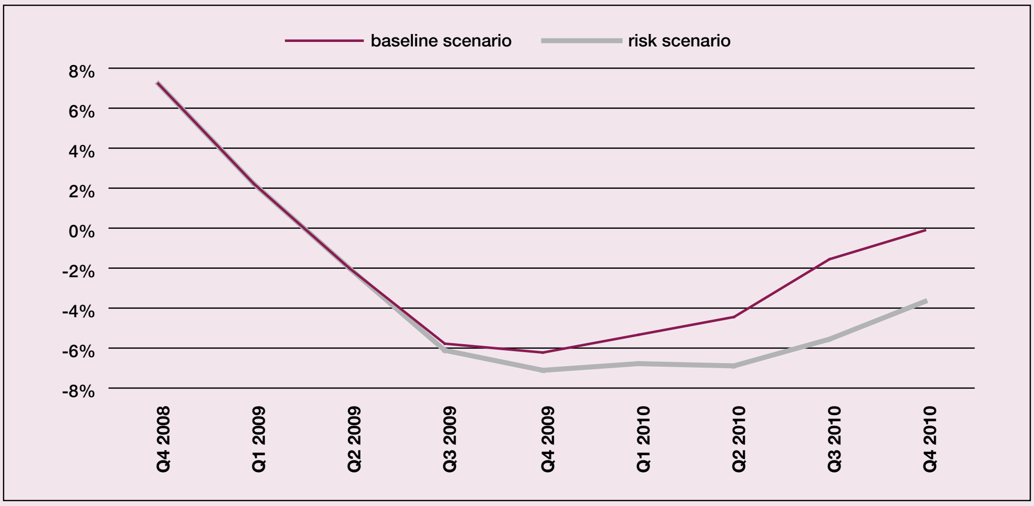

Figure 14. Credit growth based on different forecast scenarios

ployment will peak in 2010 and will start to decrease then. Monthly credit growth will be positive again in the second half of 2010, and at the end of the year it will reach a level comparable to end-2009 (see Figure 14).

The **risk scenario of the autumn forecast** projects further easing in domestic demand, as the adjustment of the economy is still under way. This translates into a possibility of recession also in 2010. According to the risk scenario, Estonia's economy will contract by a further 2% in 2010. Unemployment will be 17.7% in 2010. The recovery of the external environment will take relatively much time. For Estonian borrowers this means that the interest rates will remain low. Considering the low demand and the cautious behaviour of the non-financial sector, the loan portfolios will decrease also in 2010.

Materialisation of credit risk

The share of loans overdue for more than 60 days in banks' loan portfolios will increase across all sectors until the second quarter of 2010 and will start to decline then. According to the baseline forecast scenario, overdue loans will comprise 8.2% of the total loan portfolio. The indicators are slightly different across sectors. Compared to households' overdue loans, the non-performing loans of the corporate sector will reach their historical high sooner but will also start to decrease earlier (see Figure 15).

Based on the risk scenario, the stock of overdue loans will peak at 9.1% in the second quarter of 2009. The main difference between the two scenarios is that the risk scenario expects the stock of overdue loans to decline at a slower pace than projected in the baseline scenario.

Loan losses

The stock of overdue loans enables to assess the financial strength of companies and households, whereas the assessment of banks should primarily draw on the dynamics of loan losses. However, it is difficult to assess loan losses because of banks' different strategies in terms of loan write-downs. Earlier stress tests have been based on 45% and

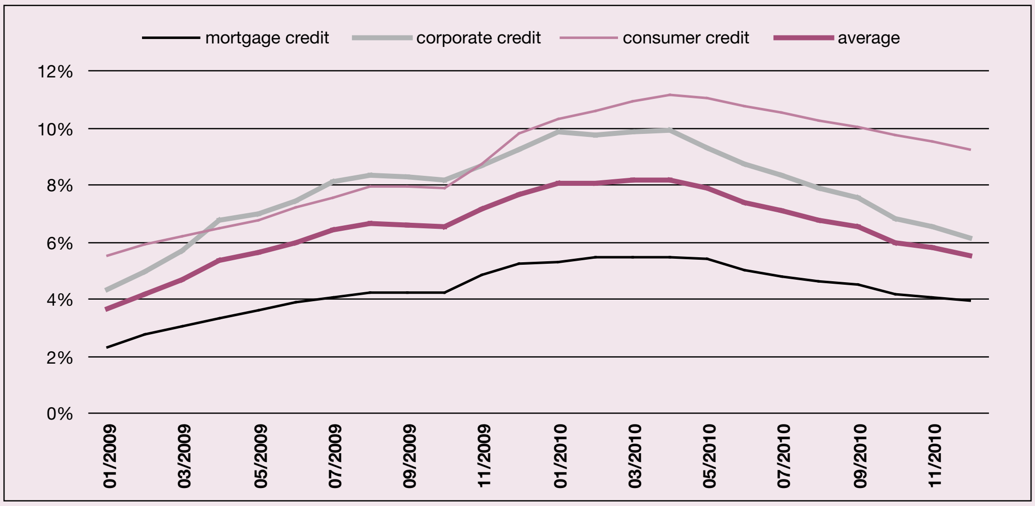

Figure 15. Non-performing loans by loan segment

60% loss given default ratios[3]. At the end of October 2009, on average banks had made provisions for over 63% of the loans overdue for more than 60 days.

The level of loan provisions is already relatively high as regards the major banks operating in Estonia. Thus, the amount of provisions is not expected to grow considerably in 2010. Drawing on the principle of conservatism, the present stress test nevertheless derives from the assumption that the major banks in Estonia intend to maintain the share of provisions in the total stock of overdue loans at a level comparable to the current one. Another assumption is that the risk assets will increase/decrease in line with credit growth.

Given the above assumptions, the baseline scenario of the stress test expects another 540 million kroons of provisions in 2009 and 1.3 billion kroons of provisions in 2010. The risk scenario indicators are 900 million and 2.1 billion kroons, respectively.[4]

Profitability

In 2010, banks' pre-loss profitability will be primarily affected by the cost of funds. In recent quarters the interest rates on kroon deposits have remained high, whereas the key interest rates have been very low. This has reduced banks' net interest income. A rise in the Euribor would also initially curb net interest income, as the change in the key interest rates would first pass on to interest costs (through the short-term resources obtained through parent banks) and only then to income. True, later on the rise in the Euribor would significantly increase net interest income.

As regards other types of income, earlier developments are expected to continue. Banks will presumably cut down more on their operating expenses.

[3] The loss given default ratio indicates the percentage of a loan that the bank would lose, should the customer become insolvent.
[4] The loan loss ratios only include the loan losses of banks that comply with the capital adequacy requirement. The respective figures for the entire market are some 1.7 billion kroons in the baseline scenario and 2.8 billion kroons in the risk scenario.

According to the baseline scenario of the stress test, banks that have to fulfil the capital adequacy requirement will earn 2.1 billion kroons of pre-loss profits in 2010. The risk scenario indicator is 1.75 billion kroons.[5] Better results can be expected in the second half of 2010. Although the stock of overdue loans will decrease in the second half of the year partly also because of the increasing solvency of borrowers, the potential additional profits have not been taken into account in the stress test to maintain a conservative approach.

Results of the stress test

In the current stress test no assumptions were included regarding transactions for increasing equity capital. Therefore, all the indicators have been calculated on the assumption that the equity capital of banks will not grow (see Figure 16).

Considering the expected developments of loan losses and pre-loss profits in 2010, the banks operating in Estonia are able to meet the capital adequacy requirement on an annual aggregate basis in either case – the materialisation of the baseline or the risk scenario of the stress test.

The primary conclusion of the stress test is that banks will have to make relatively few provisions in 2010, given that they have so far been very conservative in this respect. Major banks have sufficient funds to cope with the current situation, which is in line with the autumn 2009 forecast of Eesti Pank and the assumptions used in the stress test.

Capital buffers

Presuming that banks will not change their provisioning principles in 2010 and will make provisions for around 63% of the non-performing loans, the stock of such loans may increase to 12.8% according to the baseline forecast scenario or to 10.5% according to the risk scenario. In either case banks will still be able to meet the minimum capital adequacy ratio.

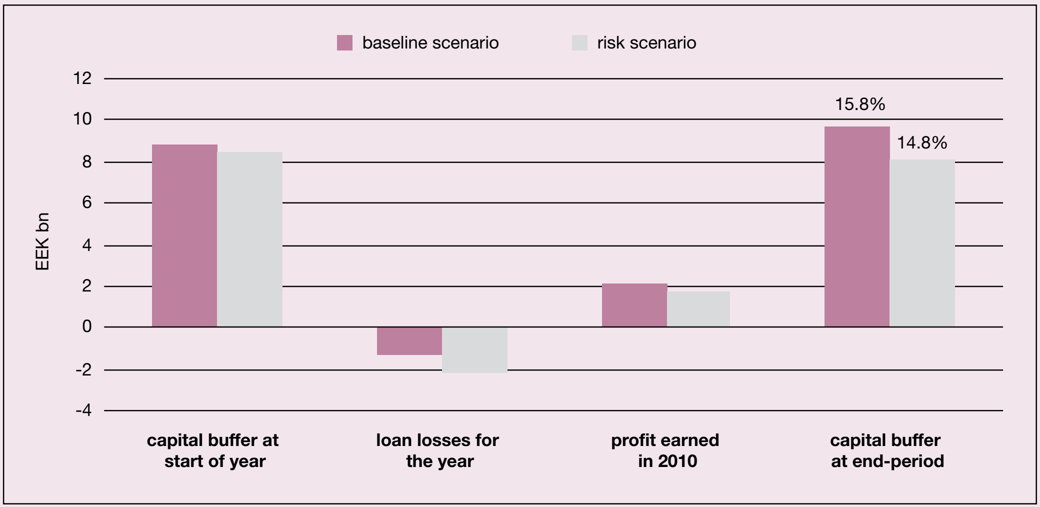

Figure 16. Development of capital buffers in 2010 based on different forecast scenarios

[5] The aggregate indicators for the entire market are 2.5 and 2.1 billion kroons, respectively.

Liquidity

Banks' assets **have decreased by about 11 billion kroons** and funds borrowed from foreign banks by around 7 billion kroons over the past six months (see Figure 17). This is so even though the cost of loan resources borrowed from parent banks has recently been much lower for Estonian subsidiaries than the price they have paid for kroon deposits.

Competition in the **deposit market** has prevented the cost of kroon deposits from a more substantial decline. In addition, customers have become increasingly more price sensitive, as reflected in their growing preference for time deposits. (This also shows that other investment options have lost some of their attractiveness for the investors.) In September 2009, banks offered, on average, a 4.6% interest rate on three-month kroon deposits. The average interest rate on three-month euro

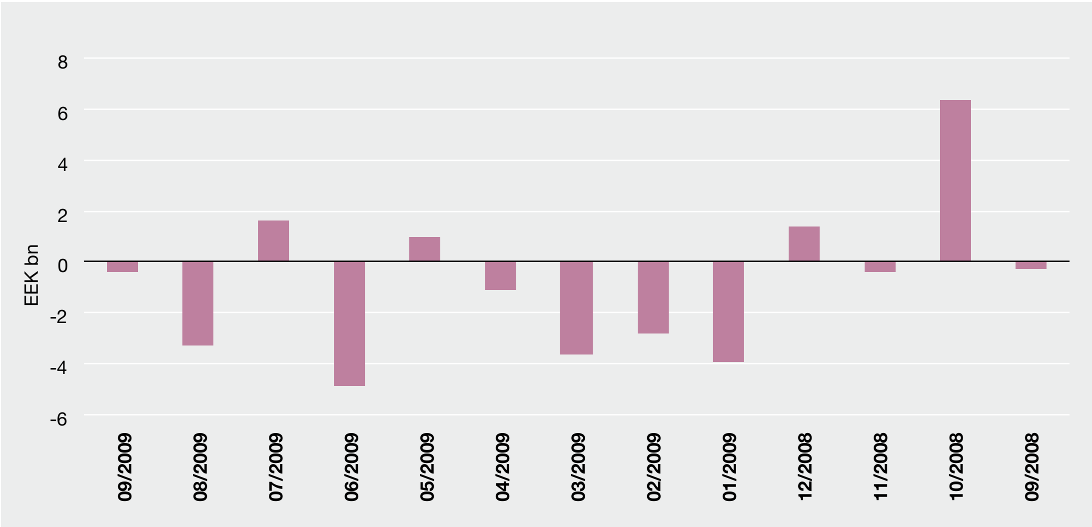

Figure 17. Monthly change in banks' liabilities to non-resident financial institutions

Figure 18. Interest rates on funds received from non-resident credit institutions

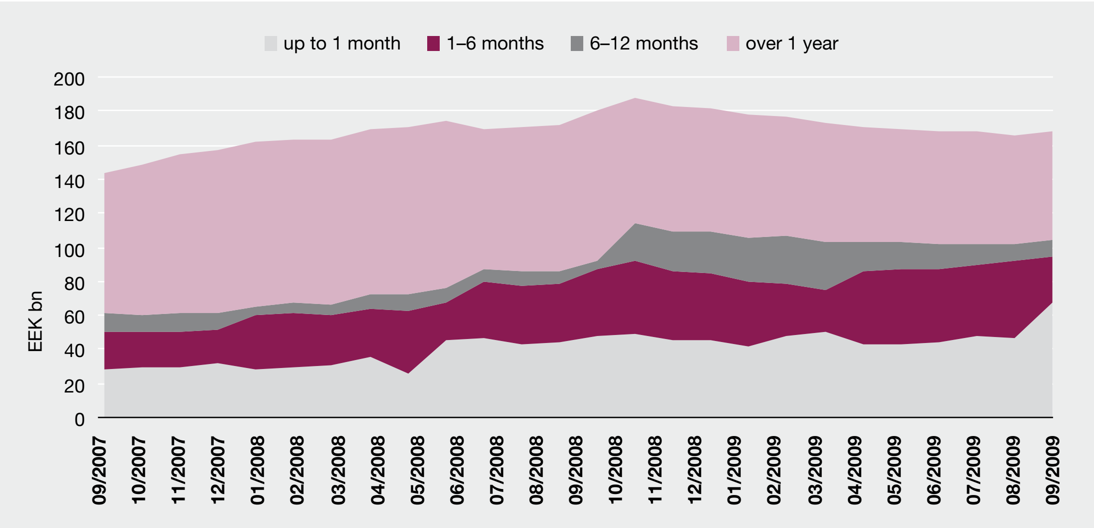

Figure 19. Banks' liabilities to non-resident credit institutions by maturity

deposits was only 0.6% and parent banks even offered funds with lower annual interest rates than 0.5% (see Figure 18). This manifests itself in smaller net interest incomes and lower profitability (see also Section *Profitability*). At the same time, the role of parent banks in the liquidity management of their subsidiaries in Estonia has increased, which is reflected in the shorter maturities of funds borrowed from foreign banks (see Figure 19).

Profitability

In the past few quarters banks' profitability has been mainly curbed by the need to adjust the value of loan portfolios. Low key interest rates have played a part as well.

