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SUMMARY

The developments in the international money and capital markets in the second half of 2007 have increased investors' aversion to risk, which will continue to have an impact on the development of the Estonian financial sector also for at least the next six months. In this respect, market sentiment towards the European banking and real estate market as a whole is much more relevant for Estonian financial intermediaries than the direct impact of the rise in money market interest rates or the correction in the stock market.

In addition to the tightening of the global liquidity environment, international investors and the community in general became more risk averse towards the economic and monetary policy outlook of the Baltic States. However, the accompanying greater activity in the money and foreign exchange market has not undermined the functioning of the Estonian financial system. In the same way, it has not tightened the funding conditions, since the funding costs have increased here just as much as elsewhere in the region.

Although the domestic demand of Estonia's main trading partners may decrease next year, the export outlook of Estonian enterprises remains good. As a logical follow-up to the rapid growth in recent years, Eesti Pank expects Estonia's economic growth to slow next year, falling below the historical average (to 4.3%), but recover then and reach a moderate level (5.7%) by 2009.

Financial behaviour of companies and households and related risks

Although the total profit of **enterprises** grew fast also in the first half of 2007 (over 30%), aggregate profitability has somewhat declined compared to the second half of 2006 owing to the rapid increase in costs. Further decline in profitability and the accompanying weakening of loan-servicing capability is to be expected also next year.

Slowing growth has brought along a decline in investment growth and thus also a slower increase in corporate debt. In the case of corporate loans, the shift from the real estate sector to other sectors has occurred as expected. Low interest rate margins persist owing to banks' competition in financing good investment projects.

Supported by favourable labour market conditions and rapid wage growth, the economic situation of **households** has remained good. However, their confidence in further income growth and economic outlook has decreased. Since demand in the housing market diminished, the monthly changes in the volume of housing loans started to decrease in comparison to previous year in the late spring of 2007. Although the growth of other household loans has remained robust (over 50%), it has slowed starting from the third quarter. The volume of non-housing household loans has grown to constitute 11% of GDP, but it is still considerably lower than in most other EU countries.

All in all, the financial position of households is satisfactory. Although it is weakened by rising interest rates and inflation, the favourable labour market situation in conjunction with more moderate but still robust wage growth has a reinforcing effect.

By autumn 2007, the decrease in demand and in the volume of transactions in the **housing market** had not yet brought about a considerable decline in prices. Calculations based on the distribution of household income indicate that at the current price level, loan potential is still there and the demand for housing suffices also in the longer perspective. Therefore, the most plausible scenario for the immediate development of the real estate market would be stagnation of prices; in other words, the stability of the current average price level instead of a sharp price correction.

While the volume of housing transactions is decreasing, the number of new dwellings put on sale is growing. For some real estate developers, this may lead to problems with liquidity and capitalisation. Since the outlook of profitability in the housing market has become less favourable, the amount of new office space developed will increase in the upcoming years. However, banks' exposure to the risks of this market segment is considerably smaller compared to residential development projects.

Banking market

The banking market is showing signs that credit institutions have become more risk sensitive. This is mainly reflected in their increased prudence in granting credit. **Asset quality** has been good for the past two quarters across banks as well as banking groups. Taking into account the slowing economic growth, it is likely that loan losses will start to rise. So far they have been quite low. However, given the current capitalisation level, the banking sector can endure a relatively extensive increase in loan losses.

The **capitalisation** of banks and banking groups has remained similar to spring levels. As of 2008, all credit institutions operating in Estonia will implement the standard methods of the new procedure for calculating capital adequacy. The adoption of the new calculation methods without any adjustments would have resulted in a considerable decrease in own funds required from banks. For this purpose, Eesti Pank decided to require banks to include the housing loans issued in Estonia in the risk assets in the extent of 60% instead of the usual 35% (so far in the value of 100%). The present 10% own funds requirement as a percentage of banks' risk weighted positions will remain unchanged.

The share of **liquid assets** in the banking sector's total assets has not changed considerably over the last half-year. The reserve requirement, which is 15% of banks' liabilities as of September 1, 2006, has helped to ensure that.

The biggest banks in the local banking market belong to the Nordic banking groups that are operating simultaneously in regions which are in different phases of the economic cycle. On the one hand, this leads one to presume that this circumstance reduces the financing risks of those parts of the group that have a higher risk level. On the other hand, higher risk estimate of some part of the group will bring about an increase in the entire group's risk estimate. Therefore, the group's ability and readiness to raise additional resources if necessary and send them to different parts of the group is more important than before.

The **profitability** of banks has remained good so far. In the upward phase of the key interest rates, profitability has been supported by the high share of floating rate loans in banks' loan portfolios. The decline in loan interest margins has stopped in Estonia. Continuously low loan losses have also contributed to profitability. Banks' ability to manage expenditure – to improve the cost-to-income ratio or keep it stable – is an important factor in ensuring the further profitability of banks.

Securities market and other financial intermediaries

Bond market capitalisation as well as the turnover of the secondary bond market grew in volume owing to the increase in the volume of issues by resident non-financial sector companies. The liquidity problems in the global financial markets that resulted from real estate loans with higher risk level, as well as the depreciation of the US dollar affected the stock markets of the Central and Eastern European countries and, to a great extent, also the Estonian **stock market**. Market developments were characterised by the sharp fluctuation of stock prices and the general downward trend. By the end of November, the value of the Tallinn Stock Exchange index OMXT decreased by nearly 16% compared to the beginning of the year, dropping back to the level of end-October 2006.

Due to the developments in the stock market and the high comparison basis, the growth of assets of **investment fund** slowed. The majority of the new capital in investment funds was invested in stock funds, most of it channelled to the EU stock markets. The growth of investment fund assets was boosted by the addition of seven new funds in the list of funds registered in Estonia. The most popular investment region of the new funds is the European market.

Pension fund assets have continued robust growth: the volume of second pillar pension funds exceeded ten billion kroons and the volume of third pillar funds is approaching one billion. The volume of fund assets still forms approximately a third of the pension system's third pillar; the rest is covered by voluntary pension insurance. The pension funds' management companies registered in Estonia prefer to invest the capital placed in the funds into other funds, thus spreading the risks better.

The growth in the **life insurance market** was supported by the establishment of life insurance companies as European companies in Estonia, where the activities in all of the Baltic States are coordinated. This structural change tripled the profit of life insurance companies and contributed to the growth of collected gross premiums. The growth in the **non life insurance market** has been quite stable, supported by the so far favourable economic environment and credit growth.

Payment and settlement systems

There were no such incidents in the operation of the Estonian **payment and settlement systems** that would have threatened the stability of the systems and the whole financial sector. The growth in the turnover of the Real-Time Gross Settlement System of Eesti Pank (EP RTGS) was accelerated by the considerably higher turnover of the foreign exchange transactions between the central bank and credit institutions. In the summer of 2007, the **interbank direct debit** infrastructure was introduced in the Estonian market. It helps to improve competitiveness in the retail payments market and expand the services provided to bank customers. The new infrastructure enables to conclude direct debit agreements and make payments initiated on the basis of direct debit orders even when the settlement accounts of the payer and the payee are opened in different credit institutions.

The international comparison of Estonia's payment environment and the use of different payment instruments revealed that Estonia is among the European countries with an advanced payment environment. In the use of non-cash payment instruments, Estonia resembles Finland and Lithuania the most, whereas its level of cash payments is lower than the euro area average. The use of payment cards is more common in Scandinavian countries, and Estonia is approaching them in that respect.

Conclusion and financial stability risks

Although the period of slower economic growth that has just started augments the credit risk and the higher risk aversion of investors increases the liquidity risk, **the risks to financial stability may still be considered low. However, the likelihood of the materialisation of these risks has increased.** The consequences of the possible materialisation of risks can be alleviated by the capital and liquidity buffers built earlier. These help the local financial intermediaries survive the forthcoming period without any major problems.

The materialisation of the credit risks that accumulated during the economic boom is only natural in the current economic cycle characterised by slower income growth. This is expressed by the relatively fast increase in the share of non-performing loans. The volume of non-performing loans has so far been very small against the rapid credit growth. Thus, their growing share can be considered normal and it does not pose a threat to the smooth functioning of the financial system. Stress tests of banks' loan portfolios indicate that in the near future, possible loan losses will not expand to the extent that banks operating in Estonia should look for opportunities to recover capital in order to continue with their day-to-day functions.

As regards the corporate debt, the highly-leveraged real estate sector may be considered at the most risk. Real estate developers and construction companies that have taken higher risks and whose share of own funds is small are the most likely to experience difficulties in servicing their loans. The situation of this market segment is further complicated by the very cautious attitude of households to property investments. This may inhibit the activity in the housing market even further.

Besides the credit risk, the liquidity risk deserves also more attention in the periods ahead. Namely, it has increased because of the tensions in the global liquidity environment. The materialisation of the liquidity risk of the Estonian banking sector depends primarily on the ability of parent banks to raise additional funds, if necessary. Based on the current information, there are no circumstances that would considerably restrict parent banks' access to funding to a greater extent than general changes in the environment, or significantly increase the funding costs.

The opinion expressed this autumn by foreign investors reflected a more sceptical attitude towards the Baltic economies. This provides a supplementary negative undertone to the slowing growth and turbulence in the global financial markets. Nevertheless, the actual economic developments are determined mainly by the behaviour of the local financial intermediaries, enterprises and households.

It is necessary to thoroughly consider possible future developments, understand them and adjust one's behaviour accordingly, ignoring the messages of those confusing and intimidating the public by speaking about an economic collapse. The time ahead will make a good lesson, helping to understand economic mechanisms. In addition, it is a good opportunity to prepare a good starting position for the new upward cycle. Financial intermediaries, who have a good understanding of how the economy functions, have the possibility to act as level-headed guides in the process of economic adjustment.

I FINANCIAL BEHAVIOUR OF COMPANIES AND HOUSEHOLDS AND THEIR RISKS

COMPANIES[1]

Corporate business situation

Confidence

The **economic confidence indicator** calculated by the Estonian Institute of Economic Research, which indicated a relatively favourable situation in the first months of 2007, witnessed a gradual decline in the following months (see Figure 1). The decreasing optimism of economic agents was consistent with the slower economic growth. Confidence has declined the most in the construction sector but the retail trade survey indicators have dropped as well. The confidence in the services sector has remained at a satisfactory level.

As for **manufacturing companies**, the future expectations that remained high for two years have fallen and been replaced by cautiousness and moderate pessimism. However, the confidence indicators are still positive (see Figure 2) and the existing orders ensure production for 4.8 months (in June, this indicator was 4.9). According to the Estonian Institute of Economic Research, the utilisation rate of production capacity will stay relatively high (76% at the beginning of the fourth quarter of 2007). At the same time, the growth in the investment needs of manufacturing companies that could tighten the situation in manufacturing is not expected to accelerate in the immediate future.

New companies and bankruptcies

The registration of **new companies** began to decelerate at the beginning of 2007 and when excluding the real estate and construction companies, even earlier – at the end of 2006 (see Figure 3). In 2007, fewer companies were registered mainly in retail and wholesale trade but to some extent also in agriculture and fishery. The registration of

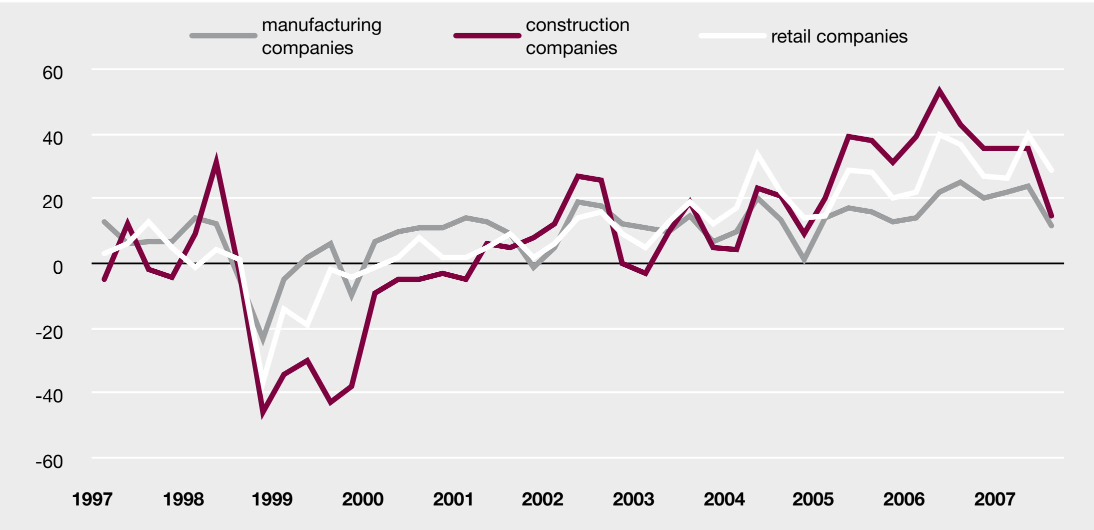

Figure 1. Confidence indicators of Estonian companies

Source: Estonian Institute of Economic Research

[1] In this chapter, “companies” refer to non-financial companies.

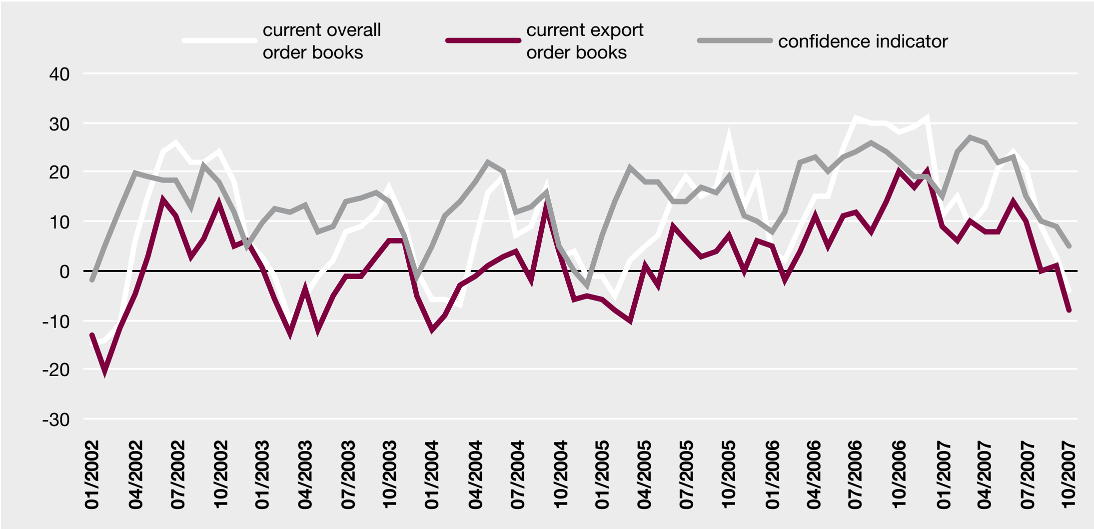

Figure 2. Demand for the production of manufacturing companies and the confidence indicator

Source: Estonian Institute of Economic Research

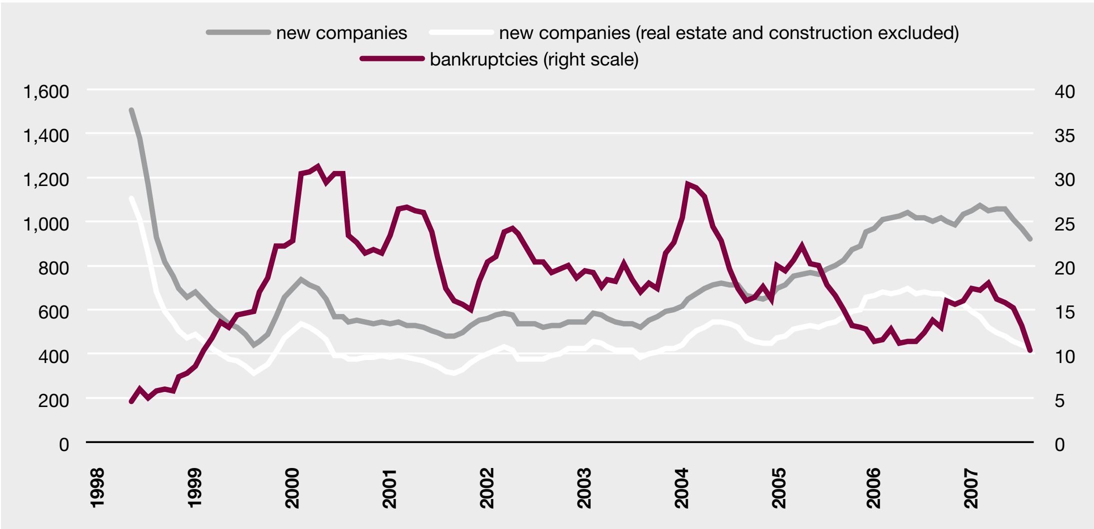

Figure 3. New enterprises entered in the commercial register within a month and bankrupt enterprises (6-month moving average)

Source: Estonian Enterprises Register

real estate and construction companies that had been accelerating so far was also more passive in the third quarter of 2007.

The number of **bankruptcies** started to rise already before the decline in the registration of new companies, namely in the second half of 2006. In the second quarter of 2007, this trend turned again. However, it is too early to draw any far reaching conclusion from that, as it is evident that when the exceptional year 2006 is excluded, the number of bankruptcies has rather been showing a decline until the third quarter and then gone up again at the end of the year. The number of bankruptcies has dropped across all sectors.

Corporate economic indicators

According to the business statistics of Statistics Estonia, the **total profit** of companies continued a very robust growth in the first half of 2007, although the rapid increase in **total costs** diminished the growth from 39% in the second half of 2006 to 30% in the first half of 2007 (see Figure 4). The increase in total costs is driven by labour costs that grew for the fourth consecutive quarter, increasing in the first half of 2007 by over 30% compared to the same period of the previous year.

At the same time, the growth of net **sales revenue** has also picked up compared to the second half of 2006, but not enough to increase profitability. This indicates that companies are less and less capable of bearing the growth of costs without compromising profitability. The growth of net sales revenue was primarily driven by retail and wholesale, manufacturing, transportation, storage and communications companies.

The growth in labour costs turned out to be too strong compared to nominal GDP growth and it was mainly covered at the expense of a relative decrease in profits. The share of corporate profit in the structure of GDP has been constantly falling since the second half of 2006: in the second quarter of 2007 nearly by 3 percentage points as an annual average compared to the year-ago figure (see

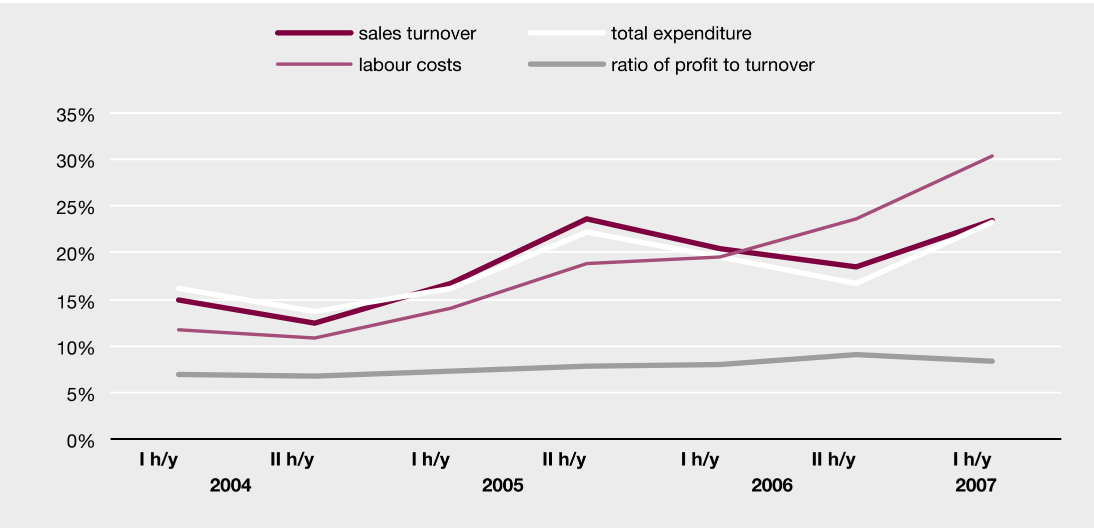

Figure 4. Annual growth rates of corporate sector turnover and costs and aggregate profitability

Source: Statistics Estonia

Figure 5). Last year, the share of labour costs in GDP did not grow considerably, whereas the data for the first two quarters of this year reflected considerable growth, approaching again the levels recorded in 2000.

