Eesti Pank
Bank of Estonia

Financial Stability Review

1/2009

The Financial Stability Review is published twice a year by Eesti Pank. Each issue of the Review refers to the time the analysis was completed, not to the period it handled. The Review includes the latest available data at the time of each issue's preparation.

The Review is available at: http://www.bankofestonia.info.

Information about publications by phone +372 668 0998.

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The Review is free of charge to subscribers.

ISSN 1736-1281
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Printed in Aktaprint

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SUMMARY

Global financial environment

The **liquidity constraints** that appeared on global financial markets last autumn **have eased by spring 2009**. This has resulted from the extensive national support programmes, which have helped banks raise capital, issue debt and restore confidence. Even though European banks are already obtaining funds from financial markets also without a state guarantee, the markets have not yet fully recovered. Without state support, the demand for long-term bonds – one of the key sources of funding for banks – is still low.

The **near-term global growth outlook** has deteriorated considerably over the past six months. The contraction of the economy and the declining solvency of borrowers have increased loan losses, which has had an adverse impact on the capitalisation of banks. Therefore, the measures taken by governments and central banks to raise capital remain crucial because of the uncertainty in the financial markets.

The **euro area money market interest rates** have dropped to extremely low levels. Compared to the peak of mid-October, the six-month Euribor had declined by over 4 percentage points by mid-May. Such a robust change in money market interest rates is unprecedented, revealing the depth of the global economic crisis. The current price environment, which is occasionally even deflationary, enables central banks to implement the policy of very low interest rates and market expectations of a new interest rate rise are therefore subdued.

Financial behaviour of companies and households and related risks

If the external environment does not improve any time soon, Estonia's GDP will contract both this year and the next, based on the spring forecast of Eesti Pank. The turning point in the economic cycle is expected this autumn, but the state as well as the private sector should be ready for over a 12% decline in 2009. The shrinking demand exerts considerable pressure on corporate and households budgets. Decreasing consumption prices and low interest rates, however, are not able to offset that pressure.

The **business sector** has tightened considerably in the past quarters. Sales and profits have plummeted, while the number of bankruptcy petitions has surged. Given that the recession is broad-based, loan repayments might pose growing difficulties for all sectors. Taking into consideration the prevailing uncertainty and low demand, less and less companies are willing to take a loan. As the lending terms are stricter now, companies are more interested in raising funds through their parent companies located abroad.

Household confidence reached a record low in March 2009. Confidence in a further price fall, fear of losing job and the resulting need to save more force the consumers to postpone purchases, which has an impact on private consumption and credit growth.

Although the net financial position of households has been deteriorating for the past year, it is expected to start improving in the near term. Household deposits have slightly grown over the last six months, whereas the stock of loans has decreased. The stock of new consumer loans has been declining especially rapidly: in April 2009 annual growth turned even negative. Households' loan repayment ability has been supported by the lower interest burden arising from the decrease in the Euribor.

Active real estate development in the past years and weak demand for new dwellings arising from the cooling economic environment has led the Estonian **real estate market** to a situation of supply heavily exceeding demand. Transaction activity is low and prices have dropped significantly in the first quarter of 2009 both as regards

commercial real estate and dwellings. Based on the data of the Land Board, the prices of apartments in Tallinn have decreased by nearly a half from the peak levels in April 2007. Consequently, the affordability of apartments (the ratio of apartment prices and average gross wages) is reaching the level of 2004 in Tallinn. The strong fall in real estate prices may partly be caused by the overreaction of market players to the changes in the economic environment. Consumer confidence needs to be restored for the real estate market to regain ground.

Banking sector

In the past two quarters, the **groups of the parent banks of the banks operating in Estonia** have been more severely affected by the provisions for non-financial sector credit portfolios. The risk profiles of groups are quite similar but they have implemented different provisioning strategies. Although also forward-looking provisions have been made, several rating agencies and market players have nevertheless considerably increased their risk assessments regarding a number of groups after the reporting of negative results.

Regardless of the difficult market situation, the cross-border banking groups operating in Estonia have been able to attract additional funds through deposits as well as bond issues, supported by guarantees that the government programmes provide. As the liquidity management of the banking groups operating in Estonia has been further centralised, the local branches and subsidiaries are dependent on receiving funds from their parent banks.

Several major groups also increased their capital levels in the past quarters. Given the current market situation, the payment of dividends has been postponed or the dividend rate has been lowered.

Considering the future economic outlook in the region where the financial groups present in Estonia are operating, it cannot be ruled out that several groups may report losses also in the coming periods. Nevertheless, the capital buffers built up in good times will enable groups to run a loss for some time. In addition, the governments of groups' home countries have agreed to provide support to the groups should it be necessary.

Although the **banks operating in Estonia** have been applying different business strategies, which has changed their market share by a few per cent, the market concentration has, in general, remained more or less unchanged. The two largest banks comprise two thirds of the credit market; the four major banks hold over 94% of the market. In May 2009, a new player entered the Estonian banking market when the LHV Group, who used to be engaged only in asset management, started to operate also as a commercial bank.

The aggregate **capital adequacy** ratio of the banks operating in Estonia increased to 22% by the end of April, mostly as a result of implementing new risk assessment methods for the calculation of capital requirements. The capital adequacy ratio increased also due to an increase in Tier I own funds, which stemmed from including the profits from previous periods in own funds. Consequently, at the end of April banks' capital buffers for potential loan losses were more than two times bigger than the minimum capital adequacy requirement established in Estonia. The buffers are expected to increase further in 2010, when the current restrictions set for the transition period regarding the decline in risk-weighted assets will be eliminated.

The cooling economy has significantly affected also the stock of overdue loans. The percentage of **loans overdue for more than 60 days** in

the total portfolio of non-financial sector loans has been growing rapidly for the past two quarters, reaching 5% in April. Overdue loans have increased among household as well as corporate loans. As usual, households mostly fail to repay consumer loans by due date. As regards the corporate sector, commercial real estate and construction firms as well as accommodation and catering companies, which are suffering from the low number of tourists, have the highest share of overdue loans.

Given the worsening economic environment and the growing number of overdue loans, banks have been relatively conservative and have considerably increased the stock of **loan provisions**. Since August 2008, provisions have accounted for around 40% of the loans overdue for more than 60 days. In addition, general provisions for the Baltic States have been made at the group level.

Based on the spring forecast of Eesti Pank, the stock of loans overdue for more than 60 days will constitute 9% of the total portfolio of banks at the end of 2009. Loan losses will amount to approximately 6 billion kroons. However, banks should cope with the expected high loan losses thanks to the capital buffers built up in good times.

The **funding and liquidity** of the banks operating in Estonia is supported by the relatively stable level of deposits and improved funding opportunities for parent banks. The amount of customer deposits has been sufficient in the past quarters to meet the lower demand for credit. As a result, banks' liabilities to foreign banks have decreased on an aggregate basis. Customers' price sensitivity and risk aversion have facilitated growth in time deposits in banks' resources, which in turn has increased the cost of funding for banks.

The **profitability** of banks has been mainly curbed by the need to adjust the value of loan portfolios but also due to a decrease in net interest incomes as well as fee and commission incomes. The reduction of key interest rates decreases net interest incomes, as the advantage of lower funding costs diminishes in the case of loan portfolios with floating interest rates. Moreover, the cost of funding has gone up also owing to an increase in time deposits. Thus, net interest incomes might decline also in the near future. The decrease in fee and commission incomes has been primarily caused by the lower number and value of payments, which has resulted from subdued economic activity.

Banks have started to cut down on costs, but the cuts have not been as extensive as the decrease in incomes. As the opportunities for income generation have diminished, banks are likely to make further cuts to operating costs. However, the cuts are unlikely to keep up pace with the rapid decline in incomes and growth in provisions, and the effect of cuts will probably be revealed over a longer period of time.

Therefore, it is quite likely that several banks may report losses also in the coming quarters. At the same time, high profits from previous periods have enabled banks to build up buffers for difficult times.

Other financial markets

The Estonian **money market** interest rates have remained at relatively high levels mostly owing to the increased demand of foreign companies for the Baltic currencies, as they wish to hedge the foreign exchange risk for operating in the region. As most Estonian credit institutions manage liquidity in euros and via parent banks' groups, temporary growth in the turnover of short-term kroon loans at the beginning of 2009 can be explained by the fact that a few banks have been covering their foreign exchange positions via the Estonian kroon money market.

The otherwise passive primary **bond market** was stimulated by relatively large issues by local governments in the past six months. It is note-

worthy because the last time the general government issued bonds was over five years ago and also the value of that issue was lower then. Bond market capitalisation has decreased nearly 20% to 11.3 billion kroons over the last six months.

Global **stock prices** went up again in March after a period of record low levels caused by the global financial crisis and negative economic outlook. As weak demand does not give hope for an improvement in corporate financial indicators in the near term, the upward trend of stock prices rather reflects decreasing uncertainty and growing confidence in the general economic outlook. The rise in stock prices is welcome for both the investors and financial intermediaries, since it contributes to restoring productivity, which has suffered heavily since the outburst of the crisis.

Compared to other Central and East European stock indices, the **Tallinn Stock Exchange** index OMXT has gone down more sharply from the pre-crisis levels. However, since the beginning of 2009 it has also been growing relatively faster than the euro area average and other indices of higher-risk markets. The liquidity of the Tallinn Stock Exchange dropped to a historical low. Stock capitalisation plummeted to the level recorded ten years ago and remained there until end-March.

The financial crisis has had a considerable impact on **investment and pension funds**. All funds (except for the money market fund) suffered from historical lows in terms of average annual yield. The share of foreign assets in total fund assets has been gradually decreasing and investment strategies are focused on the more stable markets of advanced EU economies. By the end of the first quarter of 2009, the value of investment fund assets had declined to the level of 2005. As payments to the compulsory pension funds have been stopped, growth in pension funds is expected to slow significantly over the next six months.

The future outlook for the **insurance market** is generally negative because of the adverse economic situation and low confidence of the society. The volume of insurance premiums collected by life insurers has decreased to pre-boom levels and the market witnessed huge losses in 2008 due to the loss from investment activities. The non-life insurance market has also suffered from lower sales, although the financial crisis has not hit that segment so hard.

Payment and settlement systems

The recession has manifested itself also in the payment and settlement systems: the **value of payments** processed in the Settlement System of Ordinary Payments (ESTA) declined 12%, year-on-year, to the level of mid-2007. There were no such incidents in the operation of the Estonian payment and settlement systems that would have threatened the stability of the financial sector.

Compared to several other EU countries, the Estonian payment environment is highly advanced and electronic. The **direct debit** market has already fully developed and there is potential for growth mostly for cross-border direct debit services. Besides the harmonisation of the payment and settlement environment and establishment of support infrastructures, the general integration of the financial and non-financial sectors is important in this context.

Assessment of financial stability and risks

Since last autumn the role of national and international institutions in ensuring the operation of the financial system has grown considerably all over the world. Thanks to the large-scale measures taken by governments and central banks to protect financial stability, the tensions regarding the liquidity and funding of banks have eased by this spring. National support programmes remain vital also in the next stage of the global financial

crisis, as loan losses are expected to grow and sufficient capitalisation must be ensured.

The parent banks of the major banks operating on the Estonian banking market have been secured by the guarantee schemes of their home countries Sweden and Denmark. Until the end of 2008, Nordic banking groups experienced relatively small setbacks from the global crisis compared to other larger banks in Europe, and the support programmes rather served as an emotional and calming instrument. However, the recession on the global as well as the target markets of the Nordic groups has made banks more cautious about the materialisation of credit risk. Groups have sufficient buffers based on the spring estimate of the Swedish central bank, but should negative scenarios materialise, it cannot be ruled out that parent banks may have to acquire additional capital if loan losses grow.

In addition to or as an alternative to acquiring additional capital, parent banks might set restrictions to asset growth if loan losses increase. The probability of that scenario has clearly risen since autumn. As credit demand has contracted, Estonian borrowers need not perceive the effect arising from capital restrictions, at least for the time being. However at some point, the current stable funding channel – the Nordic banking groups – might be insufficient to support the beginning of a new investment cycle.

The Estonian credit market has been mainly shaped by the decreasing willingness of companies and households to consume or invest, which has been modest compared to the amortisation of banks' loan portfolios. On the other hand, banks all over the world have tightened their credit terms and conditions, thus keeping away customers with smaller solvency, collaterals and financial buffers. Banks have become more conservative in the current economic environment but are still willing to finance viable projects. However, there is no reason to hope for the loose pre-crisis credit standards. Borrowers may benefit from lower loan interest rates, resulting from key interest rate cuts, and the overall decline in prices.

The number of households and companies with temporary or permanent loan repayment problems has grown amidst the recession. Based on the baseline scenario of the spring forecast of Eesti Pank, loans overdue for more than 60 days will constitute 9% of the total loan portfolio at the end of 2009. Regardless of that, banks have enough capital to cover potential higher loan losses. In addition to the reserves from the profits of previous years, banks can also use the capital buffers built up with the support of earlier counter-cyclical measures. The decrease of the capital buffers is only natural in the current phase of the economic cycle. Nevertheless, the reserves need to be restored as soon as the new growth phase starts off.

Half a year ago, the assessment of risks to financial stability focused on global liquidity problems; at this point, the uncertainty may be increased by a sudden deterioration in the region's economy. Consequently, the confidence of Estonian households and business sector in the domestic monetary and banking system may ultimately suffer, even though in autumn the global financial turmoil could not damage the confidence considerably.

Trust in the Estonian financial system has been so far supported by the high reserve requirement (15%), which covers nearly a third of the customer deposits. In February 2009 Eesti Pank also entered into a precautionary arrangement with the Swedish central bank to help ensure liquidity in the currency board arrangement implemented in Estonia. In addition, the govern-

ment has proposed legislative changes that are aimed to provide a better basis for financial crisis management.

To sum up, the risks to the Estonian financial stability have not decreased in the current uncertain economic and financial conditions but have even grown in some areas. Although funding by parent banks has stabilised with the support of government and central bank measures, expected loan losses might reduce the capital buffers of the groups of parent banks. This, in turn, might affect credit supply to Estonia.

Compared to last autumn, the future outlook of the Estonian economy has deteriorated considerably because of the worsening external environment, which is why credit risk is currently more likely to materialise. At the same time, local subsidiaries have sufficient capital buffers to cover potential loan losses, and this helps ensure the functioning of the financial system also should a more negative scenario materialise.

In the conditions of the ongoing recession and global financial crisis, Estonian households, companies, financial intermediaries as well as the state should continue making reasonable decisions with regard to their economic performance and financial behaviour. Attention should be paid to policies aimed at avoiding or reducing the implications of risks, including excessive pessimism that can easily emerge in view of negative economic indicators.

I FINANCIAL BEHAVIOUR OF COMPANIES AND HOUSEHOLDS AND THEIR RISKS

COMPANIES

Business situation

Confidence

The confidence of companies declined further at the beginning of 2009 owing to the current global crisis. The decreasing **economic confidence indicator**, calculated by the Estonian Institute of Economic Research, reflects low demand and uncertainty about the future. The confidence of construction companies decreased the most – in the first quarter of 2009 to nearly two times lower levels than the previous minimum levels recorded ten years ago. The abrupt fall in demand in the second half of 2008 also lowered the confidence of manufacturing and trading companies (see Figure 1).

The pessimism of **manufacturers** deepened too over the past six months (see Figure 2). The export demand was still quite stable in the first half of 2008, but the second half witnessed a robust decline in exports. The decline in domestic and external demand has resulted in lay-offs and production capacity cuts. Based on the estimates of manufacturers, the utilisation of production capacity was 58% at the beginning of 2009. On one hand, the under-utilisation of production capacity for a longer period of time increases inefficiency. On the other hand, the large number of unemployed enables companies to increase their production capacity as soon as demand recovers.

Corporate investment and economic indicators

The decline in demand is reflected in dropping **sales figures.** The sales turnover for 2008 formed 98% of the 2007 turnover. The decline was especially pronounced in the third and fourth quarters when the sales turnover decreased more than 10% year-on-year (see Figure 3). Forestry suffered the most with the sales turnover falling 37% in the fourth quarter of 2008, year-on-year. Sales were lower also in wholesale and retail trade, hotels and restaurants, and manufacturing.

Weak demand also affected the **total profit** of companies, which declined 25% in 2008 from 2007. The decline was particularly strong in the fourth quarter when it accounted for only 49% of the year-ago profits. Besides weak demand, profits were curbed also by an increase in the cost of loan

Figure 1. Confidence indicators of Estonian companies

Source: Estonian Institute of Economic Research

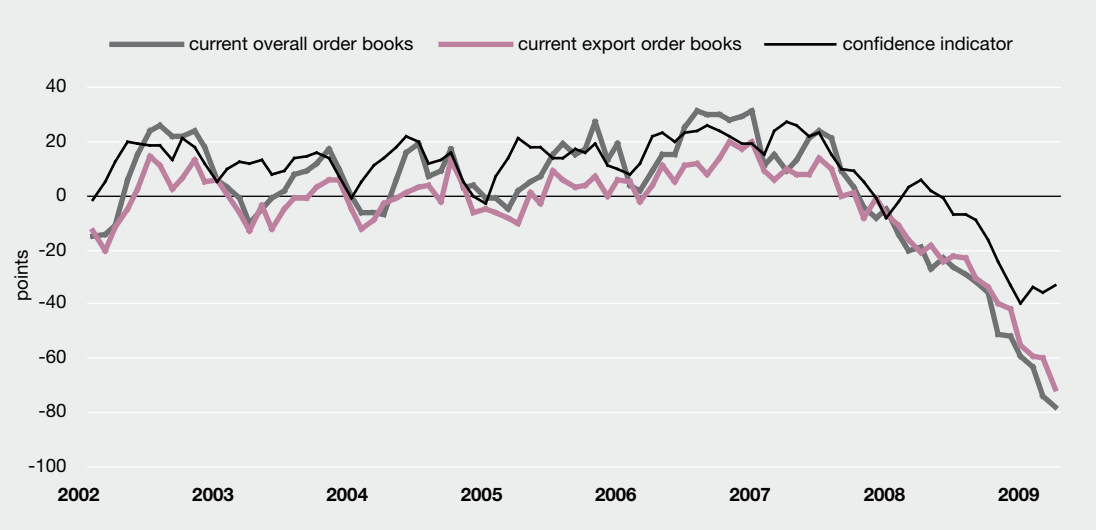

Figure 2. Demand for the production of manufacturing companies and the confidence indicator

Source: Estonian Institute of Economic Research

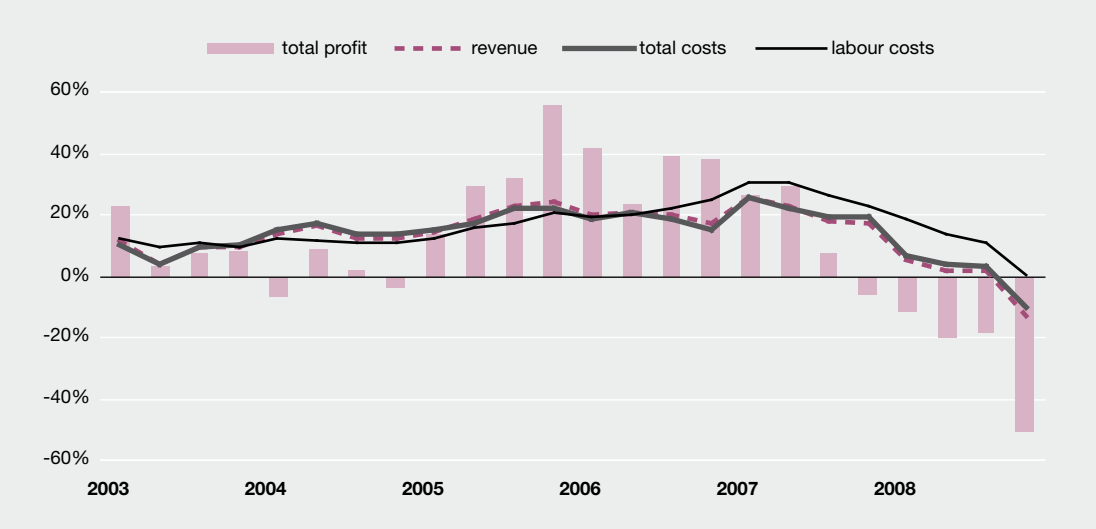

Figure 3. Annual growth of companies' economic indicators

Source: Statistics Estonia

resources and the fact that expenditure cuts could not keep pace with the decrease in incomes.

The steeper decline in profits compared to sales revenues points to a decrease in companies' profit margins. The **total profitability** of companies, i.e. the ratio of total profit to sales revenue, shrank to 4% in the fourth quarter of 2008 from 7% in the fourth quarter of 2007. Total profitability decreased significantly in manufacturing, trade and construction (see Figure 4). Although total profit growth was negative already in the fourth quarter of 2007, labour costs still continued to grow. This was caused by the expected inertia of labour costs, and growth halted only in the fourth quarter of 2008.

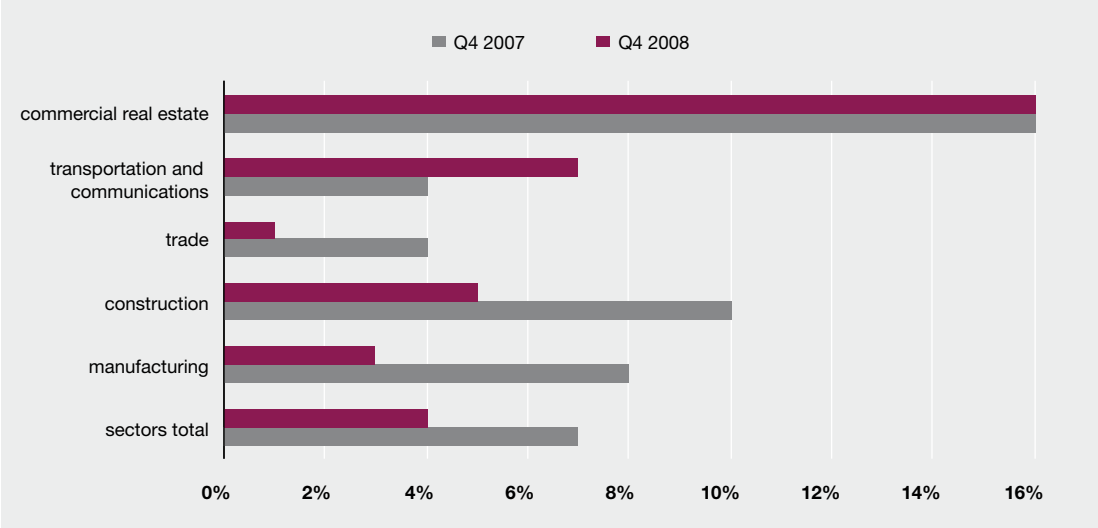

Figure 4. Total profitability

Source: Statistics Estonia

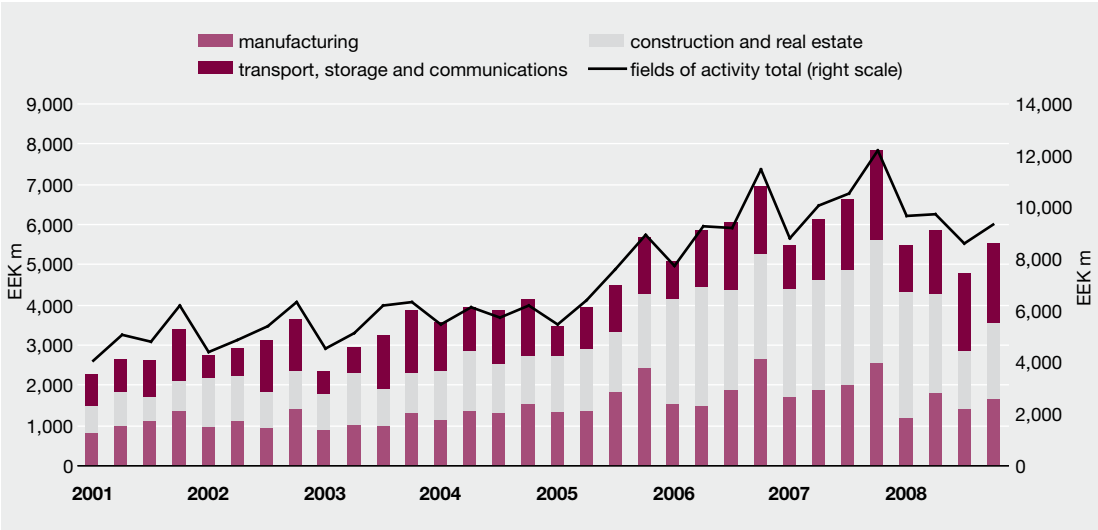

Figure 5. Corporate fixed investment

Source: Statistics Estonia

Along with a decrease in profitability, also **investment activity** slowed in the past six months (see Figure 5). Fixed investment in 2008 constituted 90% of the 2007 figures. The slowdown in investment was more marked in manufacturing and construction, falling to 73% and 79% of the investment in 2007, respectively. In the second half of 2008 investment decreased especially strongly in construction, reaching only 57% of the levels recorded in the second half of 2007. Investment in the construction sector was primarily related to the completion of unfinished objects rather than launching new projects. Compared to 2008, investment remained stable only in the field of transport and communications.

New companies and bankruptcies

The establishment of **new companies** is on a downward trend because of the difficult economic situation. About 800 companies were founded on average per month over the past six months, which is approximately as much as in 2005. After the outburst of financial crisis in October, the number of new companies registered per month decreased to 700. In March, registration went up slightly with 1,100 new companies founded.

The number of **bankruptcy petitions** started to increase markedly in August 2008 and has been growing ever since (see Figure 6).

In October 2008, the number of bankruptcy petitions reached as much as 100, and in the first

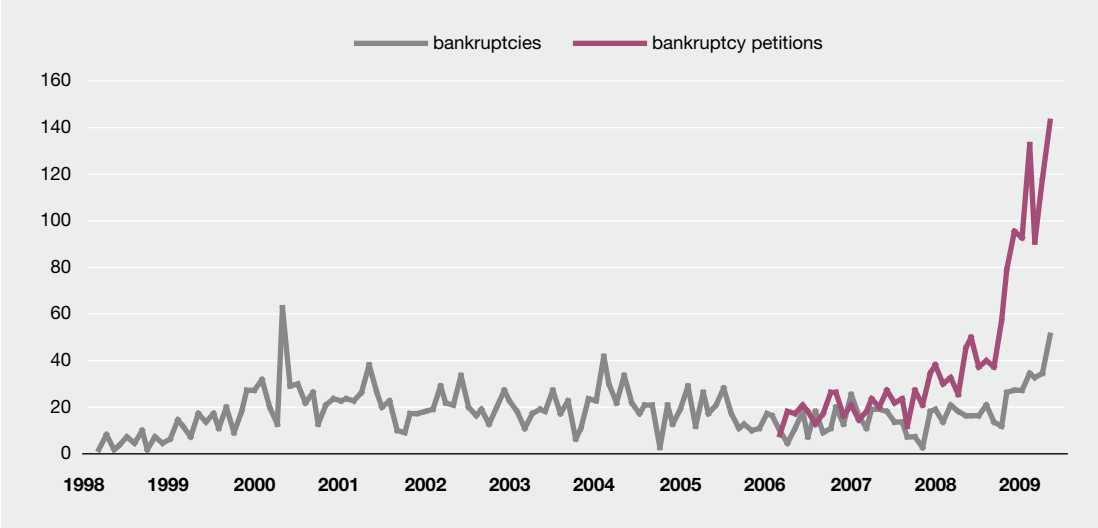

Figure 6. Bankrupt companies and bankruptcy petitions submitted to courts on a monthly basis

Sources: Estonian Enterprises Register, Courts Information System

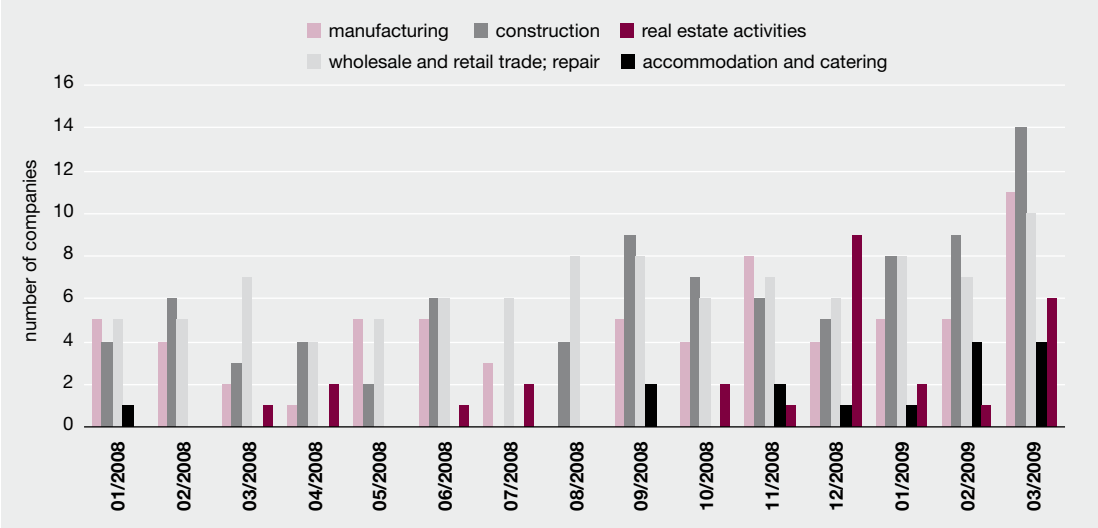

Figure 7. Bankruptcies by sectors

Source: Estonian Enterprises Register

four months of 2009 an average of 124 petitions were submitted per month.

The number of **companies going bankrupt** has also started to grow slowly but steadily. The first quarter of 2008 witnessed 52 bankruptcies, whereas the first quarter of 2009 saw already 119 bankrupt companies (51 in March). Mainly construction and trading companies went bankrupt but also manufacturing and real estate companies (see Figure 7). As the number of bankruptcy petitions has been going up rapidly, more bankruptcies are to be expected in the near future.

Financial position and saving

The negative **net financial position** of companies improved in the second half of 2008 and decreased to –101% of GDP at the end of the year (see Figure 8). The improvement has been driven by a stronger decline in financial liabilities compared to financial assets. On the liabilities side, the shares and other equity issued by companies and other financial liabilities decreased the most. The biggest changes on the assets side also concerned shares and other equity as well as other financial assets.

Companies' **deposits** in local banks are decreasing, which means that companies have started to reduce their financial buffers. Annual deposit growth has been negative since November 2008, reaching –5% in April 2009. Companies increasingly prefer time deposits; their share grew from 34% in April 2008 to 43% in April 2009 (see Figure 9). The decline in savings can partly be explained by financing the activities of companies with savings rather than loans and also by lower profit-making ability.

Based on financial ratios, the situation appears to have improved: the **coverage of debt liabilities by deposits** and the **ratio of liquid financial assets to debt liabilities** have indeed improved, but this has primarily resulted from a decrease in indebtedness.