The decline in net interest income has somewhat moderated in the last quarters and banks

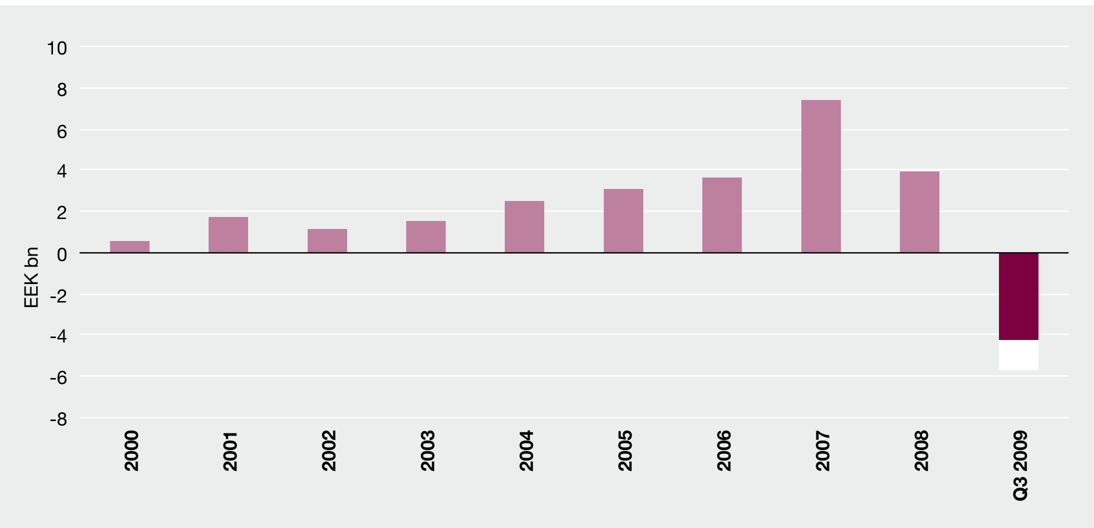

Figure 20. Banks' annual net profit and Q1–Q3 2009 results

have still earned pre-provision profits, but this has not sufficed to cover the downward adjustment of the value of assets. Thus, on aggregate, banks have suffered a more than 4.2 billion kroon loss over the last three quarters (see Figure 20). The aggregate loss of banking groups[6] for the past three quarters totals 11.5 billion kroons.

The **write-downs** of banks totalled 6.7 billion kroons in 2009 (see Figure 21 and Table 4). The loan provisions of banking groups reached 19.4 billion kroons in total (see Table 5). The majority stems from write-downs of the value of loans issued in other Baltic States.

The profitability of groups is also affected by differences in the **financial accounting practices**. For instance, the results for the second quarter, when the largest losses were recorded, were significantly affected by the transfer of a general provision from Swedbank's parent company to its Estonian subsidiary. The provision was made in the first half of 2009 to cover the risks related to the Baltic States. In the third quarter also the provisions of SEB Group, which used to be recorded under the parent bank, were transferred to its Estonian subsidiary. Moreover, groups' profitability has suffered from the write-down of goodwill.[7]

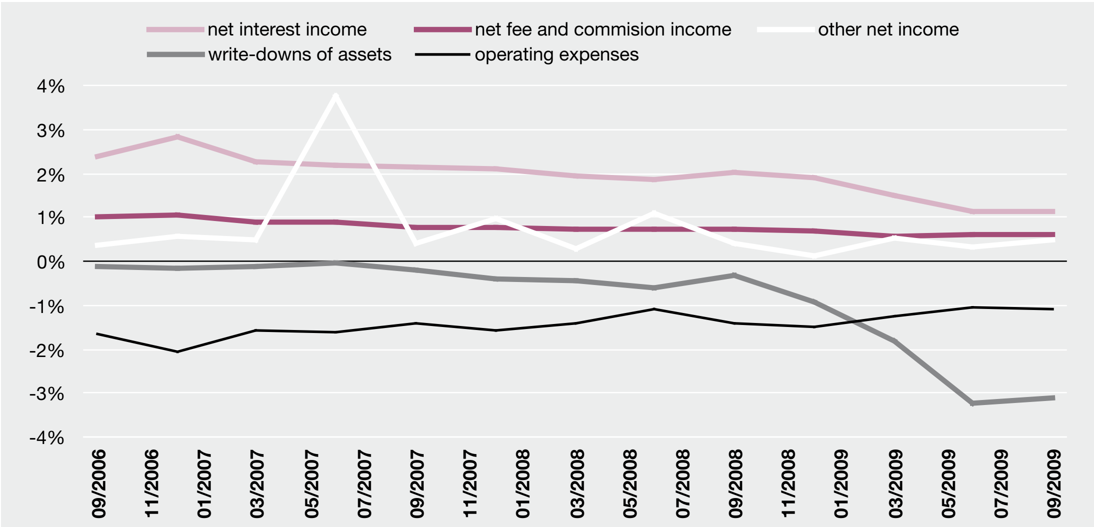

Figure 21. Income and expense items of banks (% of average assets per quarter x 4)

Table 4. Profitability of banks

	30/06/2008	30/09/2008	31/12/2008	31/03/2009	30/06/2009	30/09/2008
Average return on assets in the past four quarters	1.7%	1.6%	1.2%	0.8%	-0.2%	-1.2%
Return on assets in a quarter (x 4)	2.0%	1.4%	0.3%	-0.5%	-2.3%	-2.3%
Average return on equity in the past four quarters	18.4%	17.2%	13.6%	8.7%	-1.3%	-8.7%
Return on equity in a quarter (x 4)	20.7%	14.5%	3.5%	-5.3%	-19.5%	-15.7%
Net profit in the past four quarters (EEK bn)	5.2	5.1	4.0	2.6	-0.9	-4.0
Net profit of the quarter (EEK bn)	1.6	1.2	0.2	-0.4	-1.9	-1.9
Net write-downs of assets in a quarter (EEK bn)	-0.5	-0.3	-0.8	-1.5	-2.7	-2.5

[6] Includes only the data of banks and groups licensed in Estonia, whereas the data of branches of foreign banks have been excluded.
[7] Writing down goodwill does not lower the capital adequacy ratio of a bank, as goodwill is deducted from the own funds in the calculation of capital adequacy.

Table 5. Profitability of banking groups

	30/06/2008	30/09/2008	31/12/2008	31/03/2009	30/06/2009	30/09/2008
Average return on assets in the past four quarters	2.0%	1.9%	1.4%	0.8%	-1.0%	-2.3%
Return on assets in a quarter (x 4)	1.9%	1.7%	0.5%	-1.1%	-1.3%	-0.9%
Average return on equity in the past four quarters	25.0%	22.6%	16.8%	8.8%	-11.3%	-26.1%
Return on equity in a quarter (x 4)	22.6%	19.2%	5.6%	-12.2%	-15.2%	-10.6%
Net profit in the past four quarters (EEK bn)*	9.6	9.2	7.1	3.8	-4.9	-11.0%
Net profit of the quarter (EEK bn)*	2.4	2.1	0.6	-1.4	-6.3	-3.8
Net write-downs of assets in a quarter (EEK bn) *	-0.8	-0.7	-1.7	-3.7	-9.7	-6.0

* Excluding data of Danske Group.

Net interest income has been shrinking for the past two quarters for banks as well as groups, although the pace of decline slightly slowed in the third quarter (see Figures 21-22). Banks' net interest income for the first three quarters of 2009 totalled 3.1 billion kroons and that of groups 6.6 billion kroons, which is nearly a third less than a year before. The net interest income earned by banks almost covered their loan provisions, but at the group level provisions exceeded net interest income by 13 billion kroons.

Although low interest rates on the global markets have reduced banks' interest expenses, since the beginning of 2009 the cost of funds has exceeded the six-month Euribor, which is commonly used as the reference interest rate for loans with floating interest rates in Estonia (see Figures 23-24). This is due to the increased percentage of time deposits among banks' liabilities and the relatively high interest rates paid on kroon deposits as a result of tight competition in the banking market.[8]

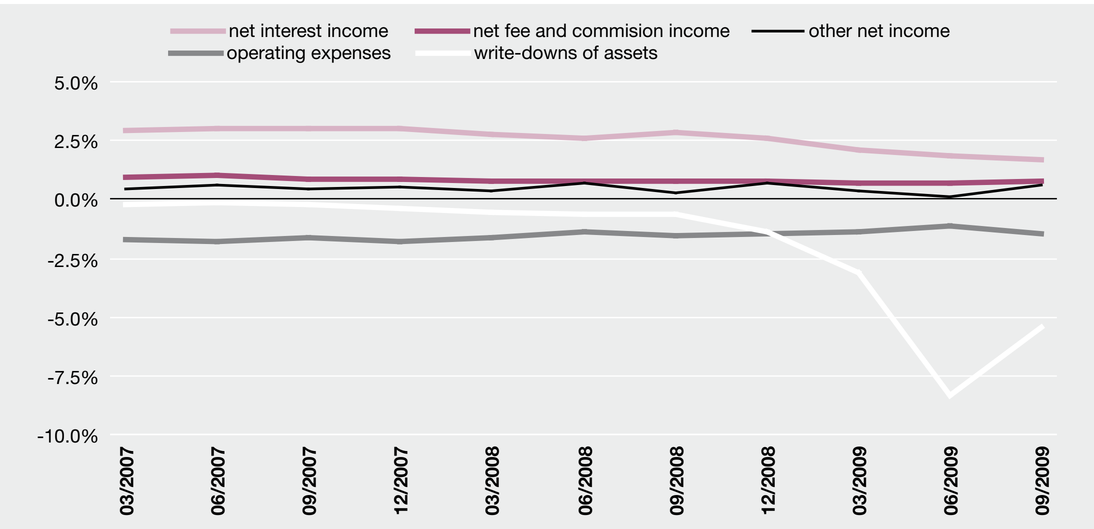

Figure 22. Income and expense items of banking groups (% of average assets per quarter x 4)

[8] In September 2009, time deposits comprised 52% of total customer deposits, with 31% being kroon deposits.

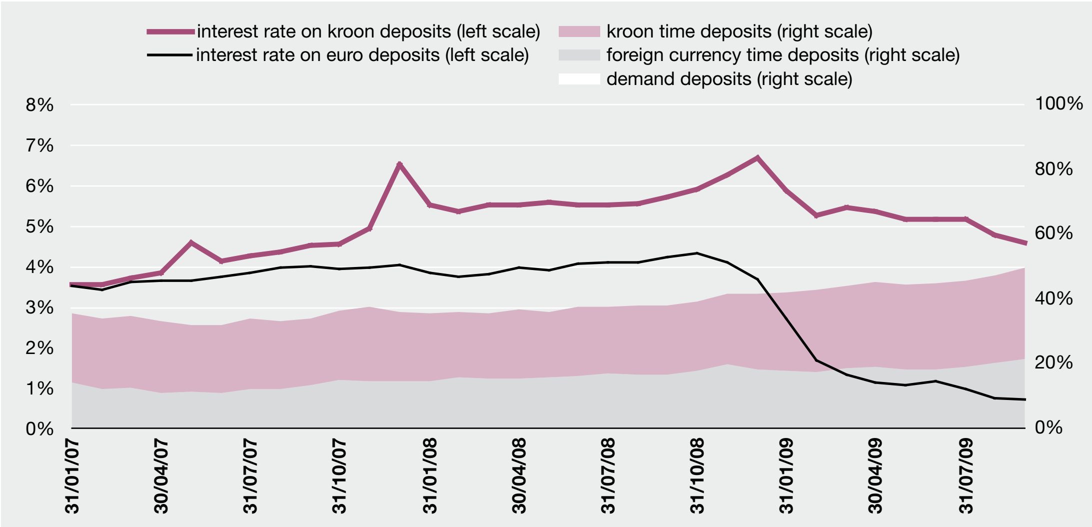

Figure 23. Average interest rate on time deposits and their share in total deposits

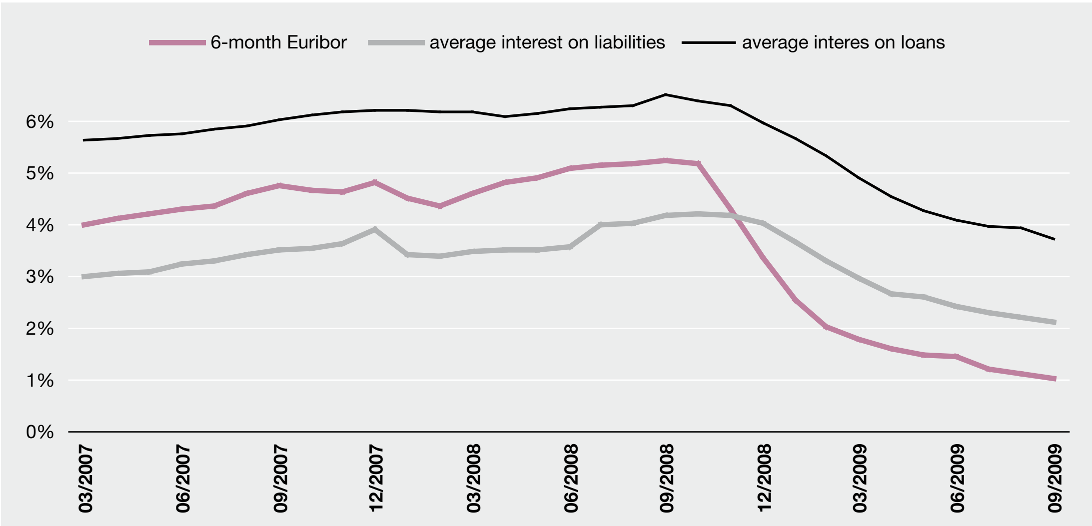

Figure 24. Average interest rates on banks' liabilities and loan stock at end-month and 6-month Euribor

Parent banks have been providing funds for their Estonian subsidiaries and affiliates, following quite closely the dynamics of international market prices, which have been on the downward trend over the last quarters. However, the aggregate price of the funds borrowed from parent banks is higher than current market prices because the cost of earlier long-term funds is relatively higher.

Banks have raised the interest margins on new loans to boost profitability but the amount of new loans is still modest and has not yet significantly facilitated interest income growth.

In addition to interest income, banks also earned almost 1.5 billion kroons of net **fee and commission income** and 1.1 billion kroons of **trading and other income** in the first three quarters of 2009. The developments regarding fee and commission income have been quite similar for banks and banking groups. The first three quarters of 2009 produced nearly 20% less fee and commission income than earned over the same period a year ago. However, the decline halted in the last quarters of 2009. The trading and other income of groups was almost 25% higher than a year ago, but this was partly due to some one-off incomes.

As incomes and credit portfolios have contracted, banks consider possible further **cut-downs on expenses**. Groups have been able to reduce operating expenses by almost a billion kroons (18%) over the first three quarters of 2009, compared to the same period a year ago. Over 25% that can be attributed to the elimination of Swedbank Group's bonus reserve. Compared to the same period in 2008, banks have cut 9% of their expenses, in particular administrative costs.

The future profitability of banks largely relies on the interest environment and the further materialisation of credit risk. The stock of new loans is not likely to grow considerably in the near future, which means that an increase in interest margins is not expected to rapidly increase banks' interest income. The impact of higher loan interest margins on net interest income may be constrained also by the termination of the calculation of interest accrual on overdue loans. With economic recovery under way, the key interest rates may start to rise again in 2010. This, however, will affect banks' net interest income with a lag, as first the price of short-term resources from parent banks is expected to grow. The change in key interest rates will pass through to the credit portfolio with a longer lag.

The current low interest environment has reduced the impact of demand deposits with lower interest rates on net interest income growth. Furthermore, to retain their customers, banks have been willing to pay notably higher interests on kroon time deposits than on similar euro deposits or funds received from parent banks. Therefore, banks' future net interest income will depend on the developments in the interest rate environment as well as banks' decisions regarding the sources of funding.

Given that interest income has considerably decreased compared to previous periods, banks are seeking for additional opportunities for income generation. As customers have become more price sensitive, banks have not been able to significantly raise fees and commissions in the current conditions. Still, the recovery of economic activity would help increase fee and commission income. Moreover, banks may still have room for further cuts on general, administrative and staff costs.

Once the economic environment improves, banks will be able to take the provisions made for credit risk in previous periods into account as an income. If at least part of the projected decrease in non-performing loans in the second half of 2010 can be attributed to the recovered solvency of bank customers the earlier loan provisions would significantly support banks' profitability of the period.

To sum up, the pre-provision profits of banks might resume moderate growth in 2010 and, in the longer run, profitability may improve significantly. Still, in the following quarters the income earned might not yet be sufficient to cover additional write-downs of assets. In other words, several banks might still bear losses over the next quarters.