Investment

In the first half of 2007, companies **invested** over 18.5 billion kroons in tangible fixed assets, which is nearly 1.6 billion kroons more than at the same time last year (see Figure 6). Investments were mainly channelled to constructing and reconstructing

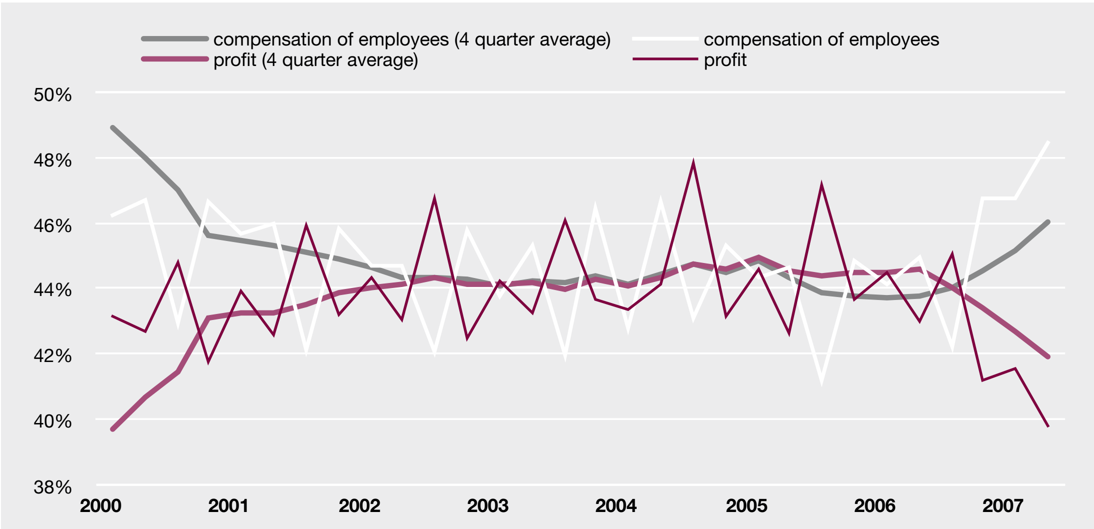

Figure 5. Compensation of employees and profit as a ratio of GDP (%)

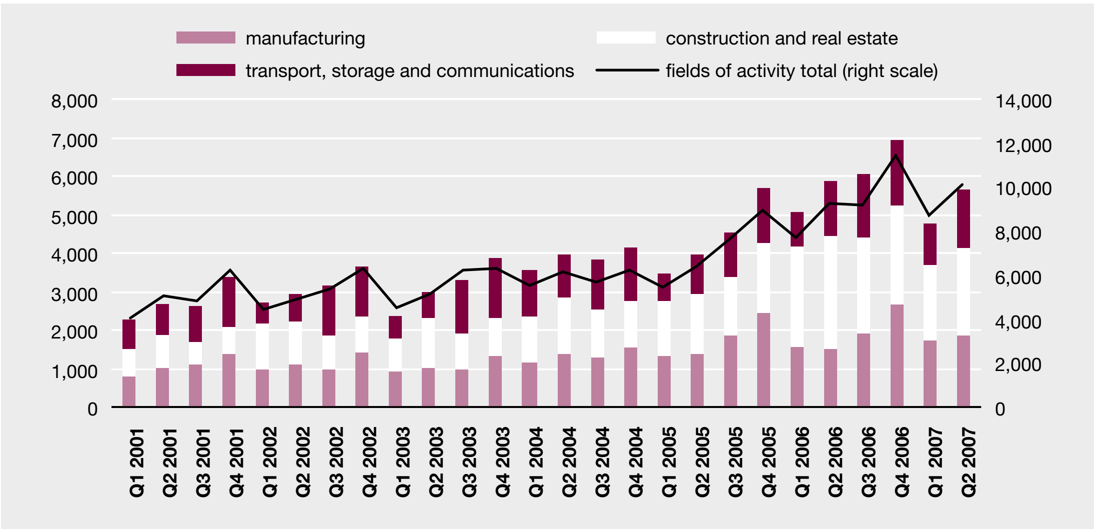

Figure 6. Corporate fixed investment (EEK m)

Source: Statistics Estonia

buildings and civil engineering works as well as to machinery and equipment. In the last quarters, the growth of investment activity slowed. In the first half of 2006, investments increased by 43% compared to the same period of 2005, whereas in the first half of this year, they increased by only 9% (year-on-year).

Largest investments again came from real estate, renting and business services companies, who made 18% of the total corporate investments (in the first half of 2006, this indicator was 4 pp higher). Real estate investments contributed the most to the decline in total investment growth: while the investments of manufacturing companies grew by over 17% in the first half year, then construction and real estate investments decreased by 2% compared to the previous year.

The probable decline in the volume of future investments in the real estate sector is indicated also by the considerably stronger growth of stocks this year. The growth of unfinished and completed buildings/development projects in the first half of this year was only 10% smaller than the sales revenue of this period.[2]

Corporate financial position and savings

The rapid growth of corporate turnover and profit created a favourable environment for the growth of both financial assets and financial liabilities. The growth of corporate financial liabilities that covers own funds as well as external funds accelerated in the first half of 2007 to 23% from the 20% of the end of 2006, exceeding again nominal GDP growth (by 4%), unlike in the second half of 2006. As at the same time, the growth of financial assets accelerated as well, the **negative net financial position** of companies has not weakened compared to the end of 2006. It remained at 114% of GDP also at the end of the second quarter of 2007 (see Figure 7).

The stronger growth of corporate **financial assets** was caused by the increase in shares, where-

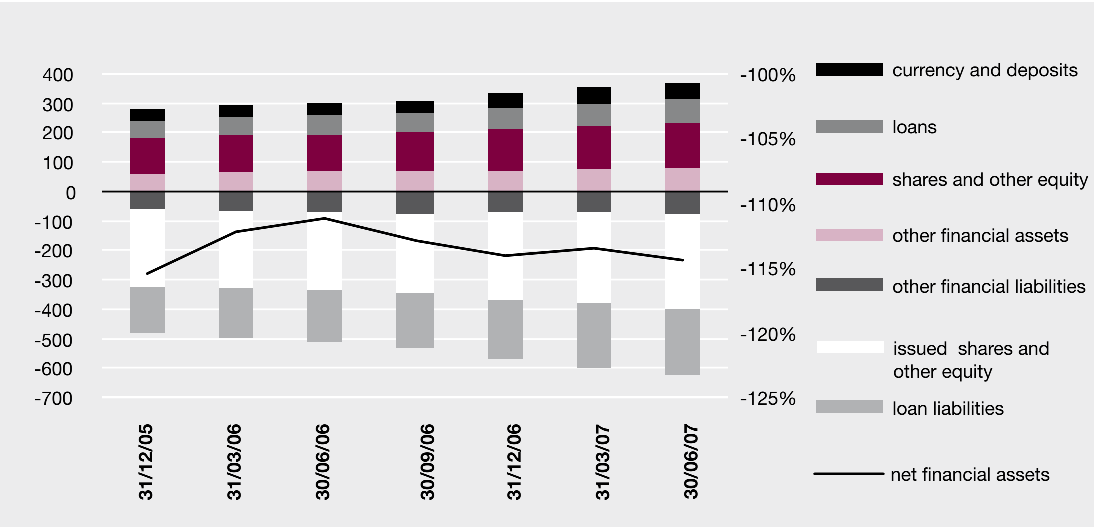

Figure 7. Corporate financial assets and liabilities (EEK bn; left scale) and net financial assets (% of GDP; right scale)

[2] Market participants estimate that the “clearance sale” will take at least one year at the current pace of new sales.

as nearly 75% of the increase can be attributed to the rise in stock market value. The contribution of corporate deposits to the growth of financial assets decreased compared to 2006, although their annual growth remained robust at over 30% at the end of the second quarter of 2007.

The **growth of domestic corporate deposits** decelerated in 2007 compared to the previous year. Consequently, the annual growth rate of deposits has also continued to decline. By the end of the third quarter, the annual growth of corporate deposits reached 17%, being lower than the expected nominal GDP growth; the last time that happened was over three years ago. Both demand and time deposits decreased in the third quarter (see Figure 8).

The growth of corporate **financial liabilities** was driven by the increase in own funds and loans taken, whereas the role of own funds in the growth of financial liabilities increased in the first half of 2007. Almost two thirds of the growth of own funds came from the increase in their market value, which, in turn, is mainly caused by strong profits. In the last four quarters, companies have also issued more bonds, but their share in financing companies is still very small (2%; see also Chapter III *Bond market*).

Companies' aggregate debt has grown faster than aggregate own funds. Therefore, the ratio of total corporate debt to own funds or the **financial leverage** has slowly increased (see Figure 9). By the end of the second quarter of 2007, the **debt-to-equity ratio** had reached 70%. Owing to the simultaneous robust growth of financial assets, the **ratio of debt to financial assets** has been weakening only slightly since the second half of 2006. The **ratio of debt to liquid financial assets**, however, declined in the second quarter of 2007, due to slower deposit growth, and probably also in the third quarter.

Corporate debt

The slowdown in economic growth in the first half of 2007 marked the beginning of the cyclical economic adjustment phase. This was accompanied by a decrease in the growth rate of **corporate debt** to 29% by the end of the second quarter of 2007 (see Figure 10). According to the main sce-

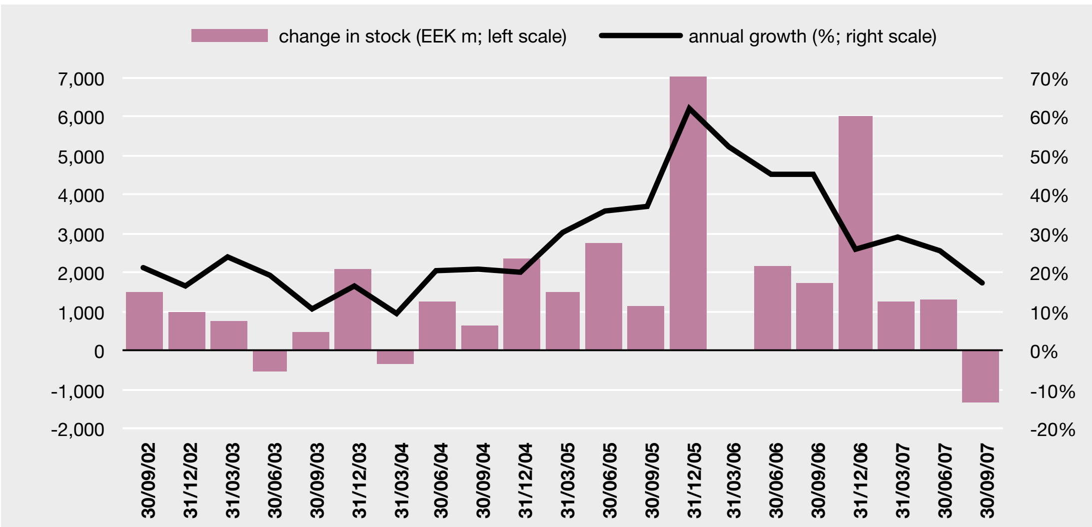

Figure 8. Growth of corporate deposits

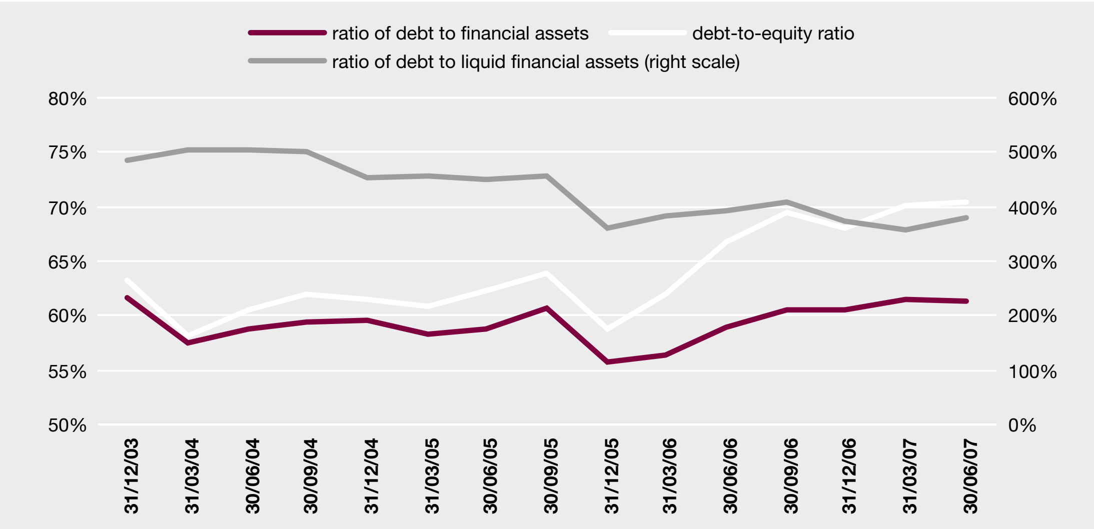

Figure 9. Corporate debt-to-equity ratio and liquidity

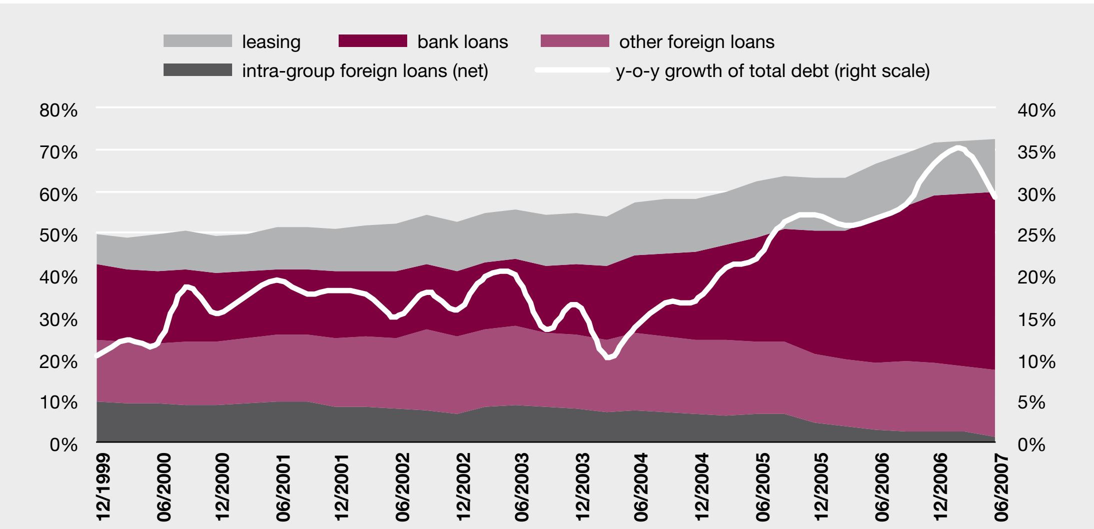

Figure 10. Corporate debt (% of GDP)

nario of the economic forecast, the growth of both corporate investment and debt is expected to slow further.

The increase in **corporate indebtedness** has also abated along with the slowing growth of debt. At the end of the first half 2007, total corporate debt constituted 72% of GDP, having increased by only 1 percentage point with six months, whereas in 2006, it grew by as much as 7 percentage points. Compared to other Nordic and Baltic countries, the level of corporate indebtedness is relatively high[3]; the aggregate euro area indicator was 68% in the first half of 2007.[4]

As regards sectors, real estate increased its **domestic and foreign debt** the most (by 9.2 billion kroons) in the first half of 2007, just as in the previous year (see Figure 11). At the same time, in the first half of 2007 this sector received less than half as many new loans as in the previous year. Over a half of previous year's volume went to manufacturing and trading companies as new loans (4.1 and 3.2 billion kroons respectively).

Although **foreign debt** started to grow again in the fourth quarter of 2006 (see Figure 12), the share of foreign debt in total debt has been declining further. By the end of the second quarter of 2007, it had reached 24%. The accelerated growth of intra group loans boosted the growth rate of foreign debt to 27% in the second quarter of 2007.

The growth rate of **domestic corporate debt** decreased rather abruptly in the second quarter of 2007 and dropped to 34% by the end of the third quarter. Domestic debt has grown at a decelerating rate in almost all sectors, but the growth rate of real estate sector borrowing has diminished the most. The financing of the wholesale and retail trade has been relatively more active compared to the previous year. The financing of manufacturing companies has not decreased remarkably either.

The **average interest rate on long-term corporate loans** has increased considerably as a result of higher key interest rates, reaching 6.2% in September 2007 (see Figure 13). The average interest margin over the key interest rate, however, has even decreased[5], indicating a tough competition between banks for profitable business projects. The same trend describes also the average interest margins of the manufacturing and real estate companies.

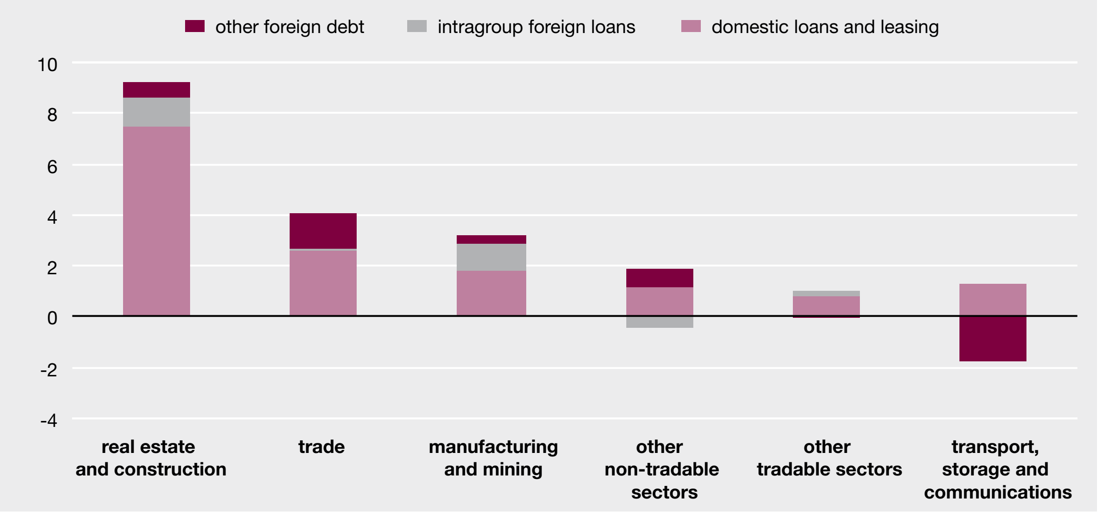

Figure 11. Corporate net borrowing in the first half of 2007 (EEK bn)

[3] According to the data of national central banks, corporate debt in Denmark reached 53%, in Sweden 50%, in Latvia 41%, in Norway 33%, in Lithuania 28% and in Finland 26% of GDP at the end of 2006.
[4] Here it must be borne in mind that due to the high level of integration with foreign markets, foreign borrowing accounts for nearly a fourth of corporate debt, whereas other countries might not take that into account. Foreign borrowing includes also intra group borrowing, which is by nature more similar to own funds than to external funds.
[5] Compared to the first three months of the year, the interest margin over the 6 month Euribor declined by nearly 40 basis points and amounted to an average of 1.4% for loans granted in the third quarter.

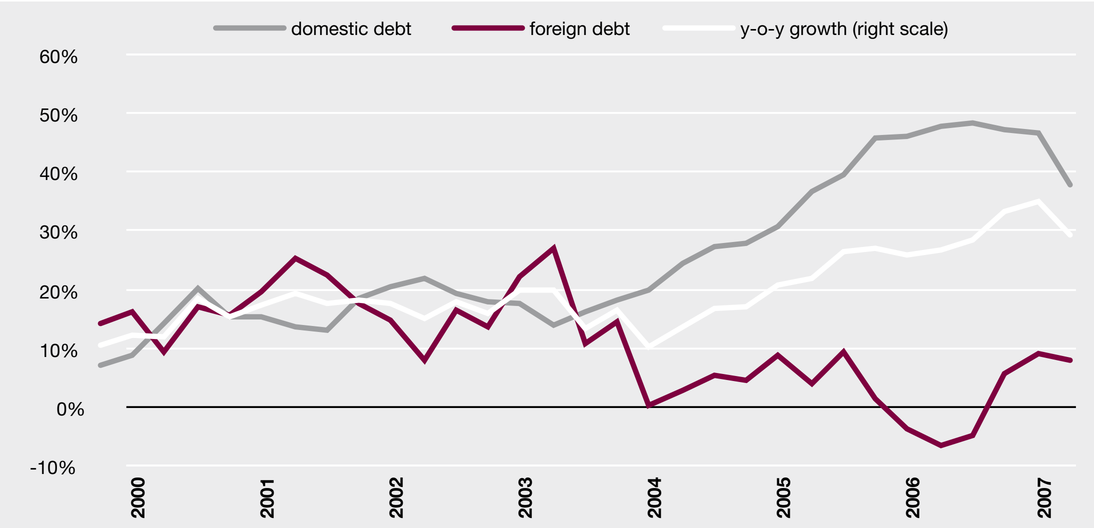

Figure 12. Growth rate of corporate debt

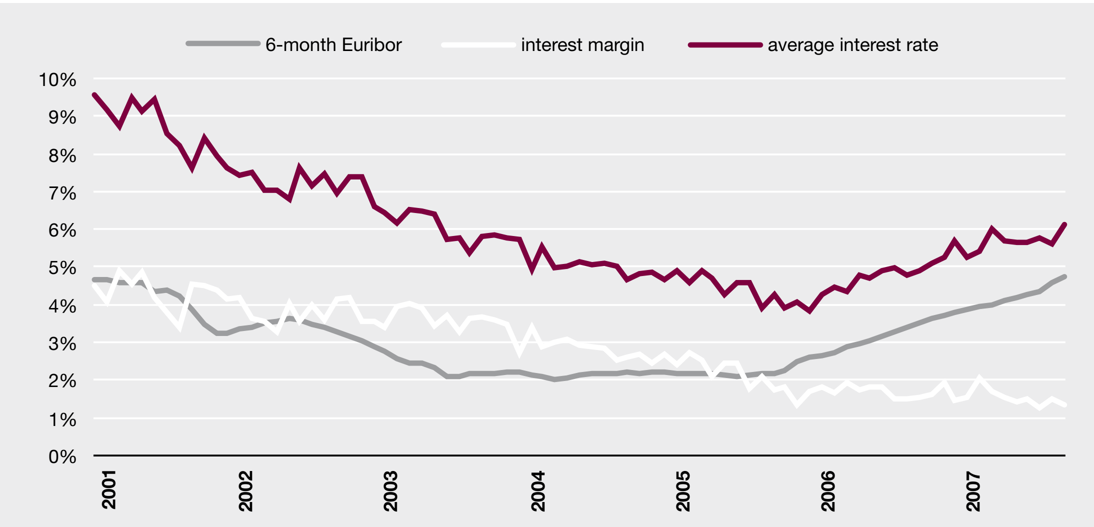

Figure 13. Average interest rate, key interest rate and average interest margin on long-term corporate loans

The distribution of **margins**, too, reflects the competitive pressure in the corporate loan market: the share of loans granted with a margin of less than 2% has gradually increased over the year. In the third quarter, loans with a less than 2% margin accounted for 83% of the total loan turnover (75% at the end of 2006) and for 55% of the number of contracts (54% at the end of 2006). Therefore, tighter credit conditions implied by banks do not manifest themselves in higher interest margins, but rather in more conservative selection of new projects and higher requirements for loan applicants.

HOUSEHOLDS

Economic situation of households

Confidence

In the second half of 2007, **household confidence** started to weaken rapidly from the historical highs of recent years that it had been enjoying for nearly a year and a half (see Figure 14). According to the consumer survey compiled by the Estonian Institute of Economic Research, consumers became more sceptical about their future income growth and the development of the economy as a whole. Inflation and the risk of becoming unemployed was perceived more clearly than before. Moreover, also the expectations of the ability to save were more pessimistic compared to the first half year.

The F-monitor survey conducted by TNS Emor in August-September 2007 confirmed the somewhat more pessimistic future expectations of households. Yet, positive moods are still prevailing over the negative ones. 33% of families, which is slightly less than in the previous year, expected their economic situation to improve further in the next 12 months.