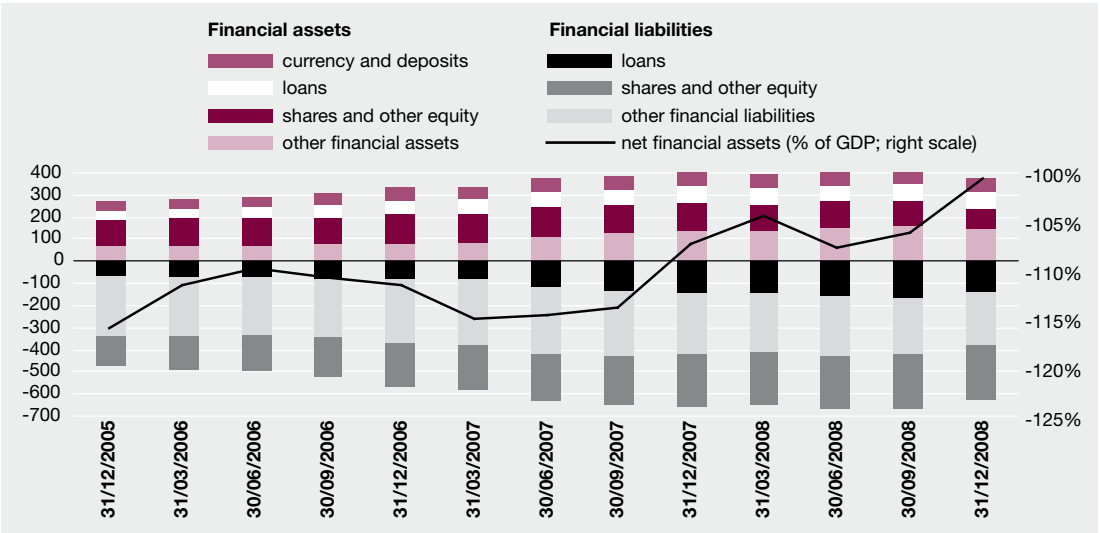

Figure 8. Corporate financial assets and liabilities and net financial assets

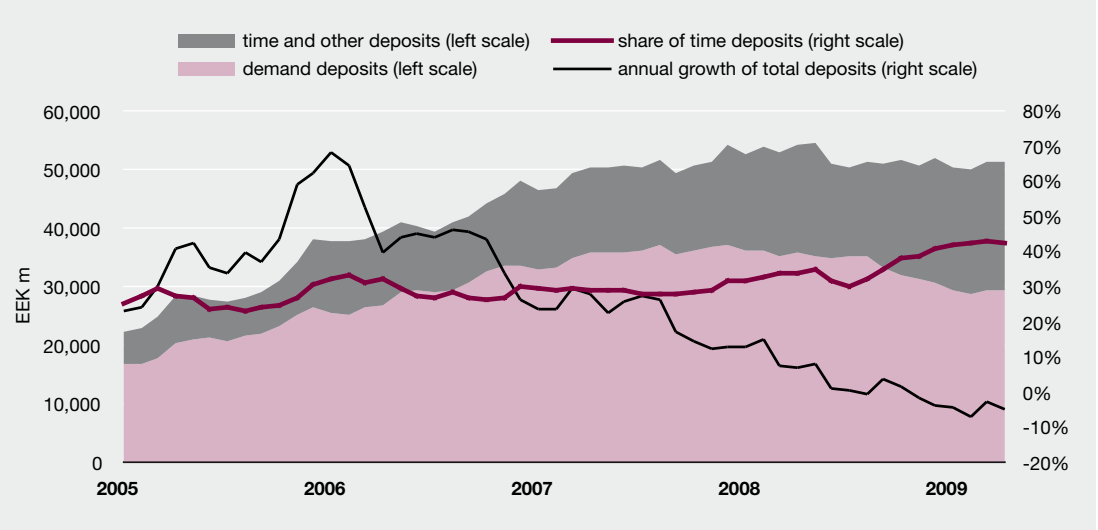

Figure 9. Volume and growth of corporate deposits and share of time deposits

Corporate debt

The **growth rate of companies' debt** has been constantly declining in the background of uncertain economic times. The annual growth rate of total corporate debt was 8% at the end of 2008 (25% at end-2007).[1] Foreign debt increased by 2 percentage points to 36% of total corporate debt.

Total debt grew by 2.7 billion kroons in the second half of 2008, with domestic debt decreasing by 0.6 billion kroons and foreign debt increasing by 3.8 billion kroons (see Figure 10). The debt of trading and manufacturing companies decreased by 2.8 and 0.9 billion kroons, respectively (see Figure 11). Strongest credit growth occurred in the real estate, construction and business services sectors, where 3.4 billion kroons of loans (mostly

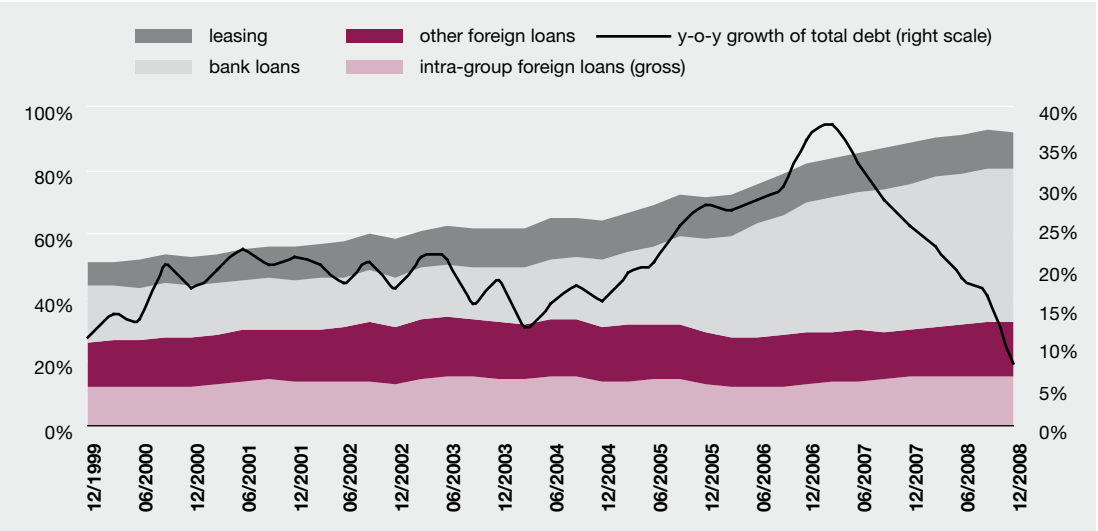

Figure 10. Corporate debt (% of GDP)

[1] Including intra-group claims to foreign affiliates, annual growth in total debt stood at 4% at the end of the year.

foreign capital) were added in the second half of 2008. External funds granted to the real estate sector totalled 1.8 billion kroons and funds to the business services sector amounted to 1 billion kroons. As local banks have tightened their loan conditions, companies now tend to obtain funds via parent companies. Foreign capital accounted for 57% of the new loans issued in 2008, which is considerably more than the 28% in 2007.

Growth in **domestic debt** halted in March 2009 and turned negative (–1.5%) at the end of April 2009. The total volume of corporate loans started to decline in October 2008, first and foremost in the real estate and construction sectors. By the end of April 2009, the stock of loans had shrunk in almost all sectors. Compared to April 2008, the loan stock had decreased in trade, construction, agriculture and business services, whereas the loan stock of other sectors had still grown in annual terms.

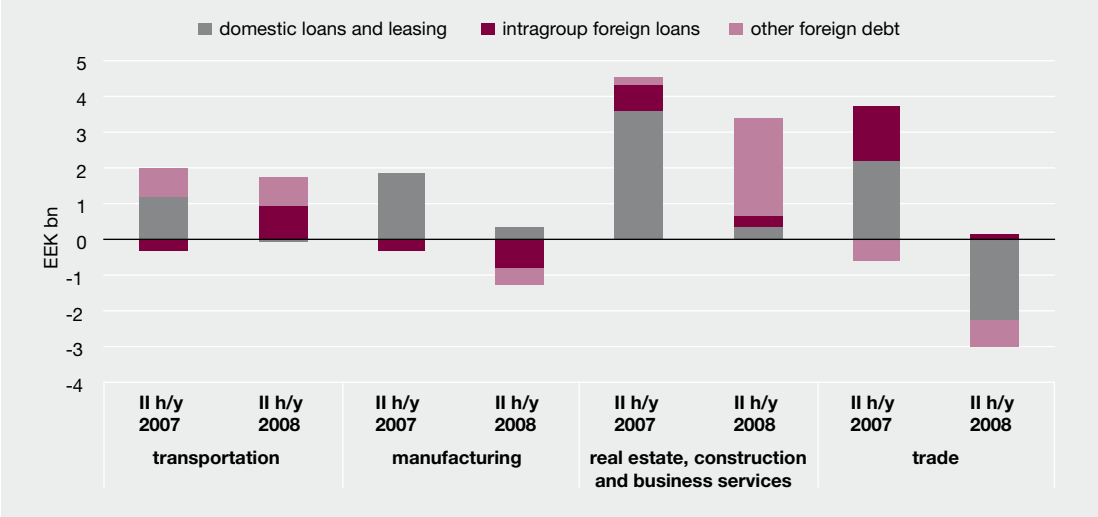

Figure 11. Changes in total corporate debt

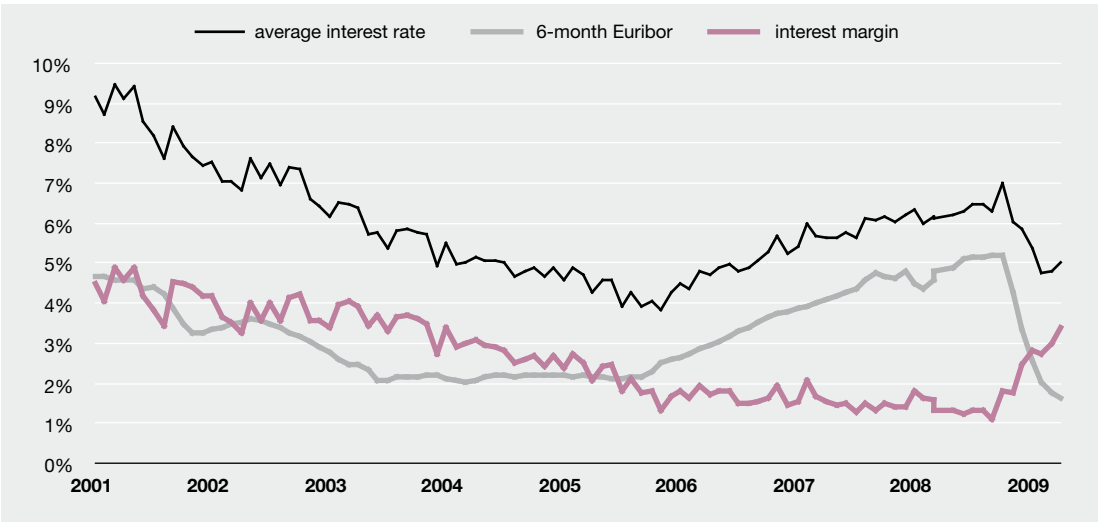

Figure 12. Average interest rate, 6-month Euribor and average interest margin on long-term corporate loans

The **average interest rate on long-term corporate loans** has changed considerably since autumn. The average interest rate fell from the record high 7% in October to 5% in April. The fall stemmed from the rapid decline of the 6-month Euribor by 3.6 percentage points to 1.6% in April. Loan margins have gone up at the same time, reaching as much as 3.4% in April (see Figure 12). Although the decrease in the key interest rate has reduced companies' loan costs, the loan conditions remain stricter for new borrowers.

HOUSEHOLDS

Economic situation

Confidence

Household **confidence** continued to decline and reached a new record low in March. The fear of losing job persists and many households are also pessimistic as far as their ability to save is concerned. Inflation expectations have come down significantly: since December 2008 households have been expecting a fall in prices rather than a rise (see Figure 13). This is the first time in the history of the newly independent Estonia that the expected inflation rate is negative. Confidence in a price fall, fear of losing job and the resulting need to save more force the consumers to postpone purchases, which has an impact on private consumption.

Labour market

The strong decline in economic activity has changed the labour market considerably. In the first half of 2008, the **number of the unemployed** even fell, whereas the second half witnessed robust growth in unemployment. Lay-offs gained momentum in the second quarter and reached a peak in the fourth quarter, when the number of the unemployed had increased nearly 90% year-on-year. Unemployment is expected to grow throughout 2009. In the first quarter of 2009, the number of the unemployed had increased 182% year-on-year (see Figure 14).

The unemployment rate was the lowest of the past years still in the first half of 2008. However, in the second half the rate started to grow. In the coming

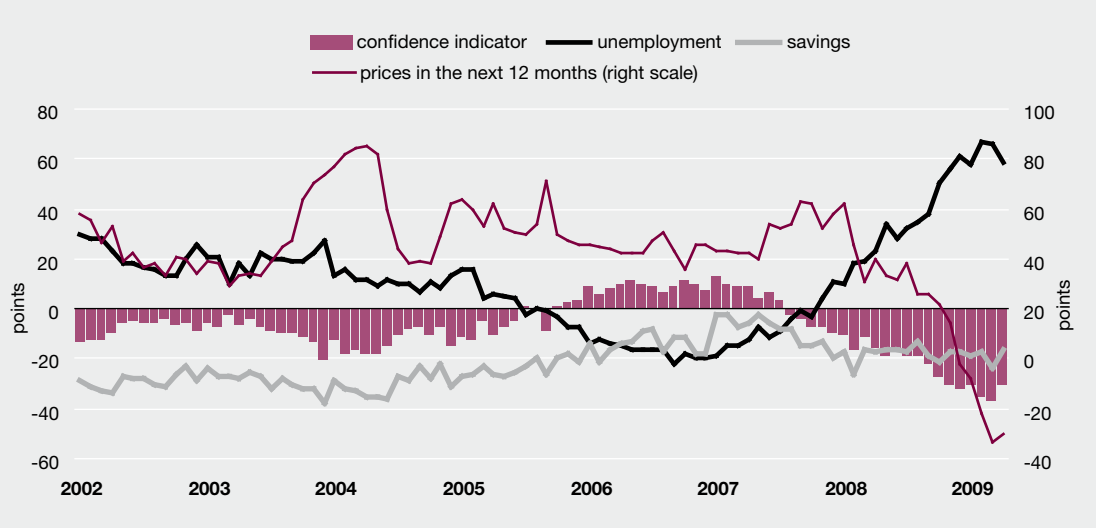

Figure 13. Consumer confidence indicators

Source: Estonian Institute of Economic Research

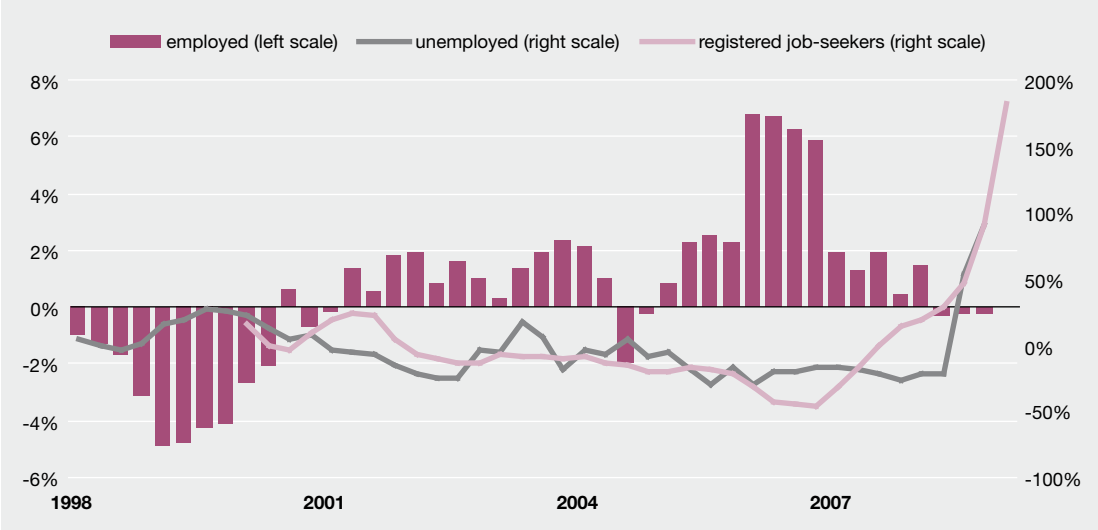

Figure 14. Annual change in the number of the employed, the unemployed and registered job-seekers

Source: Statistics Estonia

years, unemployment is expected to be at least three times higher than at the beginning of 2008. Based on the spring 2009 forecast of Eesti Pank, the unemployment rate will rise to approximately 13% this year and is likely to remain high also in 2010.

Labour market developments are reflected also in the decreasing **employment rate**. Year-on-year, the number of the employed fell by 1,600 in the third quarter and by 1,200 in the fourth quarter of 2008. A major drop will be ahead this year, when employment will decline by 5.2% as expected in the baseline scenario of the spring forecast.

Wage growth slowed considerably in the fourth quarter of 2008 compared to previous years.

Figure 15. Average annual wage growth

Source: Statistics Estonia

Average gross wages increased nearly 15% in the third quarter, year-on-year, whereas in the fourth quarter growth slowed to 7% (see Figure 15). The inflation rate was still high at the end of 2008, amplifying the impact of slowing gross wage growth on real wages. **Real wage** growth slowed to 1.3% in the fourth quarter of 2008, which is the lowest level of the past years. Growing unemployment in turn increases wage pressures. Both the average gross wages and real wages are expected to decrease this year.

Financial position and saving

The **net financial position** of households was negative in the second half of 2008 and stood at –3.6% of GDP at the end of the year. Household financial assets decreased 3% in 2008, whereas financial liabilities increased 10% (see Figure 16). Owing to the developments in financial markets, only deposits grew (11%) in 2008 while all the other financial assets of households declined. As a ratio of total financial assets, deposits grew from 44% to 51% year-on-year (see Figure 17).

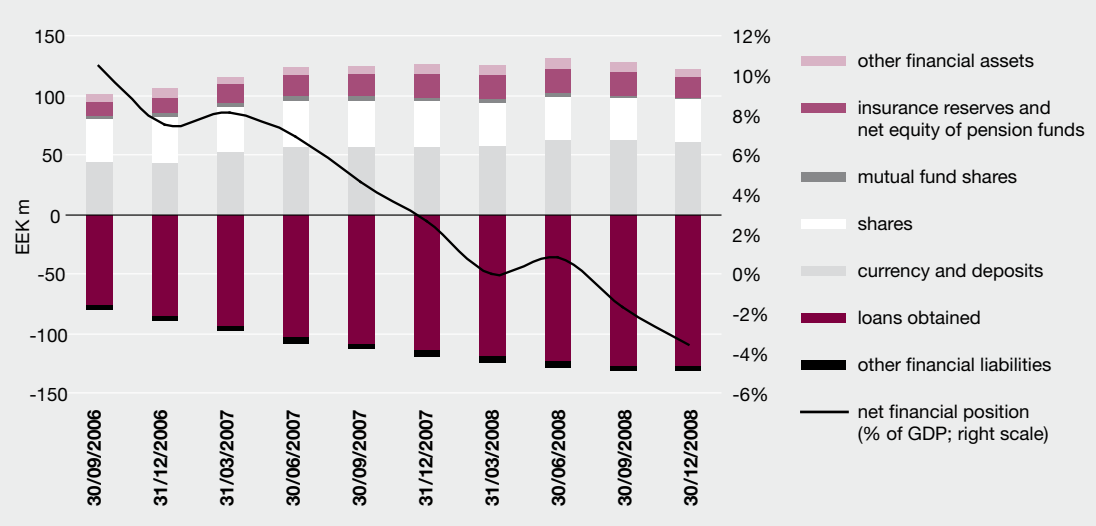

Figure 16. Household financial assets and liabilities

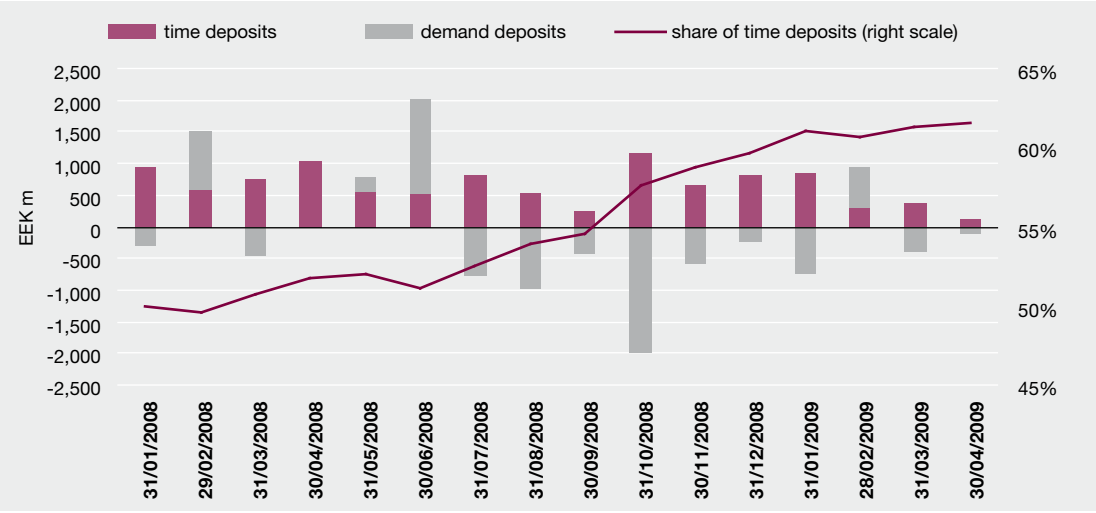

Figure 17. Monthly change and breakdown of household deposits

The breakdown of household financial liabilities, on the other hand, has not changed over the year: short- and long-term loans comprise 97% of total financial liabilities, having increased 11% in 2008 just like the deposits.

The first quarter developments of deposits and debt point to a slight improvement of the net financial position of households. Household deposits increased by 1 billion kroons in the first quarter of 2009, whereas household loans decreased by around 1.6 billion kroons.

The growth rate of **domestic deposits** fell to 8% by the end of the first quarter. The lack of good investment opportunities and the relatively high (kroon) deposit interest rates[2] have facilitated growth in time deposits. At the end of the first quarter of 2009, time deposits comprised 61% of total household deposits and their annual growth was 47%. Demand and overnight deposits have decreased 15% over the year.

Debt and loan repayment ability

Annual growth in household loans and leases slowed to 5.2% in March 2009 from 26.8% in March 2008. Monthly growth in debt has been negative since December 2008. However, the decreasing debt has not reduced the **indebtedness** of households, as the GDP and disposable income for 2008 and the coming years will decrease more than the debt. At the end of March 2009, household indebtedness stood at 51% of GDP and 85% of disposable income.

Housing loans

The transaction activity in the housing market has subsided considerably. The stock of household housing loans started to decline in December 2008, which means that the volume of repayments exceeded the volume of new housing loans granted to households. The housing loan portfolio has been decreasing by approximately 175 million kroons a month on average (see Figure 18). The aggregate portfolio of housing loans totalled 93 billion kroons at the end of the first quarter of 2009.

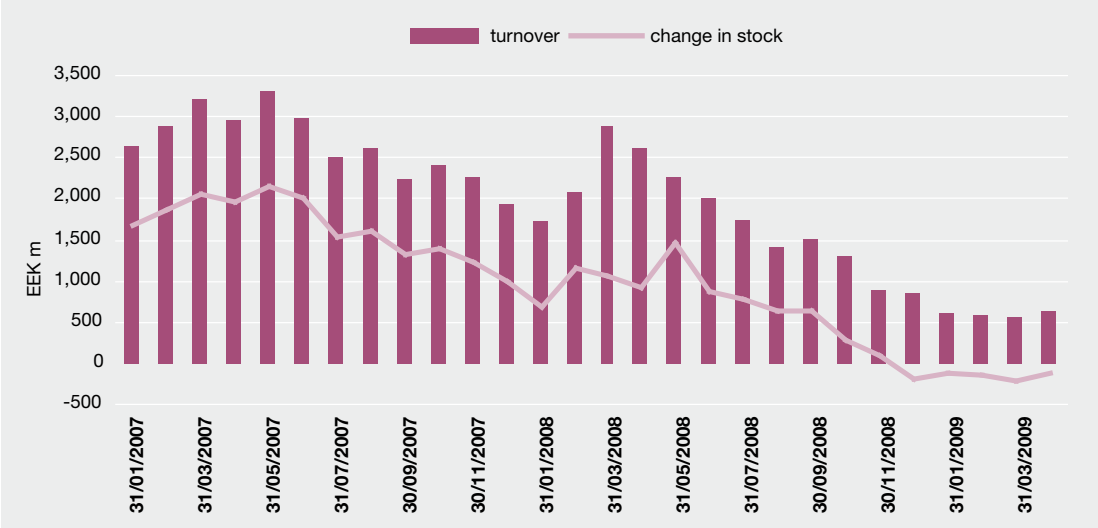

Figure 18. Monthly turnover and change of housing loan stock

[2] The average interest on household kroon deposits has climbed by 0.8% to 5.4% year-on-year.

According to the baseline scenario of the Eesti Pank spring forecast, the real estate market will be much more modest both in 2009 and 2010, compared to previous years. Although the affordability of real estate has reached the pre-boom levels, households postpone real estate purchases in the hope of an even bigger price fall.

The **average interest rate** on household housing loans had decreased to 4.2% in March, owing to the decline in the key interest rate in the fourth quarter of 2008. The last time the interest rate on housing loans was so low was in June 2006.

Consumer credit

In the background of households' low confidence and changes in the labour market, the **year-on-year growth** in the stock of non-housing loans and leases has decreased from 37% in March 2008 to 4% in March 2009 (see Figure 19). The stock of new loans added in 2008 comprises only 14% of the stock added in 2007. Total consumer credit amounted to 28.5 billion kroons at the end of March.

Growth in consumer credit slowed significantly in October and November 2008, when monthly growth in the stock of non-housing loans and car leases turned negative. On average, since November 2008 the loan and leasing portfolio has been decreasing by 200 million kroons a month. The development of consumer credit is largely affected also by the amortisation of earlier loans, which is quite extensive because of the short term of loans. As the uncertainty around the economy persists, the stock of consumer credit will decrease 12% in 2009 and post negative results also in 2010, as expected in the baseline scenario of the Eesti Pank spring forecast.

Loan repayment ability and risks

The loan repayment ability of households largely depends on the terms and conditions of their loan contracts. The fall in interest rates gives an advantage to those households whose loan interest rates are subject to change after a certain period of time. Given the uncertainty surrounding Estonia's economy, households who took their loan in euros are in a better position as their interest rate depends on the Euribor and not the Talibor.[3]

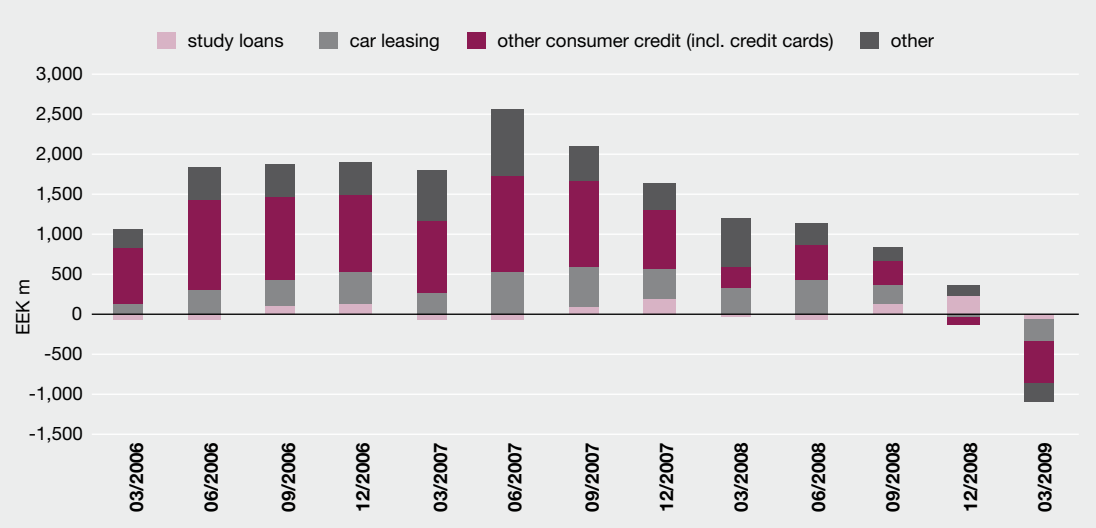

Figure 19. Quarterly change of non-housing household loans and leases

[3] In March 2009, housing loans in kroons constituted 2.2% of total housing loans.

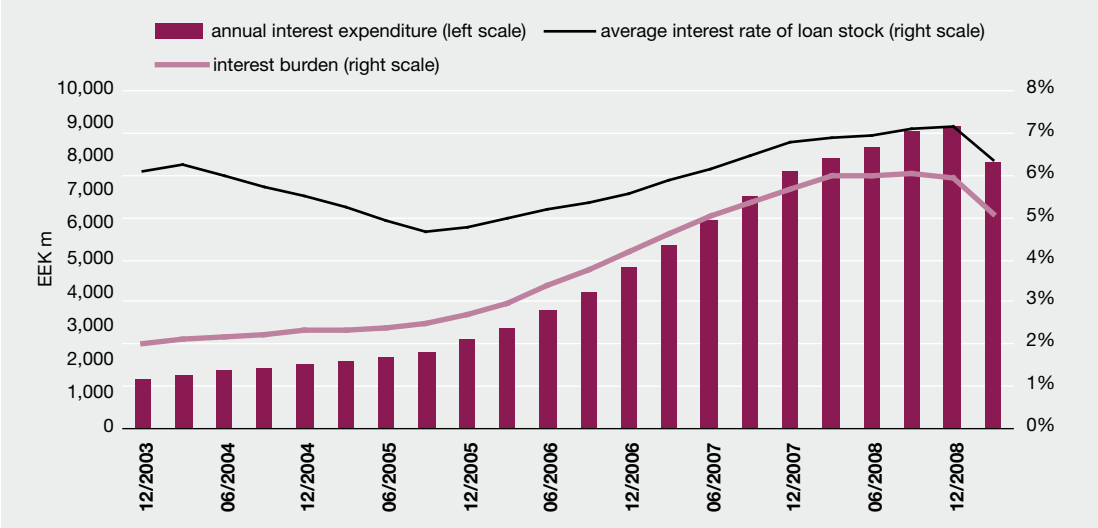

Figure 20. Interest burden of households

Household **interest burden** (the ratio of interest expenditure to disposable income) increased until end-2008 and stood at 5.9% of disposable income at the end of December (see Figure 20). In the first quarter of 2009, the interest burden started to decrease rapidly and reached 5.1% in March. The decline in interest costs was primarily affected by the significant drop in the key interest rate since October 2008. As the majority of the loans of Estonian households are in euros and have a floating interest rate, the interest burden will diminish in the coming periods owing to the low key interest rate (Euribor) and negative loan growth (see also Figures 21-22). At the same time, the disposable income of households will decrease, which will slightly offset the expected positive impact of the above factors on the shrinking interest burden.