III SECURITIES AND MONEY MARKET

International financial markets[1]

The upward trend on major **stock markets** that had started in the first half of March continued also in the period under review. This was caused by the easing of the financial crisis owing to extensive monetary policy measures and an economic revival in the second and third quarters of 2009. Already the economic results of the first quarter exceeded expectations (especially in the financial sector) and the indicators also improved within the last six months. All stock market indices had climbed significantly by the end of October. Compared to the end of April, the stock market index had grown by 18.7% in the US, by 11.0% in Japan, by 15.5% in the euro area, by 23.7% in Sweden and by 6.2% in Finland (see Figure 1). Compared to advanced economies, the stock market indices of developing countries surged even more: in China (Shanghai Composite Index) by 20.9%, in India (BSE 30) by 39.4% and in Russia (MICEX) by 34.4%.

Developments in **bond markets** were influenced by the monetary policies of major central banks. By the end of April, several advanced economies (including the United States, Canada and the United Kingdom) had completed the downward cycle of the **key interest rates**. From May to July also the European Central Bank, and the Swedish and Norwegian central banks lowered their key interest rates for the last time: to 1% in the euro area, to 0.25 % in Sweden and to 1.25% in Norway. In addition, the euro area employed quantitative measures to boost the economy[2].

The **interest rates on the interbank money market** continued to decrease owing to the loose monetary policy and the receding financial crisis. The three-month Libor dropped by 74 basis points to 0.28% in the US, by 69 basis points to 0.67% in the euro area and by 45 basis points to 0.48% in Sweden. These were historically the lowest interbank money market interest rates in those countries (see Figure 2). Thus, liquidity

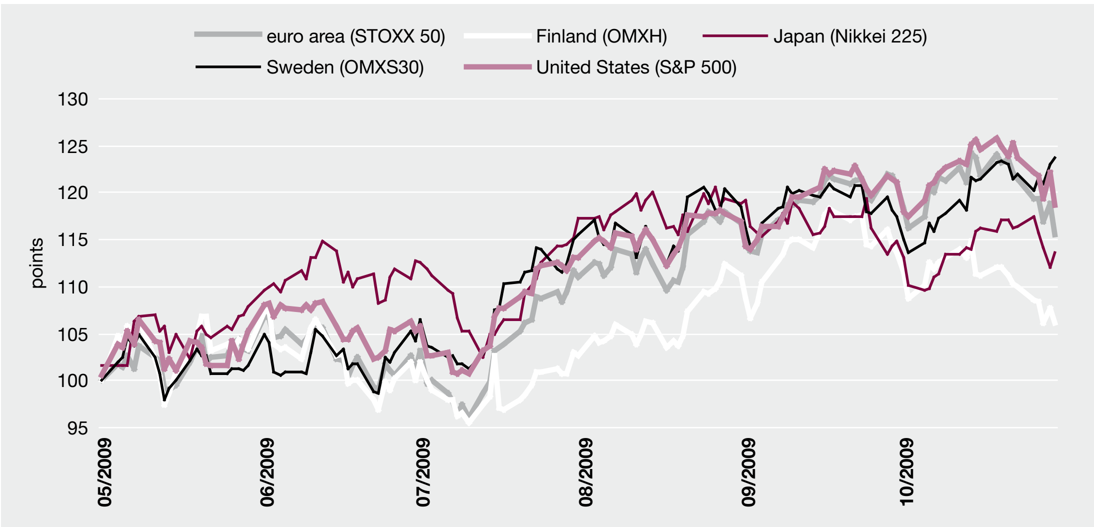

Figure 1. Stock indices in the United States, the euro area, Japan, Sweden and Finland (30 April 2009 = 100)

Source: EcoWin

[1] The Review covers the period from 30 April 2009 to 31 October 2009.
[2] The central bank buys government bonds or private debt securities (or both) to increase money supply and increases its balance sheet with the aim of keeping also long-term interest rates low.

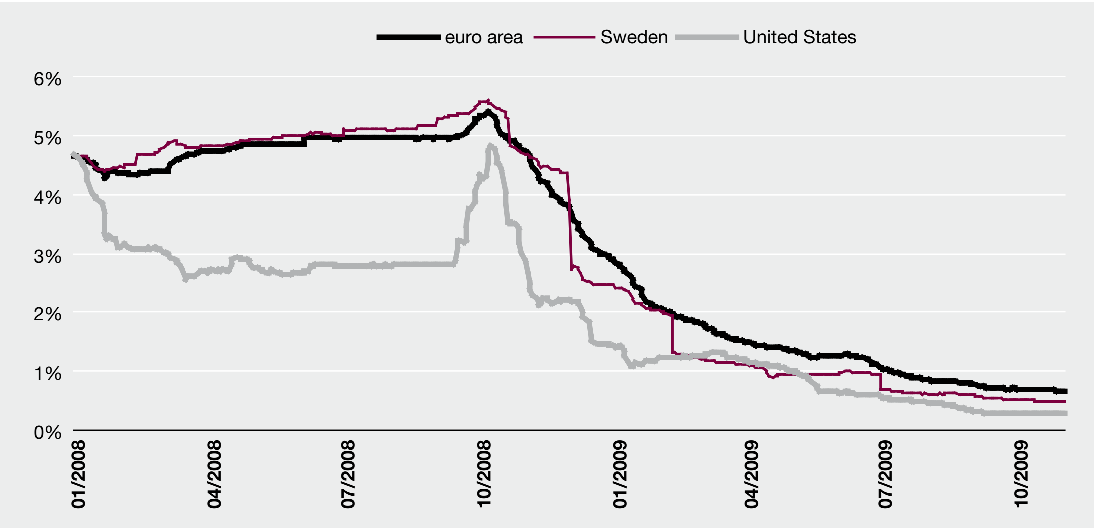

Figure 2. Three-month government interest rates in the euro area, Sweden and the United States

Source: EcoWin

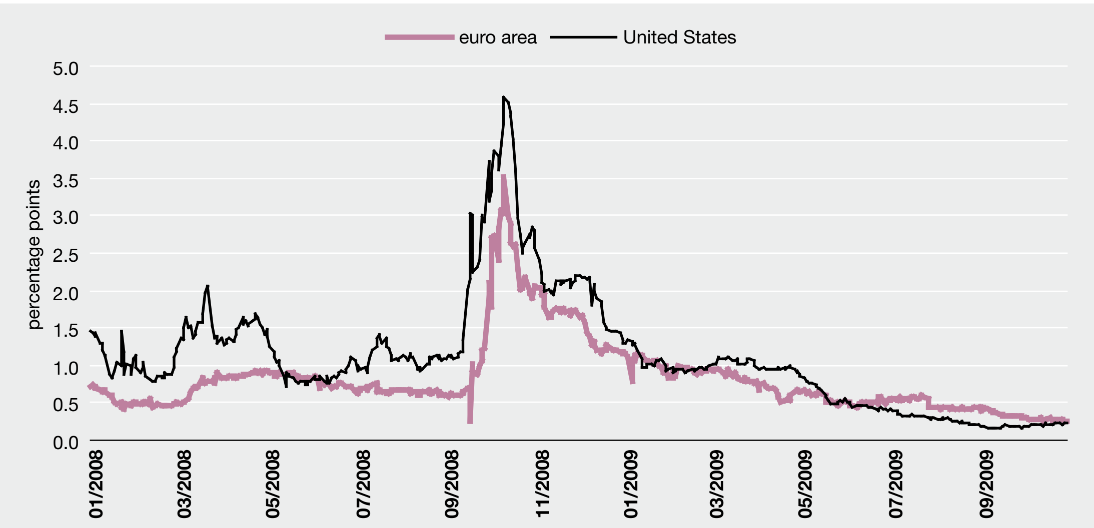

Figure 3. Spread between interbank money market interest rates and government interest rates in the United States and the euro area

Source: Bloomberg

problems in money markets have decreased and trust between banks has improved (see Figure 3).

Long-term (ten-year) government interest rates increased in light of the easing financial crisis and strengthening economy in May and June but then took a downward trend again. All in all, changes in interest rates remained marginal. In the US, the ten-year government interest rate increased by 27 basis points to 3.39% and in the euro area by 5 basis points to 3.24%, but remained unchanged in Sweden at 3.26% (see Figure 4). Since the beginning of the year, this interest rate has risen by 120 points in the US, by 29 points in the euro area and by 83 points in Sweden.

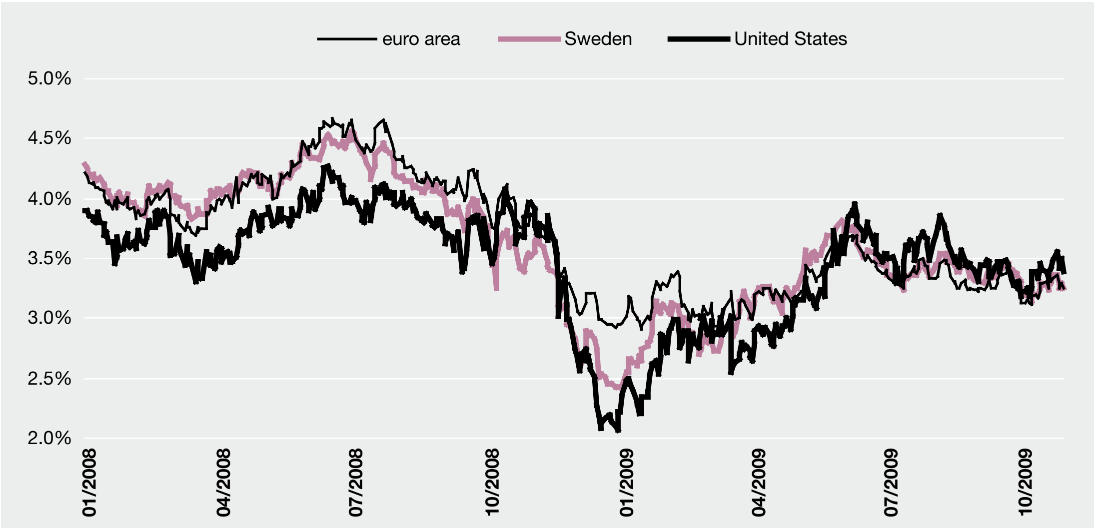

Figure 4. Ten-year interest rates in the euro area, Sweden and the United States

Source: EcoWin

October brought a change to the monetary policies of some advanced economies. Growth in economic activity created a need to **tighten loose monetary policies** in order to avoid heightened inflationary pressures. The first to raise the key interest rates was the Australian central bank, whose lead was followed by the central bank of Norway at the end of October. The Norwegian economy was facilitated by the rise in global oil prices as a result of the economic revival. As regards the key interest rate expectations in the US and the euro area, the bond markets are not expecting the upward cycle to pick up rapidly. In the US, the first interest rate rise of 25 basis points is expected at the end of the first half of 2010 and another one in the second half. Expectations regarding the euro area's monetary policy are similar. As G3 countries are struggling with a significant surge in unemployment, decreasing demand and a deflation, central banks are not expected to tighten monetary policies too soon.

Foreign exchange market developments were quite distinctly related to the stock market behaviour: the upward trend of the stock market and changes in the risk appetite of investors entailed a weakening of the dollar against other major currencies. In the period under review, the euro appreciated by 11.3% against the dollar to the level of 1.4715 and the Japanese yen by 7.6% to 90.08 (see Figure 5). Despite the improving economic indicators in the US, their excessively loose monetary and fiscal policy and significant structural problems in the economy have greatly damaged the attractiveness of the dollar, as investors consider it a safe investment only in crisis situations. The exchange rate of the Swedish krona against the euro appreciated by 2.1% to 10.44. The average daily volatility of exchange rates decreased until the end of September, but then started increasing slowly.

The downward trend of **commodity markets** halted at the end of 2008 and commodity prices stabilised in the first quarter of 2009. Due to the stabilisation and recovery of the global economy, prices started to increase again at the end of March, and this trend continued until the end of the period under review. The CRB index, which reflects the prices of 22 major commodities, increased by 15.3% with six months and managed to make up for almost half of the decrease in 2008 by the end of October. The oil price bottomed out in February when the price for barrel reached 34 dollars, but an improvement in expectations entailed a rapid increase in the price of this strategic commodity. At the end of October, a barrel of crude oil (WTI) already cost 80 dollars and the average price rise in the period under review stood at 53% (see Figure 6). The price of gold increased in line with the CRB index (17.9%) and remained steadily over 1,000 dollars per ounce in October. Thus, developments in commodity prices clearly indicate an improvement in the global economy and future economic outlook.

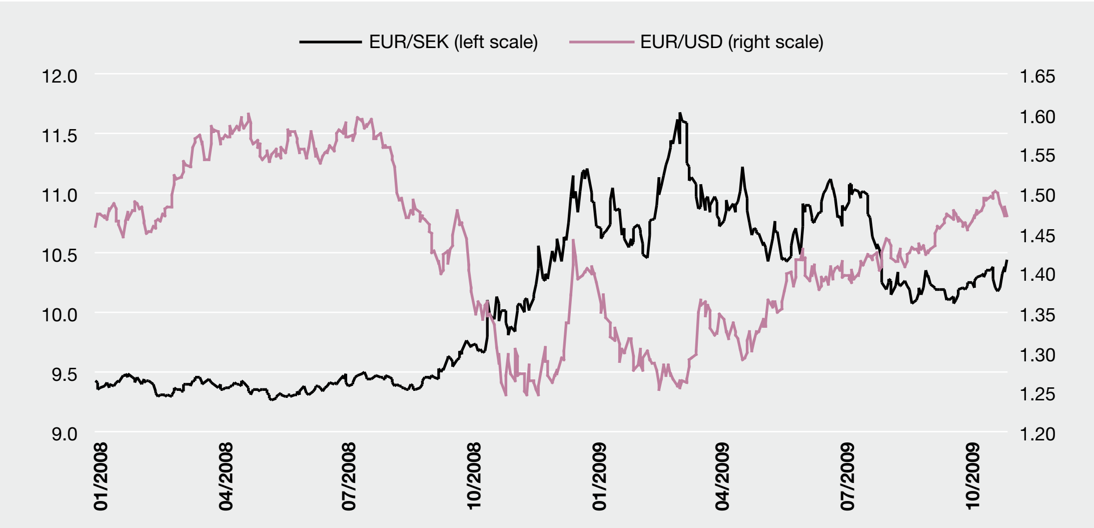

Figure 5. Exchange rate of the euro against the Swedish krona and the US dollar

Source: EcoWin

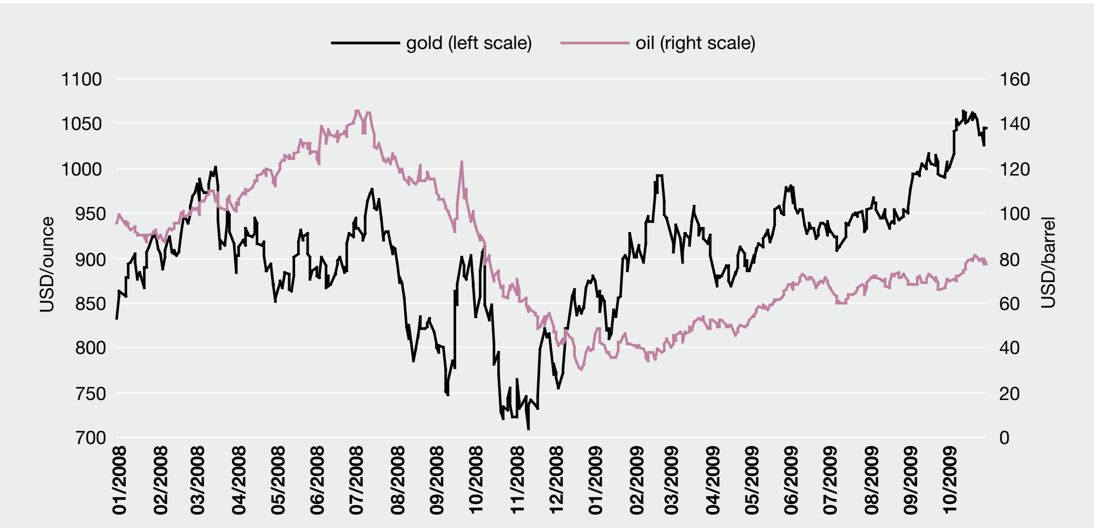

Figure 6. Prices of gold and crude oil (WTI)

Source: EcoWin

Money market

The quotations of the Talibor – the interest rate on the Estonian interbank money market – showed a very modest downward trend until November 2009, compared to the Euribor. In the last weeks of November, however, the six-month Talibor dropped by more than a percentage point, reaching the level of May 2007 (see Figure 7). Even though the difference with the Euribor quotations decreased, the spread between the Talibor and the Euribor was 3.5%, on par with November 2008.