Labour market

Labour market indicators changed in line with the slowed economic growth. Compared to 2006 when the number of the **employed** grew by 6.4% during the year, the growth of employment slowed in the first half of this year. In the third quarter, the number of the employed was 1.7% higher than a year ago (see Figure 15).

The **unemployment** rate fell to 4.2% in the third quarter. Among the unemployed, the share of the long term unemployed (i.e. those who have been looking for a job for at least a year) in the economically active population has decreased. This is a positive indicator also when compared to the EU average: while in Estonia, long term unemployment has followed only a downward trend in the recent years (falling to 2.8% in 2006), then the average of the EU has remained around 3.6%.

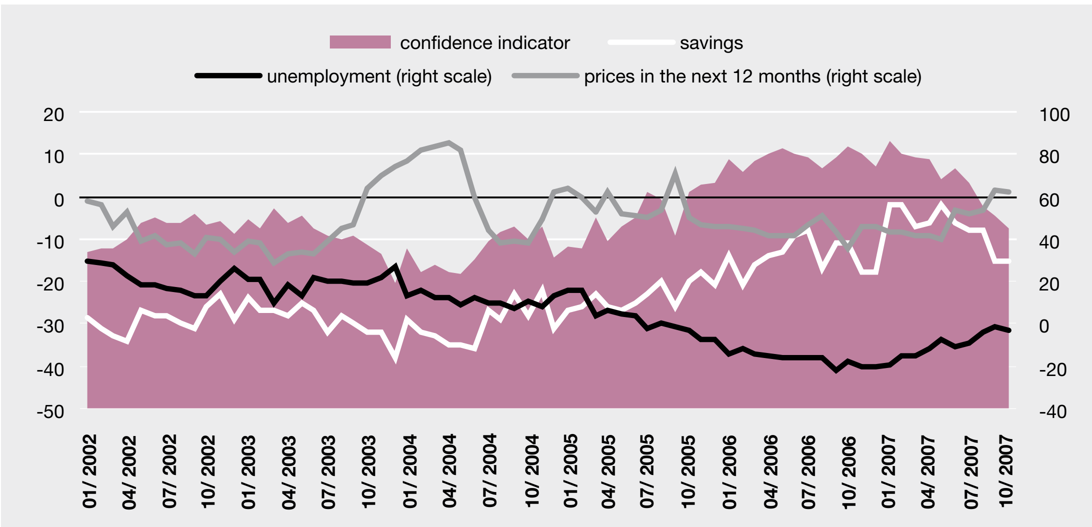

Figure 14. Consumer confidence indicators

Source: Estonian Institute of Economic Research

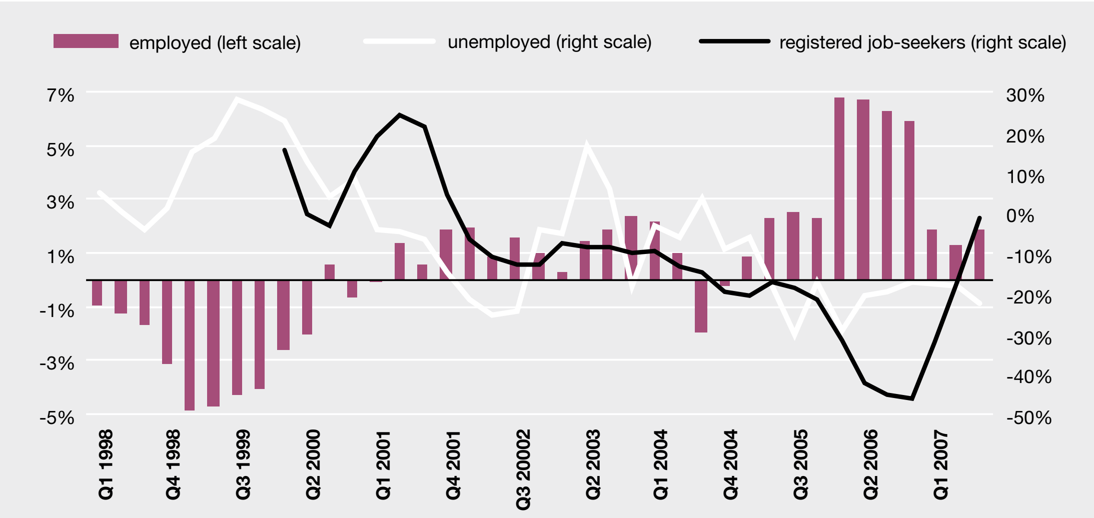

Figure 15. Annual change in the number of the employed, the unemployed and registered job-seekers

Source: Statistics Estonia

Wages

Supported by strong demand and limited labour supply, the rapid growth of the **average gross monthly wages** continued also in 2007. In the second quarter, the average gross monthly wages increased by 21.2% year-on-year, setting a record high in recent years (see Figure 16). The robust growth in this quarter was partly caused by one off compensations and summer holiday pays. In the third quarter, wage growth decelerated to 20.2%. Although a slight slowdown in the growth of social tax revenue indicates a possible moderation of wage growth also in the last months of the year, the annual wage growth will still be stronger than last year, when it was 15.8%.

The relatively rapid **real growth** of gross wages reflects the increased purchasing power of salaried employees. The difference between **net and gross monthly wages** was no longer present this year.

Structure of expenditures

According to Statistics Estonia[6], the average expenditure per household member amounted to 3,712 kroons and net income to 4,343 kroons in 2006. Compared to 2005, expenditures increased by 16% and incomes by 25%.

- The rapid growth of household **income** was mainly driven by the robust growth of wage income, but pensions and other income also increased more than 20%. Increase in child allowances and non financial income was slow and their share in the income structure decreased.
- The differences in expenditures by income brackets were large also in 2006. The expenditure on food and housing in the lowest

[6] The estimates are based on the household budget survey carried out by the Statistical Office since 1995. In 2006, the number of households participating in the survey was 3700. The household budget survey carried out by statistical organisations is based on harmonised methods across all EU Member States.

Figure 16. Average annual wage growth

Source: Statistics Estonia

and highest income quintile differed about two times. In 2006, a household member in the lowest income quintile spent 53% of consumption **expenditures** on food and housing; the respective figure in the highest income quintile stood at 30%[7]. However, in recent years, the growth rate of expenditures on food and housing has been lower than the average growth rate of consumption expenditures, which is why the share of these expenditures in the expenditure structure is decreasing.

Financial position and savings

The improving economic situation of households increased their ability to save and borrow. Borrowing has nevertheless been more brisk than saving. Thus, the **positive net financial position** of households decreased in the first half of 2007 by 1.6% to the level of 9.5% of GDP (see Figure 17).

The growth of household **financial assets** accelerated in the first half of 2007 despite the lower growth of its major component (deposits), increasing by 4% compared to the end of 2006 to the level of 29%. The strong growth of financial assets was driven by the increased volume of shares, life insurance reserves, pension assets and investment fund units of households.

The growth rate of **domestic deposits** fell in the second quarter of 2007 and dropped even lower by the end of third quarter – to 18% (see Figure 18). Deposit growth decreased primarily because of smaller inflows of **demand deposits** compared to the same period of the previous year and the net outflow in the third quarter. As a result, the growth rate of demand deposits had fallen to 8% by the end of the third quarter (28% at the end of 2006). The monthly net inflows of **time deposits** have remained at a level similar to that of 2006. At the end of the third quarter, their growth rate reached as

[7] Loans are not included in income and expenditures: taking of a loan is treated as using savings and the repayment of loan, as savings.

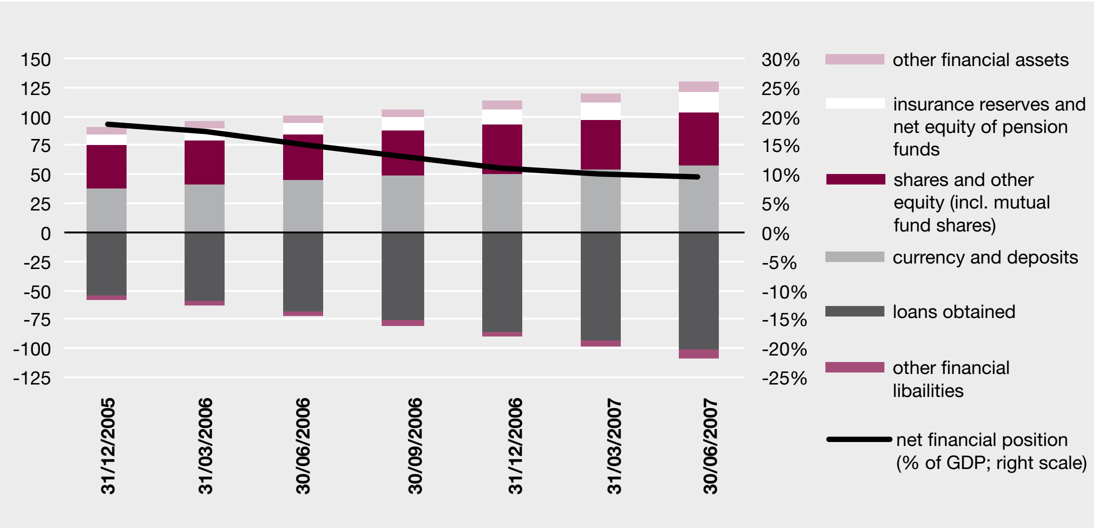

Figure 17. Household financial assets and liabilities (EEK bn and % of GDP)

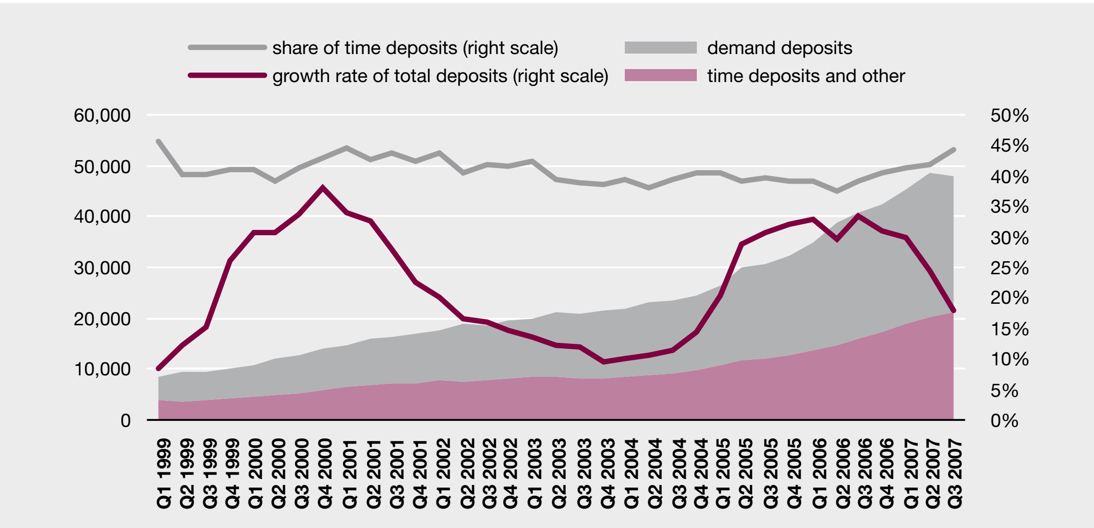

Figure 18. Household deposits in domestic banks (EEK m) and deposit growth

high as 34%. This means that households continue to save although funds for daily settlements have decreased.

The proportion of shares in household financial assets has witnessed a gradual decline despite the strong growth of their market value. Nevertheless, it was still relatively high (i.e. a third) at the end of the second quarter of 2007. Excluding the change in volume arising from the revaluation of assets, households have begun to prefer **investment fund units** to shares, probably because of their more optimal risk-return ratio.[8] **Pension assets**, too, are gaining a more and more substantial part of household financial assets. Together with life insurance reserves, their volume reached 16.3 billion kroons at the end of the second quarter of 2007 and accounted for 13% of total financial assets.

Household debt and loan-servicing capability

Level and growth of debt

From the middle of 2007, the monthly changes in the volume of **loans and leasing** granted to households have remained below the level of the same period of the previous year (see Figure 19). The annual growth of loan and leasing portfolios decelerated further and reached 43% at the end of the third quarter (see Figure 20). According to the main forecast scenario of Eesti Pank, the growth rate of the loan and leasing stock will continue to decline also in the near future.

Owing to the moderate growth of the household loan and leasing stock, the growth rate of **indebtedness** also started to decline in the second quarter of 2007. At the end of the third quarter of 2007, household debt constituted 46% of GDP and 81% of the disposable income. Compared to autumn 2006, the debt increased by 8% and 11%, respectively (see Figure 21). In the middle of 2007, the ratio of Estonian household debt to GDP was 4% below the Finnish level. In mid-2007, also the Latvian household debt burden reached that level (see Figure 22).

Housing loans

In the middle of 2007, monthly changes in the stock of **housing loans** and leasing granted to households by banks and leasing companies began to fall below the level of the previous year. In the third quarter, the number of housing transactions dropped to the level seen three or four years ago. In September, the number of new loan contracts was as much as 45% smaller than at the same time a

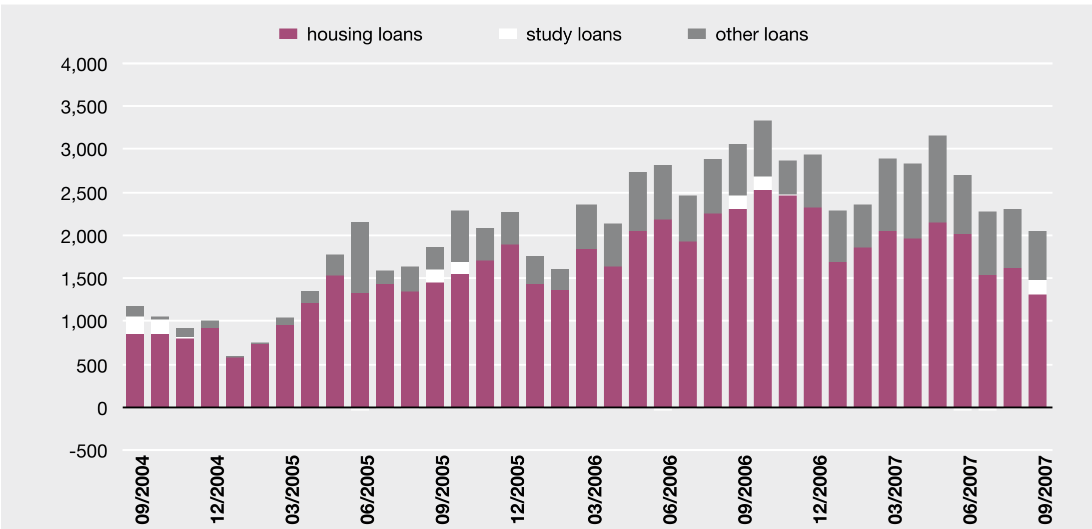

Figure 19. Monthly change in household loans (EEK m)

[8] A survey carried out by TNS Emor in August-September 2007 revealed that 9% of households owned shares listed on the stock exchange or investment fund units, whereas the percentage of such households has increased by 2% (14,000) with most of them preferring investment fund units.

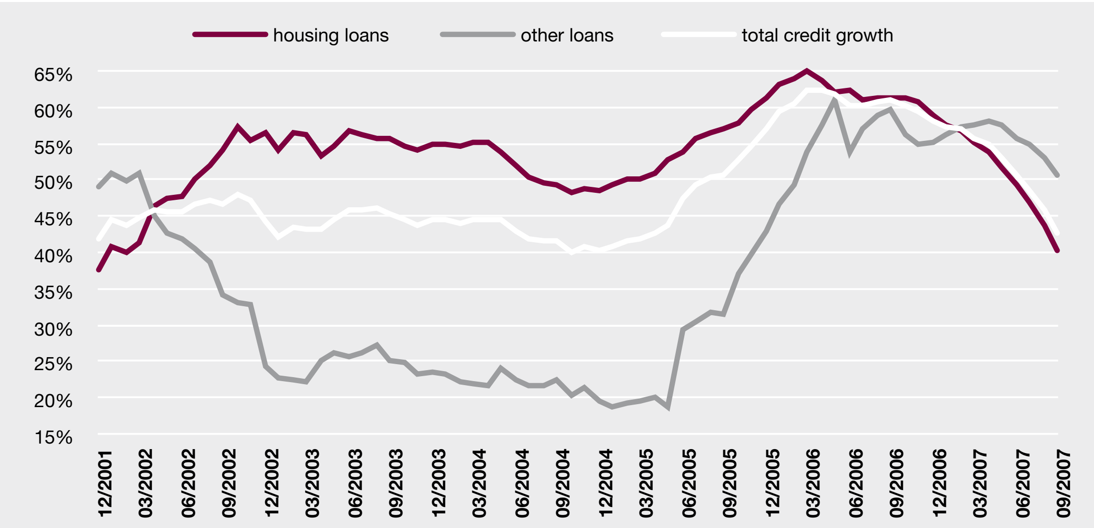

Figure 20. Annual growth of domestic credit to the household sector

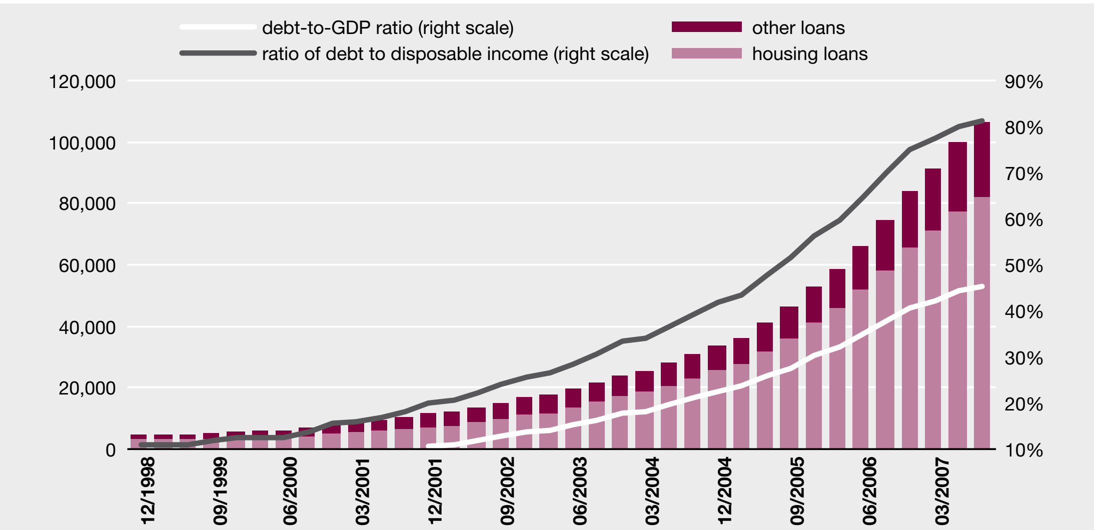

Figure 21. Household debt (EEK m) and indebtedness (%)

year ago. Thus, the slowdown in the growth of the housing loan stock has deepened, falling to 40% at the end of the third quarter of 2007. The growth of the housing loan stock has moderated due to the decreased number of contracts and the slowing growth of the average loan amount.

Household borrowing activity is cooled down also by the rapid growth of interest costs. The **average interest rate of housing loans** rose to 5.7% at the end of the third quarter of 2007, being 1.3 percentage points higher than a year ago (see Figure 23). As of the beginning of 2007, a slight increase in the ratio of the average housing loan interest margin over the key interest rate can also be detected. Therefore, either the riskiness of clients has increased or banks have started to evaluate risks more conservatively. The distribution of hous-

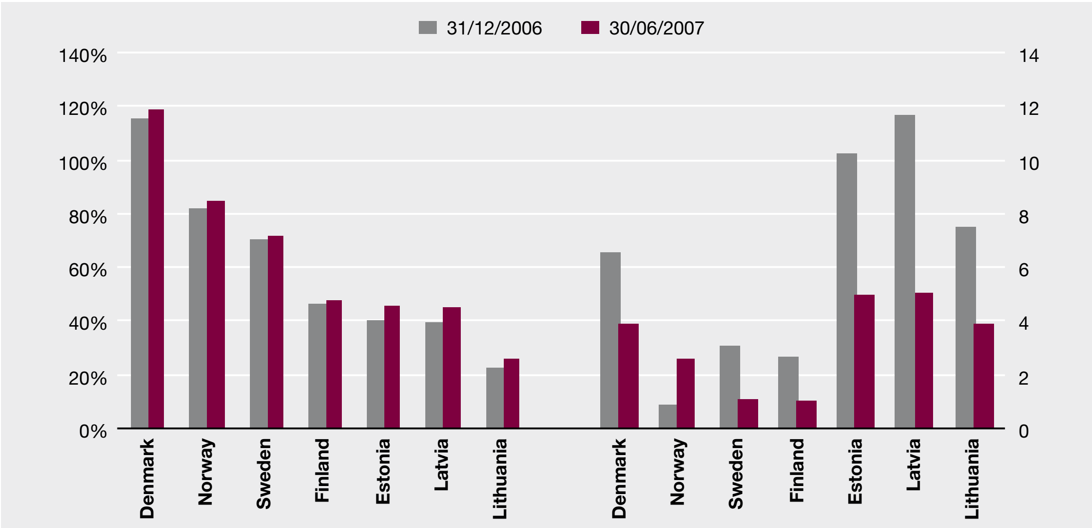

Figure 22. Household debt to GDP (left scale) and change in debt-to-GDP ratio (pp; right scale) in Nordic and Baltic countries

Source: national central banks

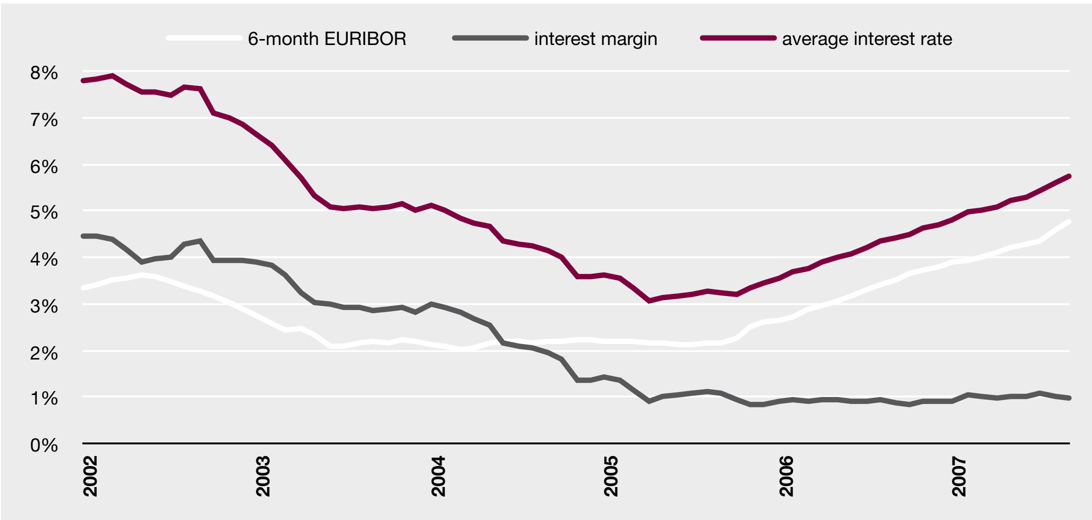

Figure 23. Average weighted interest rate, key interest rate and interest margin of housing loans

ing loan interest margins has constantly got flatter over the year. At the same time, the median interest margin has continued to increase (from 0.6% in the first months of the year to 0.64–0.65% in the third quarter).