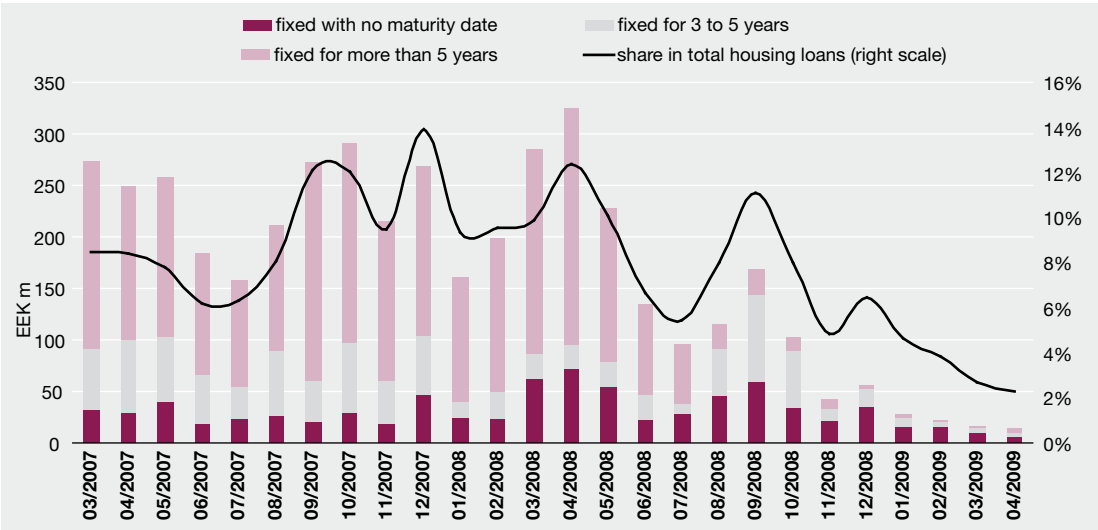

Figure 21. New housing loans with fixed interest rate

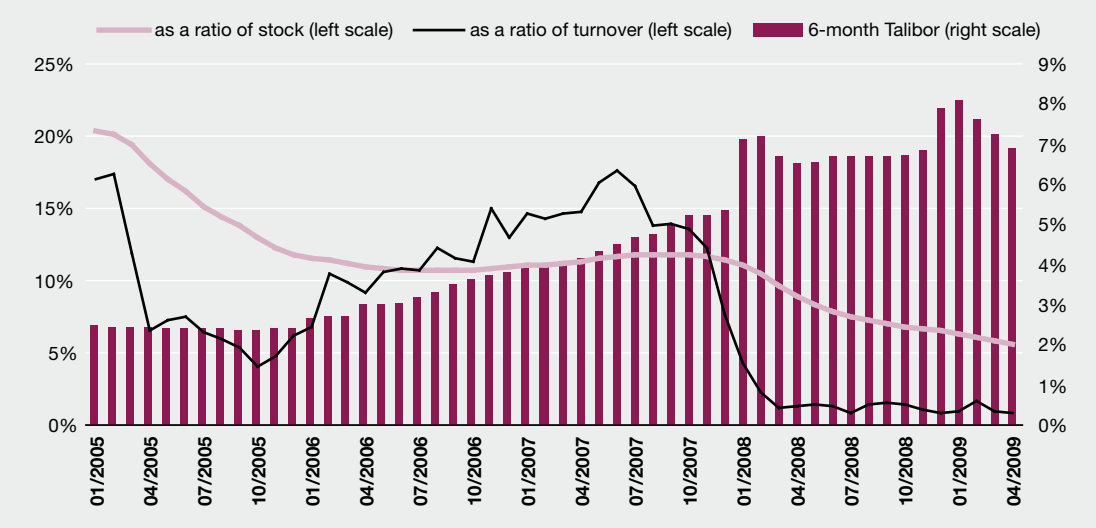

Figure 22. EEK housing loans as a ratio of total turnover and stock of housing loans

The low interest rates of the euro area will manifest themselves in the loan interests of Estonian households with a six-month lag; therefore, the positive impact of the interest rate drop had not yet fully revealed by the end of the first quarter. Considering different development scenarios, the total decrease in households' interest costs might amount to approximately 3 billion kroons in 2009.

WHAT IS A CREDIT CRUNCH?

One of the key questions in light of the global recession is the impact of banks' lending activities on the length and depth of the recession. Earlier experiences with economic busts has shown that deep and long-term recessions are usually accompanied by a considerable decline in the loan stock.[1] *A slowdown in credit growth partly reflects a decline in economic activity, but there are several transmission channels through which a sudden credit slowdown or a decrease in loan stock might deepen the recession. In order to describe lower lending activity of banks and tightening of loan conditions, the term 'credit crunch' is often used. The following tries to explain the meaning and underlying reasons of credit crunch as well as its impact on the economy.*

What is a credit crunch?

The term 'credit crunch' was coined in the United States in summer 1966 in reference to a credit market situation where there was a sudden decrease in the availability of credit and a tightening of lending standards.[2] Later, the term has been used quite loosely in business writings and in the media to describe a situation where loan interest rates have risen and credit conditions for borrowers have tightened.

The academic community has treated this term in different ways. Some authors and institutions have used it in a broader sense, referring to a decrease in credit supply; other have narrowed the meaning to describe credit rationing.[3]

Bernanke and Lown[4] have used 'credit crunch' in the broader sense of the term, defining it as *a significant leftward shift in the supply curve of bank loans, holding constant both the real interest rate and the quality of potential borrowers.* The International Monetary Fund has defined it rather similarly, as a *severe bank credit squeeze driven by a significant decline in the banking system's supply of credit*.[5] The definitions provided by Cantor and Wenninger[6] are similar to the above ones. According to them, credit rationing is one option to reduce credit supply and refers to a situation where banks base their decision to grant a loan not on the interest rate but on other lending criteria. Such criteria include the quality of the loan collateral or the level of self-financing, for instance.

Owens and Shreft have given a narrower definition for 'credit crunch', identifying it as a sharp increase in non-price credit rationing.[7] However, they do not classify a decrease in credit supply and the resulting increase in the interest rate, while other credit standards remain unchanged, as a credit crunch. The European Central Bank has given a relatively similar definition.[8]

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[1] Claessens, S., M. A. Kose and M. E. Terrones (2008). What Happens During Recessions, Crunches and Busts?, *IMF Working Paper*, 274.
[2] The term was first used by Sidney Homer and Henry Kaufman, economist at Salomon Brothers, to differentiate between the credit problems in 1966 from the episodes in the 1950s, which they did not regard that serious. The earlier terms used for such situations were 'credit squeeze' and 'credit pinch'
[3] The different types of credit rationing have been examined by Cantor and Wenninger (see Footnote 6).
[4] Bernanke, B. and C. Lown (1991). The Credit Crunch, *Brookings Papers on Economic Activity: 2*, Brookings Institution, pp 205–247.
[5] International Monetary Fund (2008). World Economic Outlook, April.
[6] Cantor, R. and J. Wenninger (1993). Perspective on the Credit Slowdown, *Federal Reserve Bank of New York Quarterly Review*, Spring, pp 3–36.
[7] Owens, R and S. Schreft (1995). Identifying Credit Crunches, *Contemporary Economic Policy*, 13, April, pp 63–76.

To sum up, the term 'credit crunch' denotes a general decrease in credit supply by banks a more specific case of a decrease in credit supply – a non-price credit rationing.

The underlying reasons for a credit crunch

A sudden decrease in credit supply may be triggered by various factors. One of the most common reasons is **problems with banks' own funds**, which usually reveal themselves in the period of recession. During a recession, it is natural that the number of borrowers unable to repay the debt increases. As a result, banks might face loan losses and lose some of their capital base. Since banks must comply with the capital adequacy requirement, they have two options in this situation: either to restrain lending or increase the equity capital. As obtaining additional resources might be complicated in the period of recession, banks rather reduce credit supply. Banks' credit supply can be reduced also if the expected loan losses do not pose problems with meeting the capital adequacy requirement but banks want to retain more equity capital.

Besides possible difficulties with obtaining equity capital, a credit crunch may be triggered **by difficulties with obtaining funds in the form of deposits and debt securities or loans**. The likelihood of the latter is quite high during a recession. In that case, banks are forced to limit the amount of loans issued.

A credit crunch may also be caused by some activities of a **government, central bank or a financial supervision authority**. In case state authorities set direct limits on credit growth or urge banks to reduce lending, a decrease in credit supply is quite natural. Moreover, a sudden and considerable rise in the minimum reserve requirement for banks inhibits the issuance of new loans.

Banks' lending depends on their **estimates to the borrowers' risk levels**. The larger the possibility of a future drop in the value of the collateral or a decrease in the customers' loan repayment ability, the more likely banks are to cut down on credit supply.

The impact of credit crunch on the economy

A credit crunch **inhibits private consumption and investment** as customers of the same risk level either have to pay a higher interest rate or comply with some other strict loan terms (such as the self-financing rate, the loan maturity or the quality of the collateral) to receive a loan. Consequently, private consumption and investment decrease.

A significant decline in credit supply **reduces, ceteris paribus, the value of the collateral (mostly real estate)**. Loan terms also depend on the rate of self-financing, which is why a decline in the value of loan collaterals increases the risk level of borrowers and thus decreases credit supply. This, in turn, results in a drop in the investment and private consumption of these customers. Furthermore, a fall in the price of assets (real estate and stock prices) restrains private consumption directly through the wealth effect.

A credit crunch might lead to a situation where companies that used to finance their activities with short-term loans cannot extend the loans and might experience difficulties

[8] European Central Bank (2003). A bank lending survey of the euro area, *Monthly Bulletin*, April.

with loan repayments. Consequently, **banks might face greater loan losses**, which might boost the credit crunch because loan losses decrease the capital adequacy of banks. There might be a vicious circle of the credit crunch leading to higher loan losses, which will, in turn, decrease the credit supply, and so on.

The transmission channels of a credit crunch

The impact of a robust credit crunch depends, inter alia, on the relative loan burden of companies and households as well as the relative importance of the banking sector in corporate and household financing. Credit supply plays an important role also in case the economy succumbs to a debt-deflationary spiral.

The impact of a credit crunch is the bigger the higher is the loan burden of companies and households. As said above, a credit crunch affects the economy through (1) a rise in the real interest rate; (2) a decrease in loan refinancing opportunities; (3) a tightening of credit conditions stemming from a decline in the loan collateral's value, and (4) a drop in private consumption as a result of a fall in asset prices. The loan burden of companies and households is directly related to the first three occasions. Since a bigger debt burden also entails higher interest costs, a rise in the real interest rate has a greater impact on private consumption and investment. The higher the relative debt burden of companies, the lower is the share of equity capital and the bigger the impact of a fall in collateral value on the level of equity capital; a lower equity-to-loan ratio, however, usually entails a rise in the interest rate on new loans. The higher the relative debt burden of companies, the bigger the impact of lower loan refinancing opportunities on the economic activities of companies, ceteris paribus.

A decrease in credit supply largely depends on the share of banks in corporate and household financing. The bigger the role of banks, the greater is the impact of a credit crunch. Usually, a credit crunch concerns small and medium enterprises for whom bank lending is often the only opportunity to obtain foreign capital and who therefore suffer the most from the decrease in credit supply.

In case the economy falls into a debt-deflationary spiral, a credit crunch may have greater influence. This happens when a fall in prices increases the real value of debt and debt owners, i.e. companies and households, try to repay the debt by selling their assets. Extensive sale of assets might lead to a drop in the value of assets and thus aggravate the general fall in the prices of goods and services. If the general price fall is bigger than the decrease in nominal debt, the debtors' wish to reduce the debt burden might, instead, entail a rise in the real value of debt. Getting out of that spiral is considerably easier if the investors with no or relatively low debt burden are able to obtain bank credit to purchase the low-price assets on sale.

II BANKING SECTOR STABILITY AND RISKS

Strategic development of the banking sector

Further economic adjustment over the last six months has manifested itself also in financial intermediation through a 127% of GPD decline in banks' credit portfolios (see Figure 1). Stock market capitalisation and investment fund assets decreased in 2008, whereas the first quarter of 2009 saw a slowdown in the decrease.

Although the different business strategies of banks have slightly changed their market shares – primarily the major players have lost some of their market share – the general market concentration has remained quite unchanged. The two largest banks comprise about two thirds of the credit market; the four major banks hold over 94% of the market.

In May 2009, a new player entered the Estonian banking market when LHV Group, who used to be engaged only in asset management, started to operate also as a commercial bank. In total, there are seven companies licensed as credit institutions, eleven branches of foreign credit institutions and around 250 cross-border banking service providers operating in Estonia.

Larger banking groups[1]

In the second half of 2008, several financial groups operating in Estonia witnessed the materialisation of credit risk owing to their positions in other credit institutions and unfavourable developments on the capital markets, which reduced groups' profitability. In the last two quarters, however, profitability was more affected by the provisions on loans issued to the non-financial sector (see Figure 2).

Although banks have increased loan margins, in the first quarter aggregate net interest margins decreased due to higher funding costs. Unlike in the second half of 2008, this year profitability has been supported by trading revenues. Groups have started to cut down on costs to cope with the difficult market situation, but so far this has not supported profitability sufficiently. Extensive write-downs of goodwill[2] and fees of participation in national support programmes have rather increased the operating costs of some groups.

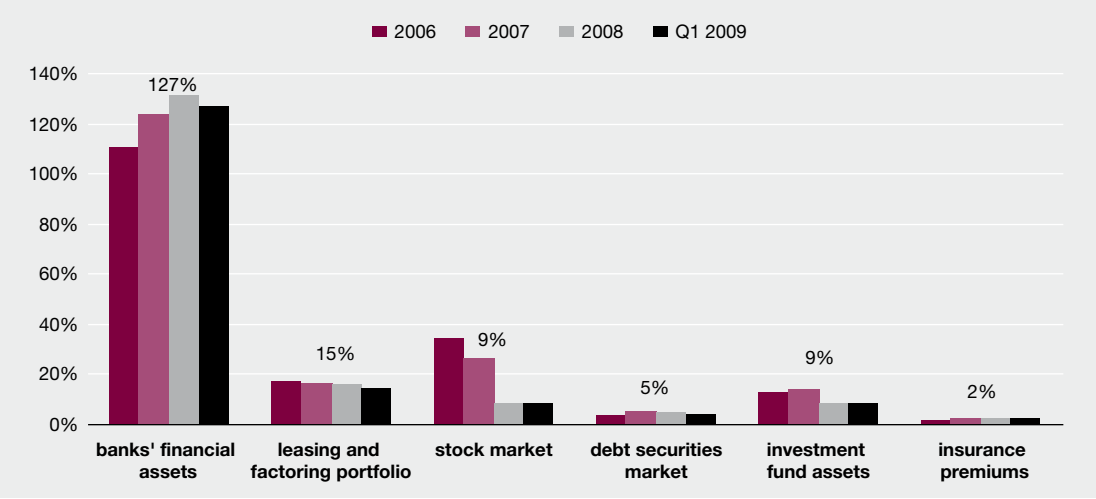

Figure 1. Structure of financial intermediation (% of GDP)

[1] The overview is based on the groups' public quarterly statements and concerns four major financial groups in Estonia on the consolidated basis of the entire group. In other words, the calculations include groups' activities in the Baltic States as well as other countries.
[2] Write-offs of goodwill are reflected in an increase in operating costs.

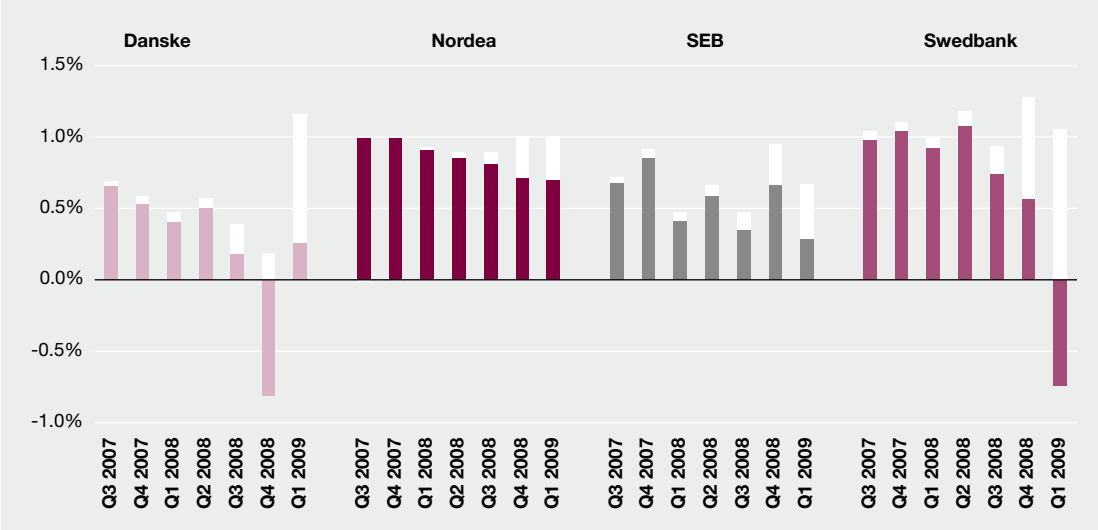

Figure 2. Real profitability of banking groups and potential profitability with loan provisions excluded

As the members of banking groups are closely integrated with each other, the cost of funds depends on fund providers' assessments of the risk level of the entire group. Several rating agencies and market players have considerably increased their risk assessments of some groups after the reporting of negative results. Although groups' risk profiles are quite similar, they have implemented different provisioning strategies, which means that the lower level of provisions of some periods need not necessarily mean that the assets of certain groups are of significantly higher quality, but rather points to differences in the financial accounting practices of different groups. Therefore, some market players who have reported (higher) operating profits may need to make bigger adjustments to the value of assets in the future.

Although the market situation is complicated, groups have been able to attract additional funds through deposits as well as other instruments. Guarantees provided by national support program-mes have been of help. In order to increase the level of capitalisation, the payment of dividends has been postponed or the ratio of profits to be paid out as dividends has been lowered. In addition, groups have issued new shares and taken subordinated loans.

Considering the future economic outlook in the operating region of the financial groups present in Estonia, several groups might report a loss in the near term. Strong capital buffers have so far helped the groups cope with the complicated market situation, but further unfavourable developments might force them to reduce the amount of outstanding assets or acquire additional capital.

FUNDING OF PARENT BANKS

The structure of funds acquired by Nordic banking groups differs by groups and, thus, the financial crisis has also affected banks' funding to a different extent. Nordea and SEB have a higher share of **deposits** and are relatively less dependent on market funding.

The Swedish government has raised the guarantee on bank deposits to 500,000 Swedish kronas and the Danish government has reported that all deposits are guaranteed in full. These measures have been taken to support the stability of that source of funding. However, in the past two quarters the share of deposits in banks' total balance sheets has changed (see Figure 3).

Tight competition has increased the cost of acquiring deposits for banks. Funding costs have also increased due to the increase in the share of time deposits.

The cost and availability of market funds is affected, among other things, by the rating given to a credit institution. Rating agencies have assessed the risk levels of the groups operating in Estonia differently (see Table 1).

Changes in **credit default swap** spreads have been similar: higher risk premiums have been asked for Swedbank and SEB.[3]

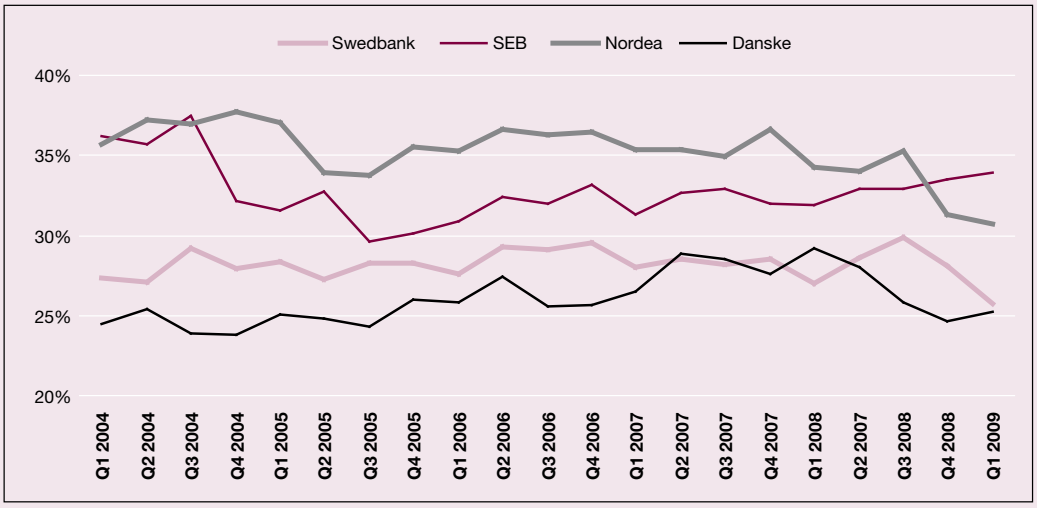

Figure 3. Share of deposits in total balance sheets

Source: public reports of banks

Table 1. Ratings of Nordic banks

	Standard & Poor's		Moody's			Fitch	
	Long-term	Change*	Long-term	Change*	Financial strength	Long-term	Change*
Nordea	AA–	-	Aa1	-	B	AA–	-
Svenska Handelsbanken	AA–	-	Aa1	-	B	AA–	-
DnB NOR	AA–	-	Aa1	-	B–	A+	-
Danske	A+	↓	Aa3	↓↓	C	A+	↓
SEB	A	↓	A1	↓↓	C–	A+	-
Swedbank	A	-	A1	↓	C–	A	↓

* Change since last *Financial Stability Review* (autumn 2008). "-" no change, "↓" ratings downgraded by one notch, "↓↓" ratings downgraded by two notches.

Source: rating agencies

[3] However, the market might be quite thin and illiquid for single institutions, which is why this indicator should be treated with some reservation.

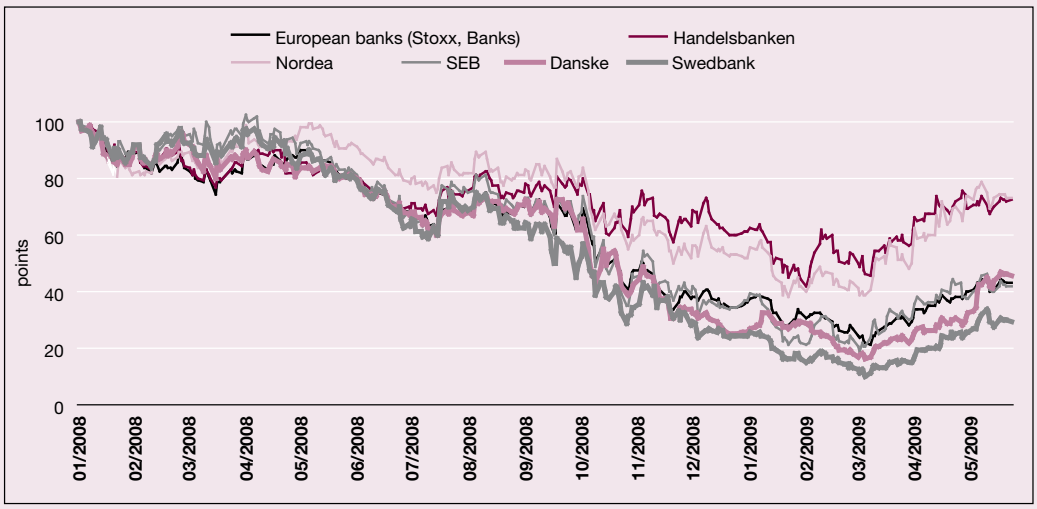

Figure 4. Stock price dynamics of Nordic banks (2/1/2008 = 100)

Moreover, investors perceive differences between Nordic banking groups to have increased also on the **stock market**. The outlook for Swedbank is regarded as the most pessimistic, whereas Nordea and Svenska Handelsbanken are regarded much more optimistically (see Figure 4).

Most of the banks' activities that are not covered with deposits are funded on **bond markets**, more particularly on the Swedish and Danish covered bond markets, as concerns the major groups also operating in Estonia. Due to financial crisis, the availability of credit (in particular long-term funds) on the markets became problematic, governments started to provide different **guarantee programmes** to banks to support functioning of the markets. Swedbank has joined Sweden's guarantee programme and is already issuing bonds under that programme. SEB reported of joining the programme in April. The cost of using Sweden's guarantee is 50 basis points plus the bank-specific risk premium. Thus, wholesale funding is still complicated and banks make active use of national support measures to raise necessary funds.

In the current market situation, the prices of **bonds** issued by banks are considerably more affected by the collateral of bonds. Market demand presists for bonds with the highest ratings. Bonds with Sweden's and Denmark's sovereign rating are also in demand, as they automatically receive the highest rating AAA. Bonds with weaker or no collateral, on the other hand, seem risky for market participants and thus demand is low.

Greater tensions on the **interbank money market** have eased and liquidity, indicated by the spread between the interest rate on the interbank money market and the expected key interest rate, has improved notably. In Sweden, this indicator reached the levels recorded at the beginning of 2008 already in mid-February, pointing to somewhat smaller tensions in the Swedish interbank money market (see Figure 5).

Central banks' alleviating measures to provide credit for banks (for instance, by loosening the criteria for acceptable collaterals) have given banks an alternative to financial markets in the turbulent times and banks intend to continue using these measures.

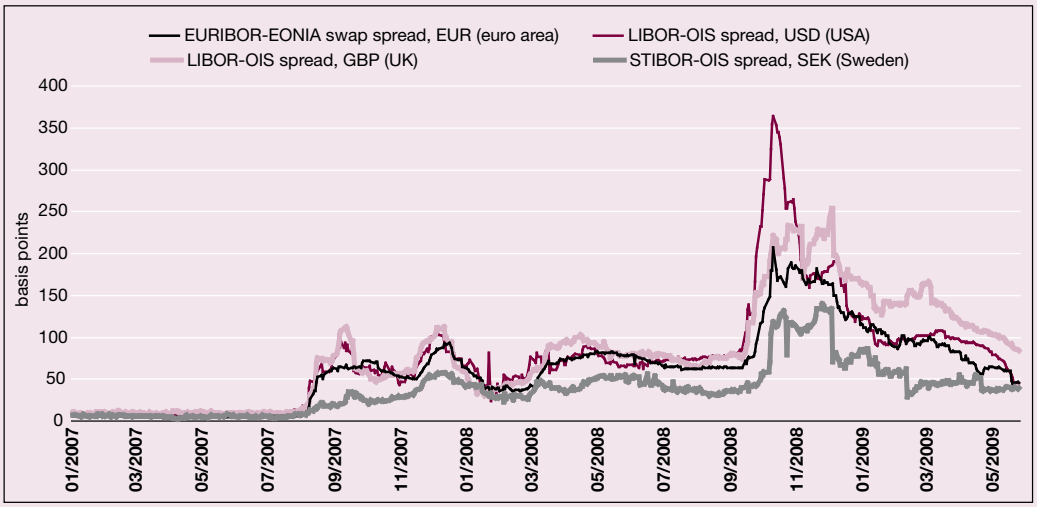

Figure 5. Liquidity in the interbank market (LIBOR-OIS spread)

Source: Bloomberg

Quality of assets

The sudden deterioration of the economic situation and outlook, rapid rise in the interest margin and tightening of credit terms led to a decrease in the **financing portfolio** of both the households and companies (see Figure 6). At the end of April, banks' loan and leasing stock totalled 276 billion kroons, having grown 1.3% year-on-year. The financing portfolios started to decrease in November 2008 and have shrunk 3.1% over the past six months. The decrease has been broad-based, concerning all types of loans.

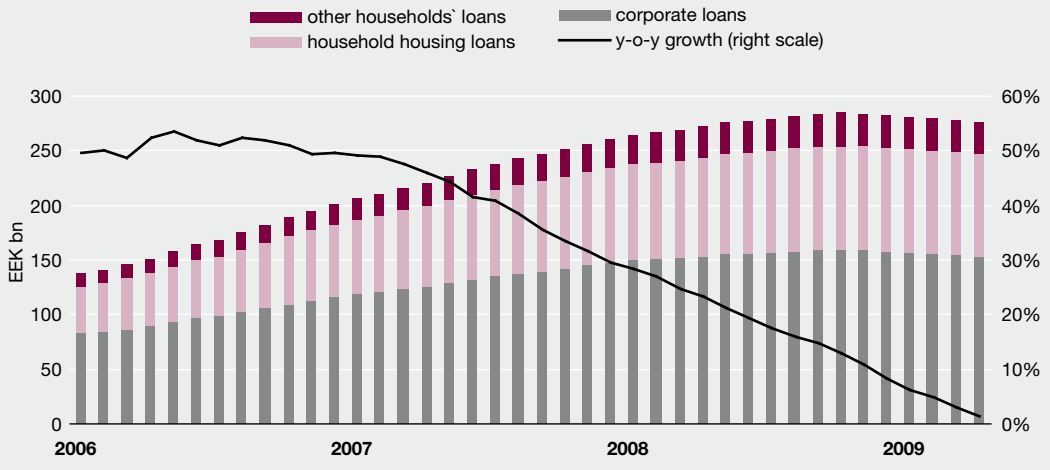

Figure 6. Stock and annual growth of real sector loan and leasing portfolio

Although the financing portfolios have diminished, the structure of the portfolios has not changed considerably over the year (see Figure 7).

Neither has the structure of **loan collaterals** changed much (see Figure 8). At the end of the first quarter of 2009, 77.3% of the loans issued to the non-financial sector were mortgage-backed (78.3% at the end of the first quarter of 2008). At the same time, loans without collateral constituted 8.4% of the total stock of loans and leases issued to the non-financial sector (6.4% at the end of the first quarter of 2008).