The money market is still very passive – transactions are few, and mainly with shorter maturities. Compared to the quotations, the interest rates of money market transactions are significantly lower, showing also a somewhat faster downward trend.

Due to the structural specifics of the Estonian financial intermediation, the Estonian kroon money market plays a rather insignificant role in banks' liquidity management. The money market quotations do not therefore reflect the changes in the cost of capital of the non-financial sector.

Similarly to the money market, the interest rates of the Estonian kroon **derivatives market** dropped, reflecting a considerable increase in the reliability of the Estonian kroon in the second half of November. For most maturities, the difference between interest rate quotations that form the basis of future Estonian kroon and euro transactions (forward premiums) dropped to the level recorded before the culmination of the global crisis in 2008 (see Figure 8).

Some activity could be detected on the Estonian kroon derivatives market from the middle of the year. This can, however, be attributed to one single bank pursuing the aim of covering non-resident Estonian kroon positions. Apart from that, the turnover of derivatives has rather decreased in the second half of the year (see Figure 9). Since August 2008, commercial banks have, through Eesti Pank's forex window, sold more kroons on the spot market than purchased. The reason lies in weakened demand for base money, conditioned by low economic activity, which reflects automatic adjustment to the

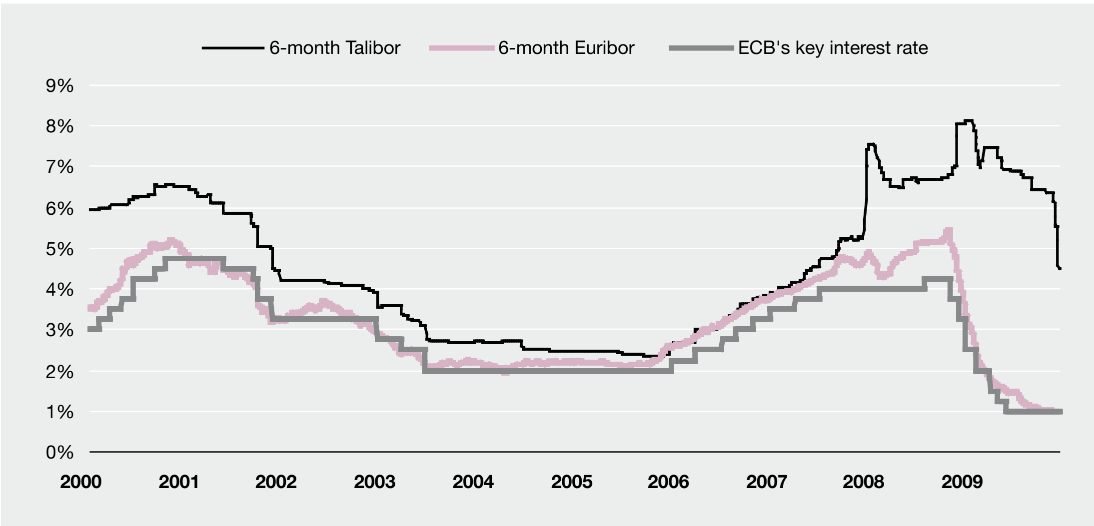

Figure 7. Money market interest rates in Estonia and the euro area

Source: EcoWin

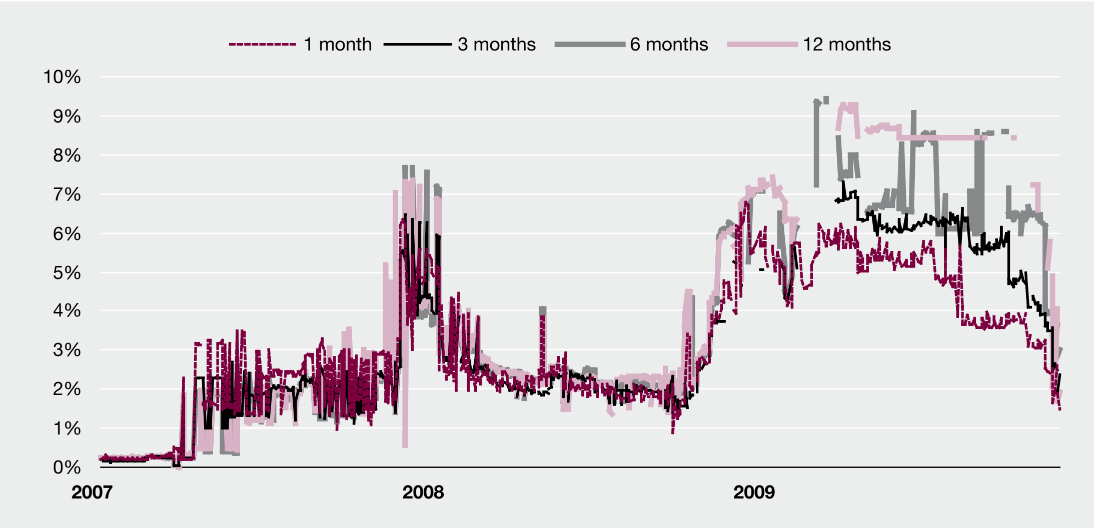

Figure 8. Forward premiums of the Estonian kroon against the euro

Source: Reuters

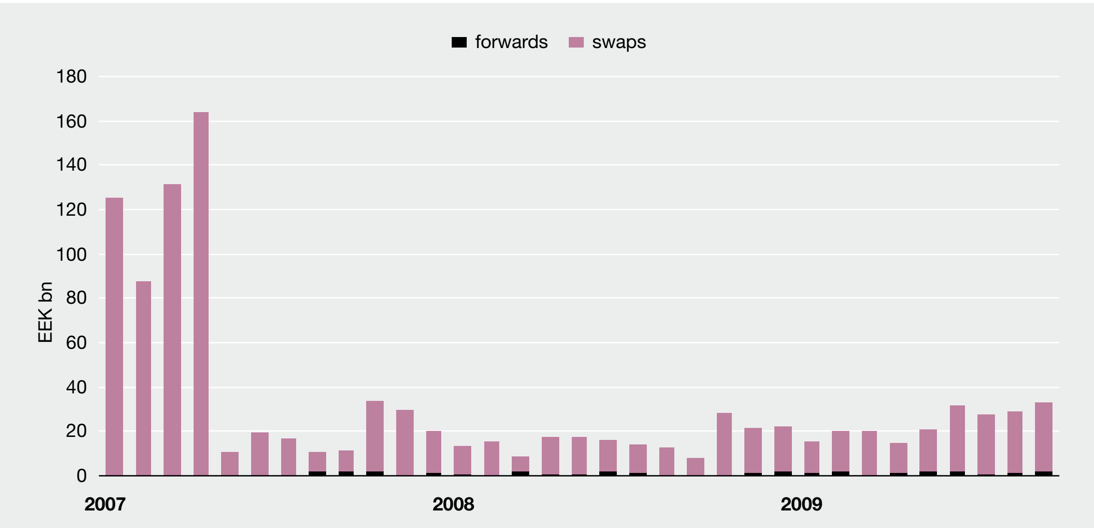

Figure 9. Monthly turnover of derivatives transactions with Estonian credit institutions

changed economic environment, characteristic of the Estonian currency board arrangement.

Even though the forward premiums were at a relatively high level until mid-November, this did not exert any pressure on the Estonian kroon exchange rates. Participation in the exchange rate mechanism ERM II has proceeded smoothly for Estonia.

The **turnover of short-term kroon loans** declined significantly in May 2009 (see Figure 10). This was mainly caused by one bank that previously used to cover its currency position on the money market. At the same time, Estonian credit institutions mostly manage liquidity in euros via parent banks or directly on the foreign markets, using the central bank forex window for converting euros into kroons.

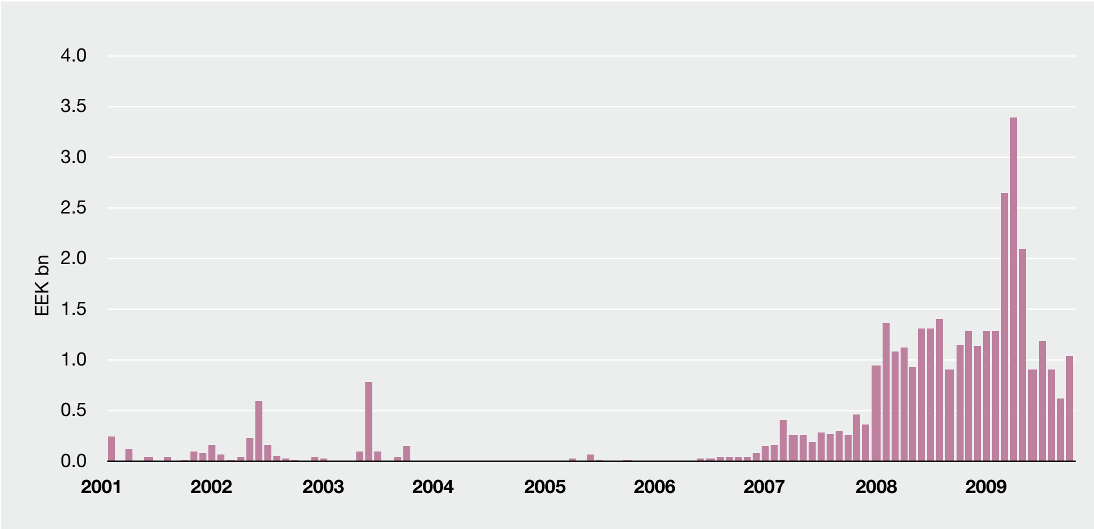

Figure 10. Turnover of short-term kroon loans

The liquidity of the Estonian kroon has remained stable, with no major failures in the kroon liquidity in the financial sector. The **banks' settlement buffers in the central bank** have been sufficient, and the fulfilment of the reserve requirement has not proved a problem. Growing confidence, easing of the economic crisis and the prospect of the adoption of the euro have laid a solid foundation for loosening the banking regulations. If the baseline scenario of the Eesti Pank autumn forecast becomes a reality, the strict reserve requirements established for banks may, in the central bank's opinion, be eased, starting from the second quarter of 2010.

Bond market

From the beginning of 2008, the bond market has dropped to the level of 2005 with respect to both new issues and average secondary market turnover (see Figure 11). The average monthly amount of issues for the last six months stood at 760 million kroons, which is on par with the beginning of the year, but nearly four times lower than at the beginning of 2008. In September 2009, the primary market capitalisation amounted to 10.3 billion kroons; that is, 4.7% of GDP (5.2% in September 2008). The capitalisation of bonds decreased by 1.4 billion kroons in 2009, and by a total of 3.7 billion kroons from the beginning of 2008.

In the first three quarters of 2009, the **primary bond market** was stimulated by the large issues of the government sector and other financial institutions. Bond issues were made by the City of Tallinn at the beginning of the year (490 million kroons), and by AS Gild Fund Management in September (355 million kroons) with the aim of restructuring the borrowings of the Gild Arbitrage Fund.

The bonds of more than 100 companies had been issued on the bond market by the end of September, 86% of them being non-financial companies. Nearly a half of the bonds issued have a coupon interest rate higher than 8%.

In the context of a decrease in bond issues, the percentage of resident issuers has increased. At the end of September, 92% of the total capitalisation could be attributed to resident issuers (see

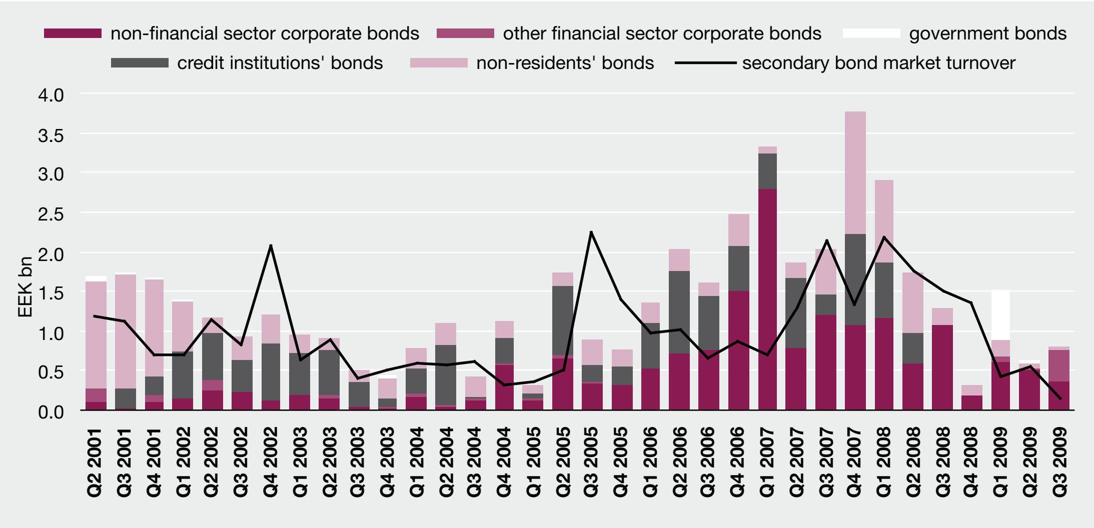

Figure 11. Bonds issued and secondary bond market turnover on a quarterly basis

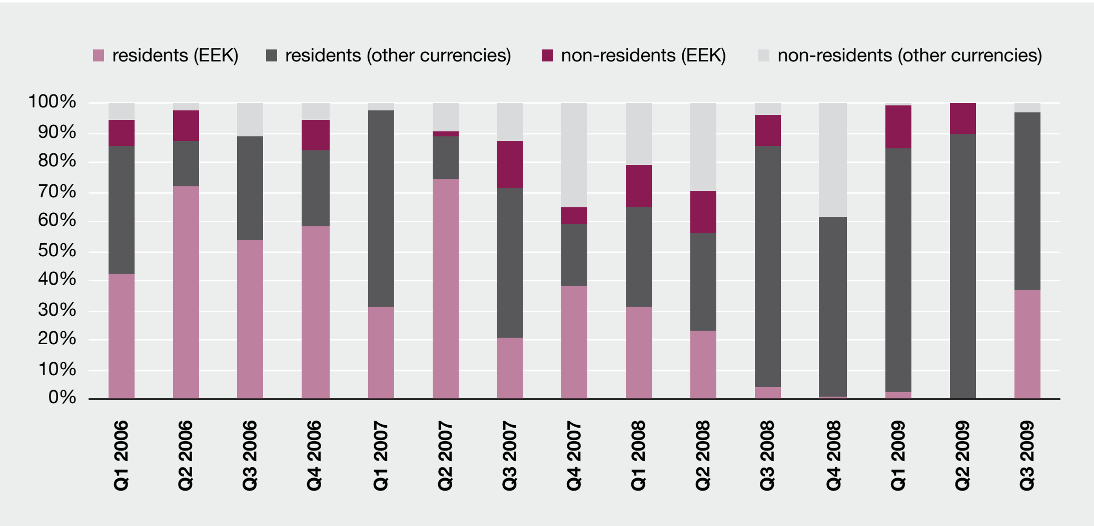

Figure 12. New bonds by issuer's residence and currency on a quarterly basis

Figure 12). In the third quarter, the percentage of issues denominated in Estonian kroons grew to 37%[1].

The average quarterly turnover of the **secondary bond market** shrank by more than 50% from the beginning of the year. The turnover for the third quarter of 2009 dropped to a historical low (153 million kroons). The average daily turnover amounted to 3 million kroons – a mere half of the average for 2009.

At the end of October 2009, the bonds of two companies were listed at the **Tallinn Stock Exchange** in the total amount of 101 million kroons. In June, AS SEB Pank stopped listing its

[3] This indicator was significantly affected by the major bond issue (254 million kroons) organised by OÜ Rävala Kaheksa in September.

bonds, and no new bonds have been listed in the last six months. At the same time, a part of bonds were redeemed by ABC Grupp and LHV Ilmarise Kinnisvaraportfell.