In order to evaluate household's **borrowing capacity**, we should look at the distribution of their incomes, as households with lower income have limited access to housing investments and loans. Based on real estate transactions made in Tallinn in September 2007, the average price of an apartment was 1.3 million kroons. A simple calculation shows that 18% of households can afford to purchase a dwelling at that price on credit, provided that the down payment rate is 25% and the loan maturity 25 years. Slightly less expensive dwellings – with the value of 1 million kroons – can be afforded under the same conditions by 25% of families. Excluding the households who have already taken housing loans, the estimated additional borrowing capacity will be 62,000 and 95,000 families respectively, that is 11% and 16% of the households.

Consumer credit

The monthly changes in the stock of **loans not directly related to financing housing** remained relatively large also in 2007 (see Figure 24). At the end of the third quarter, their annual growth exceeded 50%. However, in the third quarter of 2007, the change in the stock of loans was smaller than in the previous periods.

Car leasing experienced particularly robust growth in 2007. During the last four quarters, the volume of car leasing increased by 48%, whereas it was also lower in the third quarter of 2007.

The stock of consumer credit, including car leasing and study loans, amounted to nearly 24.7 billion kroons, reaching 11% as a ratio to nominal GDP. According to a survey by TNS Emor, 32% of households have taken consumer credit. This is approximately 20% more than a year ago, whereas a third of them have taken also a housing loan. Since the definition of consumer credit varies by countries, it is difficult to assess the level of consumer loans in the international context. However, compared to other EU Member States, Estonia does not stand out with a high level of consumer credit (see Figure 25).

Loan-servicing capability and risks

Households' loan-servicing costs continued a rapid growth during the first nine months of 2007. By the end of September, the estimated **interest burden** of households had increased to 4.4%[9]. Thus, the interest burden of Estonian households has reached a level comparable to some Nordic countries that have a high debt burden (4.0% in the first half of 2007 in Sweden, 4.3% in 2005 in Denmark, 5.4% in 2006 in Norway). The interest burden of euro area households totalled 2.7% at the end of 2006.

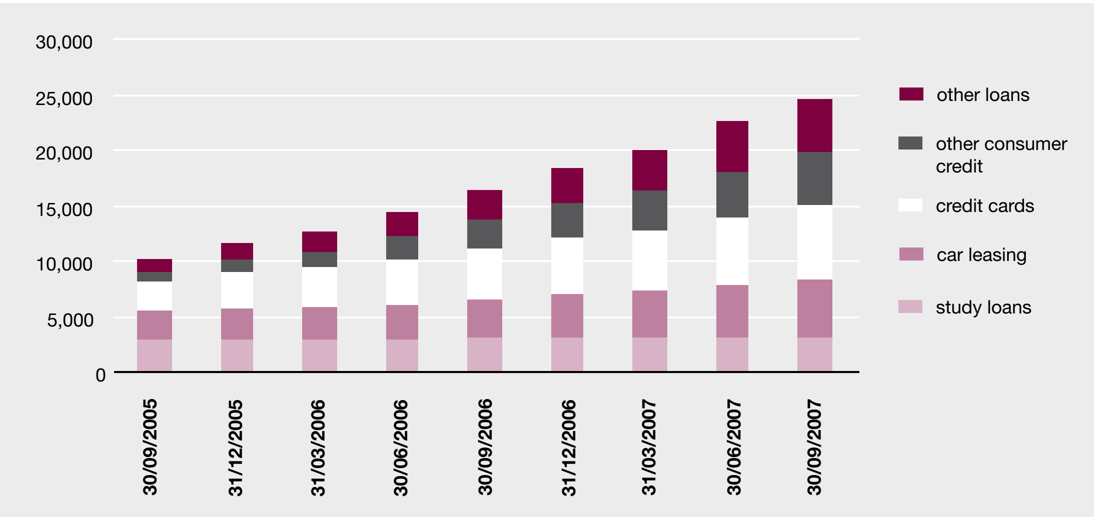

Figure 24. Stock (EEK m) and structure of non-housing household loans/leasing

[9] Interest burden is the ratio of interest payments to disposable income.

Household loans are still mainly with a floating interest rate, which also boosts the interest burden if key interest rates increase. Driven by the increase in key interest rates, people are more conscious of the interest rate risk and loans with a fixed interest rate are taken more often than, for example, a year ago. At the end of September 2007, loans with **fixed interest rates** accounted for nearly 4% of all housing loans; the year-ago figure was two times smaller (see Figure 26).

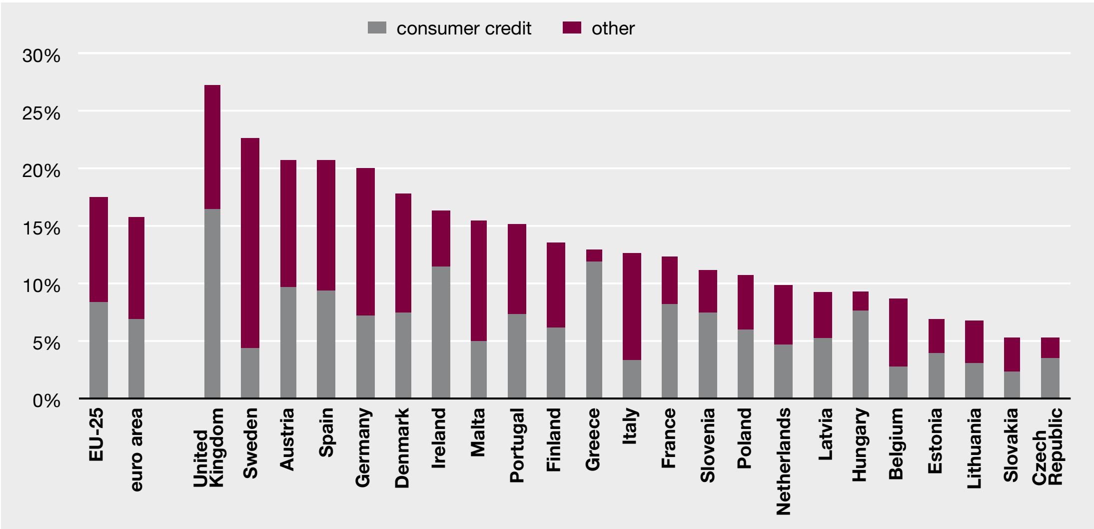

Figure 25. Household non-housing loans as at end-2006 in EU countries (% of GDP)

Sources: EU Banking Structures (ECB, October 2007); Eurostat

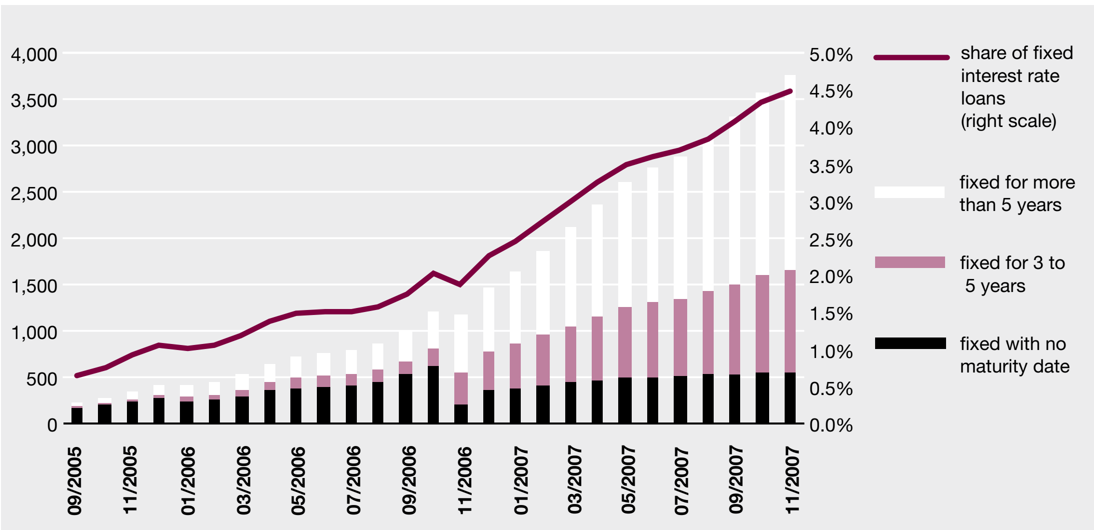

Figure 26. Volume of housing loans with fixed interest rate (EEK m; left scale) and the share of fixed interest rate loans in total housing loans

DEVELOPMENTS IN THE REAL ESTATE MARKET

The demand in the real estate market has decreased remarkably after the robust development of recent years. The **number of real estate transactions** began to diminish in the second half of 2006. The number of transactions with apartments was the first to decrease, followed by transactions with houses, land and non residential buildings (see Figure 27). In autumn 2007, the market situation could be described as the following: potential buyers were not willing to conclude transactions at the prices asked by sellers and postponed the transactions, waiting for more favourable prices.

As a result, the number of transactions with **apartments** in Tallinn fell in October 2007 to the level seen three years ago, but the average prices have not decreased much (see Figure 28). The median price of Tallinn apartments dropped from the record level of April by 8% by October; the annual growth rate stood at 6% in October.

The biggest gap between demand and supply can be seen in the case of new apartments, as their supply has grown by the new dwellings brought to the market as well as by the new dwellings sold in the secondary market. During the first nine months of 2007, almost 50% more apartments were **completed** compared to the same period in the previous year (see Figure 29). At the same time, the number of apartments purchased/sold is approximately 15% smaller than a year ago.

As access to housing investments is more limited owing to higher real estate prices, the demand for rentals has increased. That is why also the average **rents** have gone up. By the end of the second quarter of 2007, the average rent for a two-room apartment in Tallinn had grown by 18% in a year. Consequently, the supply of rental apartments has increased as well.

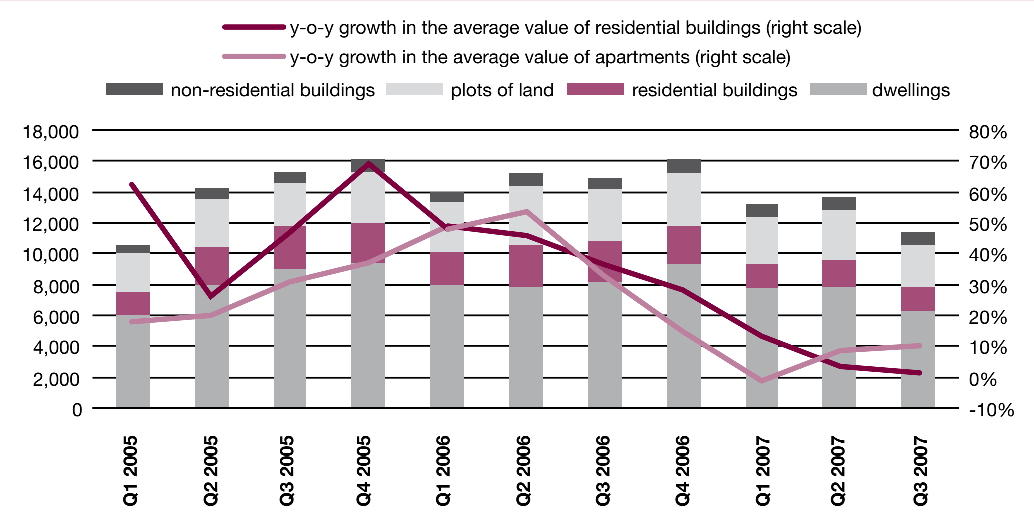

Figure 27. Number of notarised purchase-sale contracts (left scale) and annual growth in the average value of real estate

Source: Statistics Estonia

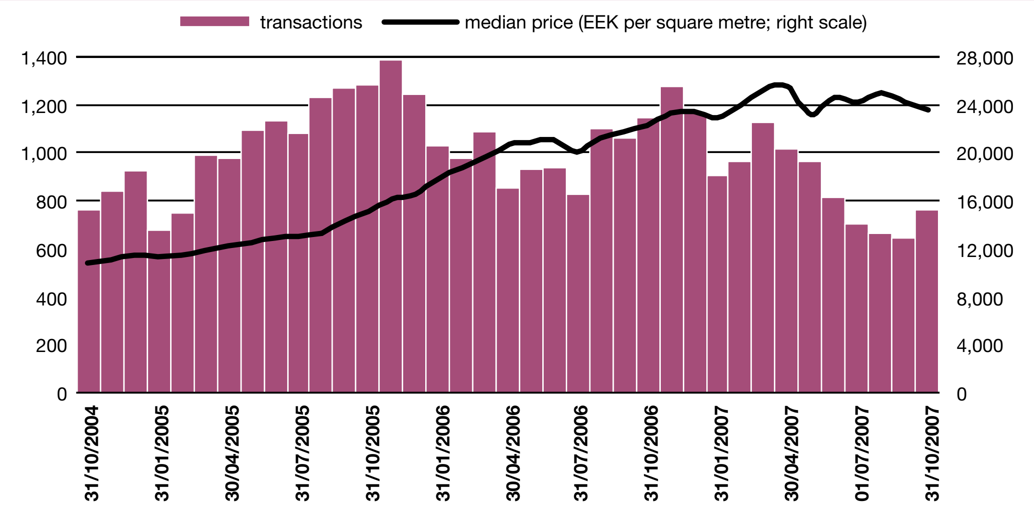

Figure 28. Number of transactions with apartments and the median price of an apartment in Tallinn

Source: Land Board

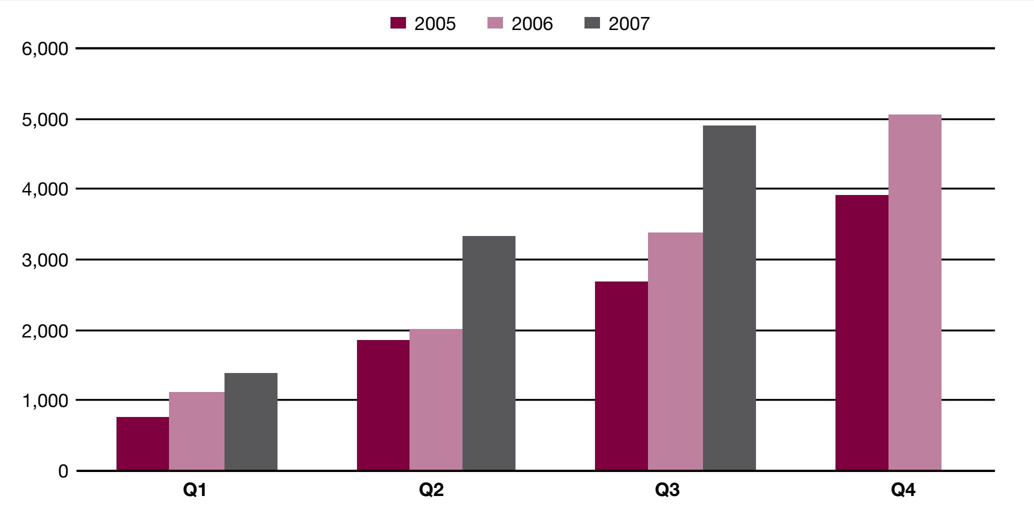

Figure 29. Number of new dwellings completed cumulatively

Source: Statistics Estonia

Real estate developers have shifted their focus to the construction of **office spaces**. Since a multitude of new projects are just about to come to the market at a time, there are doubts whether there is enough demand for all the new office spaces. According to various estimates, between 60,000 to 100,000 square metres of office space will be completed in Tallinn during the next two years, which is approximately equal to the average volume of office space completed per year during the last three years (see Figure 30).

The planned office space differs from the office space brought to the market last year for the fact that new spaces are introduced to the market in the phase of economic adjustment. Moreover, these spaces are located mainly outside the city centre and thus demand may turn out to be smaller than expected. If we consider the total volume of modern office spaces to comprise all the spaces completed in 1998–2006 in Tallinn, i.e. 300,000 square metres, then as much as a fifth or even a third of the existing spaces would be planned in addition every year. However, taking into account the total volume of new projects and assessing their impact on banks, the potential losses related to these projects do not pose a substantial threat to financial stability.

The two possible scenarios of the housing market development are price correction and stagnation, whereas stagnation (average prices remain at or near their current levels) is more probable. This is because calculations based on the income distribution of households indicate that there should be considerable borrowing capacity also at the current price level (see also *Housing loans*). Considering the amortisation of old dwellings and the fact that such buildings do not meet the requirements of home owners or buyers these days, housing demand is expected to exist also in a longer perspective.

Given the above, banks may probably expect a higher level of overdue loans in the real estate sector resulting from the failed projects of some real estate developers. Real estate developers whose liquidity situation will not enable them to postpone the sale of completed projects are forced to lower the prices. These are probably mainly smaller developers and enterprises of other sectors for whom real estate development has been a secondary activity.

From the point of view of financial stability, the determining factor is the volume of projects that cannot be sold in the secondary market to other real estate developers. With the current level of capitalisation, banks are capable of enduring an additional write off of a relatively big share of loans granted to the real estate sector.

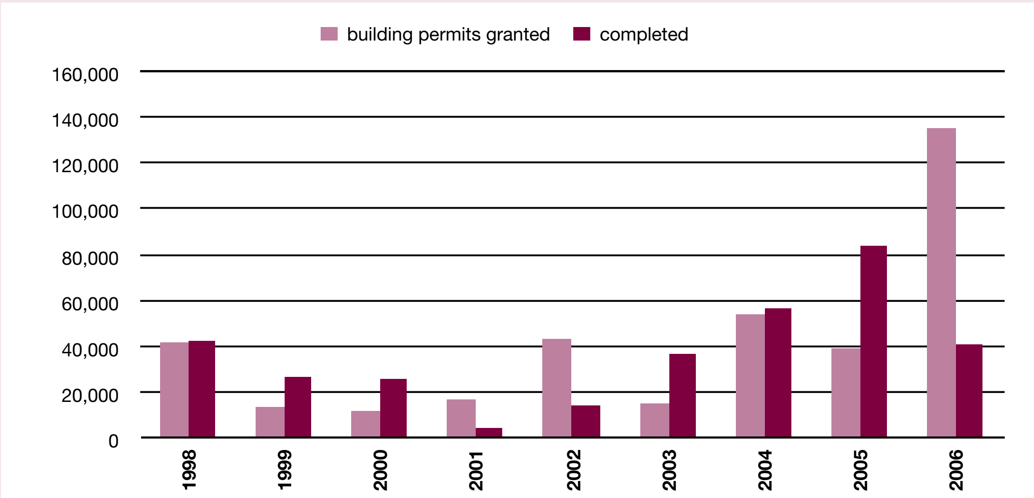

Figure 30. Useful floor area and completed office buildings with building permits in Tallinn (m²)

Source: Statistics Estonia

II BANKING SECTOR STABILITY AND RISKS

Strategic development of the banking sector

At the end of the third quarter of 2007, seven companies licensed as credit institutions, seven branches of foreign credit institutions and over 170 cross-border banking service providers were operating in the Estonian banking market. Over 30 cross-border service providers have emerged during the past six months.

On 1 September 2007, the name of Bayerische Hypo- und Vereinsbank AG Tallinn Branch was changed to AS UniCredit Bank Estonian Branch as a result of the expansion and merger of UniCredit Group.

As the growth of the loan market has slowed and credit institutions have responded differently to that, market shares have also changed more than usual during the past six months. Major banks implementing more conservative credit policy have lost market share during the last half-year. Greater market share has been achieved by somewhat more active branches. At the end of the third quarter, 95% of the total amount of loans and leases granted in Estonia divided between four major market participants whereas two major market participants occupied 74% of the market. The assets of credit institutions controlled by branches of foreign credit institutions or non-resident financial groups accounted for nearly 100% of the total assets of banks operating in Estonia.

Operating in the neighbouring countries forms an essential part of Estonian banking groups' activities. When in Estonia and Latvia the credit growth is normalising, there is still potential to increase the amount of loans in Lithuania and Russia. Moreover, at the beginning of September, the Central Bank of Russia decided to lift the restrictions on Swedbank at the beginning of June and permit Swedbank to fully resume its activities.[1]

Quality of assets

The **total value of bank loans and leases** granted in Estonia was approaching 247 billion kroons at the end of the third quarter of 2007. Within the two last quarters, the total value of the financing portfolios increased by 31 billion kroons. The structure of the financing portfolio has generally been stable and the shares of loans granted to different sectors have not significantly changed (see Figure 1).

Arising from the structure of the banks' financing portfolio, bank loan **collaterals** consist primarily of real estate. At the end of the third quarter, 73% of granted loans were mortgage-backed. The share of loans without collateral has remained comparatively stable during the last quarters; however, the share of securities has started to increase slightly. Among other household loans (non-housing loans), the share of loans without collateral has remained steady at 32% during the last year. As regards consumer credit, the share of loans without collateral is decreasing evenly: a year ago, 44% of consumption loans were without collateral, whereas in the third quarter of 2007 the respective figure stood at 40%.

The loan-servicing capability of loan customers has remained good despite the tightening economic conditions and stricter credit policy. At the end of the third quarter, the share of **loans overdue by more than 60 days** among loans granted to the non-financial sector totalled 0.5% on an aggregate basis. Following a more conservative approach where the amount of loans overdue by more than 60 days is considered as a ratio to the previous year's loan portfolio, the amount of loans

[1] In June 2007, the Central Bank of Russia decided to restrict Swedbank's activities in Russia for three months, explaining this by Swedbank's possible incompliance with the law.