The sudden deterioration of the economic situation has also affected the quality of loans. At the end of April 2009, **loans overdue for more than 60 days** accounted for 5.2% of the total portfolio of non-financial sector loans (1.3% a year ago). The stock of overdue loans surged

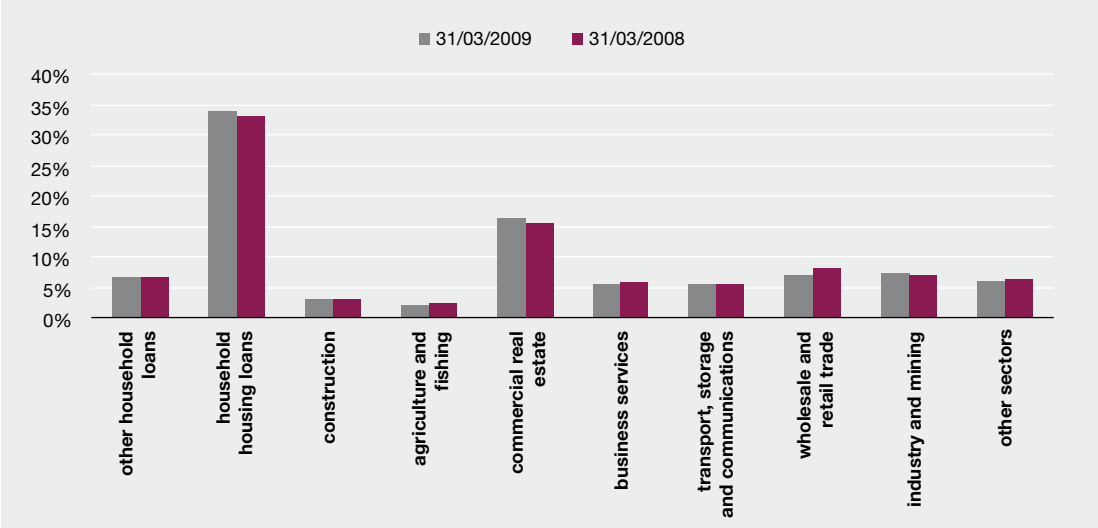

Figure 7. Structure of loan and leasing portfolio by sectors

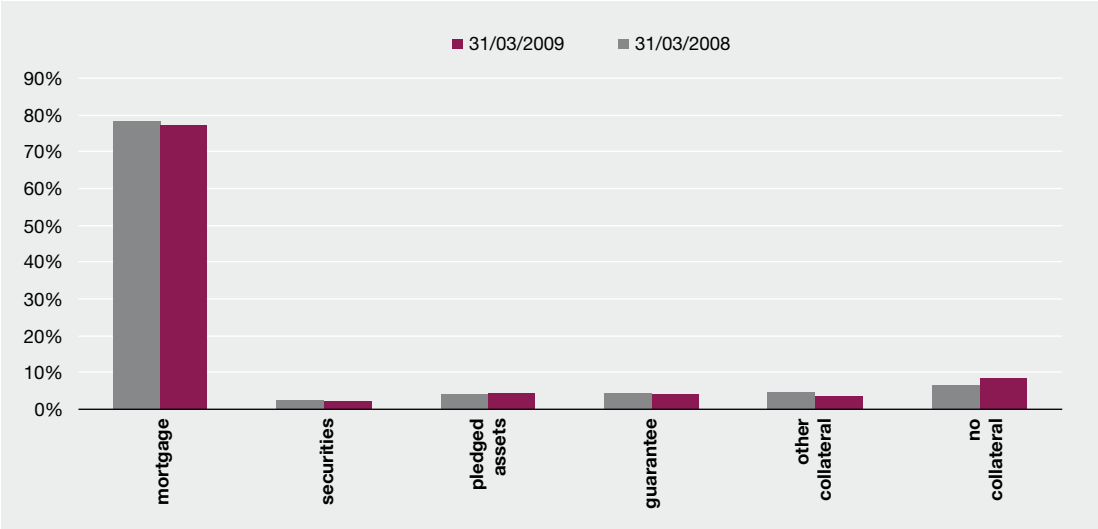

Figure 8. Loan collaterals by type

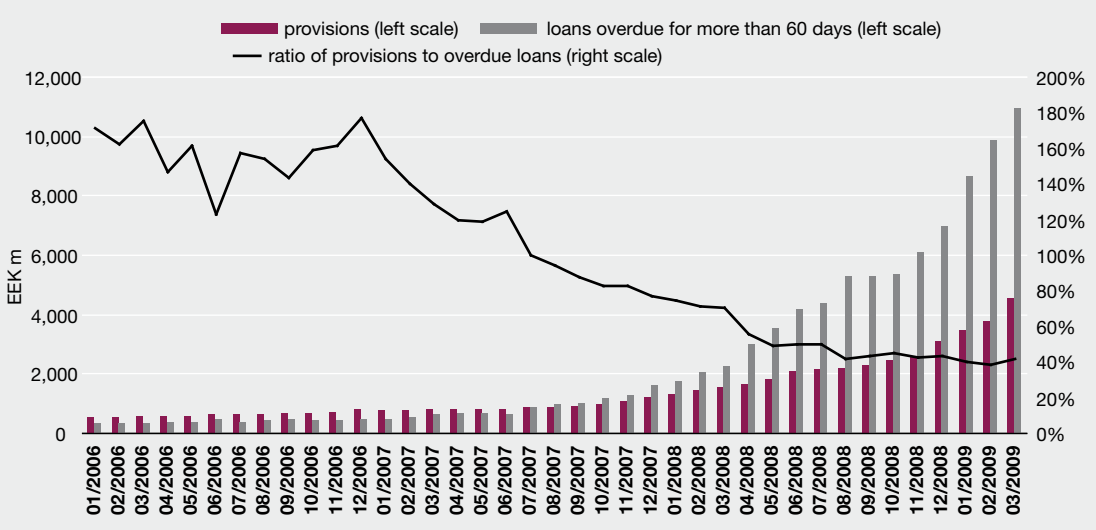

Figure 9. Overdue loans and provisions

particularly at the beginning of 2009: by over a billion kroons per month (see Figure 9).

The quality of loans granted to the business sector has deteriorated the most over the past year. At the end of April 2009, loans overdue for more than 60 days comprised 6.4% of the total corporate loan portfolio (2.4% in September 2008 and only 1.4% in April 2008). By fields of activity, the sectors of commercial real estate and construction have the most overdue loans: 18.7% and 7.9% of the total loan stock, respectively (see Figures 10-11).

The loan stock of these sectors constitutes nearly 40% of the total stock of loans issued to the corporate sector.

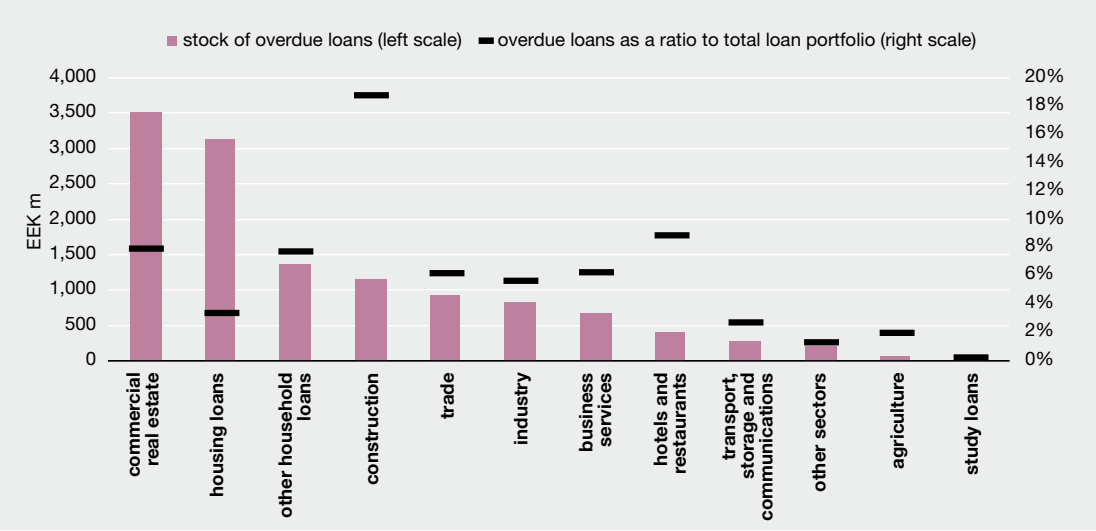

Figure 10. Stock of loans overdue for more than 60 days and ratio of such loans to sector's total loan portfolio as at 30/4/2009

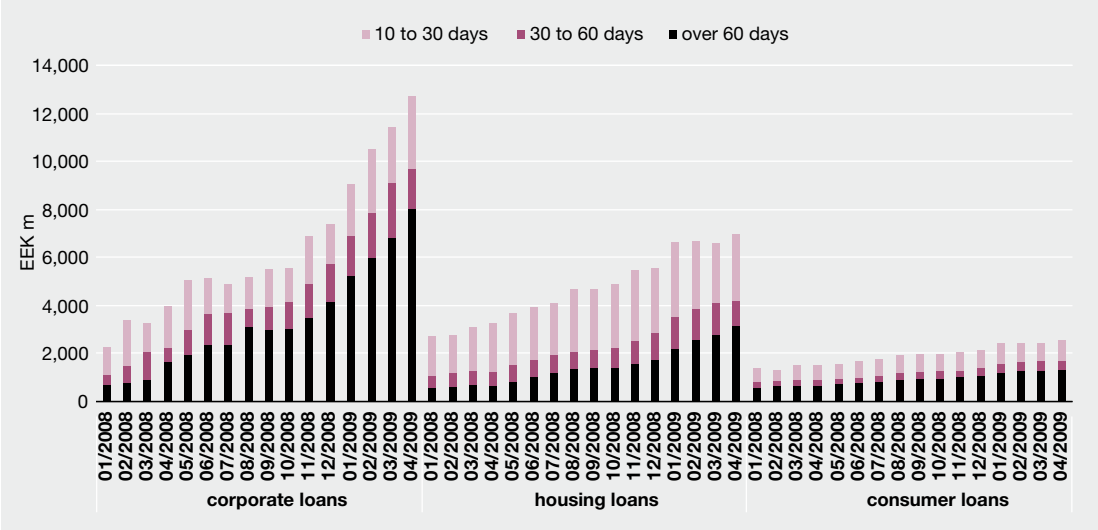

Figure 11. Overdue loans by type and length of delay

Also the quality of housing loans has deteriorated considerably. At the end of April 2009, 3.3% of total housing loans were overdue (0.7% in April 2008). However, the percentage of overdue loans is still the largest among consumer credit, reaching 7.7% at the end of April 2009 (3.9% in April 2008). Approximately 36% of the overdue consumer loans of households have been issued by one non-systemic credit institution. As regards other credit institutions, the percentage of overdue consumer and other loans is significantly smaller. Household consumer credit accounts for 9.1% of the total stock of non-financial sector loans and leases.

The cooling of the economy and the resulting low demand for the abundant new property built during the recent real estate boom has led to supply exceeding demand. The transaction activity is low and prices of both the commercial real estate and dwellings dropped rapidly in the first quarter of 2009. Consequently, more and more real estate companies are facing difficulties. According to the Land Board, the prices of two-room apartments in Tallinn have declined nearly 50% from the record highs in April 2007. Thus, the affordability of real estate (i.e. the ratio of average apartment prices and average gross wages) is approaching the level of 2004. Even though real estate is now more affordable, the recovery of the real estate market requires a considerable increase in consumer confidence.

The rapid decline in loan quality and negative future outlook has affected the ratio of loan **provisions**. At the end of April 2009, the banks operating in Estonian had made provisions in the total amount of 4.9 billion kroons (see Figure 12). Nearly two thirds of that was specific provisions (see Figure 13). General provisions constitute only 25% of total provisions made in Estonia. A considerable amount of provisions have been made in the parent banks to take into account the potential future losses in the Baltic States (see *Section Larger banking groups*). Provisions increased in the last two quarters, totalling 2.3 billion kroons. At the end of April, provisions constituted 39% of the loans overdue for more than 60 days.

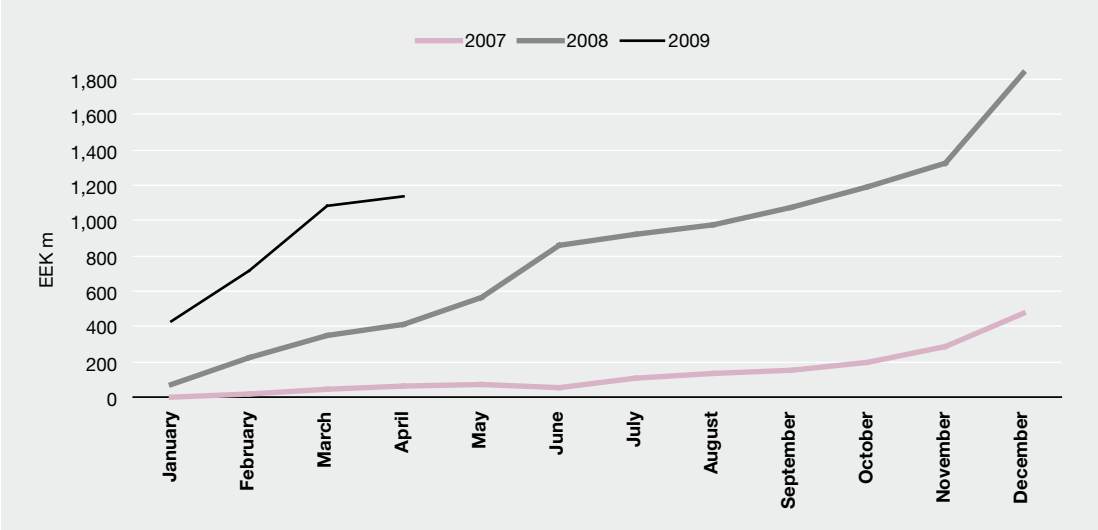

Figure 12. Cumulative loan losses (change in provisions)

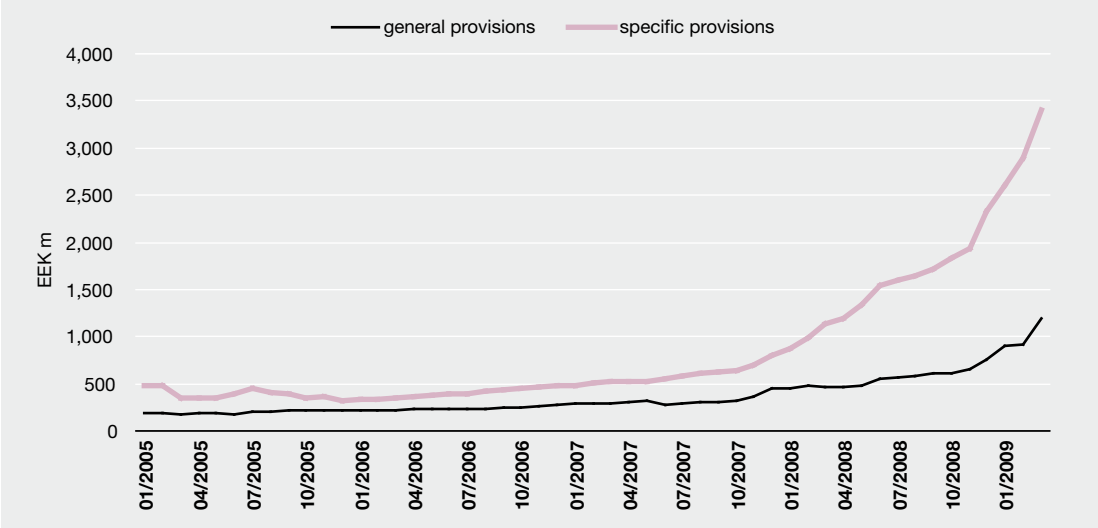

Figure 13. General and specific provisions

In 2008, the banks operating in Estonia wrote off 114 million kroons of loans and received 242 million kroons of claims previously removed from the balance sheet (see Figure 14). In the first quarter of 2009, the banks had written off 86 million kroons of loans and they collected 59 million kroons of claims previously written off.

The recession has also affected the **consolidated loan portfolio of groups** in terms of overdue loans and provisions.

The percentage of loans overdue for more than 60 days rose from 0.8% to 5.7% over the year. Nearly half of that added in the first quarter of 2009, when the stock of loans overdue for more

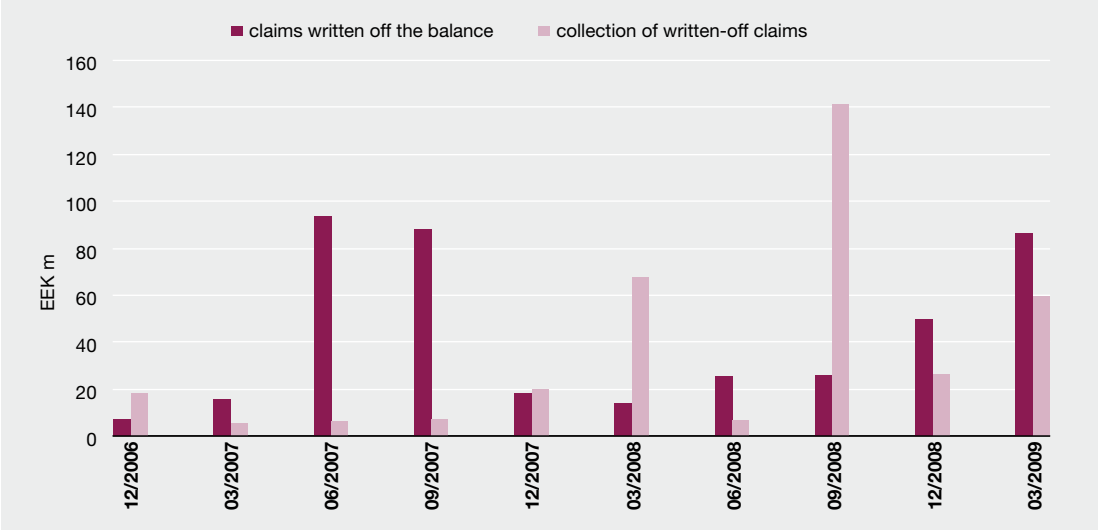

Figure 14. Claims written off the balance sheets of banks and collection of written-off claims

than 60 days increased by around 9 billion kroons in terms of banking groups. The overdue loans of Estonian residents comprised only 27% of that. Rapid growth in overdue loans and weak future outlook affected provisioning also at the group level. At end-March, provisions constituted 3% of the consolidated loan portfolio; that is about three times more than a year before. Strong growth in overdue loans has lowered the ratio of provisions to loans overdue for more than 60 days to 52.4%.

STRESS TEST OF THE BANKING SECTOR

Estonia's domestic demand started to shrink already two years ago – in spring 2007. In the second half of 2008, the external environment deteriorated suddenly and caused a rapid decline of the Estonian economy. The baseline scenario of Eesti Pank's spring forecast expects a 12.3% contraction in 2009. If the external environment does not improve any time soon, the decrease will continue also in 2010. A new growth cycle is anticipated in 2011.

Investment, which was in previous years boosted by a favourable financing environment and optimistic future outlook, usually responds to changes in economic conditions relatively sharply. Given that the economic situation has changed drastically, the banks operating in Estonia have become more cautious in terms of lending, despite the high level of capitalisation in international comparison.

Macroeconomic assumptions and future estimates of overdue loans

The loan losses of the Estonian banking sector are likely to grow considerably in the coming years. However, the forecast relies on the assumption that parent banks are continuously interested in the Estonian market and therefore will not change their current financing strategy. The baseline scenario of Eesti Pank's **forecast**

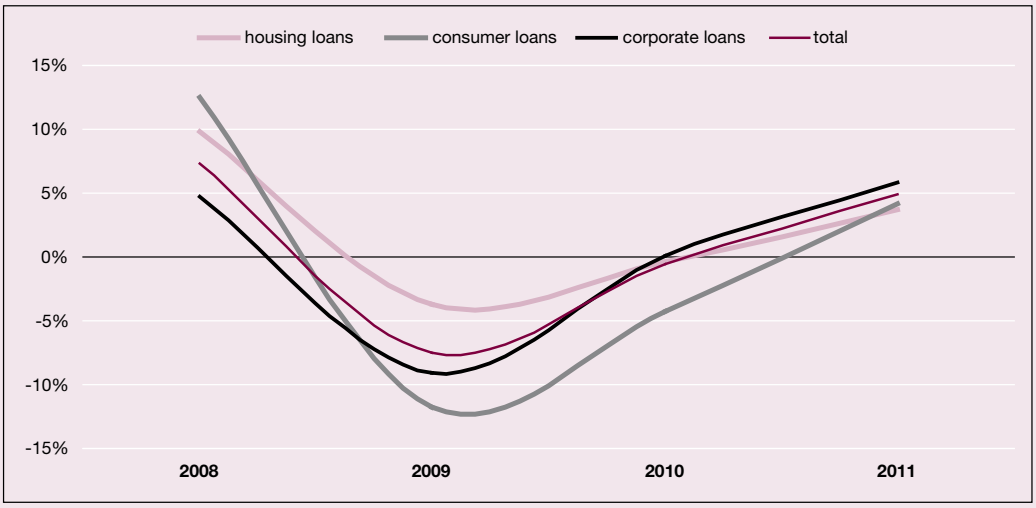

Figure 15. Credit growth based on the forecast baseline scenario

expects negative credit growth for 2009 as well as 2010: –7.5% and –0.5%, respectively (see Figure 15). Growth will be positive again in 2011 (4%). The percentage of overdue loans in the total loan portfolio will peak in 2009 at 9%. The share of overdue consumer credit will reach a record high of 23% in 2010 (see Figure 16).

Based on the risk scenario of Eesti Pank's spring forecast, global economic problems will lead to a longer recession. If the global economic decline continues for a longer period, it will entail a very weak external demand for Estonia. Besides modest exports, the business sector will be facing more difficulties in including foreign capital, which will, in turn, inhibit the necessary structural reforms. The risk scenario anticipates a 15.3% and 4.6% contraction in 2009 and 2010 in real terms, and a 1.9% growth in 2011. Nominal growth in non-financial sector loans will be –8.8%, –6.5% and –4.3%, respectively. Overdue loans will account for 10.5% of the total loan portfolio at the end of 2009 and will start to decrease after that.

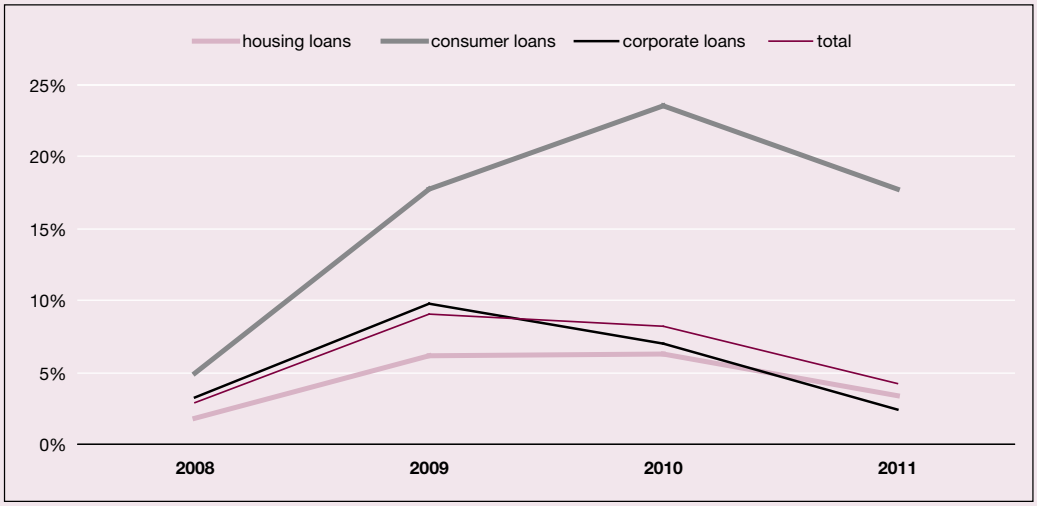

Figure 16. Changes in overdue loans based on the forecast baseline scenario

Available capital buffers

Considering the capital buffers of the Estonian banking sector, banks could have written off over 9 billion kroons of loans (6% of total portfolio) as at end-March 2009 and still comply with the 10% capital adequacy requirement on an aggregate basis (see Table 2).[4] However, writing off 26 billion kroons, i.e. 15.9% of the loan portfolio, would bring the capital adequacy ratio to 0%. In fact, banks are holding even larger buffers for coping with difficult times – in addition to the capital buffers included in the present analysis there are also the provisions made by parent banks to cover the risks.

Aggregate stress test

The aggregate stress test is based on the spring forecast of Eesti Pank and the model for the stress test of the banking sector. This model enables to analyse the developments of overdue loans and loan losses in terms of banks and loan types. Besides the inputs used for the model, the aggregate stress test takes into account a few additional assumptions regarding banks' profitability and rate of loan losses.

According to the aggregate stress test, **profitability** is lower in 2009 compared to previous years. Based on the baseline scenario of the spring forecast, the banking sector will earn 3 billion kroons of pre-loss profits in 2009 in total.

The risk scenario foresees that the income of banks will suffice only for covering the current expenditure, and there will not be any pre-loss profits.

Table 2. Available capital buffers

	Buffers (EEK bn))	Share in portfolio (%)
10% capital adequacy	9.6	5.8
8% capital adequacy	13.0	7.8
4% capital adequacy	19.7	11.9
0% capital adequacy	26.4	15.9

Figure 17. Factors shaping capital buffers

[4] The aggregate indicator includes only a part of Swedbank's capital for covering risks in the Baltic States so as to reflect only the risks taken in Estonia.

Considering the more conservative assumptions used in the stress test, the baseline scenario has applied a 45% LGD ratio for loan loss calculation. For the risk scenario, a 60% LGD ratio has been used.

Taking into consideration the above criteria, the **Estonian banking sector will meet the capital adequacy requirement on an aggregate basis in 2009** in the baseline and also in the risk scenario (see Figure 17). Loan loss provisions will constitute 2.8% and 4.6% of the total loan portfolio of banks in 2009, according to the baseline and risk scenario, respeively. Total loan loss provisions will account for 4.4% and 6.2% of the aggregate portfolio, respectively.

Capital adequacy

On 1 March 2009, Swedbank obtained authorisation from the Financial Supervision Authority to apply the new Internal Ratings Based approach (IRB) for calculating the capital requirement for credit risk within the capital adequacy framework (Basel II).

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 be over by 2010 and the volume of IRB-based risk-weighted assets is expected to decrease further, which will increase the average capital adequacy ratio of banks.

Changes in banks' own funds and risk-weighted assets are presented in Table 3.

Table 3. Changes in risk-weighted items

	June 2008	July 2008	Sept 2008	Dec 2008	Mar 2009
Tier I own funds	24.2	24.2	24.3	24.4	27.2
Tier II own funds	10.7	10.7	10.7	10.8	10.8
Deductions	0.2	0.7	0.3	0.3	0.9
Own funds in capital adequacy calculation	34.6	34.2	34.7	34.9	37.1
Credit risk	178.2	161.9	152.1	150.7	141.4
Other risks	3.3	3.7	5.8	5.1	5.4
Operational risk	8.5	7.0	7.1	7.1	7.2
Addition to risk weighted assets arising from transition period	0.0	15.1	24.4	22.1	13.3
Risk weighted items	190.1	187.7	189.4	185	167.3
Banking sector average capital adequacy	18.2%	18.2%	18.3%	18.9%	22.2%
Lowest capital adequacy indicator	14.2%	14.1%	14.9%	15.4%	16.2%

The **average capital adequacy** of the banking sector has been increasing since 2005 and reached 22% at the end of April 2009 (see Figure 18). Thus, banks' average capital adequacy is over two times higher than the 10% minimum required in Estonia. This shows that banks have strong buffers for loan losses on an aggregate basis (see also background information *Stress test of the banking sector*).

In the last quarters, the capital adequacy ratio has increased mainly owing to a decrease in risk-weighted assets and an increase in Tier I own funds.

In the first quarter of 2009, Tier I **own funds** grew by nearly 3 billion kroons. Most of that were retained earnings from previous periods included in own funds after the audits of annual reports.

Risk-weighted assets decreased primarily as a result of a decline in the capital requirements for credit risk. The capital requirements for operational and other risks did not change considerably. The capital requirement for credit risk is necessary in case the counterparty of the bank fails to meet its liabilities and the loan collateral is not sufficient to cover the claim. Credit risk is the biggest of banks' total risks and concerns nearly all loan products. In the first quarter of 2009, the capital requirements for credit risk decreased by 9.3 billion kroons in total, and by nearly 37 billion kroons over the past three quarters. The net portfolio[5] of non-financial sector loans and leases granted by banks did not change significantly during the period under observation. Risk-weighted assets declined mainly due to the adoption of more sophisticated methods for capital requirement calculation by two major banks. The current restrictions for the decline in risk-weighted assets set for the transition period will be eliminated in 2009. Consequently, the volume of risk-weighted assets will decrease further, which will, in turn, increase the average capital adequacy ratio of banks.

Considering the current phase of the economic cycle, the timing of the transition to new methods for capital adequacy calculation under Basel II is relatively suitable. By using more specific methods, banks' risk-weighted assets will decline and there will be free capital available. If this capital is used as a buffer for potential loan losses, such a countercyclical process contributes to ensuring financial stability.

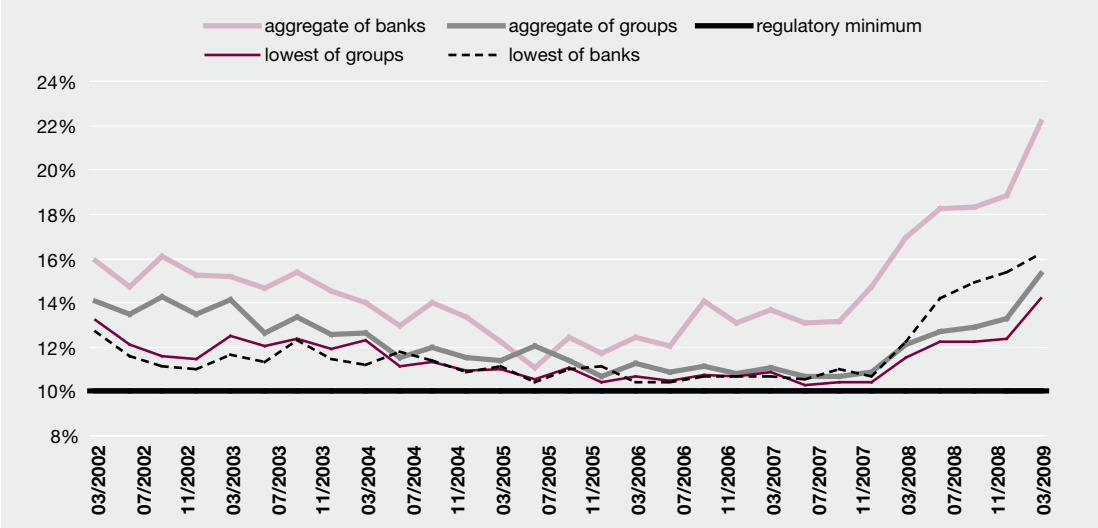

Figure 18. Capital adequacy of banks and banking groups

[5] The net portfolio of non-financial sector loans and leases = the stock of non-financial sector loans and leases – provisions for loans.

Liquidity

The amount of customer deposits has been sufficient in the past quarters to meet the lower demand for credit. Therefore, banks did not have to acquire significant amounts of additional funds from their parent banks (see Figure 19).

The slight outflow of deposits to institutions with a higher rate of guaranteed deposits that occurred in autumn 2008 subdued soon after the harmonisation of the guarantee rates.[6] In the last quarters, the deposit market has been primarily shaped by customers' price sensitivity: institutions providing higher deposit interest rates have also increased their customer base. Nevertheless, markets shares have changed by only a few percentage points, which shows that customers are relatively loyal (see Figure 20).