The **structure of bond investor** remained unchanged in the last six months. The majority (69%) were resident investors, with private investors providing merely 3.1%. The biggest contributors to the total capitalisation held by residents include credit institutions (25%) and non-financial companies (25%). The percentage of insurers and pension funds decreased from 22% to 15%.[4]

Stock market

In the summer of 2009, the Tallinn Stock Exchange index **OMXT** remained on par with the level recorded at the beginning of the year, fluctuating around 300 points. The Eesti Telekom takeover offer, made by TeliaSonera AB in the second half of August, breathed life into the Estonian stock market. OMXT grew by nearly 33% from the second half of August to the end of September. A small correction was made at the beginning of November, when the index dropped to 410 points.

The Tallinn Stock Exchange index OMXT has grown faster than the indices of Poland and Bulgaria, but slower compared to the indices of Romania and Hungary (see Figure 13). As regards the Baltic States, Lithuania has witnessed the strongest growth in stock indices. By the end of November, however, the growth had decelerated, remaining on par with the Tallinn Stock Exchange index.

Price hikes also boosted **stock market capitalisation** (see Figure 14). At the beginning of 2009, the market value of listed companies hovered around 22–24 billion kroons, whereas in the last two months capitalisation increased by 10 billion kroons, amounting to 32 billion kroons at the end of September. The biggest contributors to the increase in capitalisation were Eesti Telekom, Tallinna Kaubamaja and Tallink Grupp. The value of their shares grew by 4.4, 1.4 and 1.1 billion kroons, respectively.

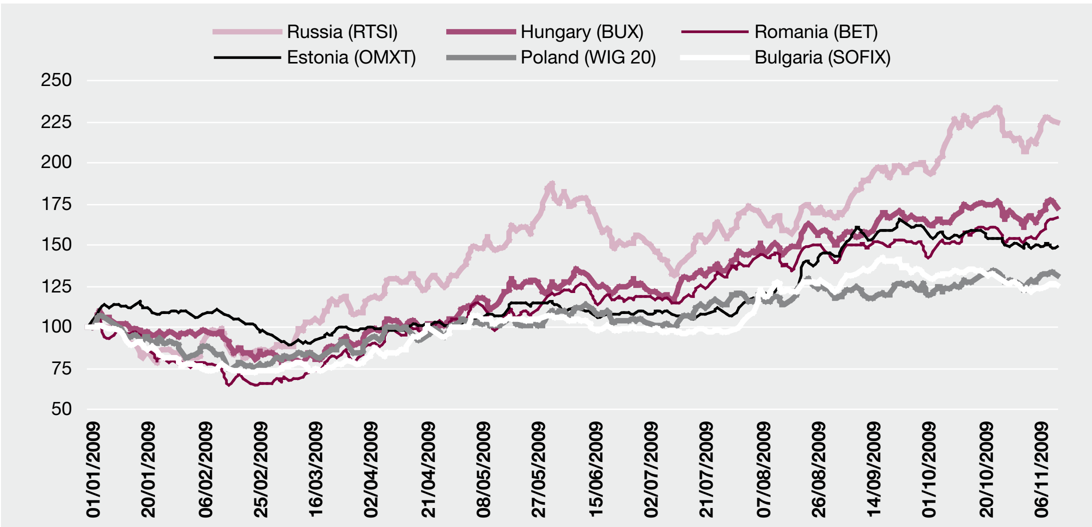

Figure 13. Dynamics of international stock indices as of the beginning of 2009

[4] The percentage of "unspecified" among both the residents and total investors rose to 28% and 24%, respectively.

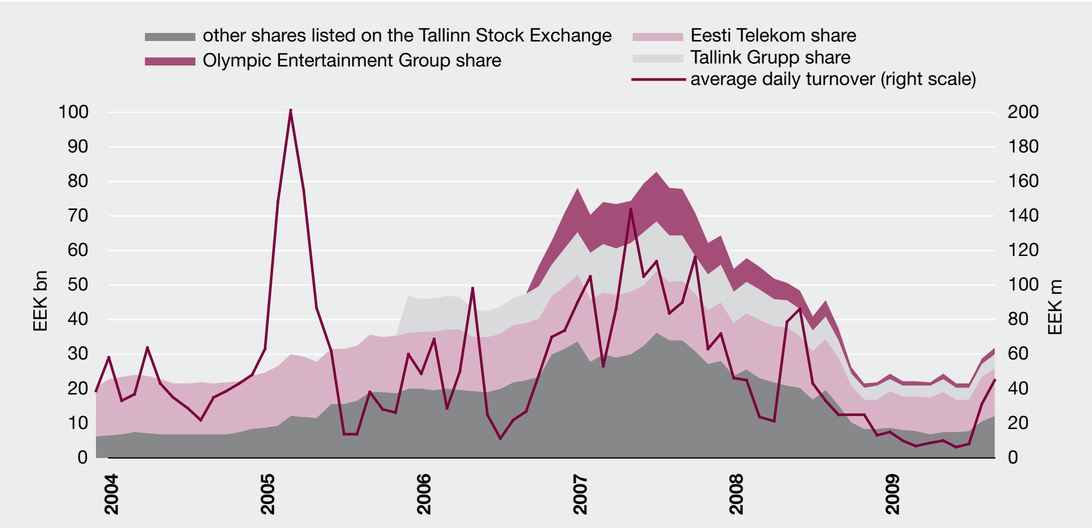

Figure 14. Market capitalisation of shares listed on the Tallinn Stock Exchange (end-month)

At the beginning of November 2009, the shares of 16 companies were listed on the Tallinn Stock Exchange in the total amount of 32 billion kroons (14.5% of GDP). The shares of AS Luterma were delisted from the primary exchange in the middle of September and the shares of AS Järvevana were listed on the secondary exchange in June.[5] In addition, Eesti Telekom, whose capitalisation constitutes nearly 43% of the total capitalisation, applied for delisting of the shares in October. These shares will be delisted after the full takeover of the company by TeliaSonera AB.

At the beginning of November 2009, the Tallinn Stock Exchange had a total of 33 members. From the beginning of September, Swedbank (Latvia) is a member in all Baltic States, while the membership of Bankas Snoras AB was terminated at the end of October. Most of the transactions were carried out via SEB Bankas, LHV Pank and Swedbank Eesti (25%, 13% and 11% of all stock exchange transactions, respectively).

The liquidity of the Tallinn Stock Exchange has been growing since the end of the summer. In August, the **average daily turnover** increased by three times to 31 million kroons. In September, it amounted to 45 million kroons. This figure is three times higher than the average daily turnover for 2009. The biggest contributions to the turnover came from transactions with the shares of Eesti Telekom, Tallink Grupp and Olympic Entertainment Group (30%, 21% and 18% of the total turnover, respectively).

Compared to the historical high recorded in the summer of 2007 (82 billion kroons), after the delisting of Hansapank when the capitalisation reached a historical high (100 billion kroons) the stock market capitalisation has decreased by over two times. The investor structure has, however, remained unchanged (see Figure 15). Local investors constituted 48% of the market at the end of September, 12% being private investors. Swedish investors still contribute 10 billion kroons (61%) to the capitalisation of shares held by foreign investors. The residents of Luxembourg and the Netherlands are also relatively large contributors to the Tallinn Stock Exchange capitalisation (9% and 7.4%, respectively).

[5] After the division of Merko Ehitus in 2008, the capitalisation of AS Järvevana was too low to be listed on the primary exchange.

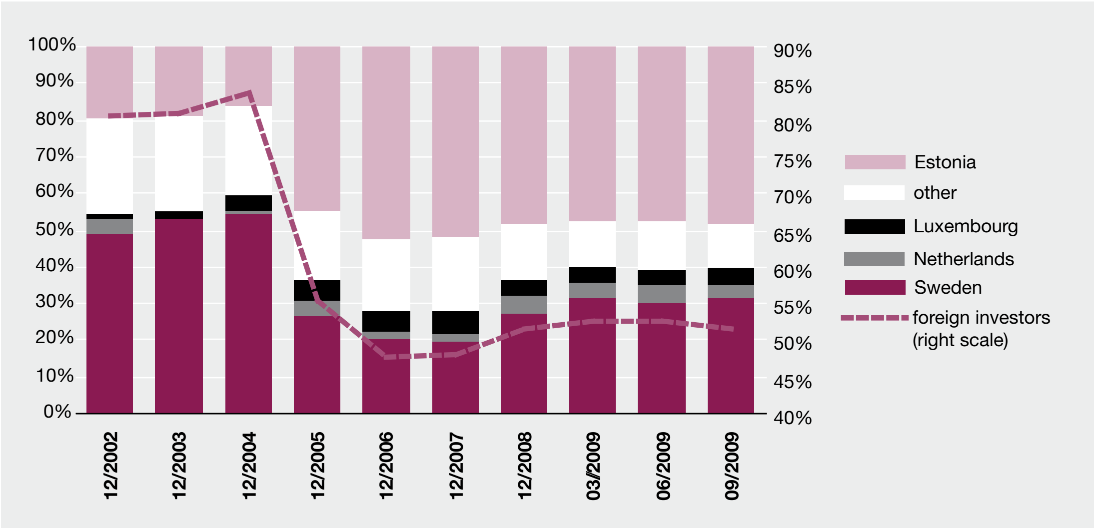

Figure 15. Structure of investors on the Tallinn Stock Exchange

IV OTHER FINANCIAL MARKETS

Investment and pension funds

Although the state ceased making payments into the second pillar pension funds at the beginning of summer, almost 40% of the current subscribers have decided to continue their payments in 2010. Most of them are of a younger generation. While altogether 220,000 subscribers applied for continuing the payments, a vast number of them (about 61,000) decided to transfer their payments into new funds. Applications for changing pension funds were accepted until the end of October.

People mainly shifted their payments from major high-risk funds of Swedbank and SEB to smaller or new pension funds. Applications for changing funds were mostly submitted by those who had previously opted for the Swedbank Pension Fund K3, where the total number of subscribers dropped by slightly over 17,000 (7.5%). The reasons for abandoning Swedbank's pension fund probably stem from the precepts issued to Swedbank Investment Funds by the Financial Supervision Authority. The precepts pointed out that Swedbank Investment Funds had failed to avoid a conflict of interest, which may have caused financial losses to shareholders.

Only one new mandatory pension fund was added during the last half-year. Meanwhile, three funds of AS Swedbank Investments Funds were eliminated: the Swedbank Interest Fund, the Swedbank Money Market Fund and the Swedbank Eastern Europe Bond Fund. After the elimination of the Swedbank Money Market Fund no money market funds remain on the Estonian market. In October 2009, the Gild Arbitrage Risk Capital Fund was made into a non-public fixed-term fund and its liabilities were restructured into long-term bonds.

Several new real estate funds and a hedge fund entered the market in the first half of 2009. Their pre-crisis market share was quite small but grew during the crisis, posting 9% and 11%, respectively, at the end of October. The share of new funds surged owing to a decrease in other types of funds, in particular a drop in interest funds to 20%, but also due to the liquidation of the only money market fund in autumn. Regardless of the structural changes, equity funds still make up the majority (60%) of the total volume of funds.

At the beginning of the year, the **average annual yield** of most investment funds fell to historical lows. Over the last six months, however, the annual yield of equity funds and all types of pension funds has improved rather quickly as financial markets have calmed down (see Figure 1).

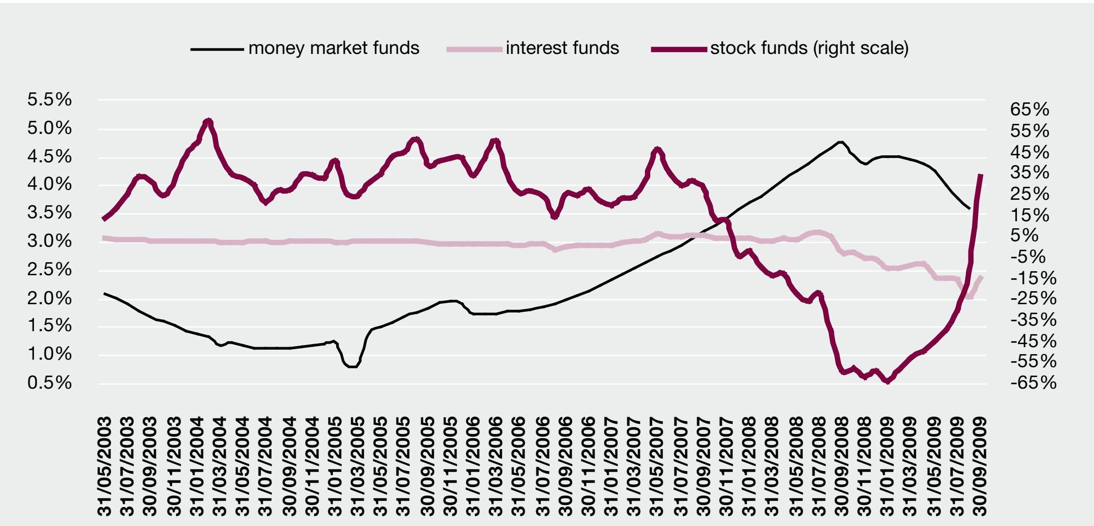

Figure 1. Average annual yield of investment funds at end-month

At the beginning of the year, the average annual yield of equity funds dropped below –60%, whereas by end-September their unprofitability had decreased to –11% and at end of October, annual yield already stood at 34% owing to the low base effect.

Mandatory pension funds posted positive average annual yields again in September. The average annual yield of high-risk mandatory pension funds has improved by 40 percentage points to 15% from spring to October and to 18% since the beginning of the year. The average annual yield of low-risk mandatory pension funds was 10% at the end of October. The indicator for voluntary pension funds stood at 12% at the end of October, having climbed 17% since the start of the year.

Contrary to equity and pension funds, the average annual yield of money market and interest funds decreased even further over the past six months. The annual yield of the money market fund, which was liquidated in September, was 3.6% at the end of August (4.5% in March). The average annual yield of interest funds dropped to –15% by the end of October from –9.8% in March.

The average annual yield of pension funds has remained at around 2.1–3.7% since the second half of 2002; by November 2009, the pension fund assets had grown by approximately 19–35% (see Figure 2).

The **volume of investment funds** decreased further in the first half of the year but regained growth at the end of summer and reached the level of end-2008 (see Figure 3). At the end of October, the total volume of investment funds was 8.8 billion kroons, which is less than a half of the pre-crisis value (43%).

The assets of pension funds have been growing since March 2009. At the end of October, their total amount was over 15.3 billion kroons, which is 3.3 billion kroons more than in spring (see Figure 4). In the past months the assets of all types of pension funds have increased, in particular second-pillar high-risk pension funds that totalled more than 2 billion kroons.