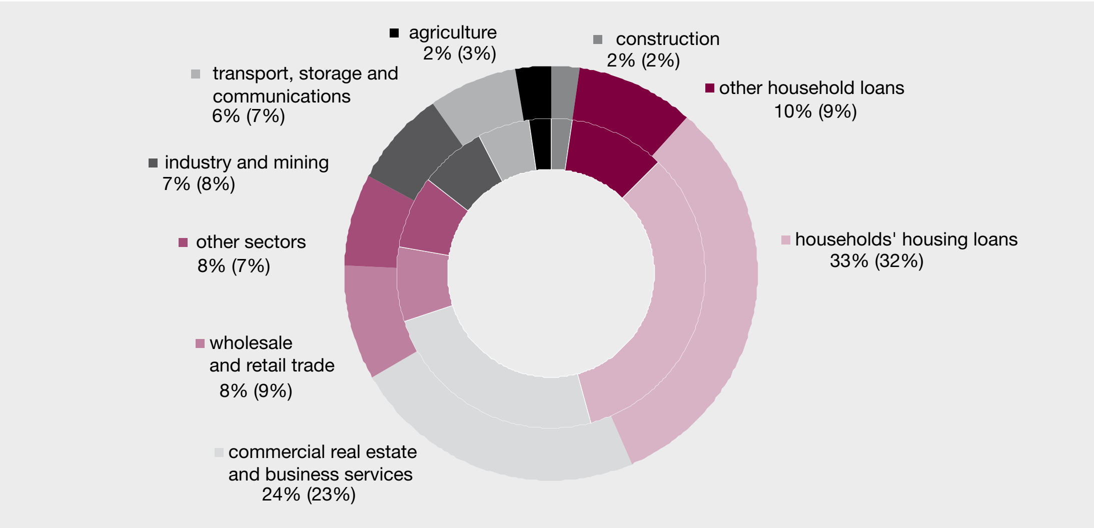

Figure 1. Financing by banks and leasing companies as at 30 September 2007 (in brackets as at 30 September 2006)

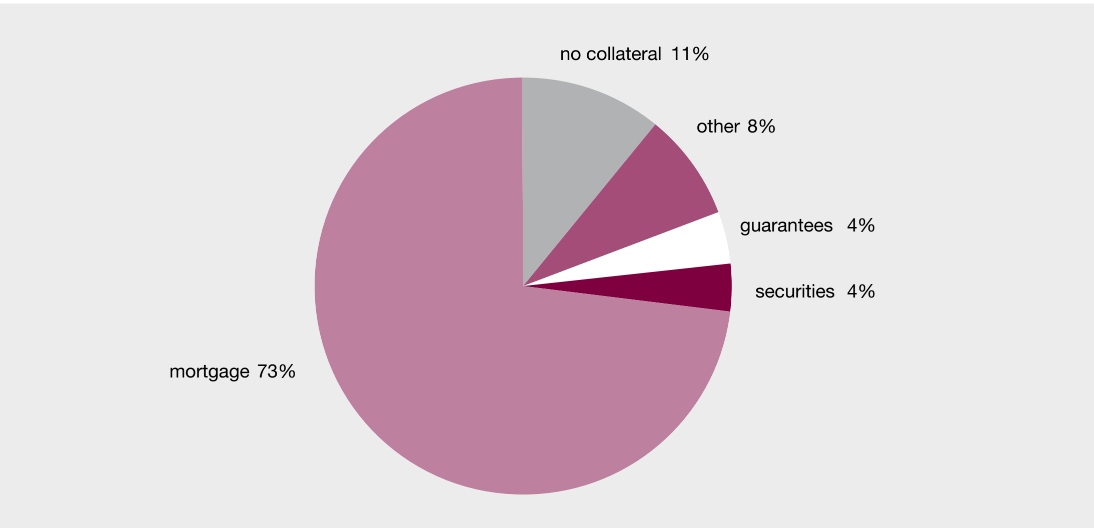

Figure 2. Loan collaterals by type

overdue was 0.71% at the end of the third quarter. Compared to the previous year, it had increased by 0.2 percentage points (see Figure 3).

The **stock of provisions for loan losses** (as a ratio to the amount of loans overdue by more than 60 days) has decreased considerably during the past six months (see Figure 4). This is due to changes in accounting principles. Previously, the stock of provisions for loan losses exceeded the value of loans overdue by more than 60 days, whereas since the third quarter of 2007 it has been

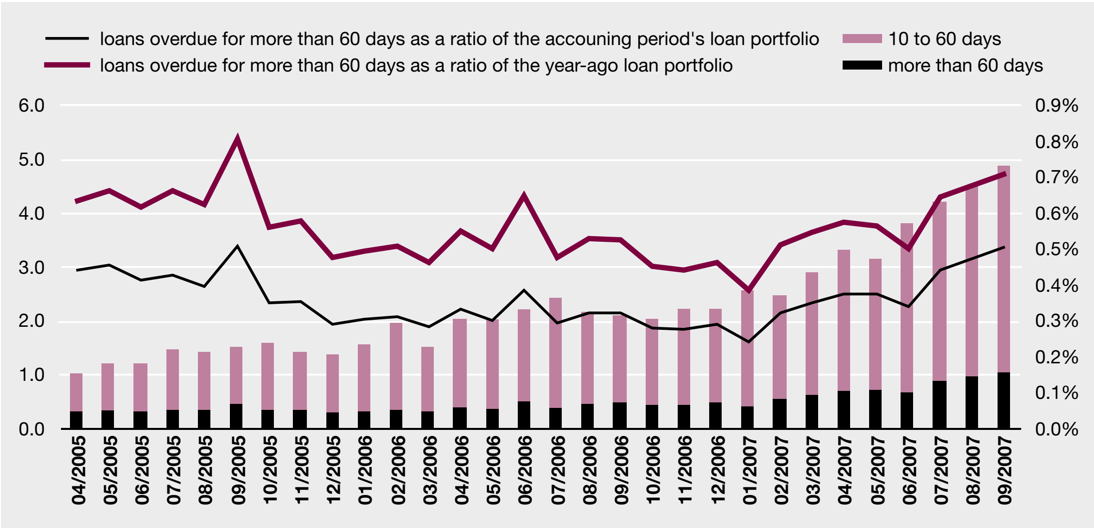

Figure 3. Volume (EEK bn; left scale) and share (right scale) of overdue loans in the non-financial sector's loan portfolio

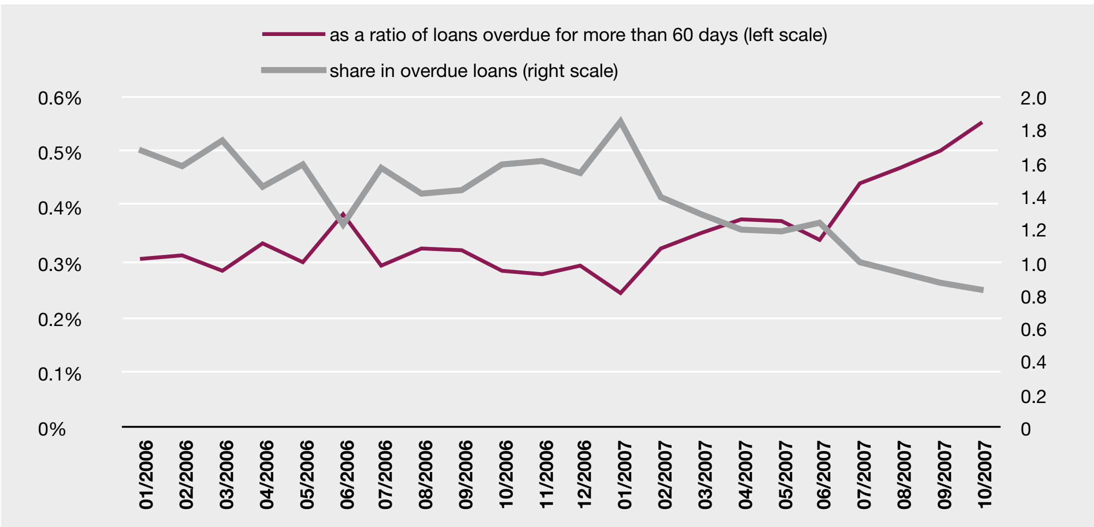

Figure 4. Stock of provisions for loan losses

lower than the latter. At the end of the third quarter, the stock of provisions for loan losses accounted for 87% of the loans overdue by more than 60 days. This is quite normal, as in Western Europe and Nordic countries this ratio has ranged from 60% to 80% in recent years.

The slight increase in the share of overdue loans in the last quarters is the result of several aspects. First of all, the growth of financing portfolios has decelerated. If their growth rate in 2007 had remained close to that in 2006, the share of overdue loans would not have changed remarkably and the ratio of overdue loans would have been comparable to the 2006 figure. Secondly, the increase in overdue loans was affected by the slowing economic growth. Thirdly, the specific nature of the business model of some financial institutions had also a role to play; the problem of overdue consumer loans rests with one institution.

By **economic sectors**, other household loans form the largest share of overdue loans. At the end of the third quarter, these loans comprised 2.78% of loans overdue by more than 60 days (see Figure 5). This figure has been steadily increasing, being 1.4% a year ago. Failing to pay consumer loans by due date is affected by the toughening economic environment as well as by the fact that these loans are readily available.

The amount of overdue housing loans has also increased steadily. While a year ago, loans overdue by more than 60 days accounted for 0.19% of all housing loans, then at the end of the third quarter of 2007 this ratio was 0.41%.

As regards the **total of banking groups**, the share of write-downs in the loan portfolio has remained more or less unchanged at 0.7% of the aggregate portfolio of banking groups. The share of loans overdue by more than 60 days in the groups' financing portfolio has also remained relatively stable, accounting for 0.4% of the aggregate portfolio at the end of the third quarter. Total write-downs of banking groups exceeded the amount of loans overdue for more than 60 days by 1.6 times.

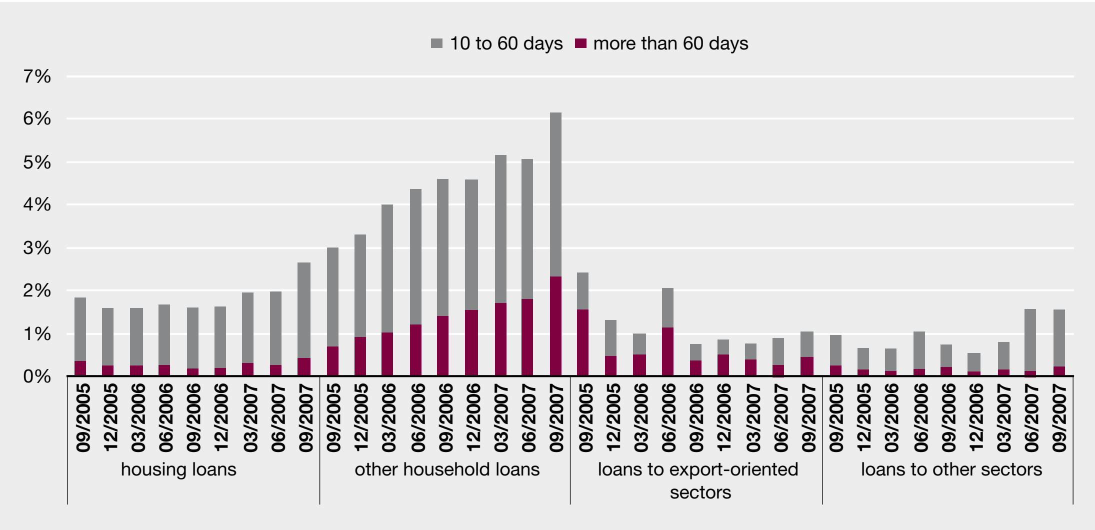

Figure 5. Overdue loans by sectors

Capital adequacy

On 1 January 2007, the new capital adequacy calculation principles entered into force in Estonia[2], but all banks decided to use the opportunity to calculate the adequacy ratio in 2007 on the basis of the former system. As of 2008, all credit institutions operating in Estonia start using the standard approach for calculating capital adequacy. The introduction of more complicated methods for calculating capital requirements for credit risk is an issue for the future.

On a solo basis, the **banks' capital adequacy ratio** has been 3–4% above the required minimum level during the last two quarters. At the end of October, it stood at 14.3% (see Figure 6). As banks use very different methods to include additional own funds, there are great differences in their adequacy ratios. Capital adequacy of most banks operating in Estonia exceeds the required minimum level by several percentages, but there are also banks in the case of which the inclusion of additional own funds is a constant issue. So far, such an operational model has worked satisfactorily – audited profits or additional funds from parent banks have been included in own funds, if necessary. Consolidated capital adequacy indicators, too, differ substantially across banking groups (from 10.4 to 11.2%).

At the end of the third quarter, banks' **net own funds** reached 33.6 billion kroons, 71% of which consisted of Tier 1 own funds (see Figures 7 and 8).

Contrary to previous quarters, the share of Tier 2 own funds in gross own funds decreased again in the third quarter of 2007 (in the second quarter, the ratio was 38%). This was caused by the more balanced growth of risk assets for which the inclusion of additional own funds ceased to be an issue. In order to cover the increasing risk assets, the inclusion of retained earnings in own funds, for instance, will suffice.

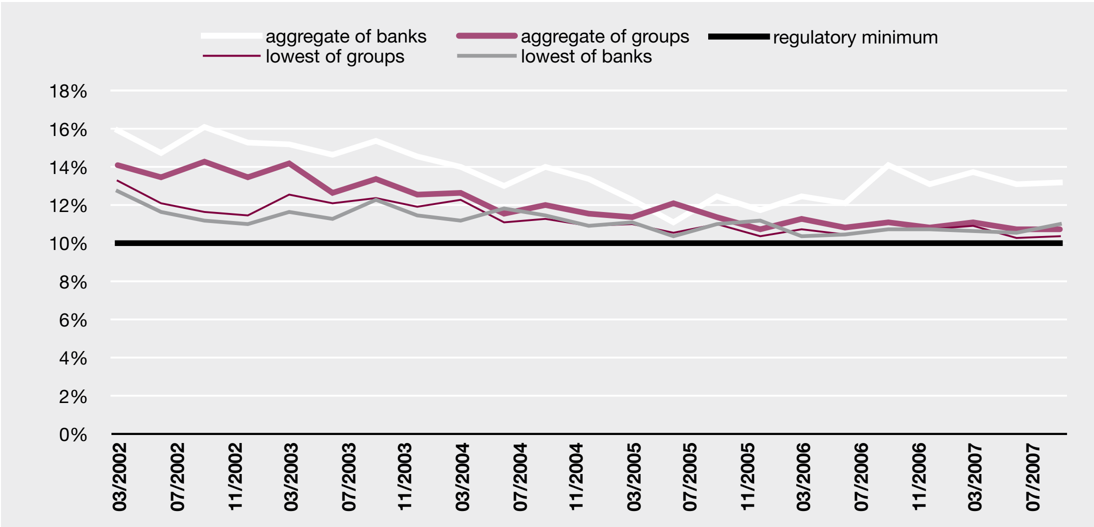

Figure 6. Capital adequacy of banks and banking groups

[2] A more risk-sensitive adequacy calculation system based on the new capital adequacy accord (Basel II).

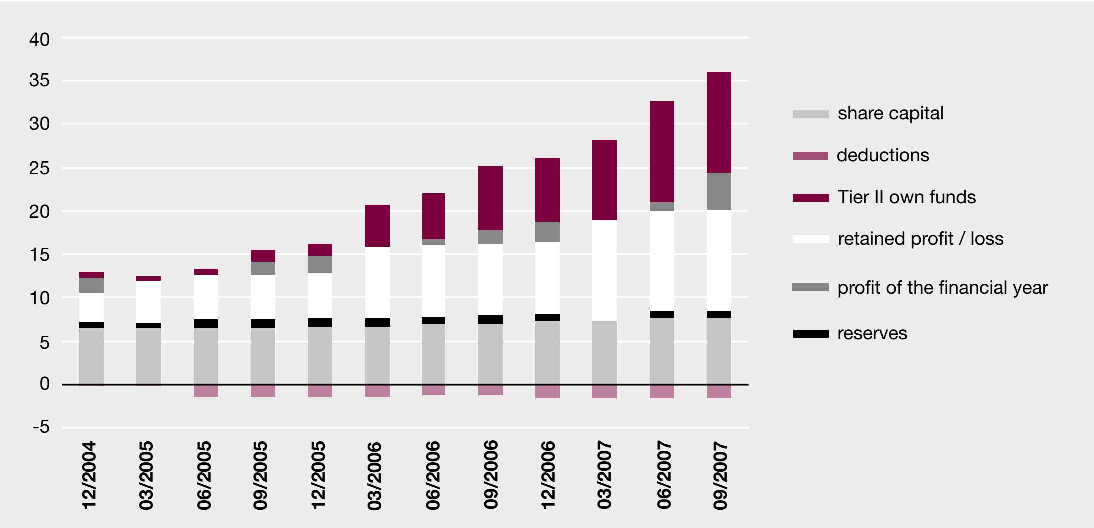

Figure 7. Structure of banks' own funds (EEK bn)

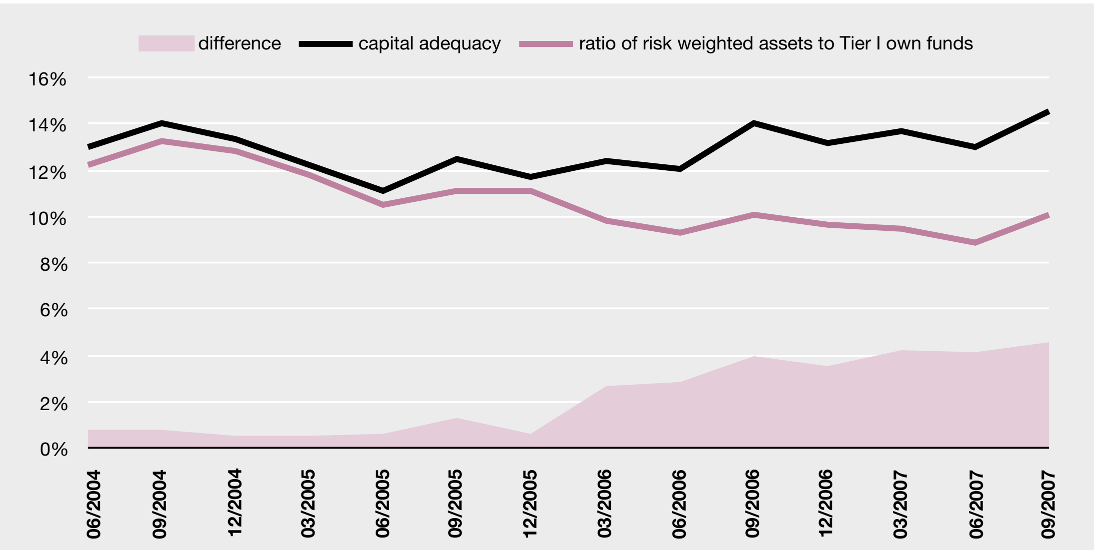

Figure 8. Tier I capital adequacy and the key indicator of capital adequacy

In the course of stress testing overdue loans by using a framework based on macroeconomic indicators, the main scenario of Eesti Pank's macroeconomic forecast was played through. This was done on the assumption that overdue loans would be equal to loan losses (conservative approach) and that profitability would remain at its current level. According to the forecast based on these criteria, the amount of loans overdue of the non-financial sector will increase to 1.3% by the end of 2009, but all banks will still be able to meet the capital requirements in these circumstances.

Liquidity

Funding

The growth of loan portfolios has slowed but as deposit growth has decelerated, the **gap between banks' deposits and loans** widened also in the last quarters (see Figure 9). To fill this gap, additional funds have been continually received mainly from parent banks.

At the end of September, the share of **foreign loans** in banks' liabilities reached 47% (128 billion kroons). The structure of banks' external financing has not changed much within the past six months. Resources received from parent banks as deposits and loans account for nearly 80% of the external resources other than deposits from non-resident clients. Another 9% comes from subordinated claims of parent banks; the share of such claims has increased due to the required higher share of own funds as of March 2006.

The share of resources raised by issuing bonds remained almost unchanged also in the last two quarters. Over two thirds of bond liabilities consist of long-term funds received in earlier periods.

Higher ratings of parent banks have enabled them to raise funds from markets at a presumably more favourable price compared to the opportunities of local banks. This has enabled parent banks to charge lower **funding costs** from local banks compared to what has been paid to local clients for term deposits (see Figure 10). The profitability of banks has continuously been supported by a relatively large share of demand deposits in total deposits, as these are less sensitive to the changes in key interest rates. The share of demand deposits reached nearly two thirds (see Figure 11 and also *Efficiency and profitability*, the development of the spread).