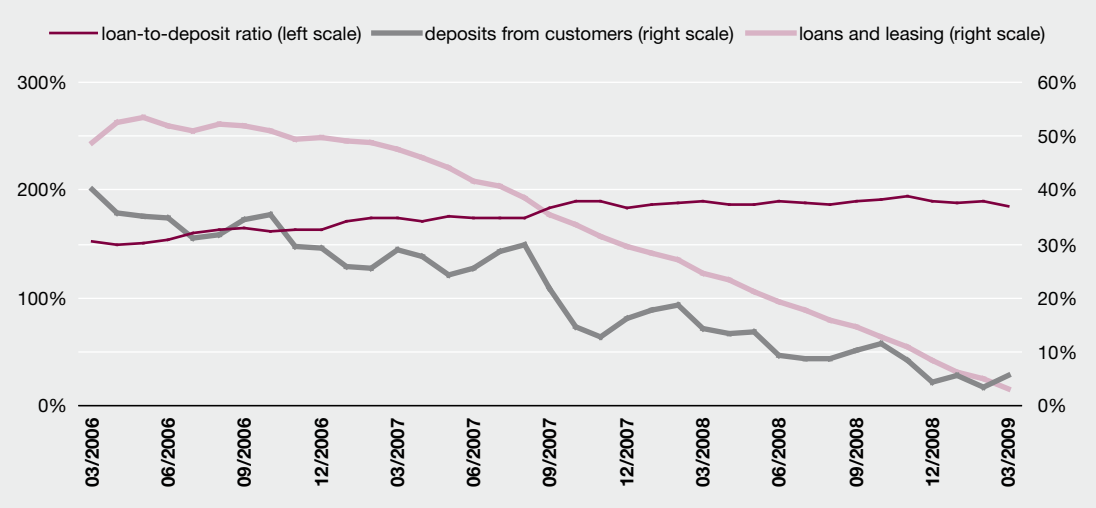

Figure 19. Loan-to-deposit ratio and year-on-year loan, leasing and deposit growth

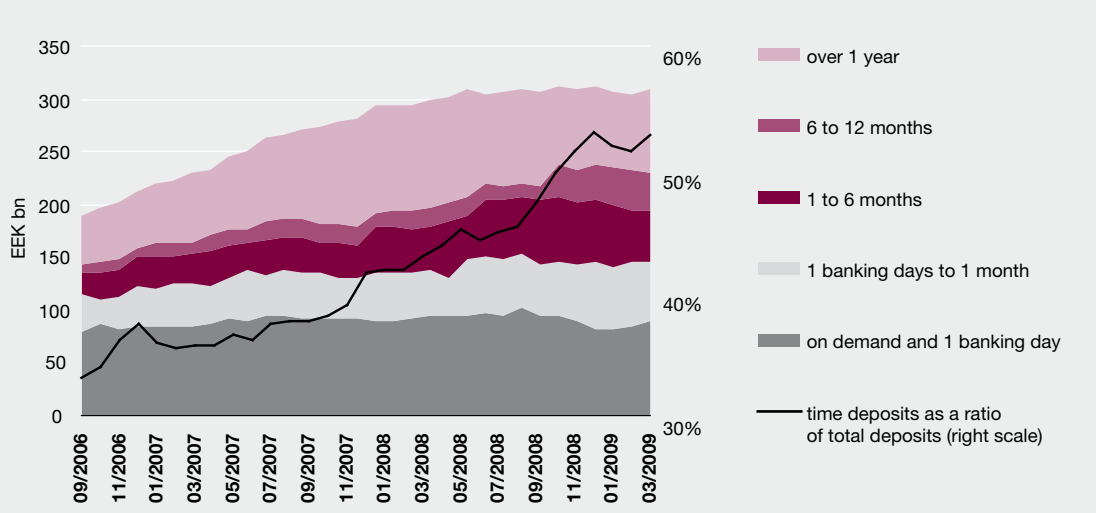

Figure 20. Banks' liabilities by remaining maturity and time deposits as a ratio of total deposits

[6] On 9 October 2008, the maximum amount of guaranteed deposits was raised to 50,000 euros (782,330 kroons) in most EU countries, including Estonia. In addition, the share of guaranteed deposits was raised from 90% to 100% within the 782,330 kroons limit.

Competition in the deposit market and customers' price sensitivity have facilitated growth in **time deposits**, which has a favourable impact on banks' liquidity positions[7] but has also increased the cost of funding for banks (see also Section *Profitability*).

The subsidiaries and branches operating in Estonia **manage liquidity** mostly centrally, **through parent banks**. As the maturities of funds received from parent banks keep shortening, local banks are increasingly more dependent on the availability of funds from parent banks (see Figure 21).

Given the higher risk sensitivity of customers in the current economic situation, the primary liquidity risk of the banking sector can be managed with the help of the requirement of liquid assets, which was increased to 15% in Estonia on 1 September 2006. However, considering that customers are entitled to require redemption of deposits on a very short notice, it is still vital that credit institutions assessed the increased risks adequately and ensured the availability of sufficient liquid funds to satisfy the potential claims.

Profitability

The profitability of banks has been affected mainly by the need to adjust the value of loan portfolios in line with the changed risk assessments. Profitability has suffered also from a decrease in interest incomes and fee and commission incomes, which has resulted from the general decline in economic activity. Banks have started to cut down on costs, but the cuts have not been as extensive as the decrease in incomes.

The credit institutions and branches of foreign banks operating in Estonia have had to make considerable adjustments to the value of assets. Consequently, most of them operated at a loss in the first quarter of 2009. Still, the total **loss of the banking sector** was only 0.4 billion kroons (see Figure 22).

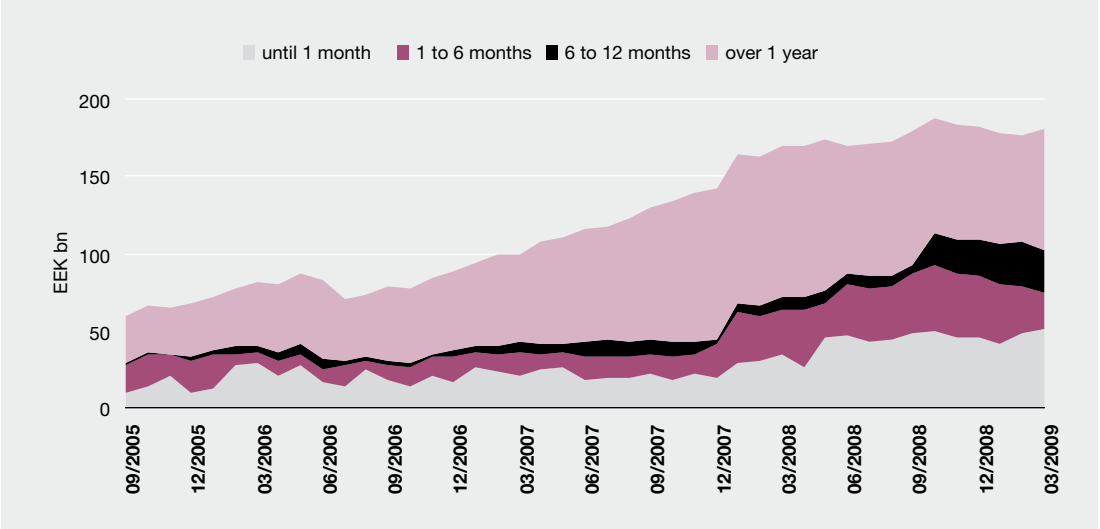

Figure 21. Banks' liabilities to external creditors by remaining maturities

[7] The terms and conditions of time deposits differ across banks. In some banks, customers can terminate the deposit contract also during the period of depositing and require early payment of the deposited funds, giving up only the accrued interest.

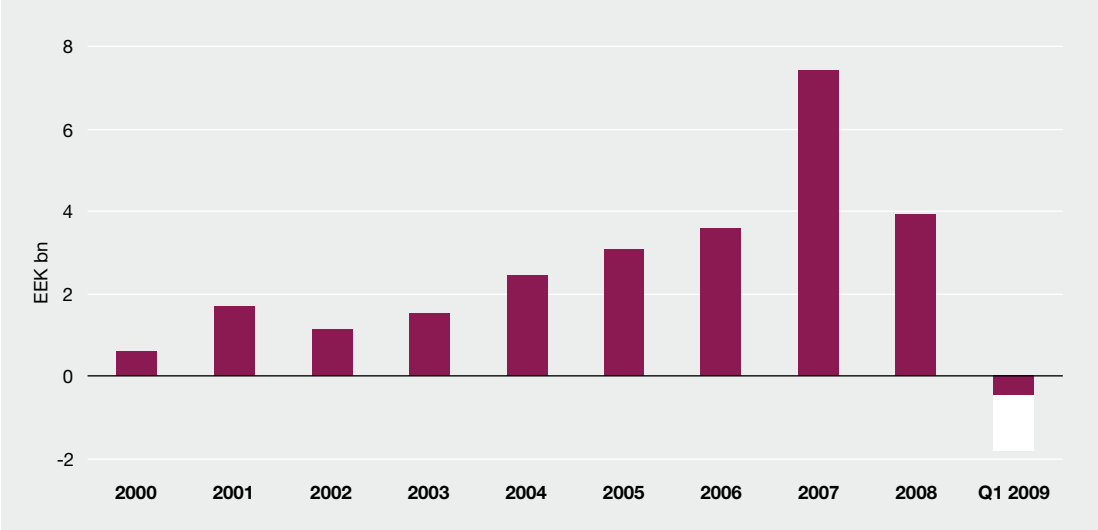

Figure 22. Banks' annual profit and Q1 2009 results (y-o-y)

As regards the total of **banking groups**,[8] the first-quarter loss stood at 1.4 billion kroons. Considering the relatively strong profitability in previous periods, the **return on equity** for the last four quarters still remained over 8.7% in the case of banks and 8.8% in the case of groups (see Tables 4-5). Although the fall in profits has been rapid and broad-based, the average profitability of the previous periods has been even over 30%, which has enabled banks to build up reserves for difficult times.

Since the economic situation has deteriorated, also credit risk is currently more likely to materialise. Given that a growing number of customers are facing difficulties with loan repayments, banks have started to make more **downward adjustments** to the value of loan portfolios. In total, the value of loans issued in Estonia was written down by 1.6 billion kroons in terms of banks and by 3.7 billion kroons in terms of groups in the first quarter (see Figure 23).

Table 4. Profitability of banks

	31/12/ 2007	31/03/ 2008	30/06/ 2008	30/09/ 2008	31/12/ 2008	31/03/ 2009
Average return on assets in the past four quarters	2.6%	2.4%	1.7%	1.6%	1.2%	0.8%
Return on assets in a quarter (x 4)	1.8%	1.1%	2.0%	1.4%	0.3%	-0.5%
Average return on equity in the past four quarters	30.2%	27.0%	18.4%	17.2%	13.6%	8.7%
Return on equity in a quarter (x 4)	21.1%	13.2%	20.7%	14.5%	3.5%	-5.3%
Net profit in the past four quarters (EEK bn)	7.4	7.1	5.2	5.1	4.0	2.6
Net profit of the quarter (EEK bn)	1.4	0.9	1.6	1.2	0.2	-0.4
Net write-downs of assets in a quarter (EEK bn)	-0.3	-0.4	-0.5	-0.3	0.8	-1.5

[8] Includes only the data of banks and groups licensed in Estonia, whereas the data of branches of foreign banks have been excluded. The comparative data on groups does not include Danske Group who has been operating as a branch in Estonia since the second quarter of 2008.

Table 5. Profitability of banking groups

	31/12/ 2007	31/03/ 2008	30/06/ 2008	30/09/ 2008	31/12/ 2008	31/03/ 2009
Average return on assets in the past four quarters	2.3%	2.1%	2.0%	1.9%	1.4%	0.8%
Return on assets in a quarter (x 4)	2.3%	1.6%	1.9%	1.7%	0.5%	-1.1%
Average return on equity in the past four quarters	29.3%	26.9%	25.0%	22.6%	16.8%	8.8%
Return on equity in a quarter (x 4)	29.2%	19.7%	22.6%	19.2%	5.6%	-12.2%
Net profit in the past four quarters (EEK bn)*	9.9	9.7	9.6	9.2	7.1	3.8
Net profit of the quarter (EEK bn)*	2.7	1.9	2.4	2.1	0.6	-1.4
Net write-downs of assets in a quarter (EEK bn) *	-0.4	-0.7	-0.8	-0.7	-1.7	-3.7

* Excluding data of Danske Group.

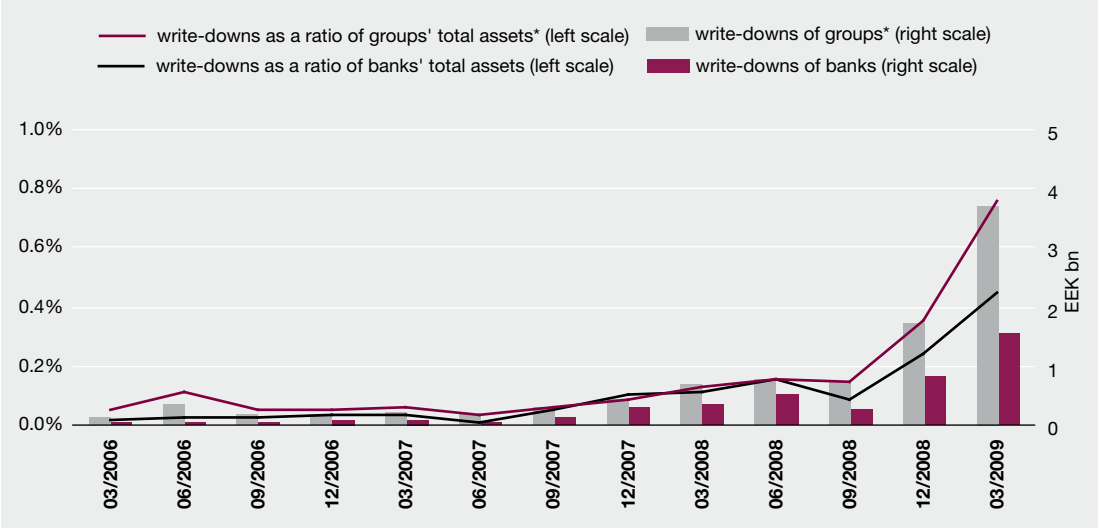

Figure 23. Write-downs of assets of banks and banking groups at the beginning of period

* Data of groups does not include Danske Bank.

The provisioning practices vary greatly by banks. However, the extensive asset write-downs of some credit institutions need not necessarily indicate substantial differences in their loan quality compared to other groups. It rather points to differences in the financial accounting practices of different groups. In some cases, part of the provisions made for covering the credit risk of loans issued in the Baltic States has been recorded in the group's parent bank in Sweden and do not appear in local statements.

Although the asset write-downs have been the most volatile component of banks' profitability of the previous quarters, in the first quarter of 2009 the **operating profits before write-downs** were 12% lower in the case of banks and nearly 15% lower in the case of groups, year-on-year.

The extensive interest rate cuts by central banks have entailed a **decline in the net interest margin** for banks (see Figures 24-25). The difference between the prices of assets and liabilities is affected, among other things, by the percentage demand deposits in the total liabilities, as the interest rate on these deposits is lower. Thus, if key interest rates are reduced, the advantage of quite low funding costs dimin-

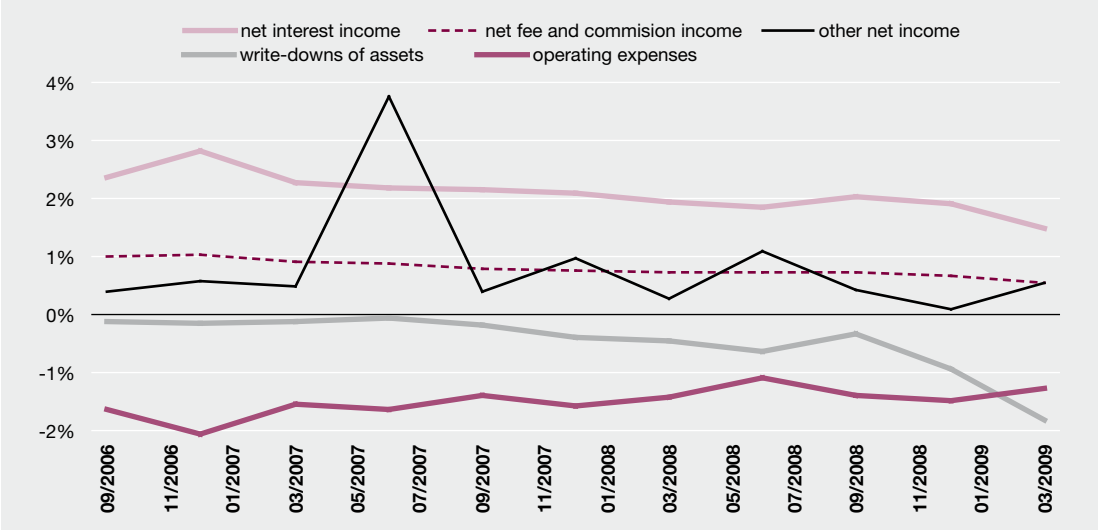

Figure 24. Income and expense items of banks (% of average assets per quarter x 4)

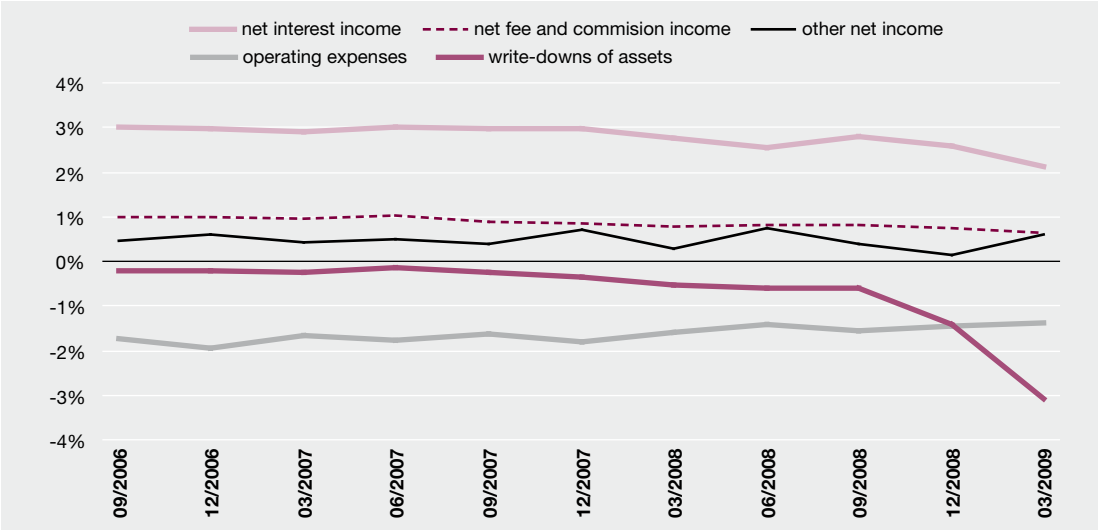

Figure 25. Income and expense items of banking groups (% of average assets per quarter x 4)

ishes if loan portfolios are mostly with floating interest rates. Moreover, the cost of funding has increased also owing to growth in the share of time deposits: from 43% in March 2008 to 53% of total deposits in March 2009.

The fear of the possible devaluation of the Estonian kroon has not prevented depositors from seeking for higher deposit interest rates – the percentage of kroon deposits, which have recently had higher interest rates than euro deposits, in total deposits has fallen by only a few percentage points. Deposit interest rate developments have varied across currencies, reflecting the differences between money market interest rates. The interest rate on euro and

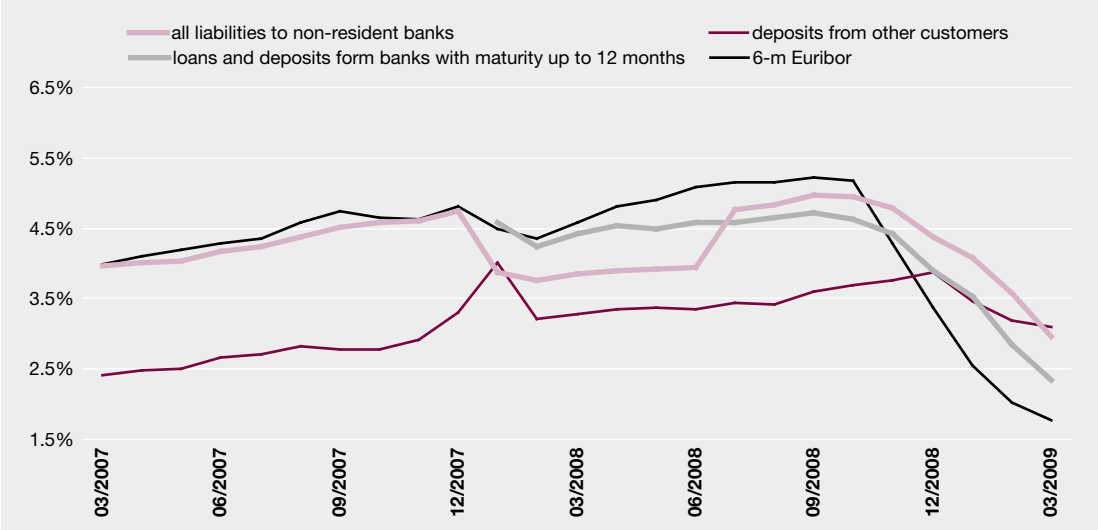

Figure 26. Average interest on banks' liabilities at month-end and 6-month Euribor

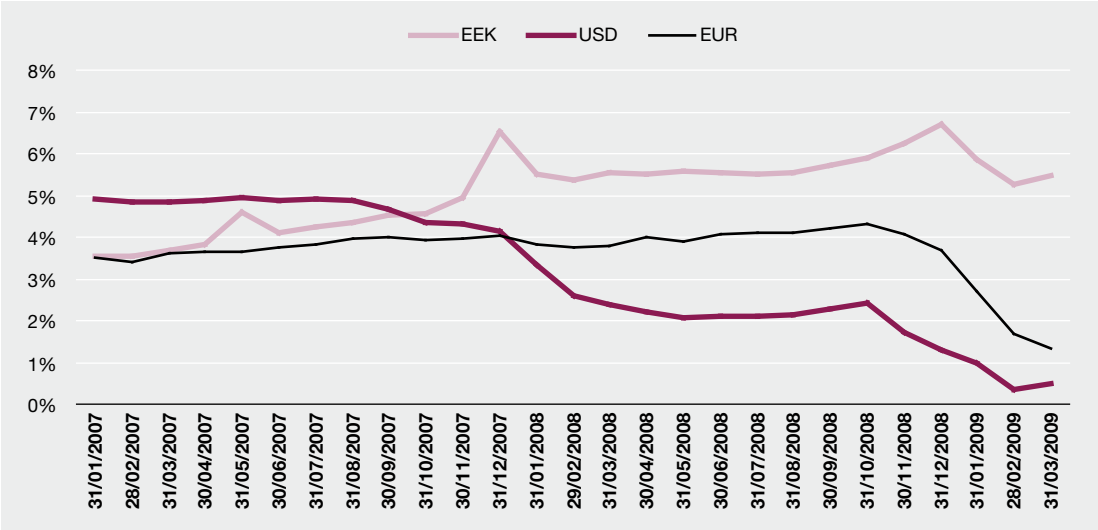

Figure 27. Average interest rate on time deposits

dollar deposits has declined considerably in the past quarter, whereas the interest rate on kroon deposits remained close to 5% (see also Figures 26-27).

As the economic situation has aggravated, risks have increased and the cost of funding has grown, banks have raised the interest margin on new loans. However, the impact of higher interest margins on net interest income is constrained by the low amount of new loans and also termination of interest calculation in the case of overdue loans (see Figure 28).

Year-on-year, total net interest income decreased nearly 24% in the case of banks and 20% in the case of groups. **Fee and commission income** shrank as well: by 20% and 14%, respectively. The decrease in fee and commission incomes has been primarily caused by the lower number

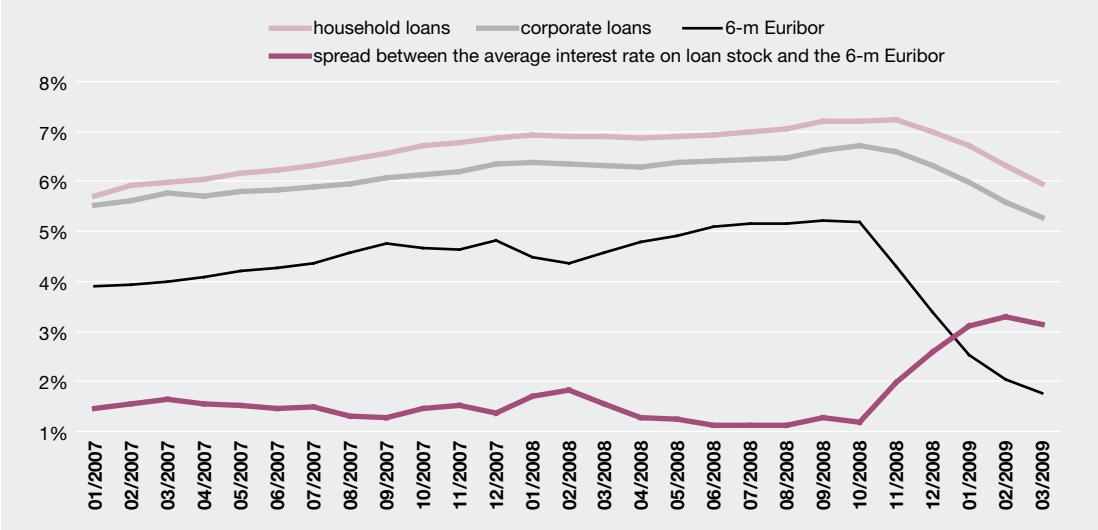

Figure 28. Average interest rates on loan stock

and value of payments, which has resulted from subdued economic activity (see also Section *Payment and Settlement Systems*).

Lower incomes and higher provisions for credit portfolios have decreased the profitability of banks to which they have responded by **cutting down even more on expenses**. For instance, bank offices have been closed and the number of employees has been curbed. However, the cuts are unlikely to keep up pace with the rapid decline in incomes and the effect of some cuts will probably be revealed over a longer period of time. By the first quater, the total staff and administration costs had decreased nearly 12% in the case of banks and 8% in the case of groups, year-on-year.

The **future profitability of the banks** will still be affected by the further materialisation of credit risk, as the economic situation is not expected to improve rapidly in the near future. Given the relatively similar structure of the credit portfolios and the business strategies of the banks operating in Estonia and other Baltic States, their ratios of loan provisions to total loans might differ also in the coming periods.

Net interest income generation will be important for banks also in the future, as it has always constituted a large part of their incomes. Higher risk estimates and lowered ratings have increased the cost of funding due to specific risk. The interest paid on deposits is influenced by growth in the share of time deposits and the differences between the interest rates on domestic and foreign currency deposits. Although the measures taken by central banks have lowered the general cost of funding, the high percentage of loans with floating interest rates reduces the favourable impact of low-cost resources on net interest margins.

To sum up, in recent quarters the profitability of banks has been largely affected by extensive loan write-downs as well as decreased interest incomes and fee and commission incomes. Even though the economic forecast allows to anticipate further growth in loan write-downs, it will affect profitability less due to the high rate of provisions already made. It is quite likely that several banks may report losses also in the coming quarters. At the same time, high profits from previous periods have enabled banks to build up buffers for difficult times.

III SECURITIES AND MONEY MARKET

International financial markets[1]

The downward trend on major **stock markets** continued until March 2009. Besides the financial crisis, also the economic decline in leading industrial countries and continuous downward revision of growth forecasts contributed to the fall in stock prices. Yet after long-lasting pessimism and decline, prices on global stock markets have been significantly increasing since March. This has resulted from the strong monetary policy implemented by several central banks and the first signs of the stabilisation of economic indicators. The increase in stock prices was also fostered by better than expected first-quarter results of large companies (mainly in the financial sector).

By the end of April, major stock markets had recovered close to the level of the beginning of the year and the volatility of stock prices had decreased more than twice compared to the peak of the financial crisis. The euro area stock index Stoxx 50 and the US S&P 500 index kept falling during the entire period under observation, decreasing by 8.4% and 9.9%, respectively. Japan's Nikkei 225 index, however, was 2.9% higher at the end of April compared to the end of October. The Finnish and especially the Swedish stock markets have recovered considerably: from the beginning of 2009, their stock indices have increased by 3.8% and 15.3%, respectively (see Figure 1). The Chinese stock market, which had went down even more compared to advanced economies, experienced an upward trend for the entire period under observation. The Shanghai Composite Index in China increased by 43.3%.

Developments on **bond markets** were still influenced by the monetary policy of major central banks. Almost everywhere, the **key interest rate** was cut to an unprecedentedly low level: in Japan to 0.1% (by 20 bp), in the US and Canada to 0.25% (by 75 and 225 bp, respectively), in the United Kingdom and Sweden to 0.5% (by 400 and 325 bp, respectively), in the euro area to 1% (by 275 bp), in New Zealand to 2.5% (by 325 bp) and in Australia to 3% (by 300 bp).

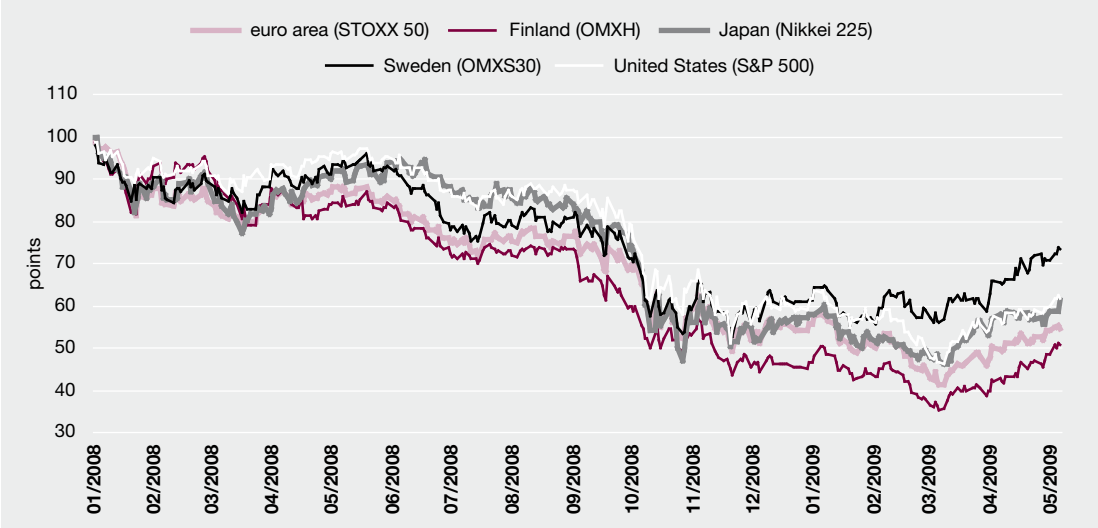

Figure 1. Stock indices in the United States, the euro area, Japan, Sweden and Finland (31 December 2007 = 100)

Source: EcoWin

[1] The Review covers the period from 31 October 2008 to 30 April 2009.

Since traditional ways of easing monetary policy have been exhausted, several central banks[2] have taken or are about to take exceptional measures to boost the economy or, more specifically, aim to implement the policy of quantitative easing. In essence, it means increasing the money supply: the central bank buys government bonds or private debt securities (or both) and increases its balance sheet with the aim of keeping also long-term interest rates low.

Influenced by such a robust monetary policy, **short-term interest rates** (three-month Libor) on the interbank money market declined in Sweden by 376 bp to 0.94%, in the euro area by 341 bp to 1.36% and in the US by 201 bp to 1.02% (see Figure 2).