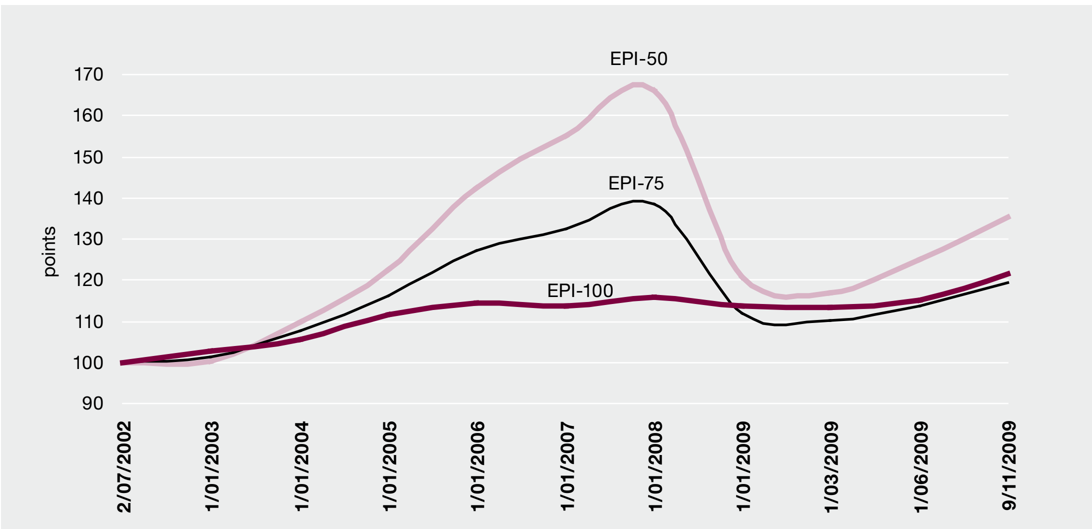

Figure 2. Second-pillar pension fund indices

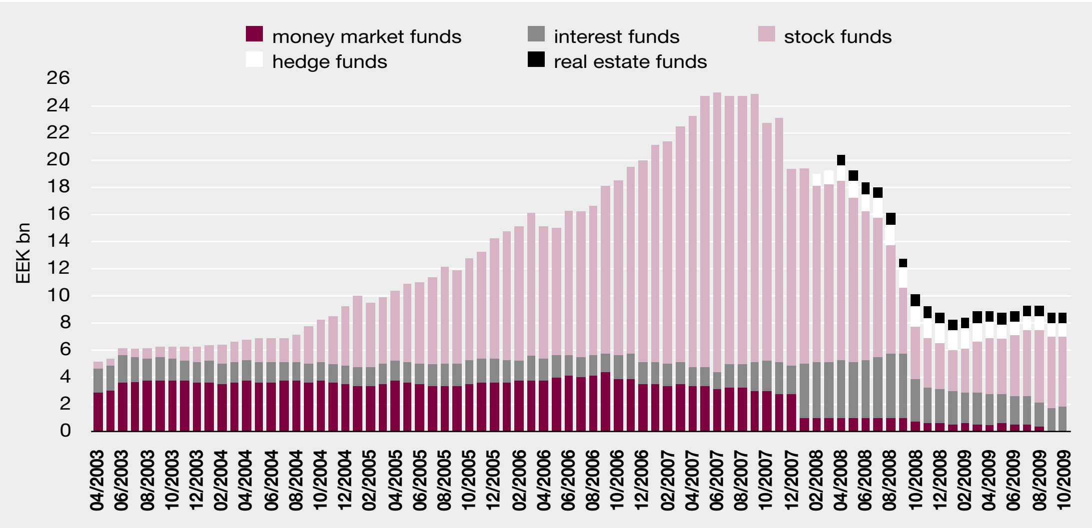

Figure 3. Value of investment fund assets at end-month

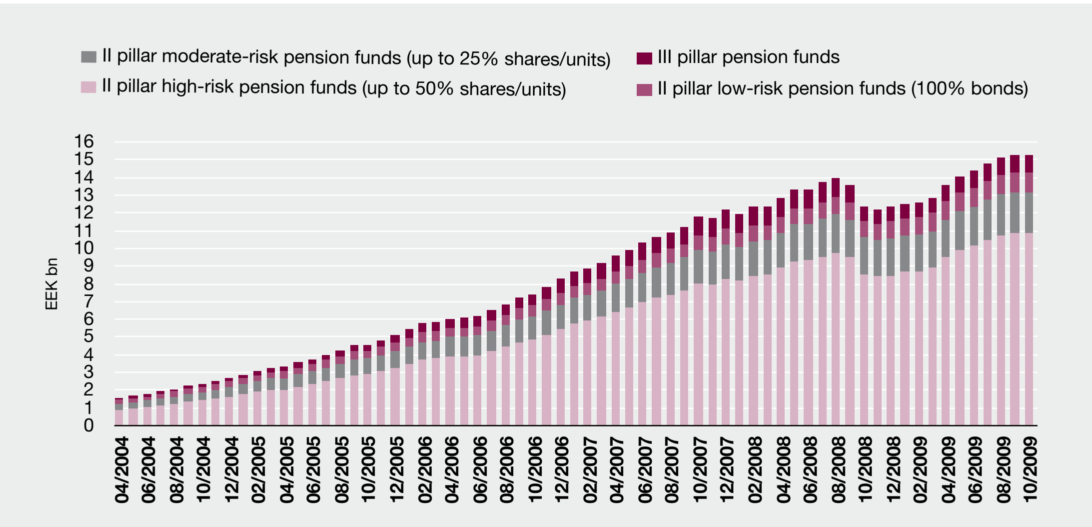

Figure 4. Value of pension fund assets at end-period

Approximate calculations indicate that the majority of growth in investment and pension fund assets stems from an increase in their yield. Although the assets of equity funds grew by 1.7 billion kroons from the beginning of 2009 until the end of October, in net terms the funds experienced an outflow of 15 million kroons. The greatest investments were made into the third pillar and high-risk second pillar pension funds, comprising 24% and 29% (0.2 and 2.4 billion kroons) of total growth, respectively. Thus, although the state ceased making payments into the second pillar pension funds at the beginning of the summer, the assets of high-risk mandatory pension funds contributed 1 billion kroons to the inflow of money. Interest fund assets decreased by over 750 million kroons, which constitutes almost 25% of the outflow.

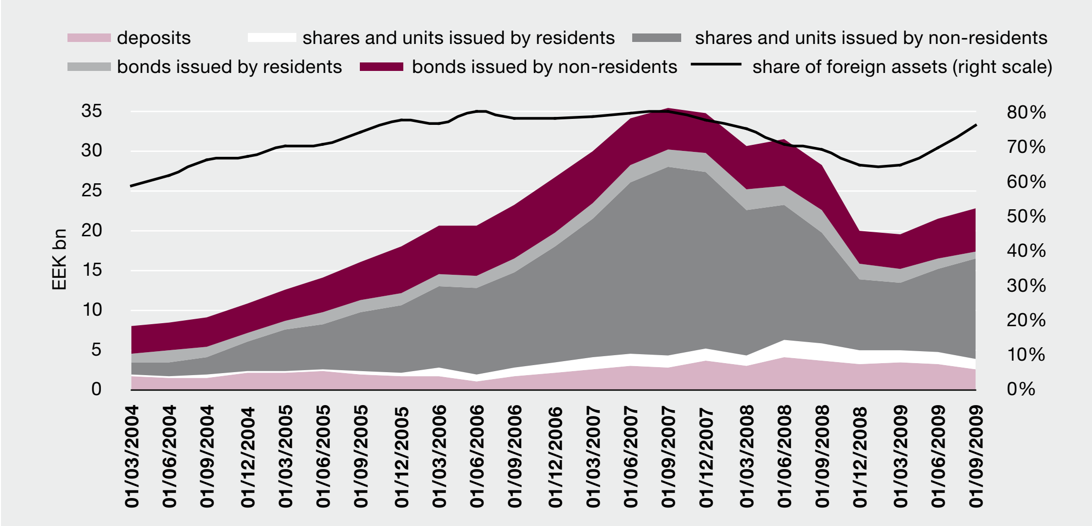

Figure 5. Structure of investment and pension fund assets and the share of foreign assets

The **share of the foreign assets** of investment and pension funds started to grow again in the last six months and reached 77% of total assets by the end of September (see Figure 5). Foreign assets increased mainly owing to an increase in the value of non-residents' stocks and securities, which stemmed from price rises as well as changes in investment strategies regarding low-risk securities. The value of deposits and residents' securities, on the other hand, contracted rapidly over the past six months and comprised about 20.6% of the total assets (32% in spring).

Changes in investment strategies (a shift from riskier markets to more stable ones) continued in the last six months. At the end of September 2009, investments in old EU Member States comprised 76% of the total foreign assets of investment and pension funds. At the same time, these investments underwent some structural changes. Over the past six months, the percentage of assets invested in Germany, Austria and the Netherlands has decreased, whereas investments in France, Italy and Spain have grown.

Investments in **other funds** by the investment and pension funds registered in Estonia had shrunk by September 2008, whereas by the end of September 2009 these investments had picked up again (see Figure 6). Second and third-pillar pension funds still invest relatively more in other funds – 48% and 73% of the total assets, respectively. 47% of equity funds have placed their assets in other funds, which comprises 31% of the total assets of funds.

Insurance

The financial crisis has given the entire financial sector a lesson, revealing the bottlenecks of the system. After the crisis, insurance companies operating in the European market will have to focus more on the assessment of risks, measures of asset insurance and cost-efficient operations.[1]

The keywords for the development of insurance companies include effective risk management and keeping up with tight competition. Although the insurance sector already made a significant recovery in the second and third quarters of 2009, no growth is expected in the near future due to the uncertain economic environment.

[1] Ernst &Young "Lessons from change: regaining the balance in the insurance industry" (2009).

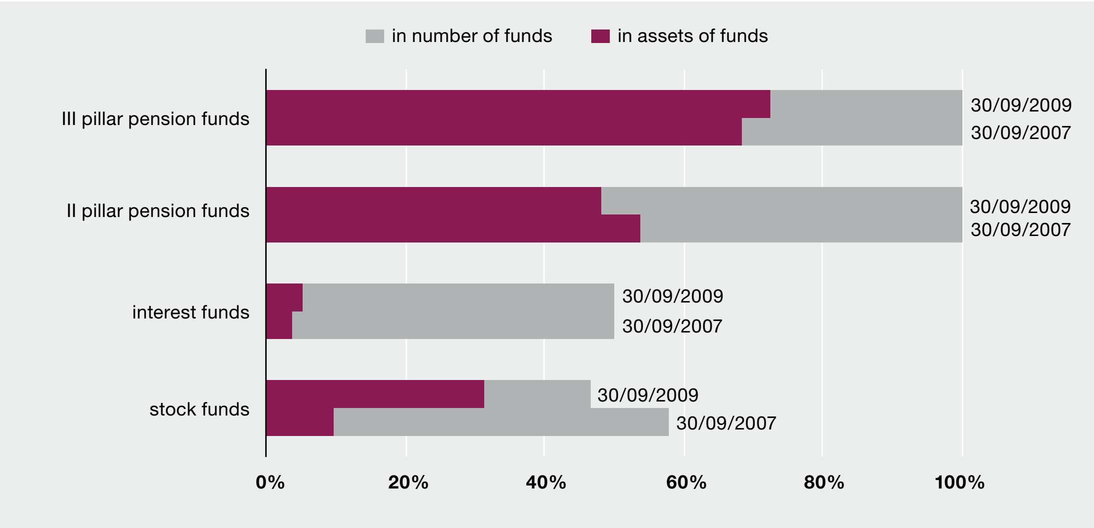

Figure 6. Share of investment funds invested in other funds at end-period

Life insurance

The life insurance market has recovered from the difficulties of the previous period owing to positive developments in capital markets. Compared to the same period last year when the life insurance companies registered in Estonia suffered a loss of 160 million kroons, this year they earned a profit of 236 million kroons (see Figure 7). However, when interpreting the profitability indicator, one must keep in mind that the entire net profit was not earned in Estonia – the financial data also reflect the operation profits of the branches in other Baltic States.

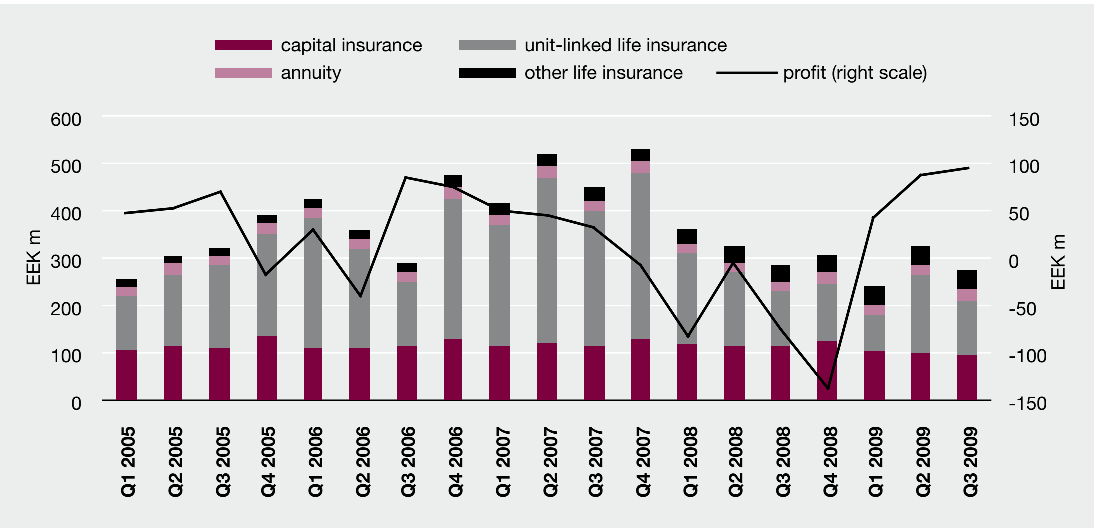

Figure 7. Profits of life insurance companies and gross premiums from residents

Life insurance companies responded to the changing economic environment relatively rapidly already in 2008 and rearranged the **structure of investment portfolios** in light of the sensitivity of their operations to the stock market volatility. No significant changes have been made over the last six months. A lot of investment (39%) is still in time deposits to reduce the investment risks, but the price rise of securities has slightly increased the percentage of securities and other fixed-income securities in the total portfolio (44%). Insurance companies usually prefer the most highly rated (AAA) government bonds, securities of financial institutions and bond fund units. In the third quarter, net investment income stood at 86 million kroons and the average annual profitability at 2.4% (see Figure 8).

The current low interest rates have slightly increased the interest rate risk of insurance companies, as the costs of insurance contracts with interest rate guarantees may become too high and these investment risks will thus have to be covered by the insurance companies. In order to avoid a discrepancy between assets and liabilities, the companies have to monitor that the distribution and structure of investment be suitable for covering the liabilities. Despite the large share of fixed-income securities in the investment portfolio, the interest risk is still limited as the majority of assets have been invested in securities that have shorter maturities than insurance contracts with interest coverage.

Although in September monthly sales grew slightly, the sales results have deteriorated with the year. 273 million kroons[2] of **insurance premiums** were collected in the third quarter of 2009, which is 4% less than in the same period last year. Unit-linked life insurance and capital insurance accounted for 77% of the collected premiums. The number of new contracts[3] decreased as well, comprising 13% of the contracts valid in the third quarter (21% in the third quarter of 2008). Although the number of cancelled contracts has increased with the year, the amount of **indemnities** paid to Estonian residents decreased significantly (47%) in the third quarter. A year ago, the majority of benefits (69% of the total benefits) were paid in unit-linked life insurance, whereas in the third quarter of 2009 the most payments were made in

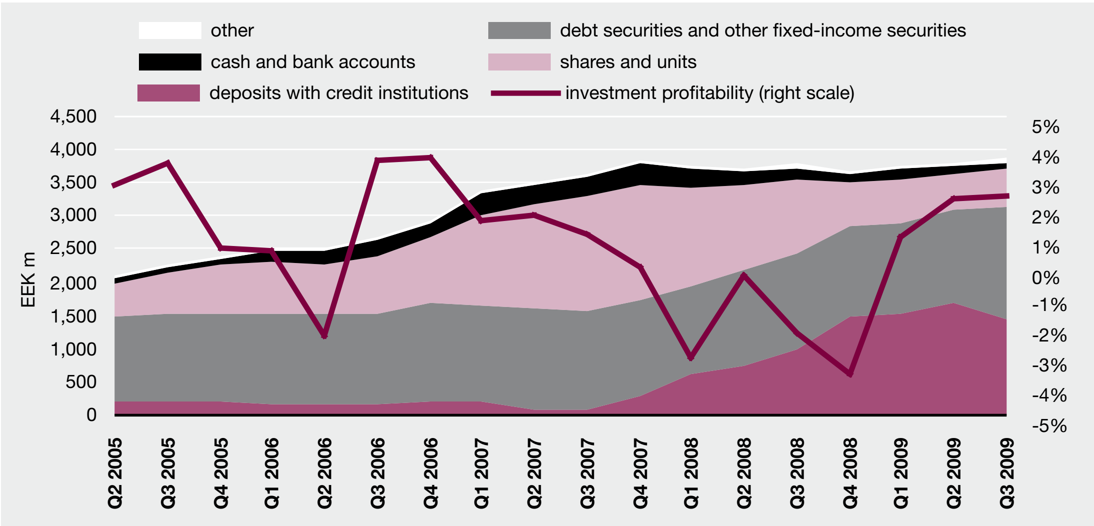

Figure 8. Structure and profitability of life insurance companies' investment

[2] Includes only the insurance premiums paid for the insurance contracts concluded in Estonia.
[3] Contracts valid at the end of the reporting period, which entered into force within the last 12 months.

capital insurance. The amount of pension insurance benefits has also multiplied, comprising 8.4% of the total claims (only 2.6% in the third quarter of 2008).