Liquid assets

After the rearrangement of intra-group financing schemes in the first half of 2006, the **share of liquid assets** in banks' assets has been relatively stable over the last quarters. The higher reserve requirement established in autumn 2006 can also

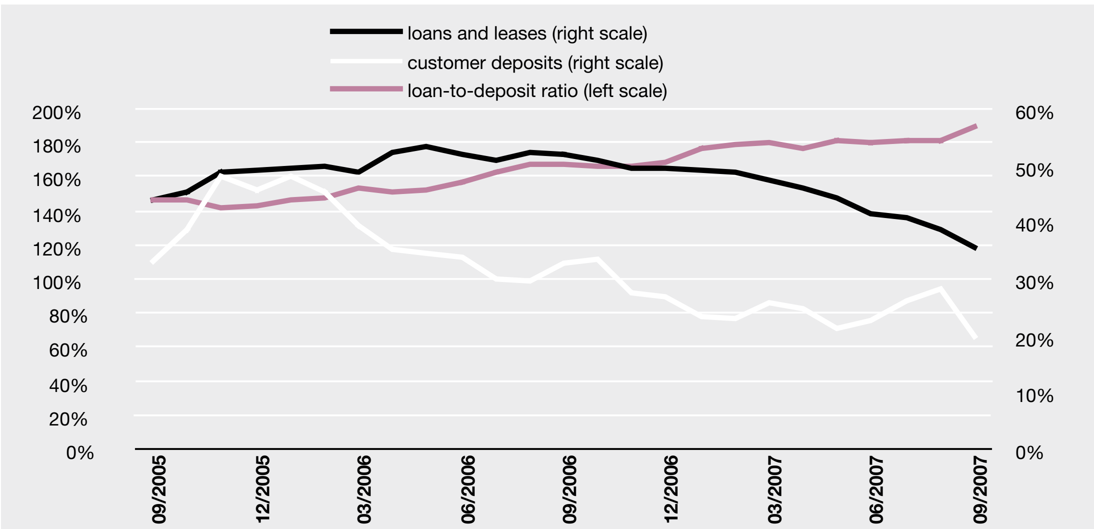

Figure 9. Annual growth of loans, leasing and deposits and loan-to-deposit ratio

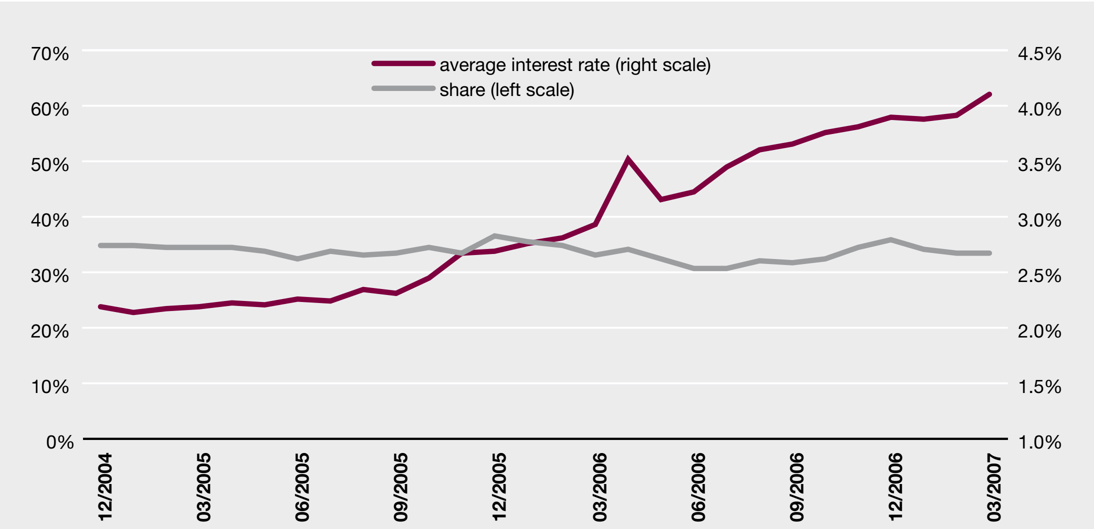

Figure 10. Average interest rate on time deposits and the share of time deposits in total deposits

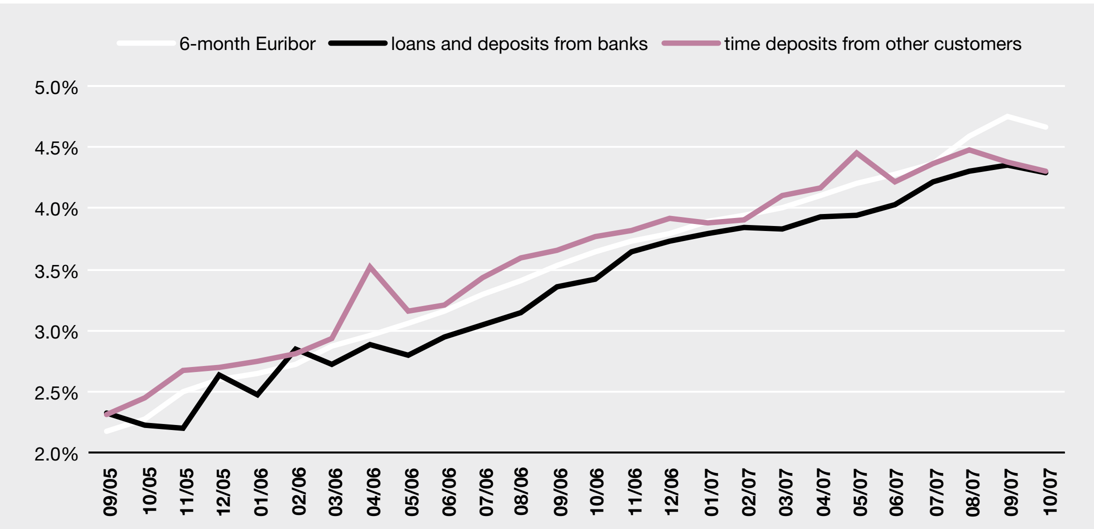

Figure 11. Average intrest payed by banks on funds raised and 6-month Euribor

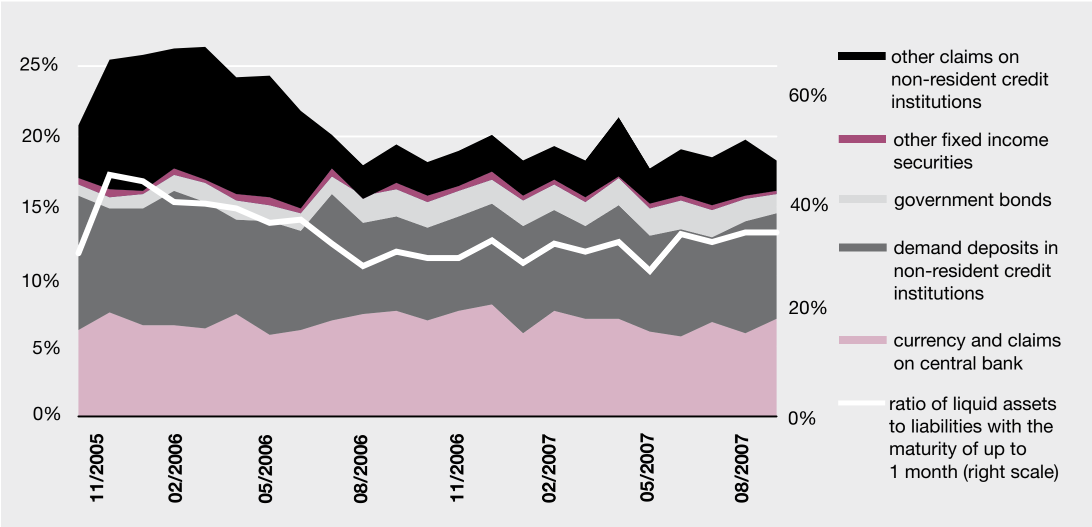

Figure 12. Liquid assets of banks (% of total assets)

be considered as a contributing factor (see Figure 12).

On an aggregate basis, the coverage of current liabilities by liquid assets has nevertheless remained relatively similar to previous levels. The ratio of short-term liabilities to short-term claims has remained relatively stable as well.

Since parent banks still play a major role in financing their subsidiaries in Estonia, the banks' liquidity risk is largely related to the parent banks' ability and will to provide funds to local banks.

Efficiency and profitability

Despite the slowdown in the growth of loan portfolios and higher funding costs, banks' profitability has remained high.

In the third quarter of 2007, banks' aggregate **net profits of the last four quarters** exceeded 7 billion kroons. A large share of the profits comes from the dividend income paid by subsidiaries this year. The **profitability of banks' own funds as the moving average of the four last quarters** has remained above 30% in the last two quarters (see Tables 1 and 2).

Table 1. Profitability of banks (%)

	2004	2005	2006	Q1 2007	Q2 2007	Q3 2007
Return on assets	2.1	2.0	1.7	1.8	2.8	2.7
Equity multiplier	8.8	9.9	10.7	10.7	10.6	10.6
Return on equity	20.0	21.0	19.8	21.2	32.3	31.0
Cost-to-income ratio	45.8	45.6	46.6	45.1	35.8	35.9
Net interest margin	2.4	2.0	2.2	2.3	2.4	2.4
Spread	2.3	1.9	2.1	2.2	2.2	2.2

Table 2. Profitability of banking groups (%)

	2004	2005	2006	Q1 2007	Q2 2007	Q3 2007
Return on assets	2.2	2.1	2.0	2.0	2.1	2.1
Equity multiplier	9.7	10.7	12.4	12.7	13.0	13.1
Return on equity	22.8	23.5	25.5	26.5	28.8	28.6
Cost-to-income ratio	49.7	46.6	43.3	42.3	41.2	41.4
Net interest margin	3.4	2.9	2.8	2.9	2.9	2.8
Spread	3.3	2.8	2.7	2.7	2.7	2.6

At the end of the third quarter of 2007, the net profit of banking groups as the sum of four consecutive quarters reached 9.8 billion kroons. This means that the annual growth exceeded even 60%. Despite the modest fall in the third quarter, the profitability of banking groups has remained above 28%, thus still exceeding the results of major Nordic banks even by as much as a third.

Although **funding costs have risen** and the spread between the income on assets and interests paid on liabilities has slightly decreased, the ratio of net interest income to average assets has remained almost similar to the second-quarter figure both in terms of banks and banking groups. In the case of banks, the growth of funding costs was largely passed on to clients, whereas its impact on banking groups was somewhat stronger (see Figures 13 and 14). The recent volatility of financial markets has not influenced banks' profitability substantially. The figures for the **trading income** of banking groups indicate slightly lower results for the third quarter compared to the second quarter. Banks, on the other hand, posted even higher results quarter-on-quarter.

Even more than the higher funding costs and the volatility of financial markets, the profitability of assets has been influenced by a slowdown in the growth of **fee and commission income**. This

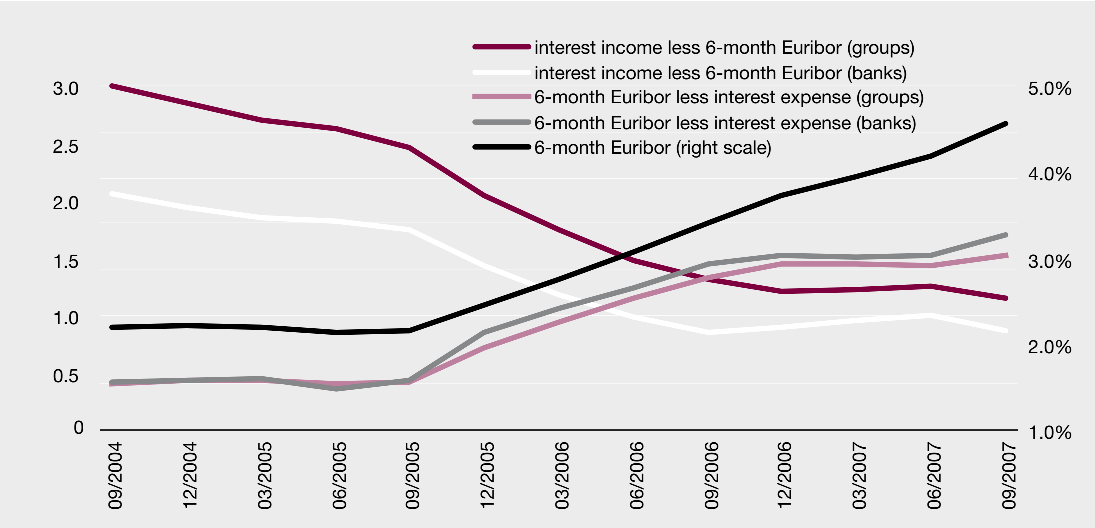

Figure 13. Interest margins

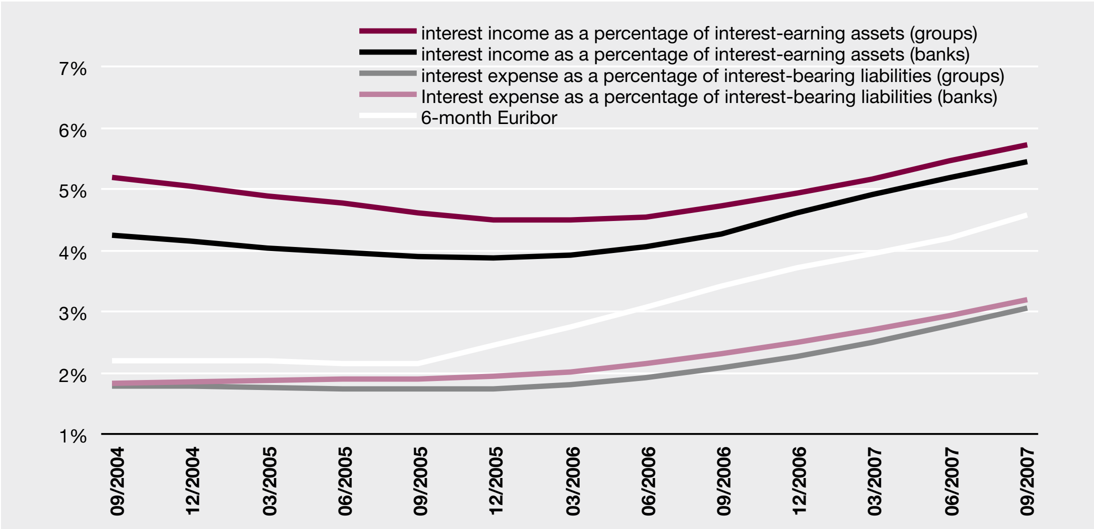

Figure 14. Spread

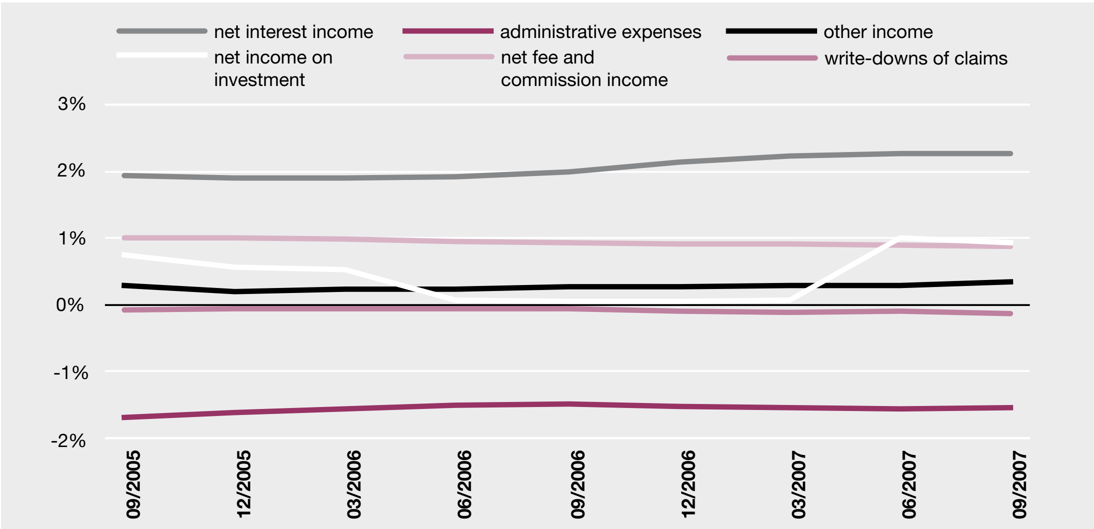

Figure 15. Income and expense items of banks (% of total assets)

could be observed in the case of banks as well as banking groups (see Figures 15 and 16). Although banks receive the majority of fee and commission income on payment intermediation, the increase in income has been inhibited, inter alia, by changed market conditions for borrowing and changing loan terms and conditions. Since key interest rates have gradually risen, a stronger demand for fixing the interest rate could be expected. However, statistics do not confirm any substantial changes in loan terms and conditions.

The slowdown in the growth of asset utilisation has been offset by a moderate rise in **administrative expenses** both across banks and groups.

At the same time, an **increase in the write-downs of claims** has reduced the expected favourable impact of the cut-down on expenses. Consequently, on an aggregate basis, banks were unable to retain the second-quarter profitability of asset in the third quarter. In the case of banks, write-downs have curbed net profits by 4.5% (0.3 billion kroons) in the last four quarters. As concerns groups, without write-downs their profits over the past four quarters would have been 9% (0.9 billion kroons) higher.

The future **profitability of banks** depends, on the one hand, largely on the further developments in funding costs. As most of the loans in Estonia have been granted with a floating interest rate, the growth of funding costs is to a great extent transferred on to clients with some delay. On the other hand, profitability is supported by the large share of demand deposits, as these are less sensitive to the changes in key interest rates. Yet in the case of loans granted by banking groups in other markets, the use of fixed interest rate is more common. The growth in the share of resources received from parent banks increases the dependency of banks' profitability on the price that parent banks ask for funds.

The slowdown in credit growth manifests itself also in fee and commission income. At the same time, local banks earn the majority of fee and commission income on payment intermediation services, whereas the volume of these services is not expected to fall abruptly.

The future profitability of banks will definitely be affected by further changes in customers' ability to service their loans and banks' flexibility in cost management.

Banks' third-quarter results give some confidence that although the profitability might slightly decrease in the future owing to loan losses and the slowdown in credit growth, banks are capable of responding to that relatively fast (though probably in a limited scope) by cutting down on expenses.

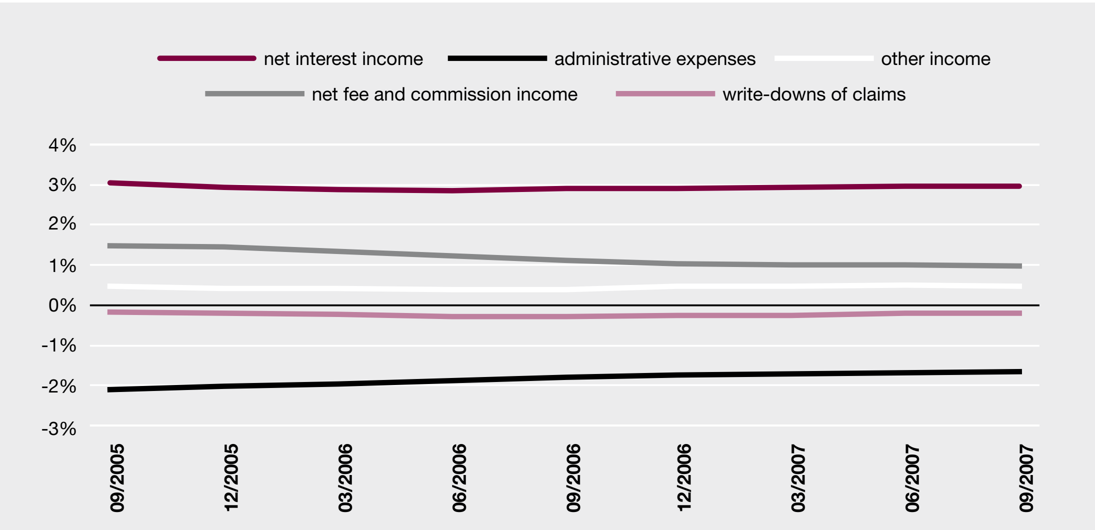

Figure 16. Income and expense items of banking groups (% of total assets)

III SECURITIES AND MONEY MARKET

International financial markets

In spring 2007, major **stock markets**[1] continued to trend upwards, but in July and August experienced an extensive and strong downward pressure. This was mainly caused by the credit market crisis originating from the US (see background information Global liquidity and credit crisis), which was so pervasive that it increased risk aversion in all major stock markets. After a slight recovery of the markets and a more positive period in September and October, the negative market factors strengthened by additional signs of economic slowdown in advanced economies. Especially, this concerns the US, where it is feared that the weakness stemming from the deteriorating housing market will spread to private consumption and the economic growth as a whole. In this context, the reviewed markets displayed quite different results. While the main stock indices in the US and the euro area (SP500 and Stoxx 50) grew by 2.3% and 2.8%, respectively, great differences could be observed in the Nordic countries: the Finnish stock index rose by 16.7%, whereas the Swedish index dropped by 8.2% (see Figure 1). At the beginning of November, the major stock markets were influenced by the deepening insecurity of investors about the future economic outlook. This was caused by several reports of losses in the financial sectors of advanced economies as well as the risk of a strong deceleration of the US economic growth.

The **stock markets of the Central and Eastern European countries** were largely affected by liquidity problems owing to high-risk real estate loans as well as the depreciation of the US dollar. Markets experienced a great volatility of stock prices and a general downward trend (see Figure 2). One of the fastest shrinking markets was the Baltic market, where the values of stock indices decreased by 14% in Estonia and by 2% in Latvia from the beginning of 2007 till the second half of November. The drop on the Lithuanian market in autumn was not as steep. It was similar to the figures of other Central and Eastern European markets (Poland, Hungary, Romania) and posted a positive result of about 5%. Owing to the oil price rise, Russia maintained its leading position with the stock prices increasing by nearly 12% after wavering up and down since the beginning of the year. The recent developments in the Estonian stock market have been rather different compared to Russia, whereas trends in other Central and Eastern European markets have generally remained alike. The markets of Hungary, Poland, Romania and Lithuania are much more interconnected than on average. As for the stock market turnovers in the Baltic States, the stock exchanges of Tallinn and Riga are somewhat connected, although rather weakly.

Developments in **bond markets** were affected by the same factors as the stock markets and were also volatile. The majority of larger central banks, however, continued raising their key policy interest rates, because the growth outlook was relatively good in the first half of the review period and the main focus of major central banks was still on reducing the inflation risk. The European Central Bank (ECB) raised the key interest rate by 25 bp and the Swedish central bank by 75 bp (both to 4%). Key interest rates were increased also by the central banks of Australia, Canada, England and Norway. The US and Japan were an exception in that respect by keeping their base rate stable.

However, in August significant changes destabilised the situation. Problems in the credit market caused a substantial rise in the interest rates of the interbank money market, to which several major central banks (including the ECB) reacted by adding liquidity to the market. This helped to stabilise the situation, but the risk of an economic

[1] The Review covers developments from March 30 to November 9, 2007.