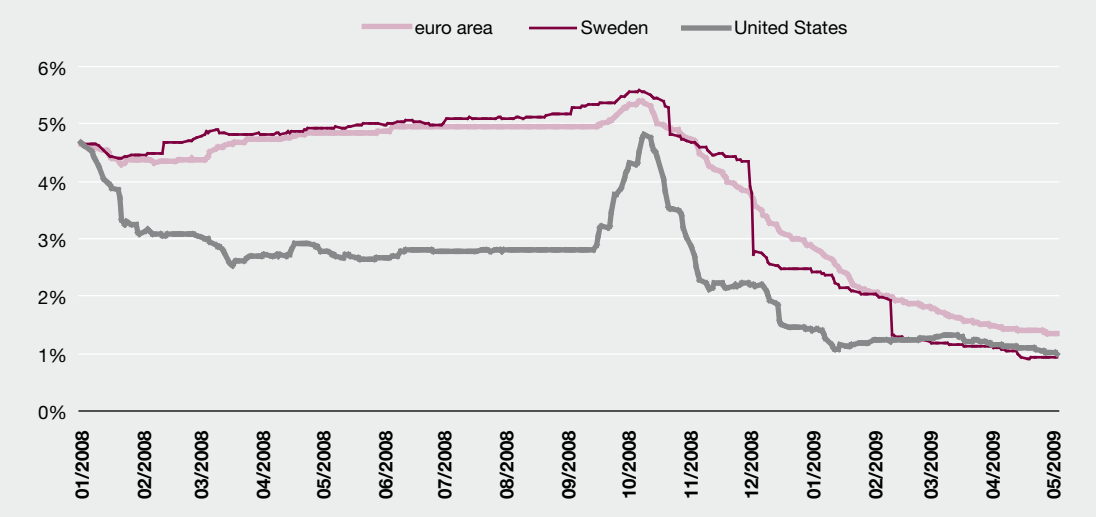

Figure 2. Three-month government interest rates in the euro area, Sweden and the United States

Source: EcoWin

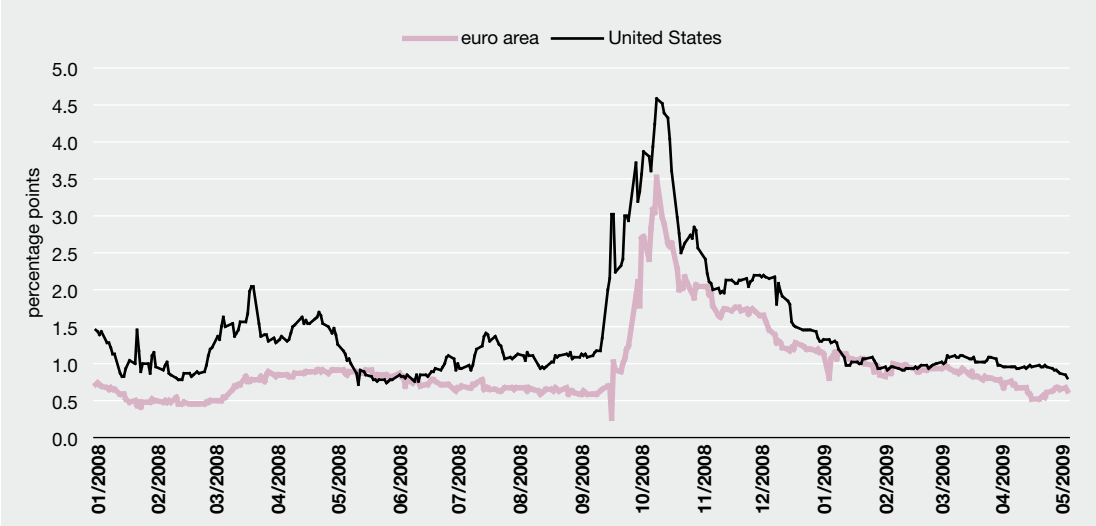

Figure 3. Spread between interbank money market interest rates and government interest rates in the United States and the euro area

Source: Bloomberg

[2] The US Federal Reserve and the central banks of Switzerland, Japan, Canada and Sweden.

These are historically the lowest levels ever recorded. At the same time, government interest rates declined at a slower pace (in Sweden by 300 bp to 0.35%, in the euro area by 204 bp to 0.69% and in the US by 32 bp to 0.13%). Thus, there was also a significant decline in the spread between interbank money market interest rates and government interest rates, which had sharply increased in September and October 2008 along with the growing lack of confidence (see Figure 3). Therefore, money markets started to show signs of easing in terms of liquidity and stronger trust between banks.

Long-term (ten-year) government interest rates declined in the light of weakening economic indicators until the end of 2008 but took an upward trend in January. From the beginning of 2009, ten-year government interest rates have increased in the US by 90 bp, in the euro area by 25 bp and in Sweden by 83 bp (see Figure 4).

Foreign exchange market developments were quite distinctly related to the stock market behaviour: the stock market fall and a general decrease in financial leverage[3] resulting from risk aversion caused the appreciation of the Japanese yen and the US dollar against other major currencies. Monetary policy decisions of central banks played an important role. Consequently, larger than expected cuts in the key interest rate in December brought about a sharp decline in the US dollar exchange rate against other major currencies. In March, the dollar depreciated considerably when the US Federal Reserve had announced of implementing the policy of quantitative easing.

The quantitative easing generally causes currency depreciation due to the increase in money supply. Consequently, also the British pound sterling and the Swedish krona have depreciated against other currencies. In March and April, an increase in the risk appetite of investors led to a growth in carry transactions[4], which is why the currencies with higher interest rates (the Australian dollar, the New Zealand dollar) appreciated and the currencies with lower interest rates (the US dollar, the

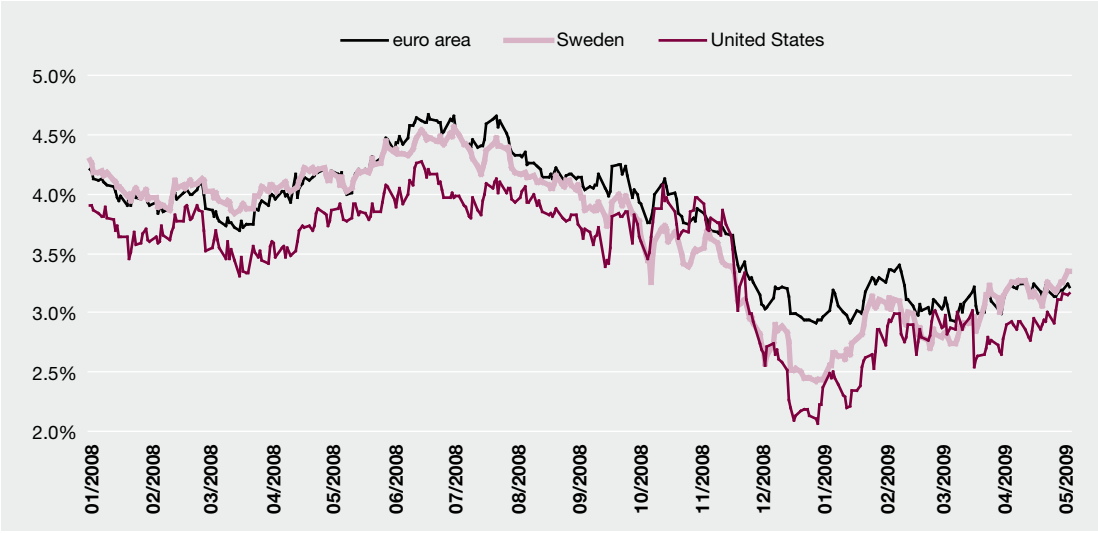

Figure 4. Ten-year interest rates in the euro area, Sweden and the United States

Source: EcoWin

[3] The ratio of investment value to borrowed capital.
[4] Trading strategy in the case of which differences between interest rates of two currency areas are exploited. In particular, loans are taken in currency with lower interest rate and invested in currency with higher interest rate and thereby carry is earned.

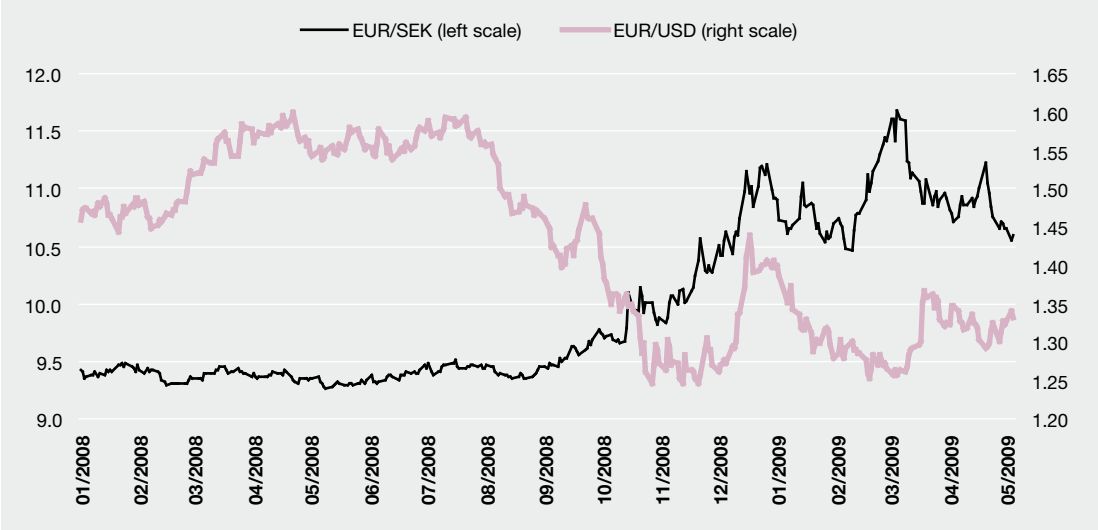

Figure 5. Exchange rate of the euro against the Swedish krona and the US dollar

Source: EcoWin

Japanese yen) depreciated. During the period under observation, the euro appreciated against the dollar by 3.9% to the level of 1.3226 and the Swedish krona depreciated against the euro by 7.9% to 10.66 (see Figure 5). The Japanese yen depreciated against the US dollar by 0.2% to 98.63. The average daily volatility of exchange rates has been gradually decreasing for the past six months.

The downward trend in the **commodity markets** stopped in the last months of 2008 when the prices of commodities stabilised at relatively low levels. Since March, the markets have demonstrated receding pessimism and growing optimism, which has manifested itself in a rise in commodity prices. The price of crude oil has also changed accordingly. After the decline that lasted until mid-December and a fall in the price of oil barrel to 31 US dollars, the price of **crude oil** stabilised. In March, the price began to rise, increasing to 50 dollars per barrel.

Gold price developments, on the other hand, were quite different. General uncertainty supported the rise in gold price until end-February; then investors' risk appetite led to a price fall. During the period under observation, the price of gold increased altogether 22.5% to 885.5 dollars per ounce, whereas the price of crude oil dropped 26.2% to 50.25 dollars per barrel (see Figure 6). The CRB index, which reflects the prices of 22 major commodities, decreased only 1.3% from end-October to end-April.

Money market

Owing to the extensive economic downturn in the euro area, the European Central Bank continued with the easing of monetary policy in the first quarter of 2009, in the light of weak inflationary pressures. The interest rate on the main refinancing operations declined from 3.75% in last autumn to 1% by mid-May 2009. Moreover, the last decision to cut interest rates also

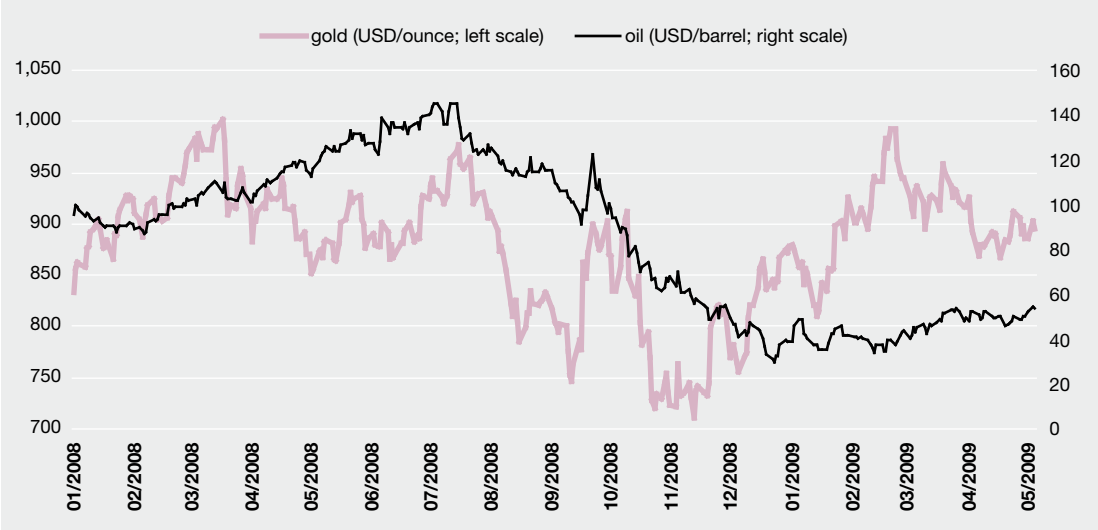

Figure 6. Prices of gold and crude oil (WTI)

Source: EcoWin

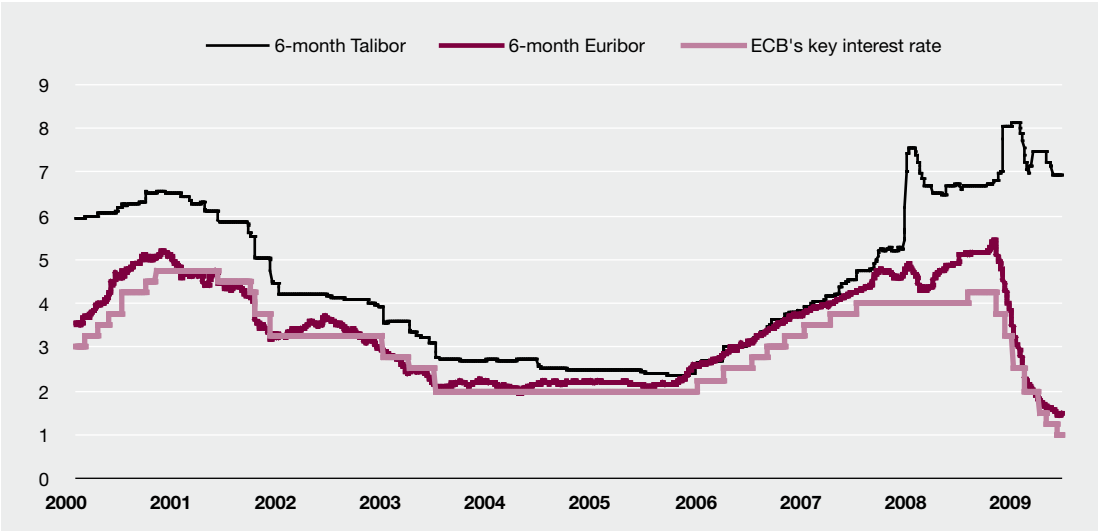

Figure 7. Money market interest rates in Estonia and the euro area (%)

Source: EcoWin

narrowed the earlier 2% range of interest rates: as of 13 May, the euro area interest rates on marginal lending and deposit facilities are 0.25% and 1.75%, respectively.

Money market interest rates in the euro area have also sharply dropped from October 2008 and reached an extremely low level in the middle of the second quarter of 2009 (see Figure 7).

Although by the beginning of May, the interest rate quotations in the Estonian money market had slightly decreased, the spread between the Talibor and Euribor has remained quite large. This is partly due to the fact that the Talibor is less sensitive to changes in the more general liquidity environment and also because of the general lack of confidence in the Baltic States. The interbank transactions in the Estonian kroon

money market have actually taken place with considerably lower interest rates, which have also declined somewhat faster.

Arising from the small number of transactions, also the **Estonian kroon derivatives market** responded to the easing of tensions on the region's money markets, which had started in March, with some delay. The difference between interest rate quotations that form the basis of future Estonian kroon and euro transactions (forward premiums) started to decrease slightly more notably only in April (see Figure 8). The above-mentioned rise and constantly high level of price quotations still have not put any pressure on the exchange rate of the Estonian kroon. Neither did the growing speculations on the domestic market considerably increase distrust in the kroon. The share of kroon deposits and loans in the retail market was not much affected by the events at the end of last year. Participation in the exchange rate mechanism (ERM II) has proceeded smoothly for Estonia.

The tensions on global money and capital markets, which started to reveal last autumn, did not lead to a noticeable growth in turnover on the Estonian kroon derivatives market. This is partly because of the smallness of the market and difficulties in finding another counterparty. Although from October, the average turnover has somewhat increased, this has not been sufficient to be considered a clear sign of growing lack of confidence in the sustainability of Estonia's monetary policy framework (see Figure 9). In the first quarter of 2009, transactions by non-residents accounted for approximately 60% of the turnover of the foreign exchange derivatives market. Since last August, commercial banks have, through Eesti Pank's forex window, sold more kroons on the spot market than purchased. The reason lies in a decline in the demand for base money, which has resulted from the contraction of the economy both in the real and nominal terms. This reflects automatic adjustment to the changed economic environment, and is characteristic of the currency board system.

The turnover of short-term kroon loans has been relatively large since the beginning of 2008, and increased further in the first months of 2009 (see Figure 10). Nevertheless, this cannot be

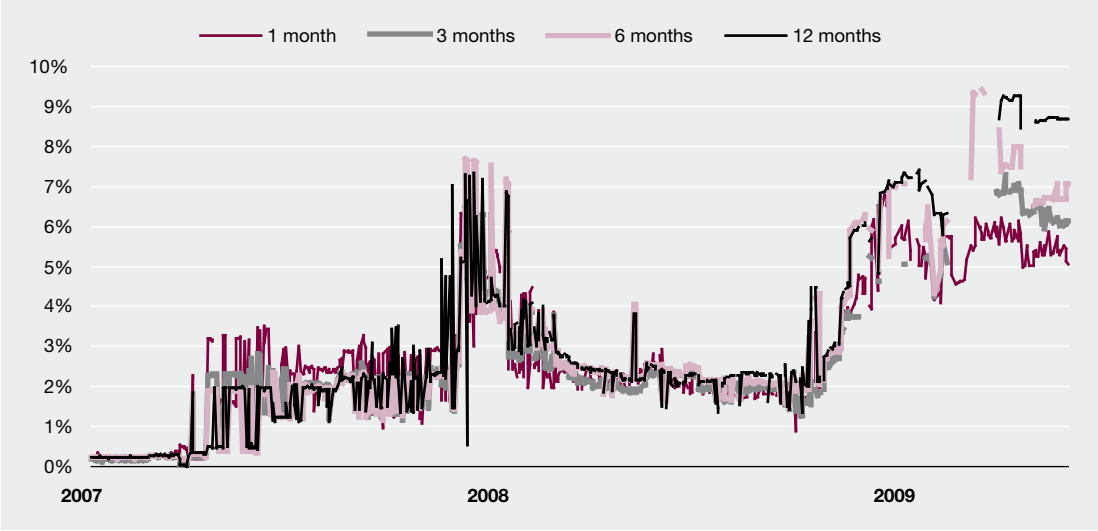

Figure 8. Forward premiums of the Estonian kroon against the euro

Source: Reuters

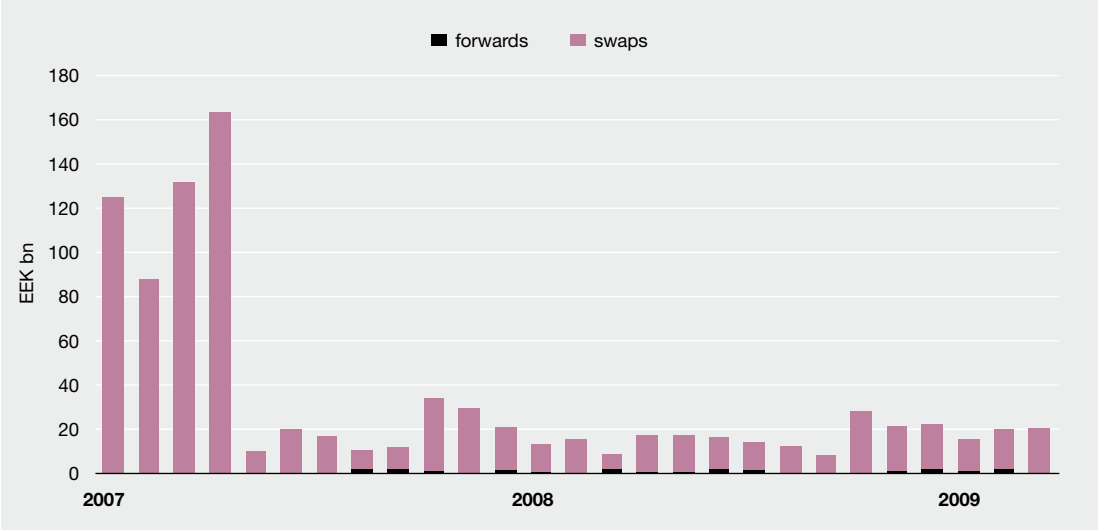

Figure 9. Monthly turnover of derivatives transactions with Estonian credit institutions

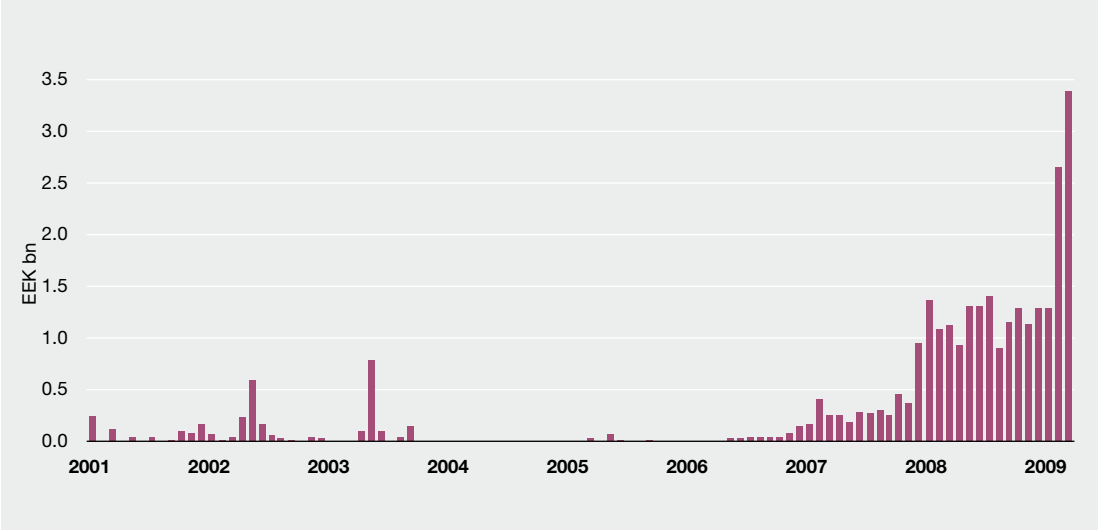

Figure 10. Turnover of short-term kroon loans

considered a significant structural change for banks with regard to their liquidity management, as the higher activity has been recently driven by a single bank, which has been covering its foreign exchange position through the money market. Estonian credit institutions still manage their liquidity mainly in euro via parent banks or directly on external markets, using the central bank's forex window to convert euros to kroons.

The liquidity of the Estonian kroon has remained stable and there have been no major failures in the kroon liquidity in the financial sector. **Banks' settlement buffers in the central bank** are still larger than the daily minimum reserve requirement and banks have not had difficulties in fulfilling this requirement.

Bond market

In recent months, the primary bond market experienced an even deeper decline in activity than in earlier periods: annual turnover growth turned negative for the first time in four years, amounting to –52%. The total bond market capitalisation has decreased by 2.8 billion kroons over the last six months. The capitalisation of short-term bonds decreased by 1.7 billion kroons. At the end of March, the total capitalisation of bonds was 11.3 billion kroons and accounted for 4.7% of GDP, having declined by 50 basis points from 5.2% in September.

The average amount of issues decreased 43% to 911 million kroons in the past six months compared to the preceding six months (see Figure 11). In the fourth quarter of 2008, bond market activity was the lowest of more than ten years with the issues totalling only 308 million kroons. The first quarter of 2009 was again more active and total issues amounted to 1.5 billion kroons. At the beginning of 2009, also government bonds were issued over several years, accounting for 40% of total issues. The largest issue was made by the City of Tallinn: 491 million kroons for three years with the price of 3-month Euribor plus 3%. The last time government bonds were issued was almost six years ago but this time the amount of issues was record high.

The bonds of non-financial and public sector enterprises comprised 44% and 34% of the total bond turnover of the fourth quarter of 2008 and the first quarter of 2009 (1.8 billion kroons), respectively. Resident issuers were relatively active in the past six months and their share in total capitalisation increased from 76.6% in September 2008 to 86.7% at the end of March 2009 (see Figure 12).

The percentage of issues in the Estonian kroon decreased further in the last six months and constituted an average of 9% of total issues per quarter.

The secondary bond market was relatively active in earlier periods unlike the primary bond market, whereas at the end of 2008 and at the beginning of 2009 also the secondary market was subdued. The average turnover shrank by almost a half over the past six months; at the end of March, the daily turnover was 14 million kroons.

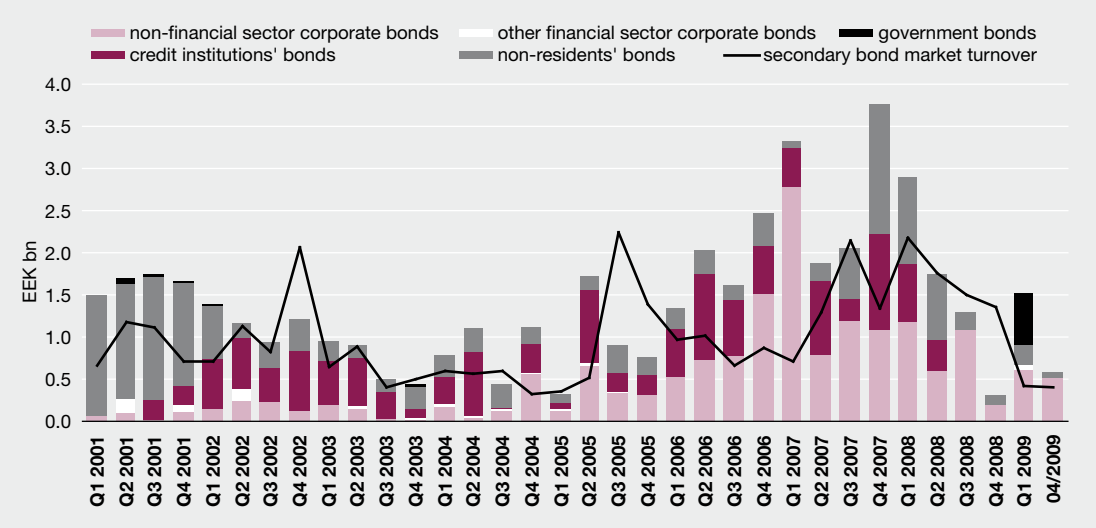

Figure 11. Bonds issued and secondary bond market turnover on a quarterly basis

[5] SEB Pank, ABC Grupp and LHV Ilmarise Kinnisvaraportfell.

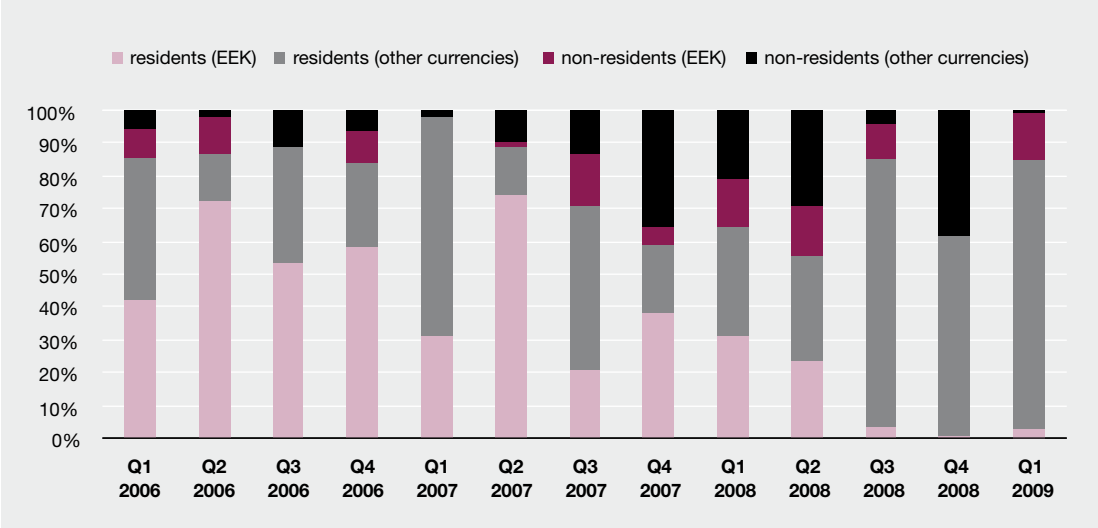

Figure 12. New bonds by issuer's residence and currency on a quarterly basis

Of all the bonds listed on the Tallinn Stock Exchange as at autumn 2008, the bonds of four companies have been redeemed during the last six months. In addition, the bonds of the new BIGBANK were listed as well as redeemed during the period under observation. The bonds of three companies[5] had been listed on the stock exchange as at the end of March. Their total market value was 209 million kroons; that is, 1.9% of the total bond market capitalisation.

The general structure of bond investors developed by the end of 2007, and since then the percentages of investors have fluctuated in the range of a few percentage points only. Resident investors accounted for about 66% (7.5 billion kroons) of the bond market at the end of March 2009, approximately 2.7% of that belonging to private investors. Resident investors include mainly credit institutions (25%), insurance companies and pension funds (22%) and non-financial sector companies (20%). The "unspecified" group held a large share among residents as well as total investors with 23% and 19%, respectively.

Stock market

The value of the Tallinn Stock Exchange Index OMXT exceeded 300 points at the beginning of 2009. Although the second half of the first quarter saw a drop of 50 points, by the second half of May the index had increased again to 315 points. The index fluctuated between 250–315 points during the period under observation. It was over two times lower than a year ago, reaching the level recorded at the beginning of 2004, when the shares of 14 companies had been listed on the stock exchange with the total capitalisation of 50 billion kroons on average. Compared to the indices of the euro area and other selected Central and East European countries, the value of the Tallinn Stock Exchange index OMXT has decreased considerably more from the record high pre-crisis levels. Since the beginning of 2009, the value of OMXT has grown approximately 15%, increasing relatively faster than the euro area average or the indices of Romania, the Czech Republic, Poland and Bulgaria (see Figure 13).

The capitalisation of the Tallinn Stock Exchange has lost approximately 15.6 billion kroons in value over the past two quarters (see Figure 14).

[5] SEB Pank, ABC Grupp and LHV Ilmarise Kinnisvaraportfell.