With nine months, the assets of life insurance companies have grown by 1.15 billion kroons to 7.3 billion kroons. As at 30 September 2009, technical reserves arising from insurance contracts to cover the insurance risks amounted to 2.2 billion kroons and financial liabilities to 4.2 billion kroons. Liabilities increased by about 860 million kroons in the past nine months, which supported the growth of the balance sheet.

Non-life insurance

While the decline in the life insurance sector has halted, developments in non-life insurance remain negative. The shrinking demand for insurance and tight price competition are currently shaping the non-life insurance market. The annual growth of **non-life insurance premiums** collected in the third quarter of 2009 (914 million kroons) stood at –13%, which is in line with nominal GDP growth. The premiums collected by foreign branches comprise 14% of the total, which means that their market share has been relatively stable in 2009. Compared to the same period last year, motor own damage insurance and the property insurance of legal persons have witnessed the biggest decline. The popularity of corporate property insurance has decreased owing to the optimisation of costs and also termination of business. Insurance premiums have grown slightly in private property insurance, financial loss insurance and credit insurance.

However, shrinking sales and competitive pressures have not affected **profitability** – the profits earned in the third quarter amounted to 324 million kroons (see Figure 9). Technical results accounted for 250 million kroons of the profits and gains on investment for 93 million kroons. Other operations entailed a loss of 19 million kroons. The relatively high profitability was partly caused by an institutional change in the market. As of 1 July 2009, the Baltic companies of IF P&C Insurance AS were joined into a single European company and the operation results now also reflect the cumulative profits of the Latvian and Lithuanian branches.

Incomes on the interests of relatively low-risk assets also posted historical highs (48 million kroons in the second quarter and 47 million in

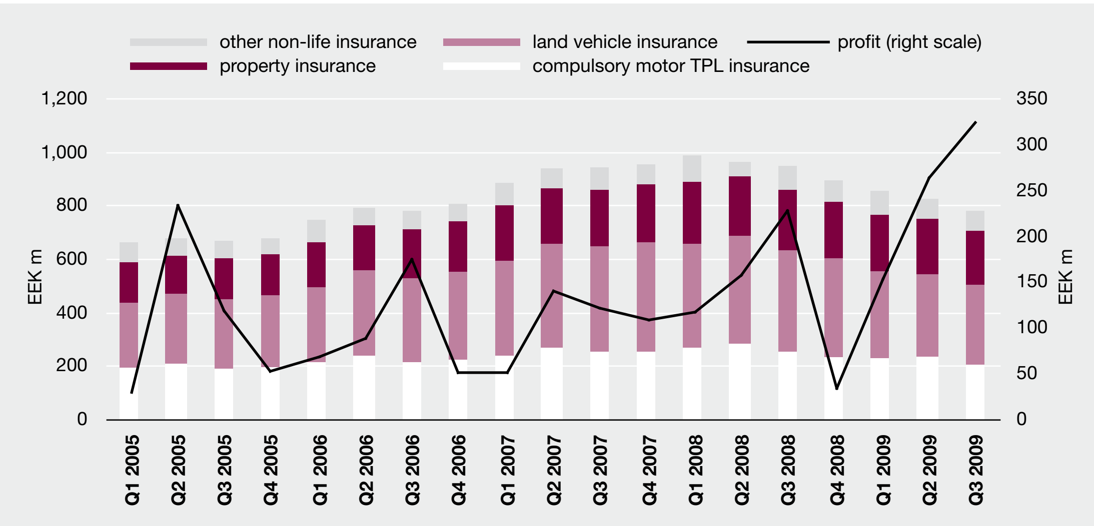

Figure 9. Profit of non-life insurance companies and insurance premiums collected from residents

the third quarter). As regards the **structure of investment**, the share of short-term time deposits has grown further and constituted 31% of the total portfolio with 1.7 billion kroons in the third quarter (20% in the second quarter). Most of the deposits are in Estonian kroons. Similar to life insurance companies, the majority (52%) of the investment portfolio of non-life insurance companies consists of bonds and other fixed-income securities. Foreign government bonds listed on the stock exchange have been most preferred. At the end of the third quarter, the average annual profitability of investment stood at 2.3% (see Figure 10).

The results were also positively affected by the modest amount of **claims**. Indemnity payments to Estonian residents have dropped 12% to 1.4 billion kroons over the first nine months of 2009. Given the similar decrease in sales, the profitability of the non-life insurance companies is quite in line with expectations. Claims have not decreased in property insurance, which is related to a specific loss event at the beginning of the year. The decreased claims have exerted a positive influence on the loss ratio for the first three quarters of 2009, which stood at 57.1% (59.5% in the same period of 2008). The expense ratio for the last nine months (24%), however, is higher than a year ago (21.8%), as operation costs have increased by about 170 million kroons with the year.

The **capitalisation** of non-life insurance companies has successfully resisted the fall in financial markets. As at 30 September 2009, the own funds of insurance companies amounted to 3.1 billion kroons, having increased by 69 million kroons with nine months. The balance sheet total has grown by 947 million kroons, primarily owing to an increase in insurance technical reserves. Financial investments exceed the liabilities arising from insurance contracts by 1.3 billion kroons, thus guaranteeing sufficient liquidity buffers for the insurance companies.

Although the insurance market is showing first signs of recovery, companies remain cautious and do not rule out any negative developments, should the recession continue. At this point, the main responsibility of the insurance companies is to ensure customer confidence and guarantee the simplicity and transparency of their products and claims handling. However, growth in insurance payments is not expected to recover to pre-crisis levels.

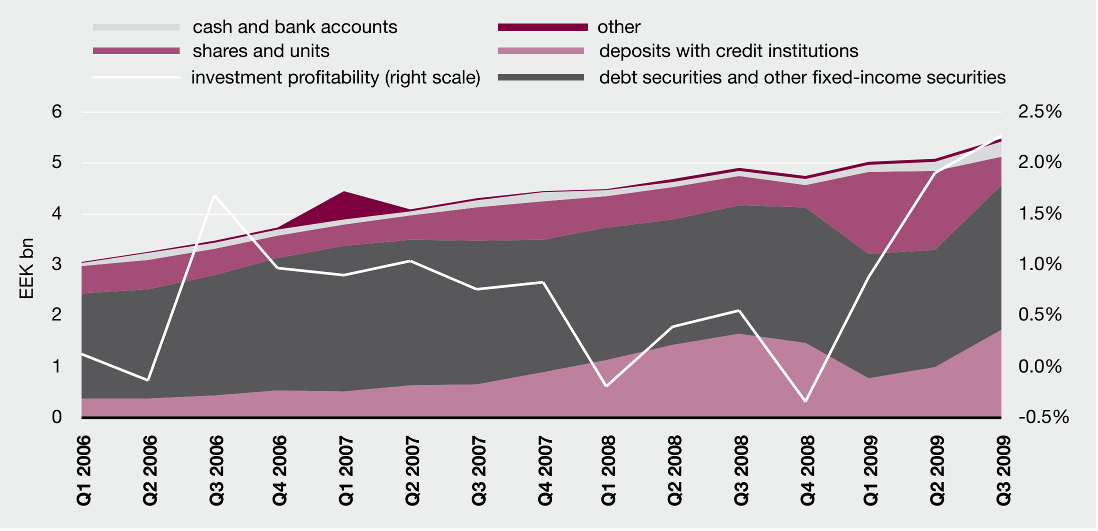

Figure 10. Structure and profitability of non-life insurance companies' investment

V PAYMENT AND SETTLEMENT SYSTEMS

Interbank payment and settlement system

Around 99,000 payments a day are settled via the interbank payment and settlement systems at a total value of 12.8 billion kroons.

Over 99% of domestic interbank kroon payments are settled through the **ESTA** owing to its customer-friendly functionality (see Figure 1). However, the settlement value in the ESTA is relatively small: about 1.5 billion kroons are transferred daily, which accounts for only 12% of the total value of interbank payments.

Although the number and value of payments grew a year ago owing to crisis-induced developments in deposits, in the first nine months of 2009 the economic decline has become apparent also in the field of payment intermediation. The value of payments dropped to the level of mid-2007, shrinking by 14% on an annual basis. The average amount of a payment decreased to about 15,000 kroons.

The number of payments settled through the **EP RTGS** declined 21% year-on-year, largely due to the 25% decrease in the number of express payments initiated by bank customers (see Figure 2).

From April 2009 until end-September, the EP RTGS processed an average of 192 payments per day, with express payments initiated by bank customers comprising over two thirds. About 130 customer payments were settled a day with an average value of 5.7 million kroons.

As the year-on-year growth in the value of express payments accelerated to 18% over the past few months, their average daily value increased to almost 6 billion kroons. Banks' "compulsory" payments (transactions related to the collateral account of the ESTA) and interbank payments still formed the majority of the value with 38% and 26%, respectively. Similar to spring 2009, the turnover of net settlement liabilities stemming from securities transactions dropped in line with stock market developments by about 65%, year-on-year.

The settlement system **TARGET2-Eesti** has been used more actively since the peak of the financial crisis in the autumn-winter of 2008. In

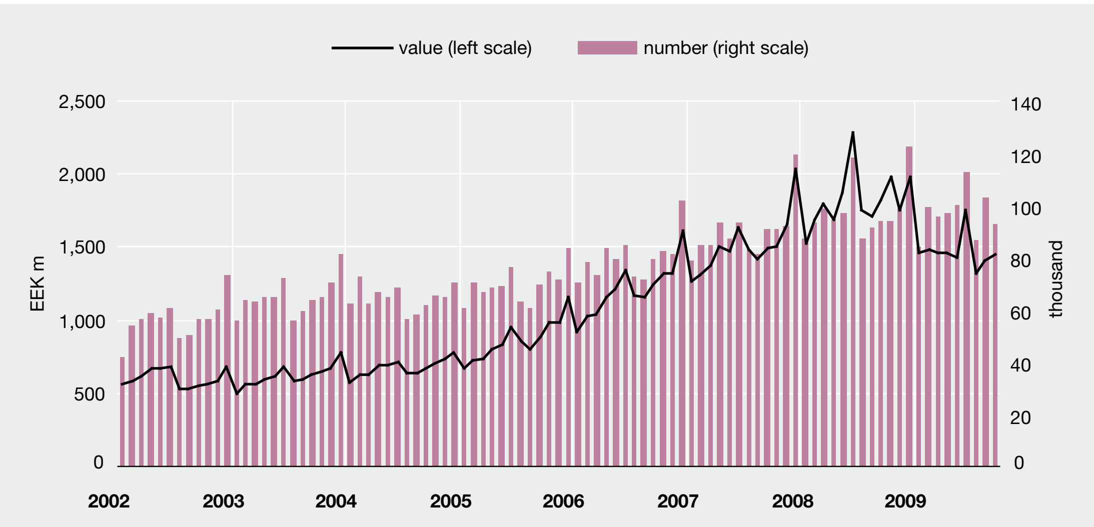

Figure 1. Number of payments processed per day in the ESTA and their average daily value per month

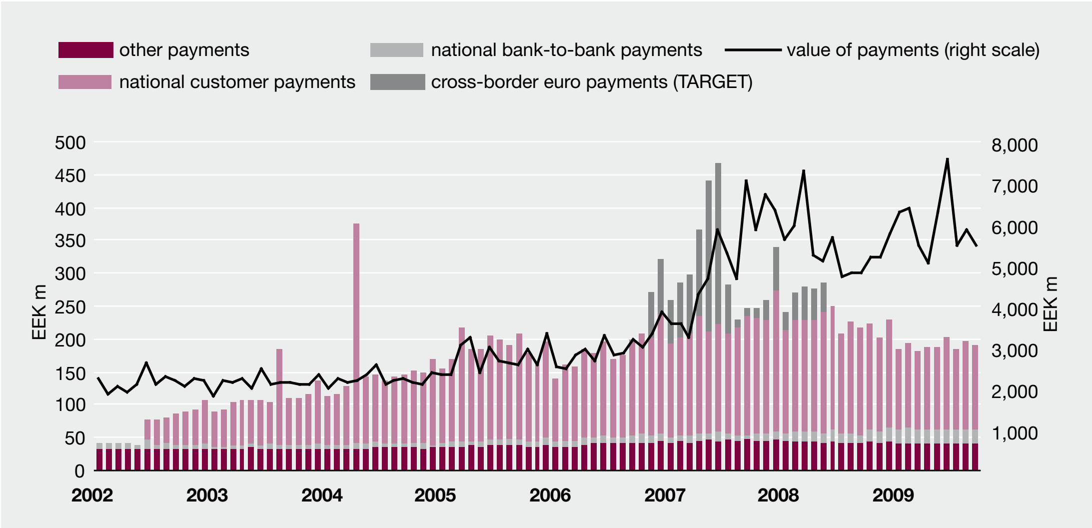

Figure 2. Average number of payments processed per day in the EP RTGS and their average daily value per month

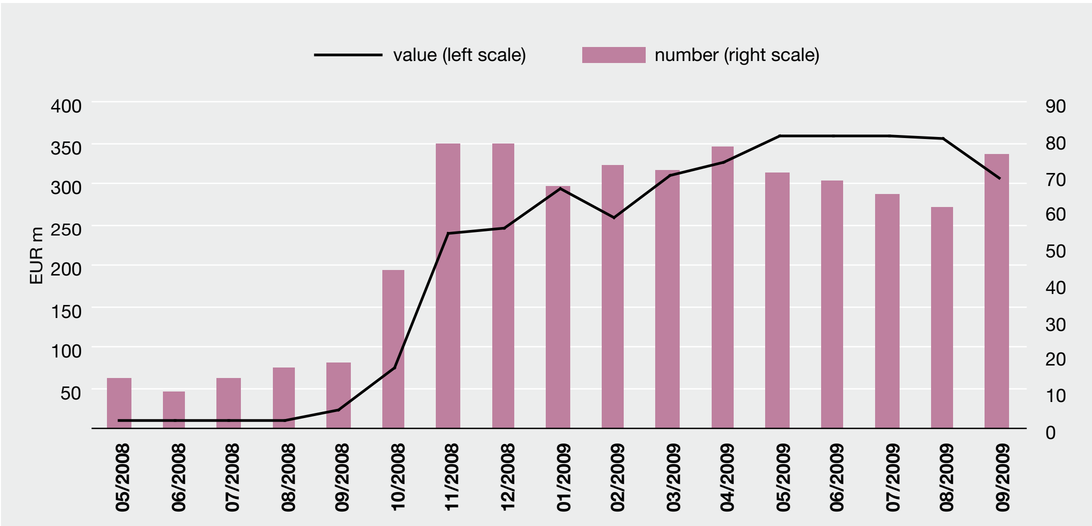

Figure 3. Number of payments processed per day in the TARGET2-Eesti and their daily value

the past six months, 69 payments a day were processed through that system at the total value of 343.3 million euros, i.e. 5.4 billion kroons (see Figure 3). Through the system of TARGET2 the banks operating in Estonia (incl. bank customers) received an average of 199 payments per day at the total value of 343.4 million euros (5.4 billion kroons).

Payment instruments

Payment environment

Based on the annual survey conducted by the market research company TNS Emor, the share of income recipients has dropped slightly, but the number of people who receive income on bank accounts instead of cash has clearly increased. This largely stems from the changes in the pension payment principles, which has decreased the number of those receiving pension in cash by five times. Thus, the number of bank customers and bank channel users has increased, as more people now receive income on bank accounts.