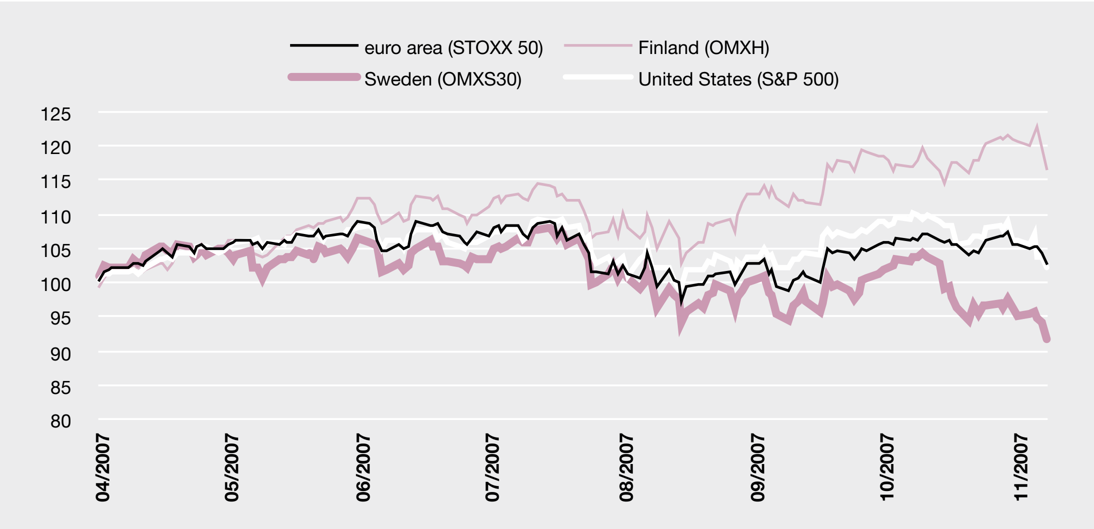

Figure 1. Stock indices in the United States, the euro area, Sweden and Finland (30 March 2007 = 100)

Source: EcoWin

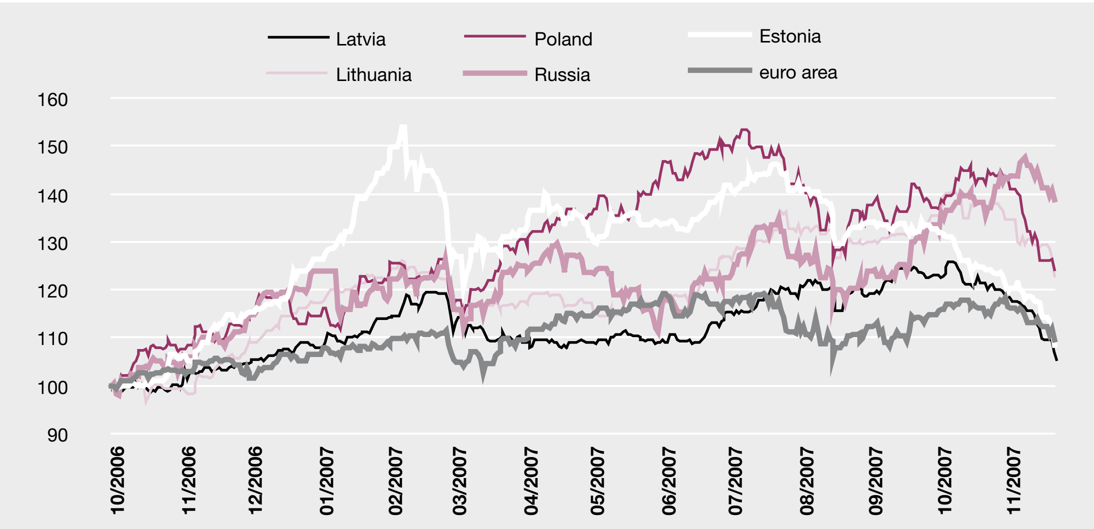

Figure 2. Dynamics of stock exchange indices of the new EU Member States, the euro area and Russia (points; 01/10/2006 = 100)

Source: EcoWin

slowdown and increased volatility persisted. In order to reduce these risks, the US central bank decided to decrease its key interest rate by 50 bp in September and by another 25 bp in October.

Three-month money market interest rates increased by 65 bp in the euro area and by 108 basis points in Sweden; in the US, however, they dropped by 47 bp (see Figure 3). **Long-term (ten-year) interest rates** experienced a remarkable turning point in their dynamics: in the second quarter they were in upward trend, but in July (in June in the US) the rates started to decline. For the whole period, in the euro area the ten-year interest rate changed little, increasing by 2 bp; in Sweden it grew by 26 bp and in the US dropped by 44 bp (see Figure 4).

Developments of interest rate quotations in the **Baltic money markets** were more notable in Latvia and Lithuania. The three-month Rigibor, which ranged between 6–7% in the middle of the summer, rose over 12% in mid-September and dropped below that level only in November (see Figure 5). The difference of the three-month Vilibor with the euro area's money market interest rates started rising steadily in the middle of October and stabilised in November at 2 percentage points. These trends probably indicate an increased caution of investors in light of the much speculated overheating of the Baltic economies, which has lead bank customers to cover their positions in the Baltic currencies.

As regards **foreign exchange markets**, the dollar continued to depreciate against other major currencies. The dollar exchange rate began to weaken particularly fast in September, when several negative economic and market reports were released in the US. At the end of the review period, along with the reduction of the US key interest rate the situation for the dollar was further aggravated by the Chinese central bank's plan to decrease the dollar's share in their foreign exchange reserves. The euro exchange rate appreciated by 9.9% against the dollar, reaching a new historic high at 1.4674 (see Figure 6). The exchange rate of the yen appreciated by 6% to 110.76. This occured partly a result of a massive unwinding of carry positions associated with the yen. The exchange rate of the Swedish

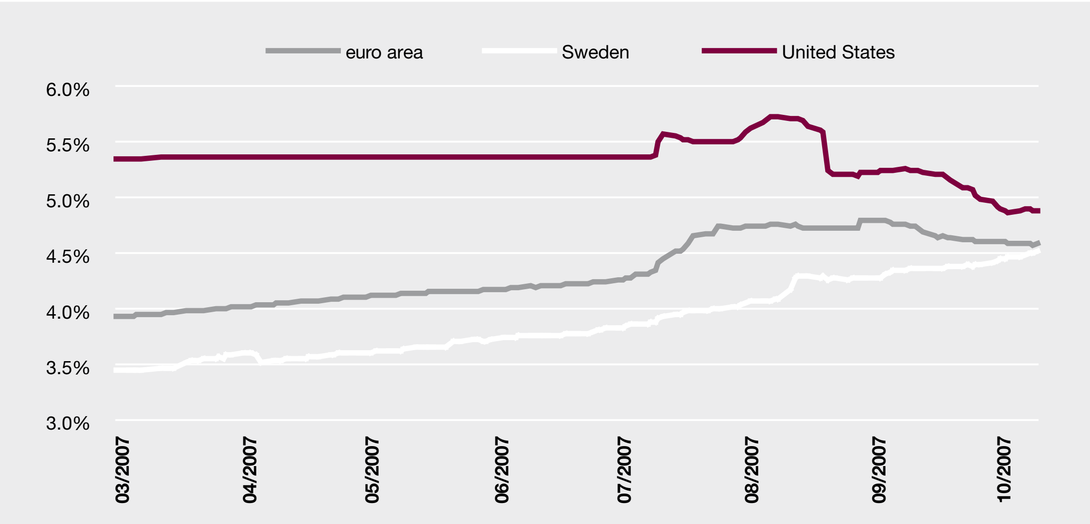

Figure 3. 3-month interest rates in Germany, Sweden and the United States

Source: EcoWin

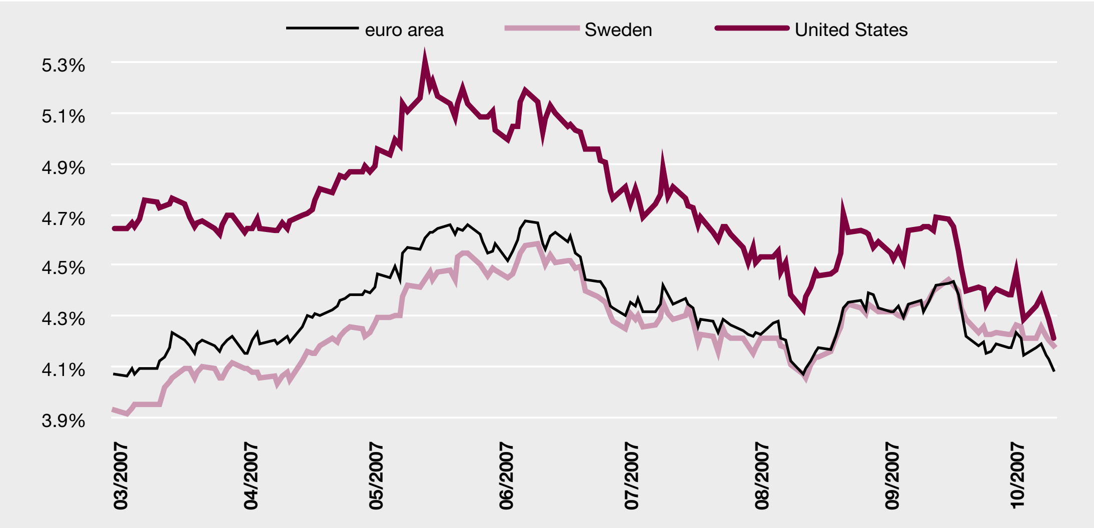

Figure 4. 10-year interest rates in the euro area, Sweden and the United States

Source: EcoWin

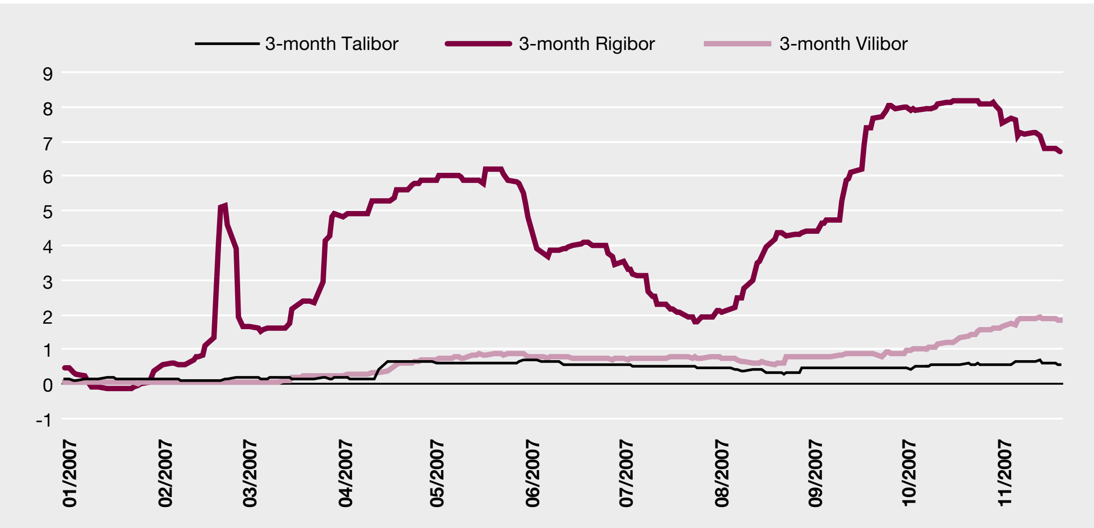

Figure 5. Differences between Baltic interbank money market interest rates and 3-month Euribor (percentage points)

Source: EcoWin

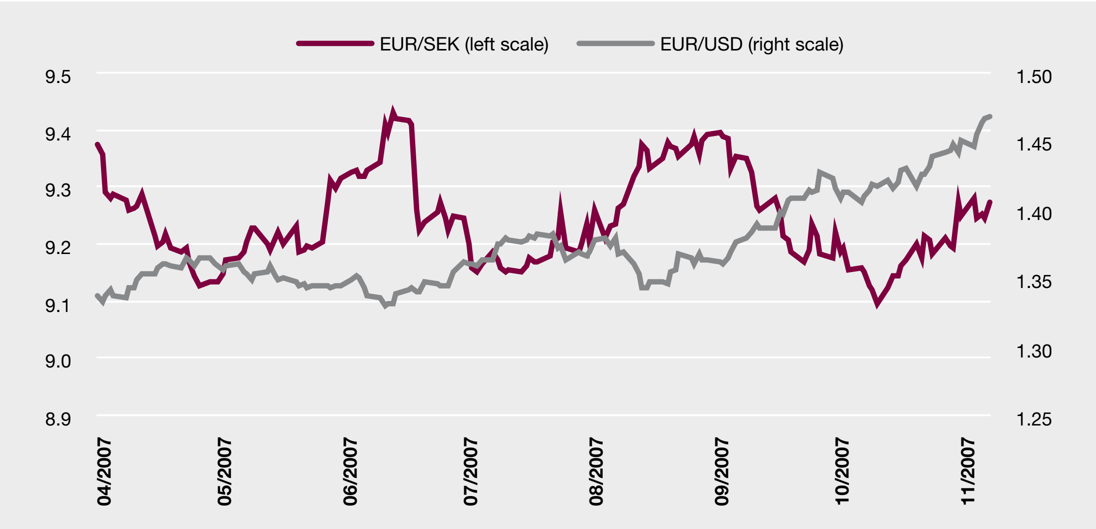

Figure 6. Exchange rate of the euro against the Swedish krona and the US dollar

Source: EcoWin

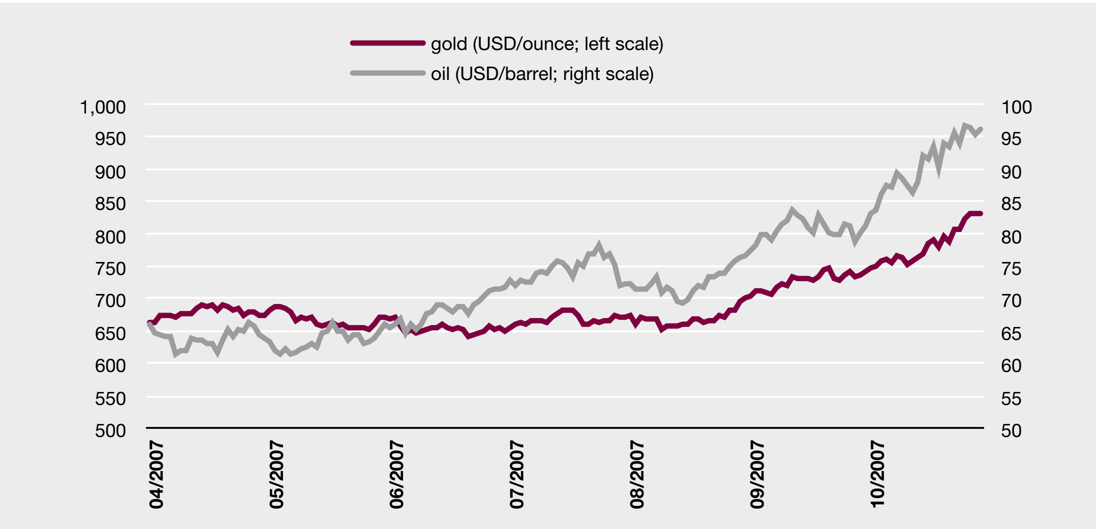

Figure 7. Prices of gold and crude oil (WTI)

Source: EcoWin

krona against the euro ranged between 9.10–9.45 and changed little all in all (appreciating against the euro by 0.5%).

The **commodity markets** continued to trend upwards driven by strong global demand. The CRB index that reflects the prices of 22 key commodities grew by 9.6% (see Figure 7). The prices of oil and gold experienced a particularly rapid rise, supported by the rapid depreciation of the dollar. The oil price shot up by 46.2%, reaching a record high on November 6, namely 96.6 dollars per barrel. While the price of gold remained between 650–700 dollars per ounce until September, by November 7 it had already risen by 25.4% to 831.3 dollars. The price hike of gold may be regarded as the investors' reaction to the worsening of the economic outlook and the increased risk of holding financial assets (primarily stocks and credit instruments). In these conditions, the role of gold as "a safe haven" instrument and the "anti-dollar" gains more importance, which also happened during the review period.

Money market

The interest rate applied to main refinancing transactions with the European Central Bank remained unchanged at 4% during the past half-year. The **euro area money market interest rates** generally moved in line with the monetary policy interest rates. August and September were exceptional though, as the money market interest rates were boosted by signs of instability on the euro area money markets, including the increased liquidity need. In October and November, the euro area money market interest rates experienced a slight correction, dropping by an average of 15 basis points across various maturities.

The **Estonian money market interest rate** Talibor has generally moved in line with the Euribor. Contrary to April, when the spread between Talibor and Euribor slightly increased, in the third quarter and the first half of the fourth quarter the interest rate difference remained relatively unchanged. In the middle of November, it reached an average of 60–80 bp across various maturities (see Figure 8).

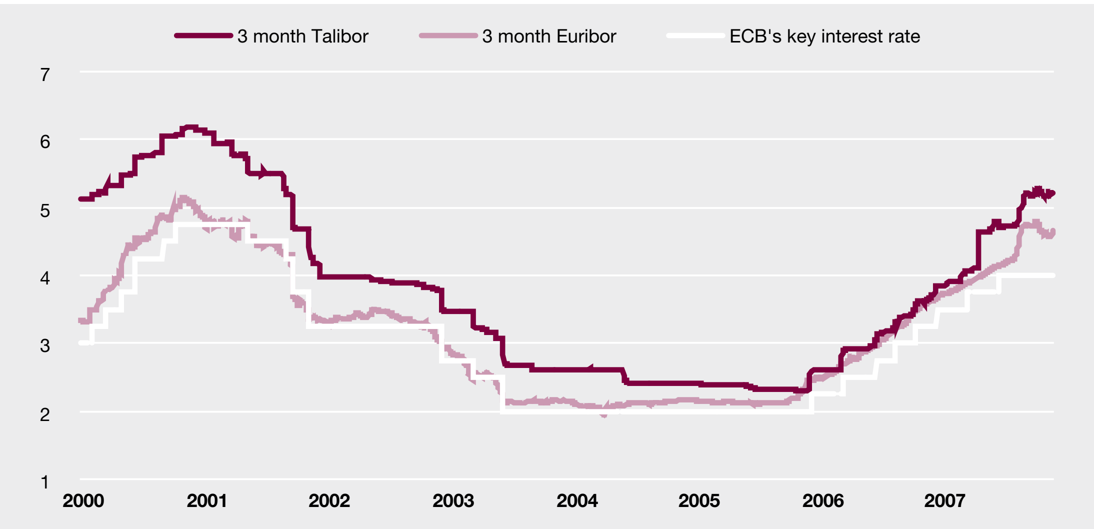

Figure 8. Money market interest rates in Estonia and the euro area (%))

Source: EcoWin

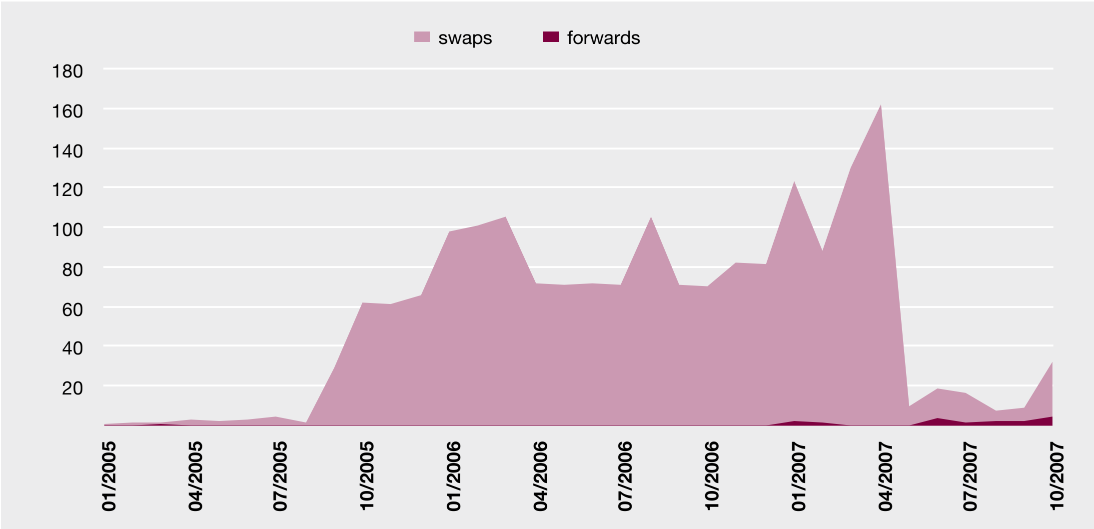

Figure 9. Derivatives transactions with Estonian credit institutions (EEK bn)

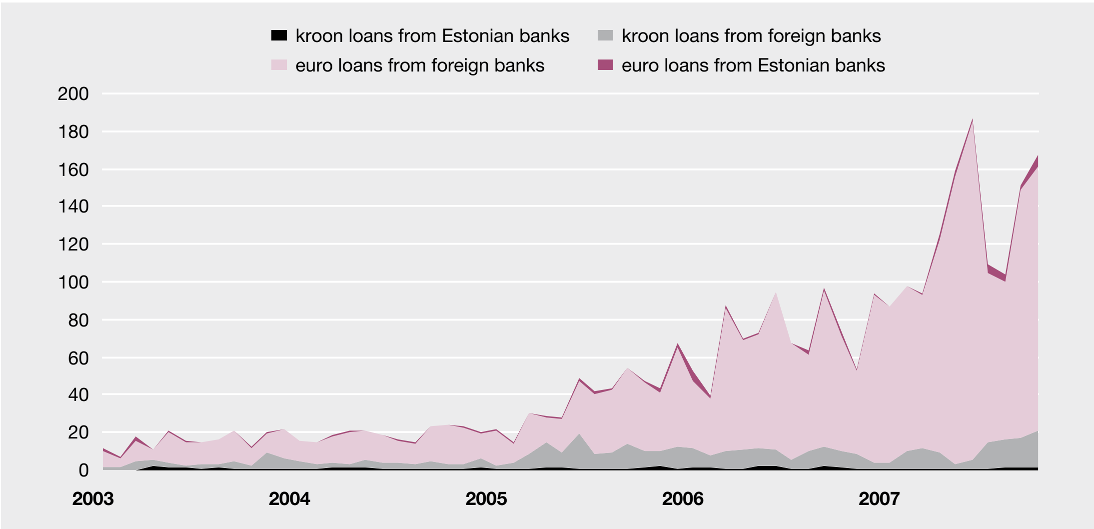

Figure 10. Loans of Estonian credit institutions received from the interbank loan market (EEK bn)

The slightly stronger demand for risk-hedging transactions related to the kroon exchange rate also caused an increase in the difference between interest rate quotations that form the basis of future Estonian kroon and euro transactions (forward premiums), mainly in case of longer maturities. In the last third of November, the price quotations of 12-month derivatives rose sharply. This was probably caused by the media-exaggerated discussions on the potential devaluation of the kroon.