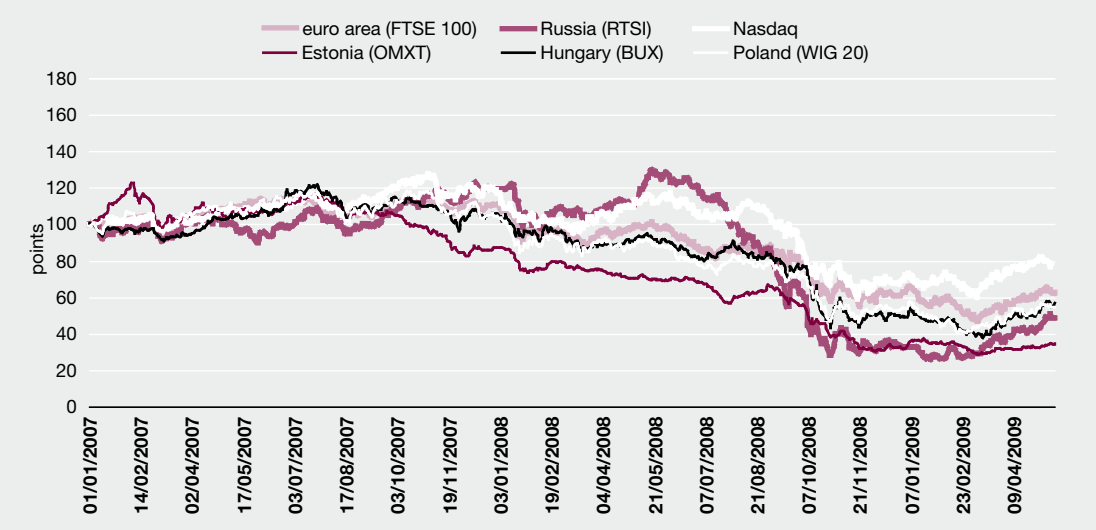

Figure 13. Changes in stock indices

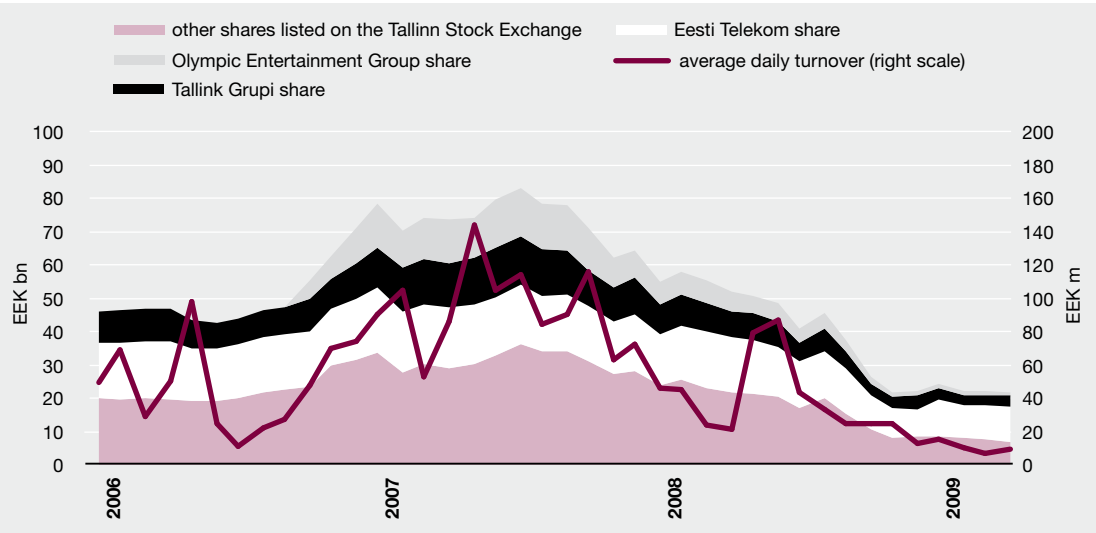

Figure 14. Market capitalisation of shares listed on the Tallinn Stock Exchange (end-month)

By end-2008 capitalisation had returned to the level recorded ten years ago and remained there until the end of the first quarter of 2009 when the value of the 18 companies listed on the stock exchange[6] totalled 22 billion kroons and constituted 9.2% of GDP, having declined by 80 basis points. On 1 April 2009, the shares of Starman were delisted from the primary exchange.

In February 2009, the trading period of NASDAQ OMX Baltic stock exchanges was extended by two hours to 16:00. The liquidity on the Tallinn Stock Exchange remained low because of the uncertainty in financial markets. The average daily turnover for the last two quarters was approximately 16 million kroons, which is three times smaller than during the previous six months (see Figure 15). In March 2009 liquidity reached a historical low with the average daily turnover of only 7 million kroons.

[6] The business name of Kalev was changed to Luterma. In April, also Eesti Ehitus changed its business name to Nordecon International.

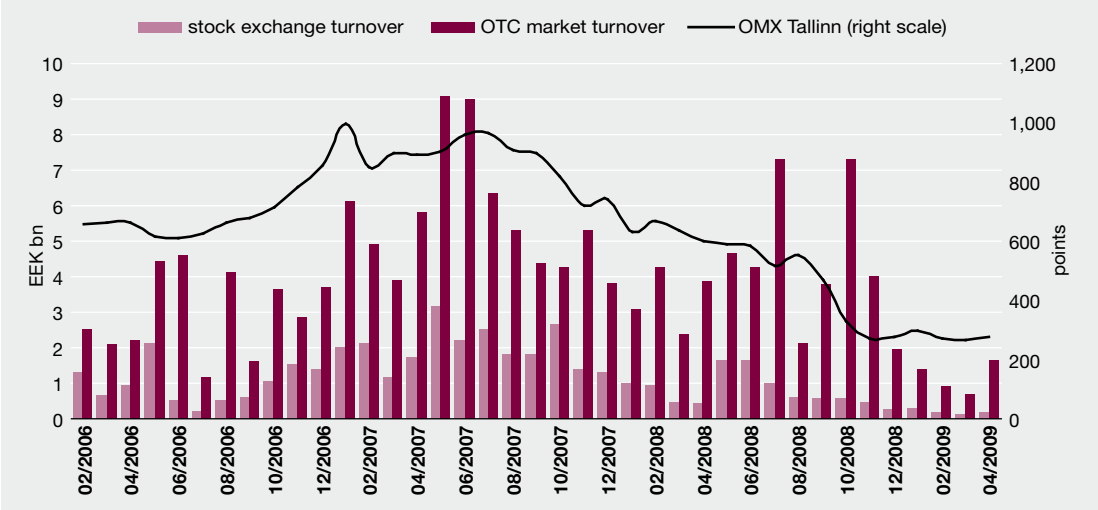

Figure 15. Stock turnover on the Tallinn Stock Exchange and OTC market and Tallinn Stock Exchange index OMX Tallinn (end-month)

In terms of volume, the most transactions were made with the shares of Eesti Telekom, Tallink Grupp, Tallinna Vesi and Olympic Entertainment Group. Their transactions accounted for 25%, 19%, 15% and 12%, respectively, of the total turnover.

The Tallinn Stock Exchange has 32 members, the newest of which is DnB NORD Pank who was listed in November 2008. Swedbank, SEB Pank and LHV were the most active traders also in the past six months, accounting for 39%, 20% and 17% of total transactions, respectively.

At the end of 2008, the share of foreign investors exceeded 50% of the total capitalisation of listed companies (see Figure 16). At the end of March 2009, foreign investors accounted for 53% (11.6 billion kroons) of the total market capitalisation; two thirds of foreign investors are Swedish. The structure of resident investors remained more or less unchanged. At the end of March, approximately 12% of residents' investment belonged to private investors.

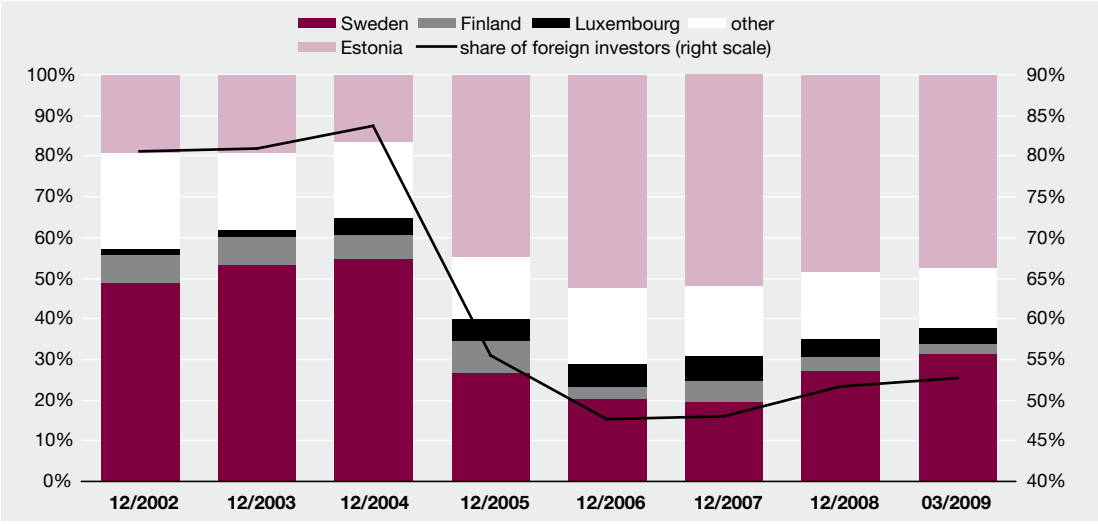

Figure 16. Structure of investors on the Tallinn Stock Exchange

IV OTHER FINANCIAL MARKETS

Investment and pension funds

The shortage of liquidity that emanated from the financial crisis of 2008 influenced the yield of investment funds even more in the last six months (see Figure 1). In autumn the crisis primarily affected the **yield** of high-risk funds, whereas by spring 2009 the yield had dropped regardless of the type of fund. At the end of February, the average yields of all funds (except money market funds) had reached historical lows. In March and April the yield slightly grew, as global financial markets started to ease. The average annual yield of interest funds turned negative for the first time and reached –8.6% at the end of April. The average yield of equity funds and voluntary pension funds stood at –52.6% and –32%. The average annual yield of the money market fund moved in line with the interest rate changes and posted 4.4% at the end of April.

Two of the risk capital funds that entered the market in the first half of 2008 have been liquidated. Currently only the GILD Arbitrage Risk Capital Fund is operating, with an annual yield of 14.58% at end-September. (After September the fair value of the fund is difficult to estimate due to the difficult market situation).

All mandatory pension funds also posted negative average annual yields. In the first quarter of 2009, the average annual yield of conservative and balanced pension funds amounted to –0.4% and –10.3%, respectively, and that of funds with an aggressive strategy reached –20.4%, improving to –14% by April. As the investment strategies have changed and are focused on low-risk markets, that is the old EU Member States, growth in the value of pension funds has stabilised since the beginning of 2009 and started to grow again at the end of the first quarter (see Figure 2). Since the second half of 2002, when the first second pillar funds were created, until mid-May 2009 their value has grown by 13–24% on average.

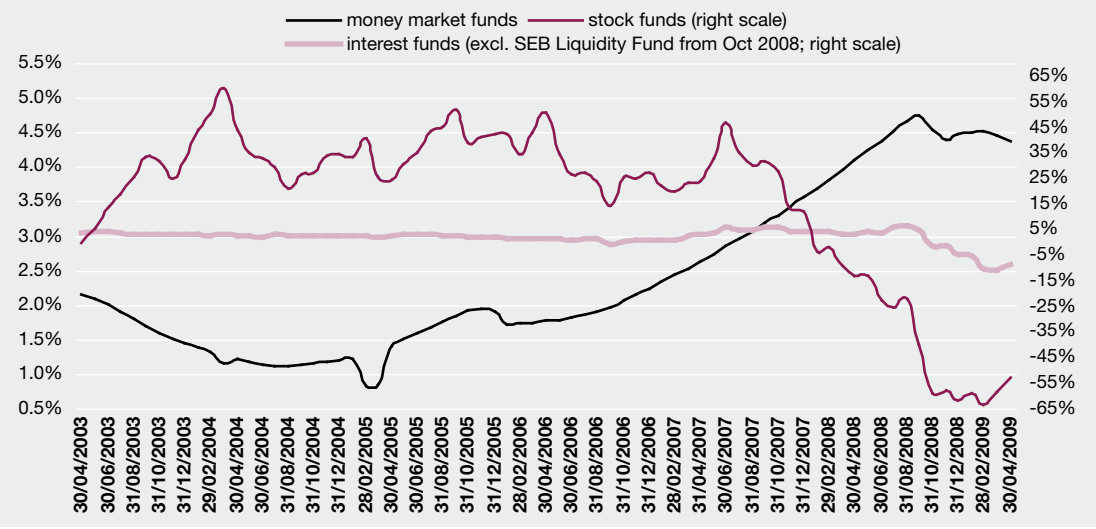

Figure 1. Average annual yield of investment funds at end-month

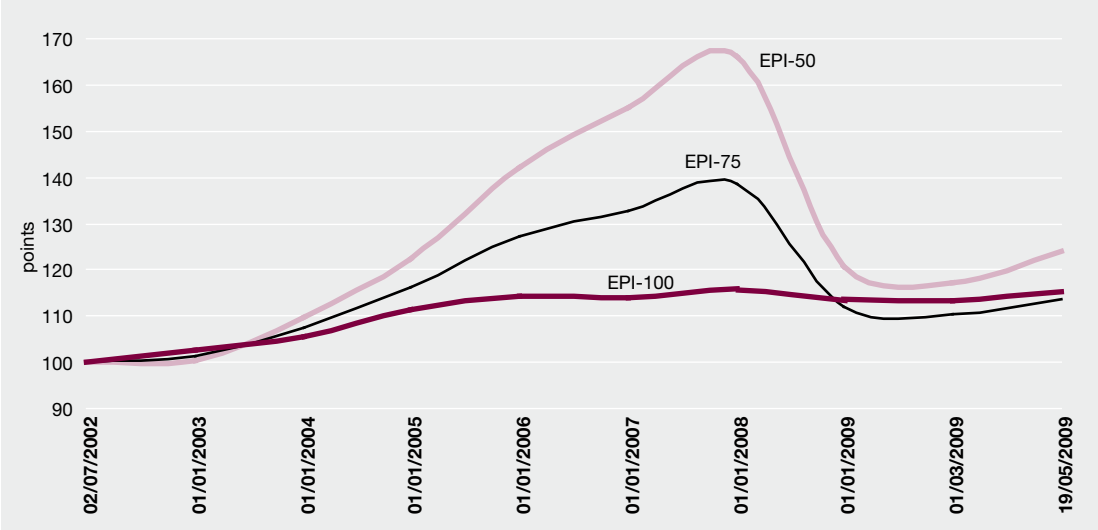

Figure 2. Second-pillar pension fund indices

The assets of investment funds have been shrinking since the summer of 2008. The value of investment fund assets value dropped about 48% in the past two quarters and at the end of March the value had dropped to only 8.3 billion kroons (see Figure 3). Equity funds suffered the most serious setback (60.5%, i.e. 4.9 billion kroons), but also money market and interest funds lost about a half of their value (45.7% and 52.6%, respectively). During the last six months only the assets of real estate funds grew (by 43%), comprising 10.4% of total investment fund assets at the end of March (3.8% in September 2008).

In autumn 2008, also the total stock of mandatory pension fund assets started to decrease owing to the decline in high-risk pension fund assets (see Figure 4). Although at the beginning

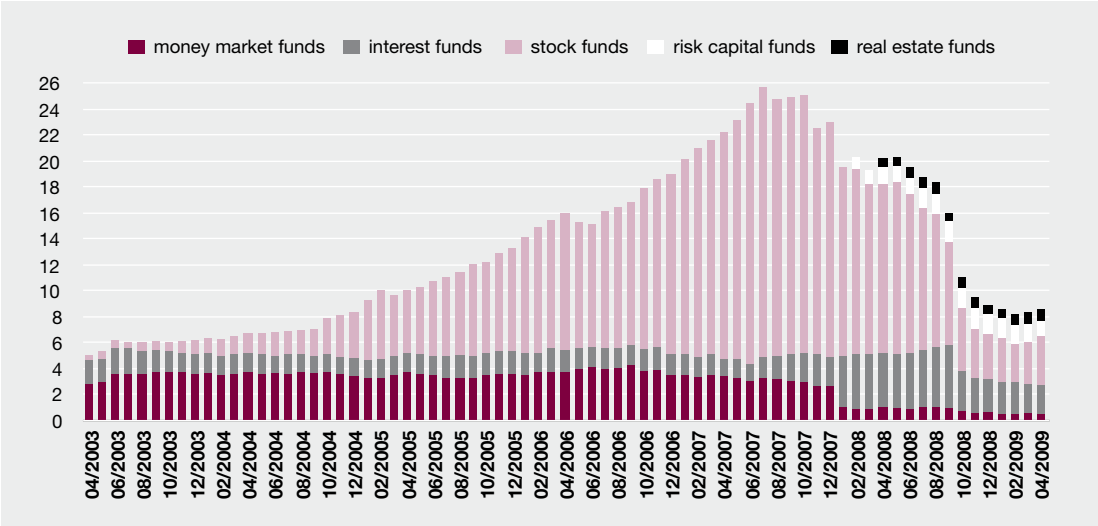

Figure 3. Value of investment fund assets at end-month

of 2009 **asset growth** became positive again, at the end of March their value was still about 500 million kroons lower than half a year ago, posting 12 billion kroons. In April, the stock of the second pillar pension funds grew rapidly, reaching the autumn level again and amounting to 12.8 billion kroons at the end of the month.

As of 1 June 2009, both the state and the indivi-duals terminate their **payments to the mandatory pension funds**, which will entail a significant slowdown in the growth of pension fund assets during the following year-and-a-half. Further developments depend on whether individuals wish to continue the payments as of the beginning of 2010 or wait until 2011 when also the state resumes payments in half (1% is paid by the individual and 2% by the state). The payments to the second pillar pension funds will be fully restored as of 2012.

The total assets of the voluntary pension funds have diminished slightly over the last six months. At the beginning of 2009, the third pillar funds totalled approximately 2.8 billion kroons and their share in the total assets of funds dropped to 29%.

According to rough estimates, the total stock of investment and pension fund assets diminished year-on-year, mainly as a result of a decrease in annual yield. Most of it was caused by a decline in the assets of equity funds, nearly 77% (7.6 billion kroons) of which can be attributed to the shrinking yield. As for the interest funds, on the other hand, the majority of the decrease (79%, i.e. 1.5 billion kroons) was caused by the outflow of funds, mainly capital withdrawals from the SEB Liquidity Fund. The annual yield of Swedbank's money market fund generally followed a positive trend during the year, whereas in the past six months the outflow of funds exceeded yield growth and assets decreased by 406 million kroons.

The share of **foreign assets** in total investment and pension fund assets declined further in the last six months (see Figure 5). At the end of the first quarter of 2009, the share of foreign assets had dropped to the level of end-2004 (65.1%). This occurred primarily as a result of a 38% decrease in non-residents' investments in the shares and other equities. Funds' investment in domestic securities and deposits comprised about 31.8% of total assets.

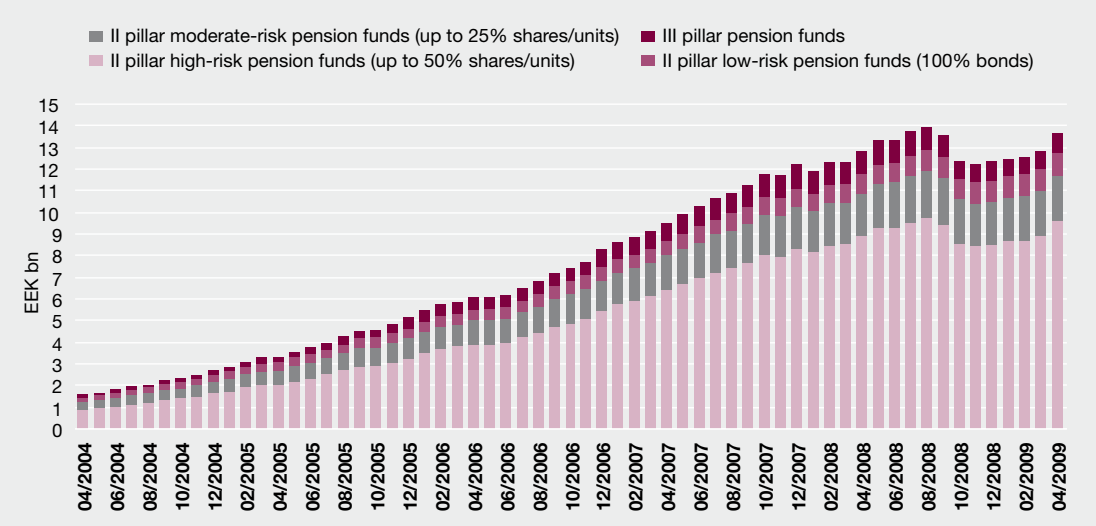

Figure 4. Value of pension fund assets at end-period

In spring 2009, investment in the European Union accounted for 84% of total investment in foreign markets, 75% of which were channelled to developed EU Member States (see Figure 6). Investment in France increased considerably in the last quarters (to 14%), whereas investment in Russia diminished (to 4%). Increased investment in old Member States reflects changes in the investment strategies that occurred already in mid-2008, and laid the focus on more stable markets rather than riskier ones.

The number of investment and pension funds registered in Estonia and the investment to other funds has not changed significantly in the last six months. Second and third pillar pension funds still make relatively more investment in other funds, whereas money market and interest funds do not own any shares or units of other funds.

Nine new investment funds entered the market in the last six months: one equity fund, one real estate fund, three mandatory pension funds and four voluntary pension funds.

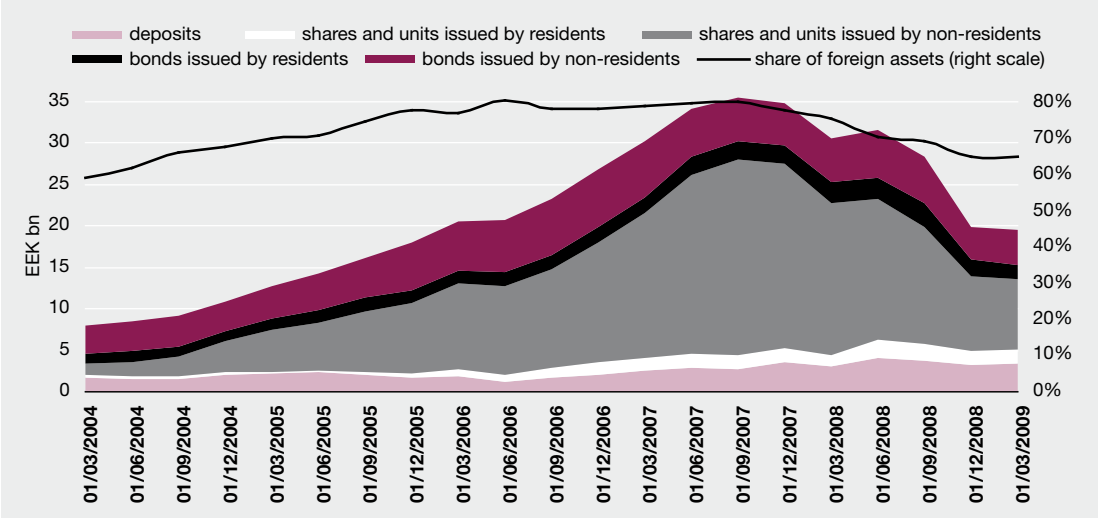

Figure 5. Structure of investment and pension fund assets and the share of foreign assets

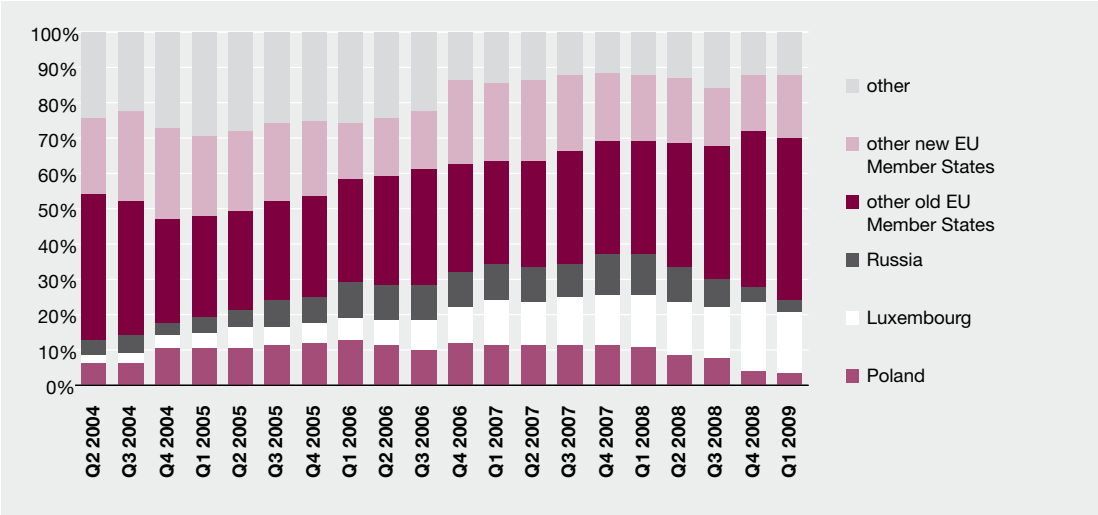

Figure 6. Foreign investment of investment and pension funds by residency at end-period

Insurance

Conservative investment policy has protected the insurance sector from the worst but the year 2008 was still pivotal. The amount of insurance premiums decreased significantly, the number of new contracts shrank compared to 2007, whereas the number of cancelled contracts grew. As financial markets suffered from a decrease in the rate of return, insurance companies gained losses on their investment portfolios, and the tightening competition in the insurance market added extra pressure on their economic results. The near-term outlook for the European insurance market is still negative; however, it is believed that insurance does not cause such systematic risk as the banking sector.

In 2008, preparations were started for making mandatory funded pension payments as of 1 January 2009. According to the Funded Pensions Act, persons who have acquired units of a mandatory pension fund and have reached the pensionable age can conclude a pension contract with an insurer who deals in life insurance. Under this contract, the insurance undertaking will pay a person a lifetime pension irrespective of the length of person's life. The options of making second-pillar funded pension payments depend on the value of a pension account belonging to a person of pensionable age. If the value of the pension account is 50 or more times the national pension rate, that is over 95,657 kroons, the person must sign a pension contract with a life insurer in order to get regular payments until the end of his/her life. If the value of the pension account is below 50 times the national pension rate, the person is entitled to regular payments straight from the pension fund; if the value of the pension account is 10 times the national pension rate or less, the person has the right to withdraw the total amount as a single payment.

Life insurance

During the last year, the development of the life insurance market has been mainly influenced by people's increased uncertainty about the developments of the coming years, which is why more liquid investments are preferred to life insurance as regards saving. People's choices are affected by differences in the profitability of financial products and the generally waning interest in life insurance.

The **amount of insurance premiums** in the life insurance sector had been growing steadily for seven years but decreased 33% last year, when the premiums collected by life insurers registered in Estonia totalled only 1.3 billion kroons. In the first quarter of 2009, the volume of collected premiums was 238 million kroons, which is approximately as much as in 2004 (see Figure 7). Most of them were still unit-linked life insurance premiums and capital insurance premiums (83% in total), but since the fourth quarter of 2008 the percentage of these premiums has changed in favour of the latter. Comparing the life insurance premiums collected in the first quarter of 2009 to last year's figures, only insurance on death (including loan insurance) has increased remarkably (31%). Loan insurance is focused on loan risk management and is most often bought in connection with housing loan contracts. Although growth in the housing market has slowed, the coverage of the current loan portfolio by life insurance contracts has increased.

Last year, life insurance companies concluded altogether 90,737 new insurance contracts (97,099 in 2007)[1], whereas the number of cancelled contracts doubled. The cancellation rate of main contracts increased to 2.8% after the first quarter of 2009; as expected, the number of cancelled unit-linked life insurance contracts was the highest.

[1] Including life insurance contracts concluded with non-residents.

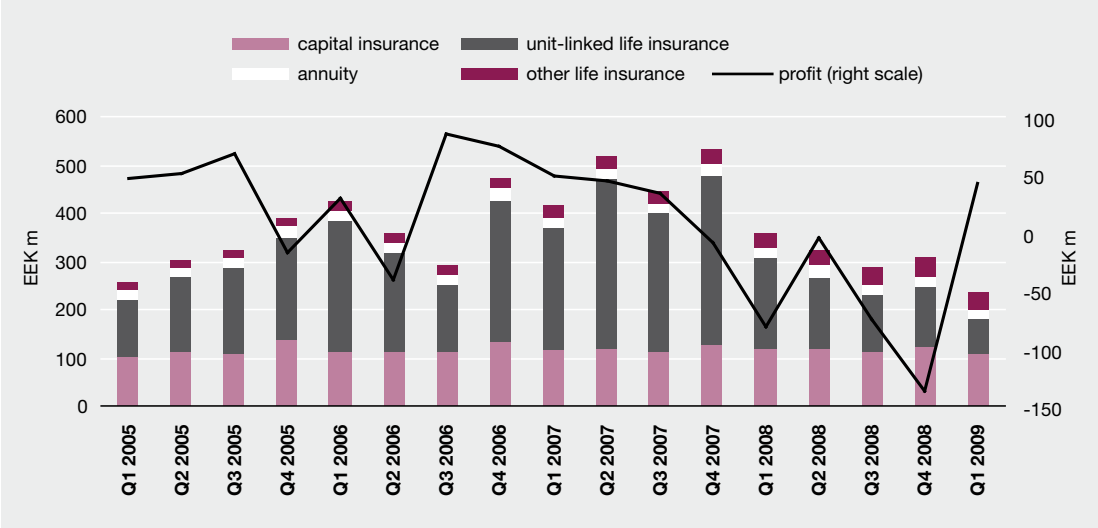

Figure 7. Profits of life insurance companies and gross premiums from residents

In 2008, the amount of **indemnities paid** to Estonian residents (1.1 billion kroons) increased 101% compared to 2007. Such a large amount of payments was due to the cancellation of unit-linked life insurance contracts or just because of withdrawal of money from investment funds in order to protect one's investment from the slump in global stock markets. The data for the first three months of 2009 show that payments of unit-linked products have already decreased 38% in just one quarter.

In 2008, the earlier profitability enjoyed by life insurers was replaced by a 298 million **loss**. However, in the first three months of 2009, undertakings again managed to earn 42 million kroons of profit. Their economic results have been adversely affected mainly by a 317 million kroon loss on investment. Throughout the year, a lot of effort was put into the management of investment portfolio in order to guarantee the highest possible security and profitability, yet the investment risk still remained high. The share of stocks – the riskiest assets – has been considerably reduced by shifting funds into European government bonds and time deposits (see Figure 8).

At the end of 2008, the **equity capital** of life insurance companies totalled 671 million kroons, which is 24% less than in the previous year. Return on equity decreased even further as a result of losses in the insurance sector, falling from 13% to –44%.