The survey also confirmed the continuation of earlier trends regarding the popularity of payment instruments used for purchases and regular payments. Cash payments for purchases and regular payments have decreased with the year and are still preferred by the retired, households in small settlements and with lower incomes. The young and higher income earners prefer card payments and generally use debit cards for that purpose. With five years, the number of people making daily payments with credit cards has also risen by five times.

Regular payments are usually preferred to be made by using standing orders or direct debits and Internet banks. The choice of payment channel has so far depended on habits and convenience, but in recent years security, comprehensiveness and payment costs have become increasingly significant for users (see Figure 4).

By autumn 2009, the **number of POS** accepting card payments had grown by more than 1,000 compared to a year ago, reaching 17,110 at the end of September (see Figure 5). The number of POS accepting mobile payments continued decreasing and at the end of September they amounted only to 587, which is four times less than in September 2008. 15 new ATMs were added with the year and they are all intended for cross-usage and withdrawal of cash. At the end of September, the total number of ATMs stood at 1,017.

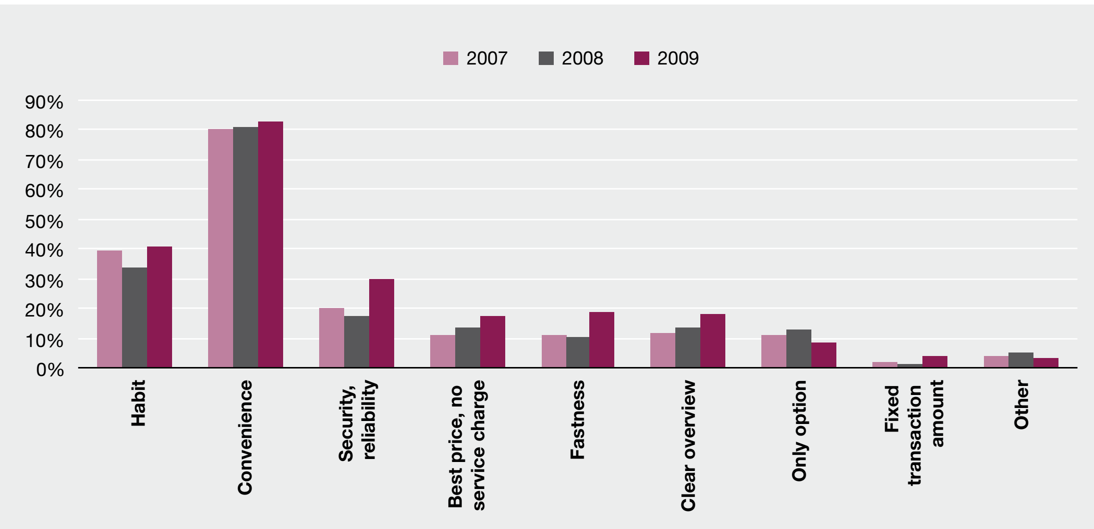

Figure 4. Reasons for payment channel preferences

Source: Emor (2009)

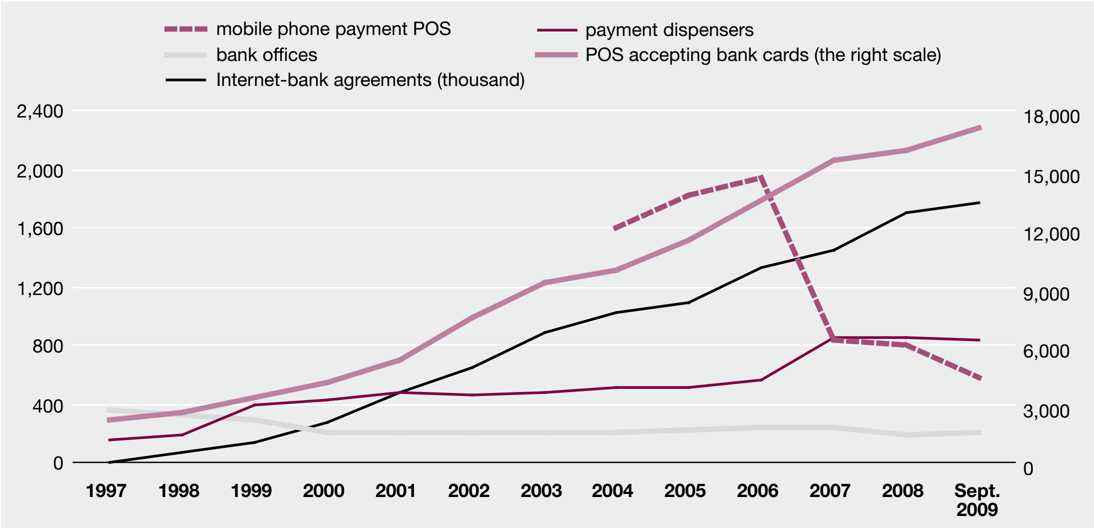

Figure 5. Channels for retail payments in Estonia (end-of-period figures)

Payments via credit institutions

Over the three first quarters of 2009, 99.7% of payments via banks were non-cash payments[1]. The average **number of transactions** per month grew by more than 200 to 22,430 transactions compared to the average of 2008. As the survey of TNS Emor also revealed, people's payment habits have fully developed. They prefer to use a single specific payment channel to several different ones. The most popular payment instruments in Estonia are still cards, credit orders and direct debits, comprising 58%, 35% and 7% of the total transactions, respectively (see Figure 6). The majority of credit orders were made via the Internet (66%) or telebank (22%).

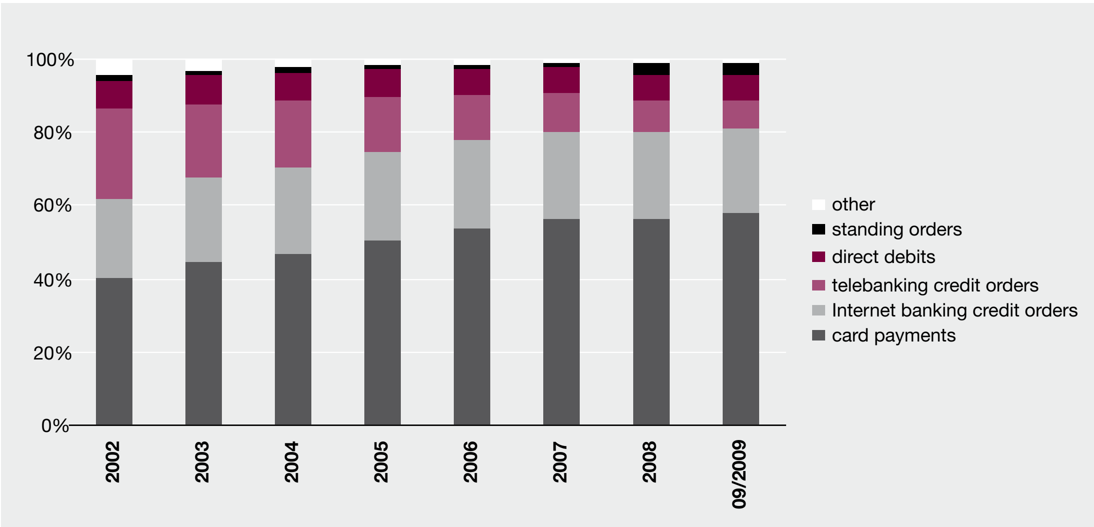

Figure 6. Most common payment instruments in Estonia

[1] Non-cash payments are card payments, direct debits, mobile payments, credit orders (incl. standing orders, paper-based credit orders, telebanking and Internet credit orders, mobile credit orders, other credit-type payment orders, SWIFT) and cheques (incl. traveller's cheques).

In 2009, the **average monthly value of non-cash payments** shrank by approximately 14% from the annual average of 2008. The value decreased across all payment instruments, except for telebank payments which posted a 2.8% growth. 99% of the value of payments originated from credit orders, of which 66% were performed via the Internet. The value of telebank payments accounted for about 22% of the total credit orders.

Use of payment cards

The number of **debit and credit cards** issued by credit institutions (1.85 million) has remained virtually unchanged from last year. With the year, it grew only 1.5% owing to an increase in the number of debit cards. The number of issued credit cards decreased 2.7%, year-on-year. Except for revolving credit cards, which witnessed a 12% increase, the number of all other credit cards contracted. Thus, the share of debit cards increased slightly and accounted for 76% of the total payment cards. The share of revolving credit cards among all credit cards rose from 28% to 32% mainly on account of the most popular type of credit cards, namely the instalment cards, as their share dropped from 40% to 36% (see Figure 7).

The use of payment cards has not changed in recent years. Approximately 80% of the debit cards issued have been used at least once a year. The frequency of use of credit cards still remained low – only about 55% of all the credit cards issued were used at least once a year.

Overseer's assessment of payment and settlement systems

There were no such incidents in the operation of the Estonian payment and settlement systems in the past six months that would have threatened the stability of Estonia's financial sector. The functionality and principles of the systemically important settlement systems (the TARGET2-Eesti, the EP RTGS and the ESTA) have been structured so as to minimise the materialisation of potential risks.

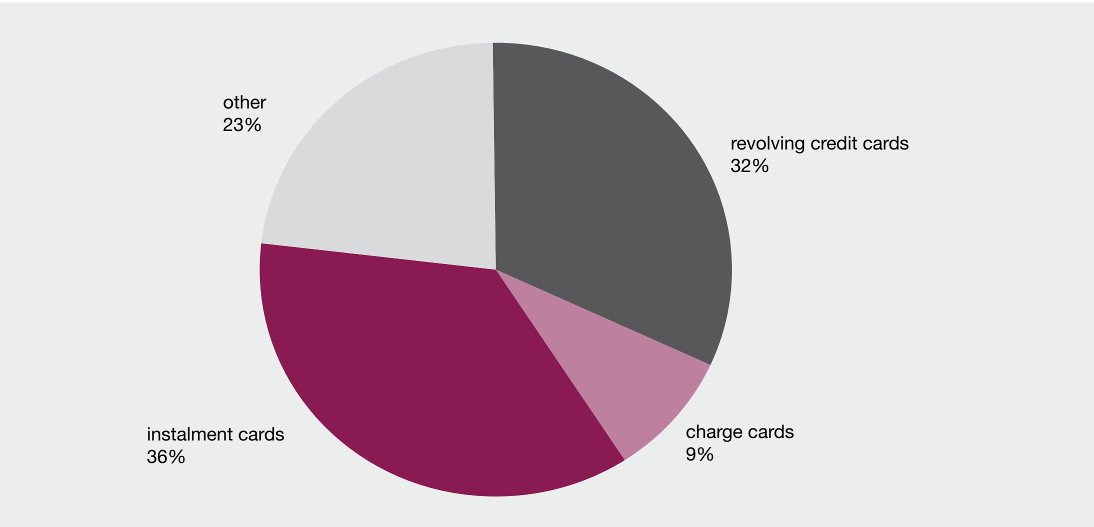

Figure 7. Share of credit cards in Estonia (as at September 2008)

Over the last six months, **the EP RTGS encountered one serious failure**[2], which interrupted the system's operation for 53 minutes (see Figure 8). The error was localised and the malfunction of a network device of Eesti Pank that caused the interruption was repaired. The availability of the EP RTGS was 99.92% in the second quarter and 100% in the third quarter.

The **ESTA** survived **one serious malfunction** during the period under observation, which caused a 22-minute interruption in the system. The error was identified and corrected. The availability of the ESTA was 99.96% in the second quarter and 100% in the third quarter.

The **TARGET2-Eesti operated smoothly** and its availability remained at 100% in the second and third quarters.

In addition to the credit institutions and Eesti Pank that joined TARGET2-Eesti in May 2008, the **Estonian Central Register of Securities** (ECRS) also became a member of TARGET2-Eesti on 3 August 2009. As membership to the ECRS and the introduction of euro settlements for settling obligations resulting from securities transactions influence the operation of TARGET2-Eesti and the securities settlement system, Eesti Pank analysed the impact of the ECRS's project (integration of settlement infrastructures) on the settlement systems.

Based on the introduction of various services, the ECRS's euro settlements project in TARGET2 may be divided into three stages:
1) national services, which do not include the settlement of financial obligations resulting from the purchase and sales transactions of securities (transfers are primarily related to investment fund units and dividend payments), were launched on 3 August 2009;
2) Settling financial obligations resulting from the purchase and sales transactions of securities in Estonia – due date for implementation in December 2009;
3) Settlement of financial obligations resulting from transactions carried out in the common Baltic trading platform – the preliminary implementation time set by the ECRS is spring 2010.

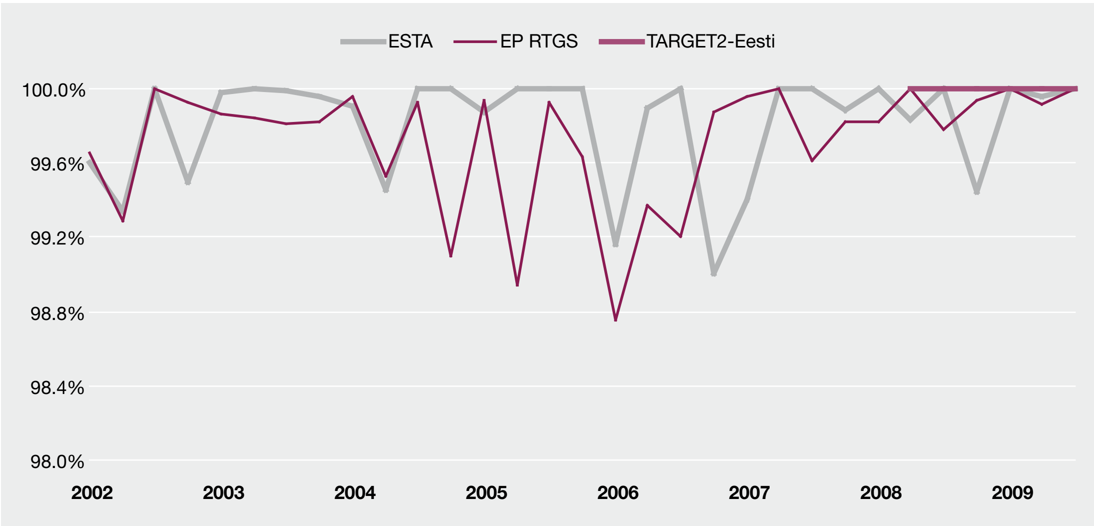

Figure 8. Availability of interbank settlement systems

[2] According to the risk management procedures, a failure is considered serious if the incident involves several system participants or if it entails the application of business continuity arrangement or a decrease in the operability of settlement systems.

Along with the introduction of national services (in particular stage 2 services), the ECRS intends to eliminate the drawbacks that have been outlined in the overseer's assessments of Eesti Pank in previous years and that so far prevented the settlement risks to be fully hedged. To this end, the following will be applied:

1) real-time delivery versus payment (DVP) for securities transactions;
2) an integrated settlement model where settlement system participants (account managers) transfer funds to the ECRS payment module account opened in the TARGET2-Eesti settlement system, which may be used as a collateral account for performing settlements;
3) amended ECRS data processing rules.

According to Eesti Pank, the solution offered by the ECRS is reasonable and appropriate in terms of operation, technology and oversight.

In order to settle financial obligations resulting from transactions performed in the common Baltic trading platform, the ECRS plans to start using the services of the TARGET2 via its ancillary system interface. This means that the settlement of rights and obligations in TARGET2-Eesti will be carried out on the sub-account of the ECRS, the securities settlement system manager. The materialisation of settlement risks will be managed and hedged as follows:

1) by using an integrated settlement model that will enable the ECRS to have an overview of money and securities positions throughout the settlement cycle;
2) based on the results of the analysis and agreements with market participants, the imposition of trading limits and the establishment of a separate guarantee fund will be taken into consideration.

In general, **Eesti Pank deems the planned Baltic settlement scheme suitable** and supports the ECRS in the integration of the settlement infrastructures. Before the finalisation of the Baltic project, however, technical solutions related to the ECRS's sub-account in TARGET2-Eesti must be specified and the rules of TARGET2-Eesti must be thoroughly revised.