The amount of available solvency margin of insurance companies has decreased too. At the end of 2008, the required solvency margin for life insurance undertakings was 245 million kroons, whereas they exceeded the margin by 2.7 times (by 4 times in 2007). Year-on-year, the amount of available solvency margin has shrunk 40%. Nevertheless, in 2008 all insurance companies complied with the requirements for committed assets and own funds as set out in the Insurance Activities Act.

Non-life insurance

While the downward trend of life insurance figures was apparent already a year ago, at this point also the sales of non-life insurance policies have gone down. In 2008, the non-life insurance undertakings operating in the Estonian market collected 4.2 billion kroons of **insurance premiums** in total, which is approximately 11% more than in

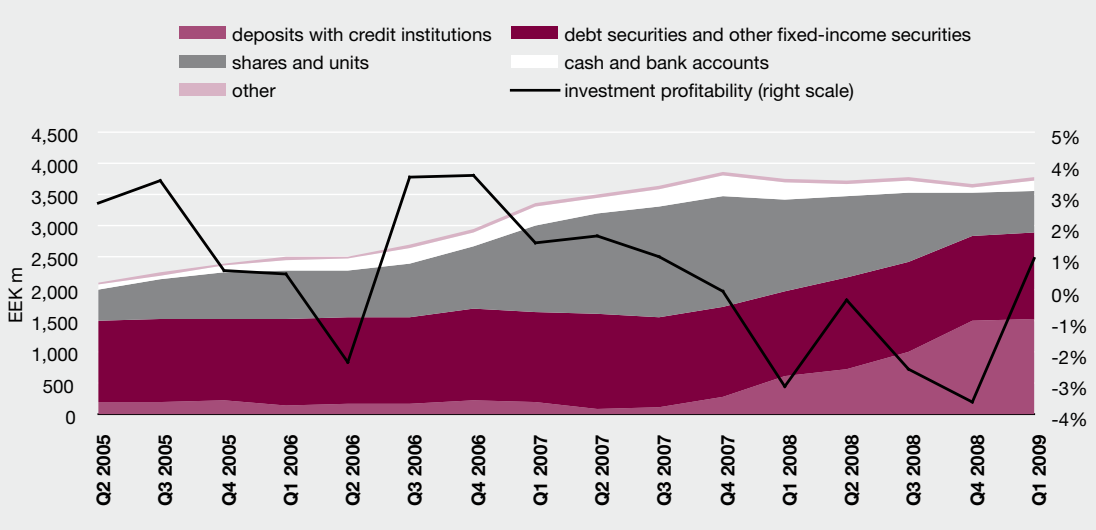

Figure 8. Structure and profitability of life insurance companies' investment

2007 (see Figure 9). The increase in premiums is mostly related to the increase in the market share of foreign branches. At the end of the first quarter of 2009, the branches accounted for 13% of the market (7% in the first quarter of 2008). The quarterly sales of non-life insurance undertakings has decreased on average 5% already from the third quarter of 2008; in the first quarter of 2009, non-life insurance companies collected 854 million kroons of premiums in total.

The volume and structure of **indemnity** payments did not change much in 2008: the insurance companies operating in Estonia made payments in the amount of 2.4 billion kroons, the majority of which were claims for the insurance compensation of land vehicle damage.

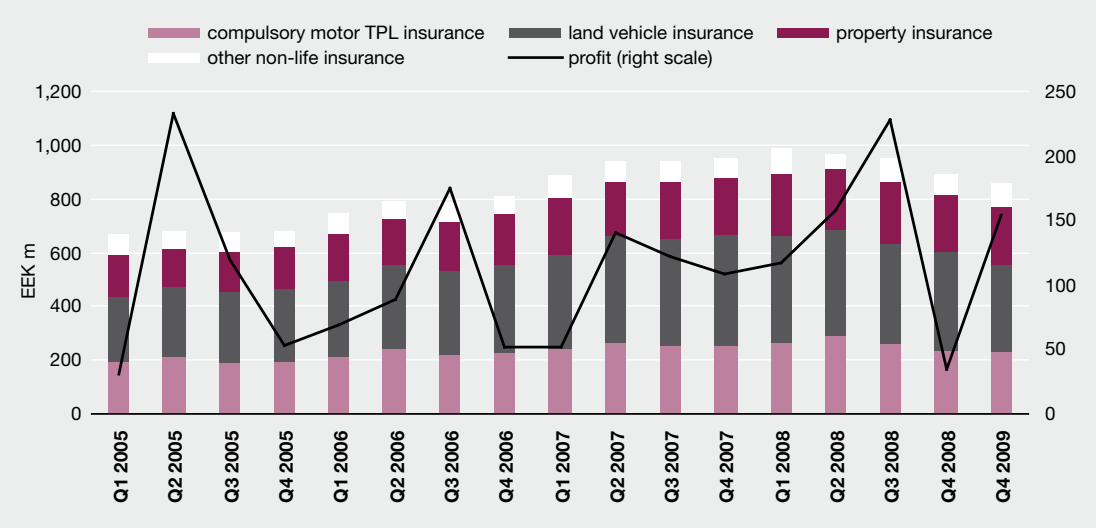

Figure 9. Profit of non-life insurance companies and insurance premiums collected from residents

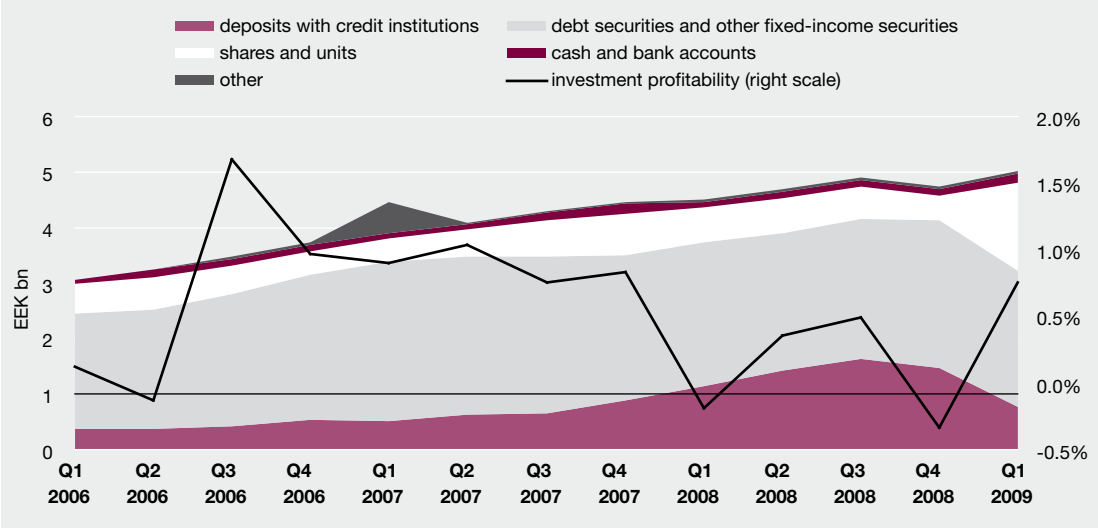

Figure 10. Structure and profitability of non-life insurers' investment

Unlike in the life insurance sector, in 2008 the **profitability** in the non-life insurance market (538 million kroons) was 27% higher than in 2007, although annual growth in insurance premiums was considerably more modest than in previous years or even negative due to low economic activity. Profitability was supported by sufficient diversity of invested assets, positive rate of return and decrease in the loss and expense ratios. Although in the last quarter of 2008 insurance companies earned only 34 million kroons of profit, the profits for the first quarter of 2009 were 119 million kroons bigger.

The structure of investment has changed considerably this year. At the end of 2008 insurers had deposited 1.5 billion kroons in banks, whereas in the first quarter of 2009 the deposits decreased 48%. The amount of stocks and units in the investment portfolio experienced a considerable increase: from 437 million kroons in the fourth quarter of 2008 to 1,602 million kroons in the first quarter of 2009. This was related to the restructuring of two major insurers in the Baltic States. The rate of return on investment in the first quarter was still modest, reaching only 0.75% (see Figure 10).

In 2008, the **required solvency margin** for non-life insurance undertakings was 634 million kroons, having increased only 2.6% year-on-year. The solvency margin increased 22% over the year and amounted to almost 3 billion kroons. The available solvency margin increased by 477 million kroons.[2] Thus, the capitalisation of non-life insurance undertakings is still high.

Considering the cooling of the real economy, the low of the insurance market is likely to continue because the economic environment generally affects the insurance sector with a lag. The life insurance market has already declined to the level of 2004 but a further fall cannot be ruled out either. Since household incomes and corporate earnings have decreased and loan and leasing market activity has waned, the market trend of non-life insurance remains in decline. The improvement of economic performance primarily depends on the ability of insurers to respond rapidly to changes in the economy, maintain good customer relations and sound cost management.

[2] In 2007, the minimum requirement to solvency margin increased to 3.2 million euros, which is why the amount of the available solvency margin for 2007 has been adjusted.

V PAYMENT AND SETTLEMENT SYSTEMS

Interbank payment and settlement system

Eesti Pank is managing three interbank settlement systems: the Settlement System of Ordinary Payments (ESTA) for domestic payments, the Real-Time Gross Settlement System (EP RTGS) and TARGET2-Eesti for pan-European euro payments.

Around 99,400 payments a day are settled via the interbank payment and settlement systems at a total value of 11 billion kroons.

Owing to the customer-friendly functionality of the **ESTA** the majority of domestic interbank kroon payments are settled through it: 99,000 payments a day, which comprise 99.6% of total interbank payments (see Figure 1). An average of 1.7 billion kroons a day were settled through the ESTA over the past six months.

Although the number and value of payments started to grow rapidly in September 2008 owing to the unstable financial markets, in the first quarter this year the general economic decline became apparent also in the field of settlements. The value and number of payments dropped to the level of mid-2007, shrinking 12% year-on-year. The average amount of a payment decreased to 17,000 kroons.

Due to structural changes in the **EP RTGS**, i.e. the introduction of euro payments via TARGET2-Eesti and the decrease of customer transactions, the number of payments settled through the RTGS declined 26% over the year (see Figure 2).

On average, 202 payments per day were settled in the EP RTGS from October 2008 until end-March 2009. The express payments initiated by bank customers comprised 69% of total transfers.

The average value of express payments decreased 9% over the year and amounted to 5.7 billion kroons per day during the past six months. Banks' "compulsory" payments (transactions related to the collateral account of the ESTA) and interbank payments accounted for the largest share of the value with 39% and 30%,

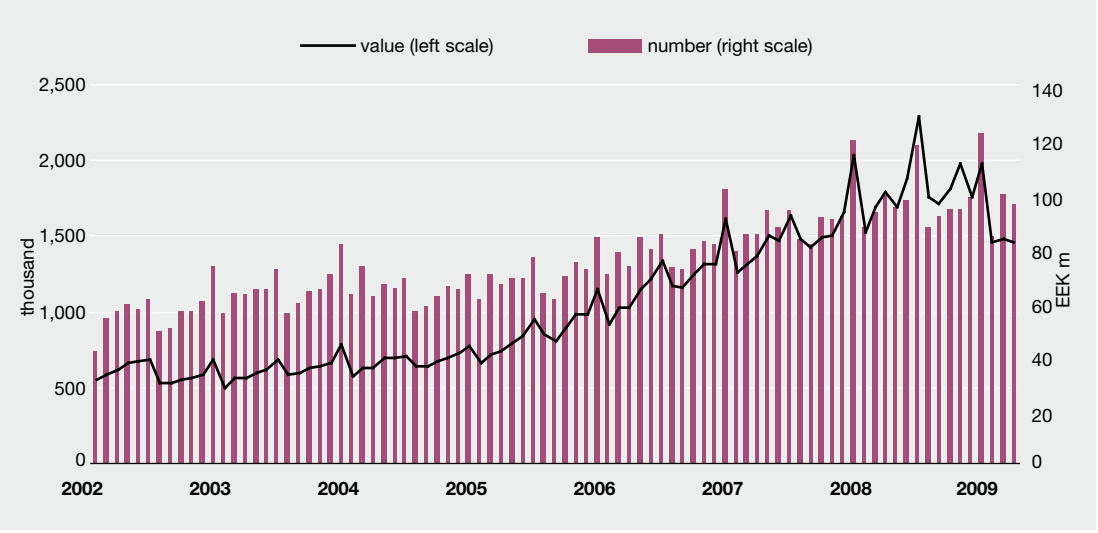

Figure 1. Number of payments processed per day in the ESTA and their average daily value per month

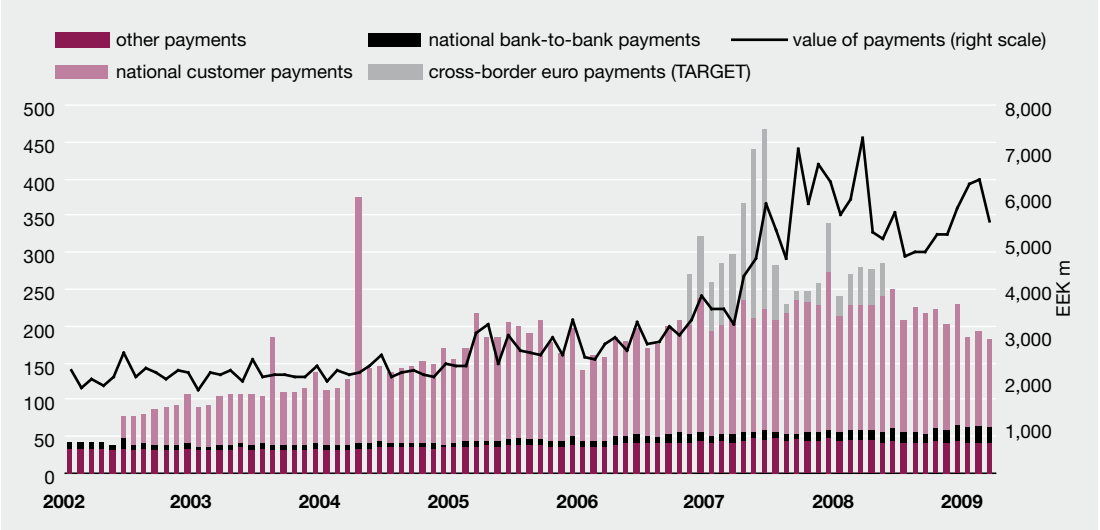

Figure 2. Average number of payments processed per day in the EP RTGS and their average daily value per month

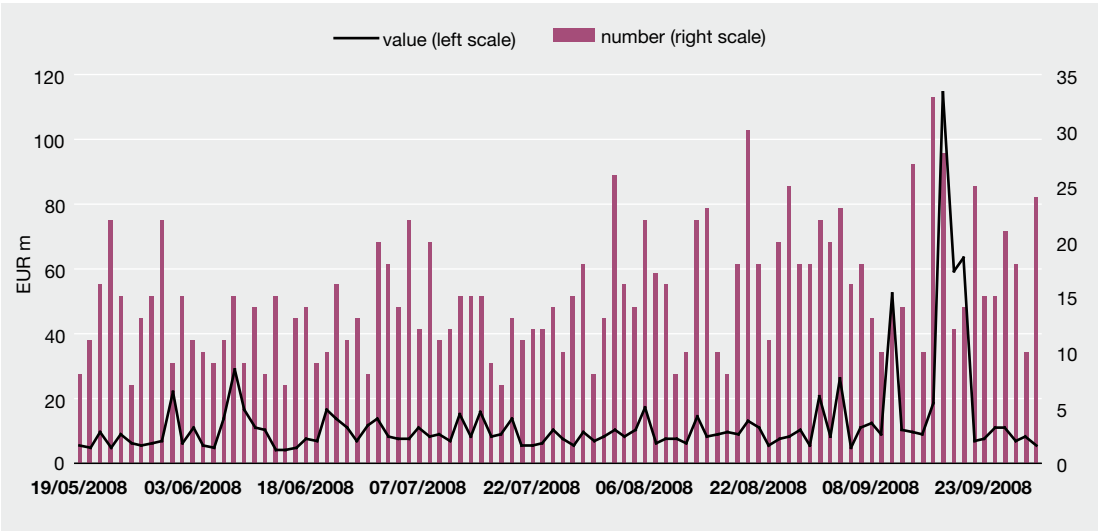

Figure 3. Number of payments processed per day in the TARGET2-Eesti and their daily value

respectively, whereas the latter have increased by 1.75 times. As a result of the stock market decline, the turnover of net settlement liabilities stemming from securities transactions is also on the wane, having shrunk 66% year-on-year.

The cross-border settlement system **TARGET2-Eesti** – the alternative channel for euro payments – gained popularity in the final months of 2008 (see Figure 3). From October 2008 until March 2009, an average of 68 payments were settled daily at the value of 234.8 million euros (3.7 billion kroons). The banks operating in Estonia received an average of 191 payments per day at the value of 234.8 million euros (3.7 billion kroons) via the TARGET2.

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 operating in Estonia – the TARGET2-Eesti, the EP RTGS and the ESTA – have been structured so as to minimise the materialisation of potential risks.

During the last six months, the EP RTGS encountered one serious failure[1], which interrupted the system's operation for 26 minutes. The reason for the interruption was the installation of the updates of the TurboSwift software. In order to avoid such incidents in the future, the management procedures for updates were improved. The availability of interbank payment and settlement systems was 99.94% in the fourth quarter of 2008 and 100% in the first quarter of 2009 (see Figure 4).

The ESTA recorded two serious malfunctions over the past six months. Software errors occurred on 17 October and 15 December, causing an interruption in the operation of the system that lasted for 3 hours and 30 minutes in total. The errors have been eliminated. The availability of the ESTA was 99.44% in the fourth quarter of 2008 and 100% in the first quarter of 2009.

The availability of the TARGET2-Eesti remained at 100% throughout the period under observation. **The malfunctions of the settlement systems did not affect financial stability.**

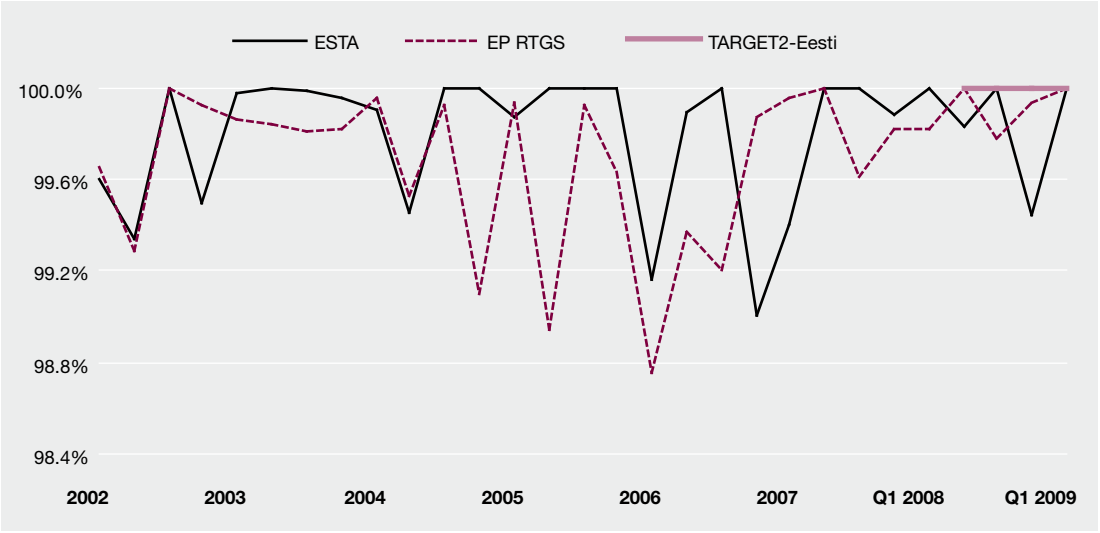

Figure 4. Availability of interbank settlement systems

[1] 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 or a decrease in the operability of settlement systems.

THE INTEGRATION OF THE PAYMENT ENVIRONMENT OF THE EUROPEAN UNION AND THE DEVELOPMENT OF DIRECT DEBITS

The harmonisation of the principles of the payment systems (e.g. TARGET2) and payment instruments (payment orders and direct debits, cheques, debit and credit cards, etc.) available in various countries forms an important component of the EU integration. Some years ago the payment environments differed significantly across the EU Member States. Payment habits vary primarily because the majority of the solutions for payment environments have so far been designed for domestic markets.

Currently, the **Single Euro Payments Area (SEPA)** is being developed in order to harmonise the European payment systems. The key goal of the SEPA is to eliminate the borders between EU payment environments and increase the level of electronic payments.

To this end, common rules and procedures have been prepared for the three major payment instruments: payment orders, direct debits and card payments. In addition to the different infrastructure and procedures available in EU countries, another bottleneck of integration is the differences in legislation, which have hindered the harmonisation of direct debit schemes. Thus, finding suitable solutions for direct debit schemes to provide domestic and pan-European direct debiting has become one of the key issues in establishing the Single Euro Payments Area. A new EU directive on payment services has been adopted to eliminate legislative obstacles. EU Member States are expected to transpose the directive into national law by 1 November 2009 at the latest.

Comparing the popularity of direct debits and also the general payment environment in Estonia to that of several other European Union countries, Estonia is highly advanced and electronic. The amount of currency in circulation in Estonia (4.9% of GDP) is relatively smaller than the euro area average (over 6% of GDP). The most popular payment instruments in Estonia include payment orders, card payments and direct debits, comprising 37.8%, 55.3% and 6.8% of total transactions, respectively (see Figure 5). The majority (88%) of payment orders consist of transactions via the Internet and telebank. While cheques are still quite popular in the euro area,

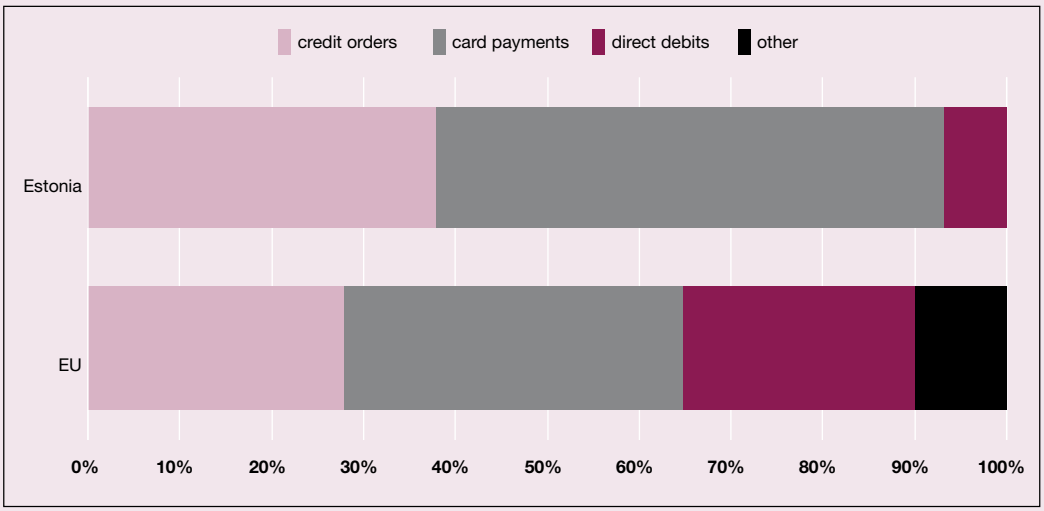

Figure 5. Structure of non-cash payments in Estonia and the EU at end-2007

comprising 8.6% of all non-cash payments, the use of cheques in Estonia is very rare.

In the summer of 2007, the **interbank direct debit infrastructure** was introduced in the Estonian market. It has improved the efficiency of the payment environment and competition in the Estonian banking market. The Estonian national direct debit scheme differs from the SEPA direct debit scheme mainly with respect to the holder of the authorisation. In the current scheme it is the payer who manages and owns the rights over the applications for using direct debit services, but the SEPA scheme favours giving the application management rights to the receiver of payment. In other words, in Estonia payers are entitled to terminate the use of a direct debit service at their own will, but the SEPA requires permission to terminate the contract from receivers.

Based on the data of 2007, direct debits comprised about 6.8% of total non-cash transactions performed in Estonia; in this respect, Estonia was most similar to Finland and Romania (see Figure 6). Growth in the number of direct debits in Estonia has slowed, year-on-year, and their share in total non-cash payments has declined (6.7% in 2008, see Figure 7). Although the number of direct debits has been growing faster in Estonia compared to the EU average, their share (25%) in total non-cash payments remains nearly four times smaller than in the EU on average.

Direct debits are widely used in Germany, Spain and Austria, where they accounted for over a third of total domestic non-cash payments in 2007. Such vast differences in the use of direct debits have been also caused by the fields where direct debit services are used. Several EU Member States use direct debiting also for loan repayments, which statistically boosts the share of direct debits among total non-cash transactions both in terms of number and amount. In Estonia, loans are repaid by standing orders rather than by direct debits. Neither are the transactions regarding various service fees and interest charges reflected in Estonian payment statistics, which may elsewhere be settled by direct debits, thus increasing their relative importance.

In 2007, direct debits comprised 0.7% of the total value of non-cash domestic payments in Estonia (see Figure 8). The total share of direct debits

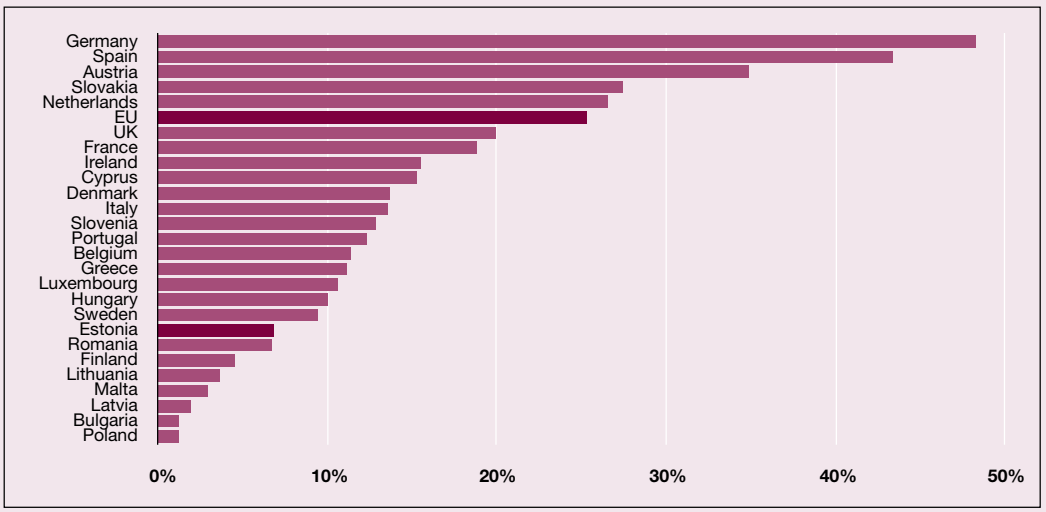

Figure 6. Direct debit payments as a ratio of total domestic non-cash payments in 2007

Source: Blue Book (2008)

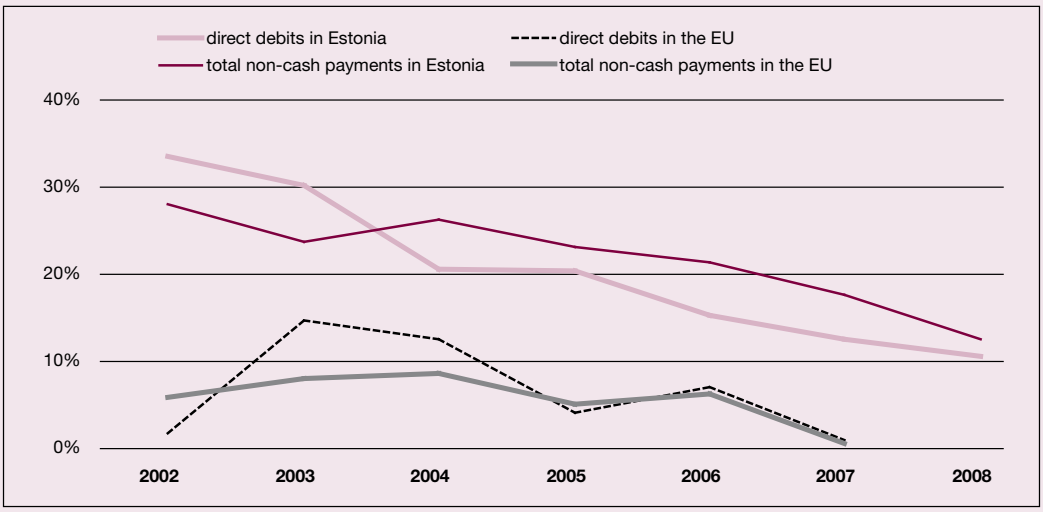

Figure 7. Growth in non-cash payments and direct debits in Estonia and the EU

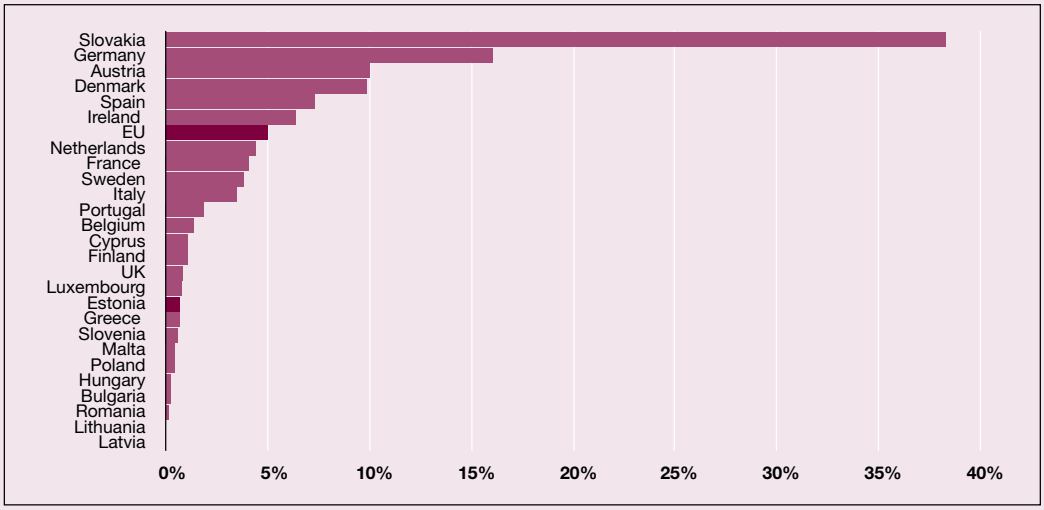

Figure 8. Volume of direct debits as a ratio of total volume of domestic non-cash payments in 2007

Source: Blue Book (2008)

in the European Union was also relatively low, reaching an average of 5%. In terms of number and size of transactions, direct debits are popular in Germany, Spain, Austria and Slovakia. Direct debits are more widespread in Western Europe, where they are mainly used for regular retail payments similarly to Eastern Europe.

Given that the electronic payment environment is highly advanced in Estonia, the market of direct debits has reached a relatively stable level over the past years. The payment habits of Estonian residents have been shaped by the availability of comfortable and inexpensive services. The integration of the financial sector and pan-European direct debit schemes, but also the integration of the field of the non-financial market, facilitates the appearance of new international companies in the Estonian market that use the direct debit services, which, in turn, may foster a further increase in direct debits in Estonia.