The **turnover of the derivatives market** decreased considerably in May 2007 and has remained several times smaller compared to the highs of two previous years (see Figure 9). However, in earlier quarters the turnover was significantly influenced by large foreign exchange transactions between a local bank and its parent bank. Excluding these transactions, the turnover of the derivatives was slightly above usual since the second quarter of 2007, reaching an estimated 12 billion kroons in October. This reflects the increased interest of foreign investors in risk-hedging transactions related to the kroon exchange rate. Moreover, besides swaps also the turnover of forward transactions has grown since June; in October it reached 4 billion kroons. Transactions by non-residents comprised approximately 90% of the turnover of the foreign exchange derivatives market.

The **turnover of short-term kroon loans** was relatively typical in the second and third quarters of 2007. Non-residents' transactions comprised approximately 70% of the short-term kroon loan market (see Figure 10). The most active market participants were credit institutions from Sweden, Finland and Latvia. Estonian credit institutions nonetheless continue managing 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 kroon's (net) sales turnover via the central bank's forex window was slightly greater during the monitored period, indicating a stronger demand for the kroon.

The liquidity of the Estonian kroon remained stable and no significant failures occurred in the financial sector's kroon liquidity. **Banks' settlement buffers in the central bank** remained high and banks had no difficulties with fulfilling the reserve requirement.

Bond market

After a rapid growth in the domestic bond market at the beginning of the year, the last half-year has remained slightly more peaceful. The year-on-year growth of the **primary bond market** turnover reached 60% at the end of October (see Figure 11). In the third quarter, the turnover was approximately 2 billion kroons, which is about 1.5 times less than in the first quarter and the same as the quarterly average of 2006.

The growth rate of bond **capitalisation** remained high (81% compared to a year ago). At the end of September, capitalisation exceeded 12.6 billion kroons (5.5% of GDP). The greatest contributors to growth were resident companies' issues that increased by 135%. The bond issues of banks decreased slightly (13.7%), whereas the volume of issues by non-resident companies grew by 40%.

The average daily turnover of the **secondary bond market** increased in 2007, reaching 20 million kroons. Among the transactions originated through the Estonian Central Register of Securities (ECRS), transactions with bonds issued by the non-financial sector prevailed (52% of all transactions).

No new bonds were listed on the Tallinn Stock Exchange during the last half-year. The market value of the bonds of the four listed issuers amounted to nearly 521 million kroons at the end of September, which is 4.1% of the total bond market capitalisation.

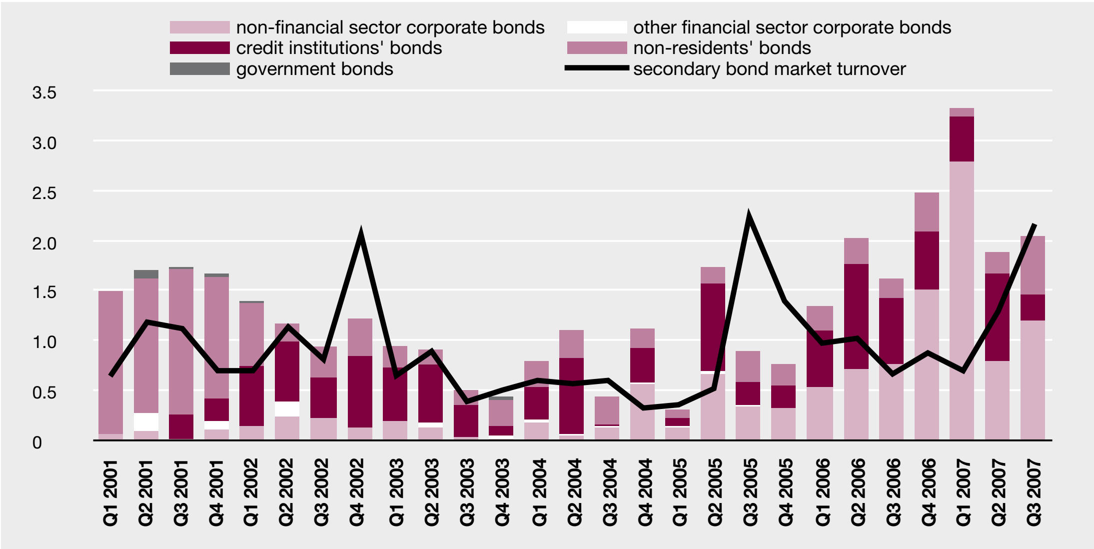

Figure 11. Volume of quarterly issued bonds and secondary bond market turnover (EEK bn)

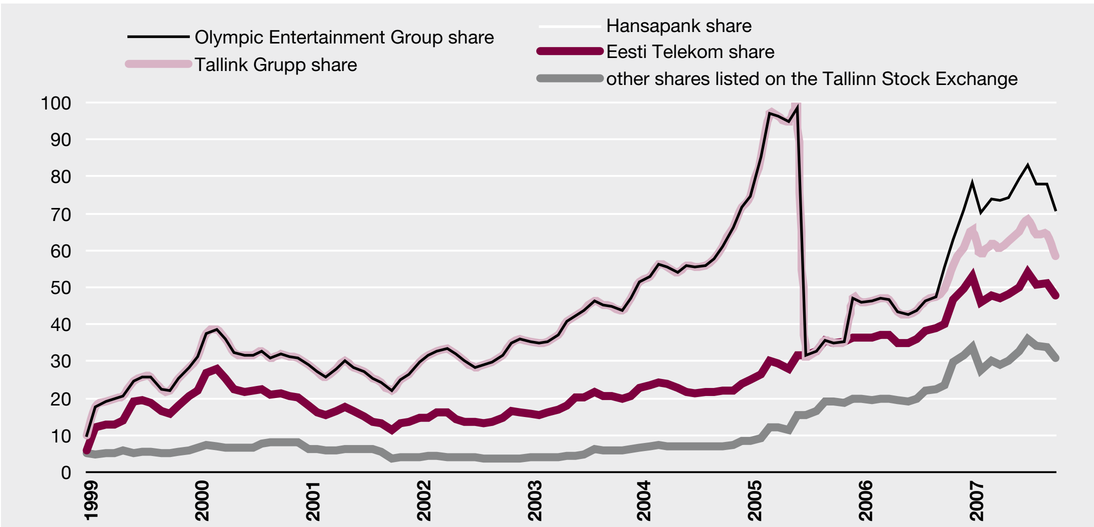

Figure 12. Market capitalisation of shares listed on the Tallinn Stock Exchange (end of month; EEK bn)

Stock market

One of the most significant events of the past six months on the Tallinn Stock Exchange was the listing of shares of Arco Vara on the primary list of the Tallinn Stock Exchange in June. The volume of this issue posted the all-time top third result on the stock exchange (the total volume of the issue was 1.5 billion kroons). In addition, AS Viisnurk was divided into AS Trigon Property Development and AS Viisnurk, and the business name of PTA Grupp AS was renamed AS Silvano Fashion Group.

The value of the **Tallinn Stock Exchange index OMXT** rose quickly at the beginning of the year and experienced a correction in the second half of the first quarter. By mid-summer, the value of the index increased to nearly 1000 points again (see Figure 12). Due to the downturn of international stock markets the index value shrunk close to 900 points by the end of the summer and remained there throughout September. October, however, saw a rapid price hike and in November the value of the index dropped even below 800 points. The year-on-year growth of the stock index stood at only 13% at the end of October.

After a brisk rise the **capitalisation of listed companies** dropped by some billions to 78 billion kroons by the end of September. By the end of October, it had shrunk already to 70 billion kroons. This is comparable to the level of end-2006. As a ratio of GDP, the capitalisation rate declined to 31% (34.8% at the end of March).

The average **daily turnover** of stock transactions totalled 104 million kroons and was 1.4 times higher in the last half-year, compared to the previous period (see Figure 13). The turnover was again primarily boosted by transactions with the shares of Tallink Grupp and Eesti Telekom, which comprised 28% and 17%, respectively, of the total turnover of stock exchange. The stocks of Merko Ehitus, Olympic Entertainment Group and Arco Vara were also more liquid during the period under analysis.

In the autumn of 2007, 29 members of stock exchange were entitled to act as brokers; four of them were inactive. The number of domestic members of stock exchange still remained below that of foreign members. The majority of transactions were nevertheless intermediated by domestic members.

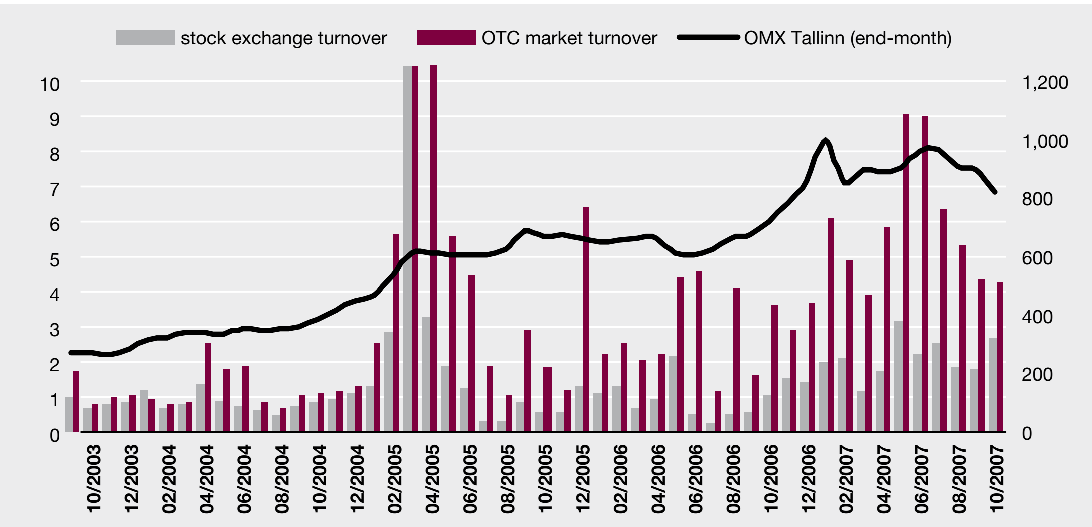

Figure 13. Stock turnover on the Tallinn Stock Exchange and OTC market (EEK bn; left scale) and Tallinn Stock Exchange index OMXT (points; right scale)

The share of foreign investment in the capitalisation of listed companies remained at 53% in the last six months. Within the past half-year, investors from Switzerland, Lithuania and Denmark have multiplied their stock investments. The investments of Polish investors witnessed the greatest rise – by almost eight times (2.8 billion kroons). At the end of September, the share of resident companies' investment in the total value of listed stocks accounted for 42% and that of retail investors for 3.8%.

GLOBAL LIQUIDITY AND CREDIT RISK

Sources of crisis

The main reason underlying the liquidity crisis that began in the summer of 2007 and continued in autumn with varying severity was the mortgage lending strategy of the US financial institutions during the past three or four years. Increasingly more loans were issued with floating interest rates, and often to borrowers with poor credit history. According to the International Monetary Fund[2], 21% of the loans issued in 2006 consisted of **subprime loans**[3] and 25% of **Alt-A loans**[4]. In 2004–2005 real estate prices rose quickly, whereas 2007 saw a downturn in growth. Moreover, refinancing opportunities decreased and monthly repayments increased owing to a rise in the short-term interest rate. As a result, the share of bad loans[5] among subprime loans increased to 14.8% in the second quarter of 2007 and composed 5.1% of the total loan volume.[6]

The rapid and global spreading of losses resulting from the drastic growth of bad loans was also fostered by a **peculiarity of the US financial system**, where most mortgage loans are not left in the balance sheet of the loan issuer but are divided into tranches with varying credit ratings and sold to investors in the secondary market. Furthermore, most of the risks of loans "turning sour" are packaged into tranches with poor (or no) credit ratings, which act as kind of buffers for tranches with higher credit ratings. The resale of loans to secondary market investors contributed to the rapid spread of US problems all over the world, as also various major European and Asian banks purchased mortgage-loan backed bonds. In hindsight, it has become evident that owing to the inexperience of rating agencies in adequately assessing the risks of such tranches they gave relatively high ratings to some bonds backed by mortgage loans with greater risks. Thus, those bonds were purchased also by investors and funds with relatively more conservative investment guidelines.

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[2] Kiff, J., Mills, P. S. "Money for Nothing and Checks for Free: Recent Developments in U.S. Subprime Mortgage Markets", IMF Working Paper 07/188.
[3] Loans to borrowers whose credit history is poor, monthly loan repayments exceed 55% of the income and/or the value of the loan exceeds 85% of the collateral's value.
[4] Loans to borrowers who have a good credit history and the value of loan is below 85% of the collateral's value but who have not submitted sufficient records concerning their incomes.
[5] Loans with the payment due date exceeded by at least 30 days.
[6] Source: Bloomberg.

Spread of crisis

Owing to the real estate loans “turning sour” and the related rapid deterioration of the value of mortgage-backed bonds, several financial institutions in the US, euro area and elsewhere faced difficulties. Numerous reports of the bankruptcies of major real estate loan issuers, the closing of funds containing mortgage-backed loans and/or the emergency liquidity provided by central banks to financial institutions in trouble destroyed the mutual trust of market participants. As a result, market participants became reluctant to lend money to each other; free assets were rather invested in government bills. Those who lacked liquid assets had to borrow from the market with hiked interbank interest rates. Consequently, the **difference between the short-term interbank interest rate and government bills** exceeded 240 basis points in the US and 100 basis points in the euro area for a while (see Figure 14). This entailed a sudden downfall in the stock prices of companies engaged in real estate and the financial sector.

The liquidity and credit crisis that started off from the US also affected currency markets. The increase in corporate interest premiums on bonds reduced the volume of bonds issued in the US, which in turn decreased the net inflow of foreign capital to the US. The subdued demand for the US dollar was one of the reasons for its weakening in the third quarter of 2007.

Reactions of central banks and the International Monetary Fund

In order to alleviate the liquidity crisis, various central banks added liquidity to markets by issuing repurchase loans on several occasions. The loans were issued with above average maturi-

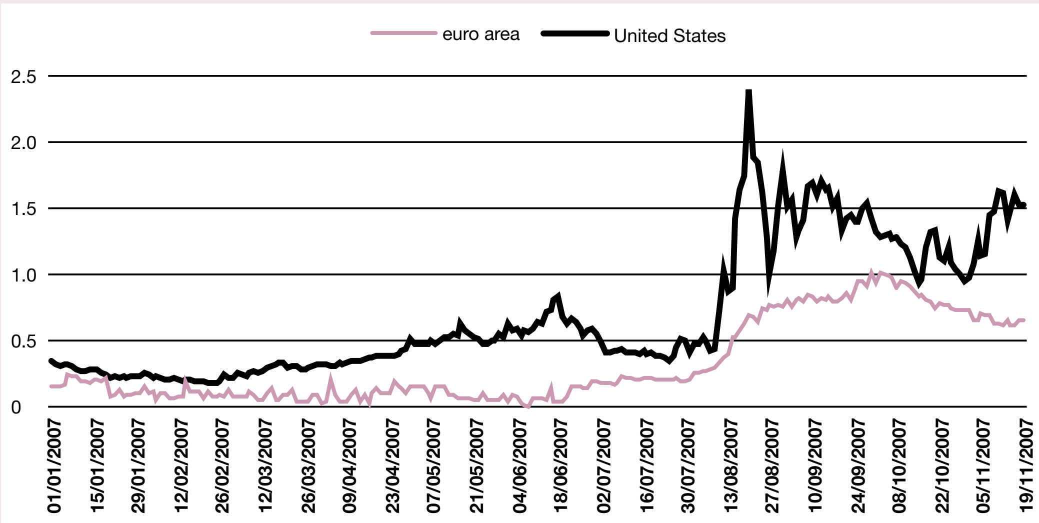

Figure 14. Difference between interbank money market interest rates and government bill interest rates in the United States and the euro area (percentage points)

Source: Bloomberg

ties (up to three months) and the list of acceptable collaterals was extended as well. The US Federal Reserve also lowered the key interest rate two times: by 50 basis points from 5.25% in the summer to 4.75% on September 18 and by 25 basis points to 4.5% on October 31. The European Central Bank did not change the key interest rate until the middle of November and considers the current risks to the economy two-sided. On the one hand, the slowdown in economic activity caused by the liquidity and credit crisis may entail a need to lower the key interest rate in the future. On the other hand, the inflationary pressure resulting from a sharp price rise in commodity markets may trigger a further rise in the key interest rate.

The International Monetary Fund (IMF) warned in this autumn's World Economic Outlook that the disturbances in financial markets may lead to a faster than expected halt in growth in the euro area. Therefore, IMF lowered the euro area's economic growth forecast for 2008 from 2.5% in spring to 2.1% in autumn. As regards global economic growth, the forecast for 2008 was revised from 5.25% to 4.75%.

IV OTHER FINANCIAL MARKETS

Investment funds

Since the end of September 2006, the **yield** of investment funds has been influenced by the rise in key interest rates, the rapid increase in stock prices and the subsequent global correction at the beginning and in the summer of 2007 (see Figure 1). This mostly affected the yield of equity funds, which rose to 32% as a moving average by the end of September, despite having fluctuated up and down. The increase in key interest rates also entailed a rise in the average yield of money market funds that posted the highest result in four years at the end of September with 3.3%. In end-September, the average yield of interest funds – 3.2% – was nearly three times higher than last year's average.

The growth of investment fund **assets** started to decelerate in spring owing to the high comparison basis and stock market corrections. By the end of September, it had declined to 48% year-on-year (see Figure 2). At the end of July – before the turbulence in financial markets – the volume of investment fund assets reached its record high level with 25.6 billion kroons. At the end of September, after a major correction of stock prices in August, it displayed signs of growth again and amounted to 24.9 billion kroons.

The **return on assets** contributed 46% of the year-on-year growth of investment funds. The rest, approximately 4.4 billion kroons, was new investment capital, which has increased by nearly a third compared to last year. Most of it was invested in equity funds in the amount of nearly 5.2 billion kroons, which is almost twice as much as a year ago. The assets of money market funds that had shrunk by nearly a quarter by the end of September diminished due to the outflow of 1.2 billion kroons. This was somewhat compensated by the improved yield of these funds. Despite the multiplication of the yield, new capital nevertheless accounted for approximately 90% of the asset growth.

The share of residents among the shareholders of equity funds dropped even further from 59% a year ago to 54%. Less than half of them, that is 43%, were private persons.

The **share of foreign assets** in total fund assets started to increase slowly in the fourth quarter of 2006 and comprised 80% in end-September 2007

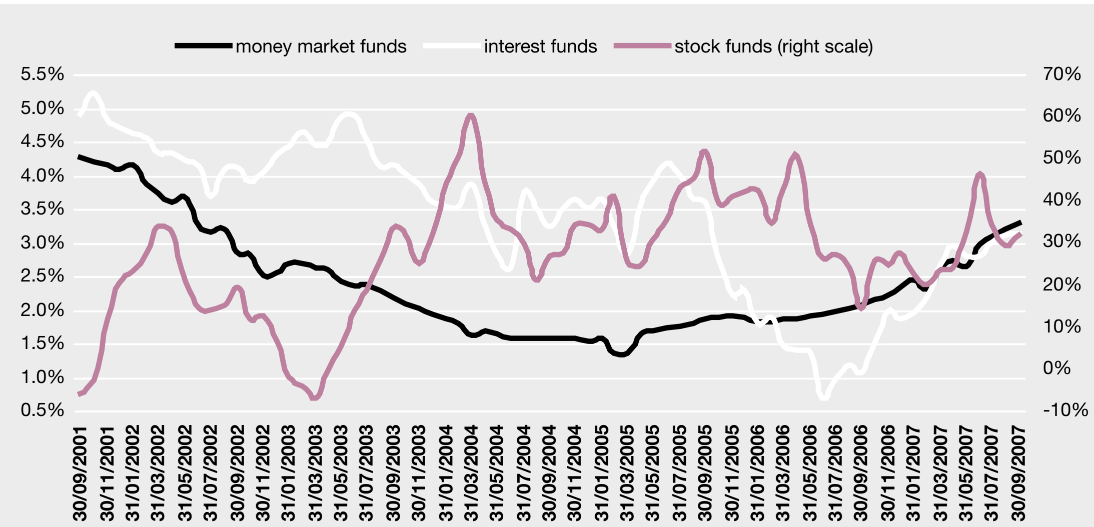

Figure 1. Average yield of investment funds

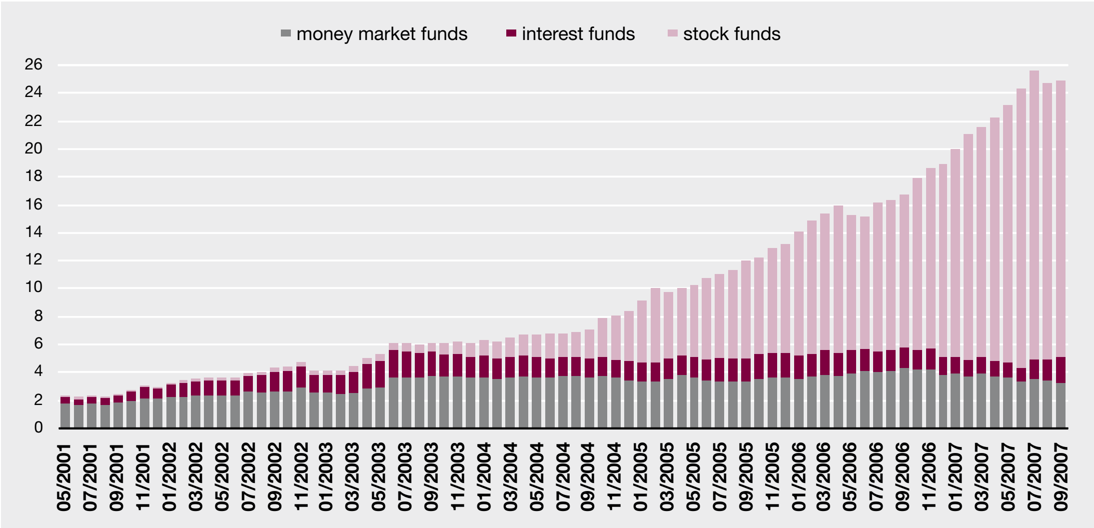

Figure 2. Volume of investment fund assets at end-month (EEK bn)

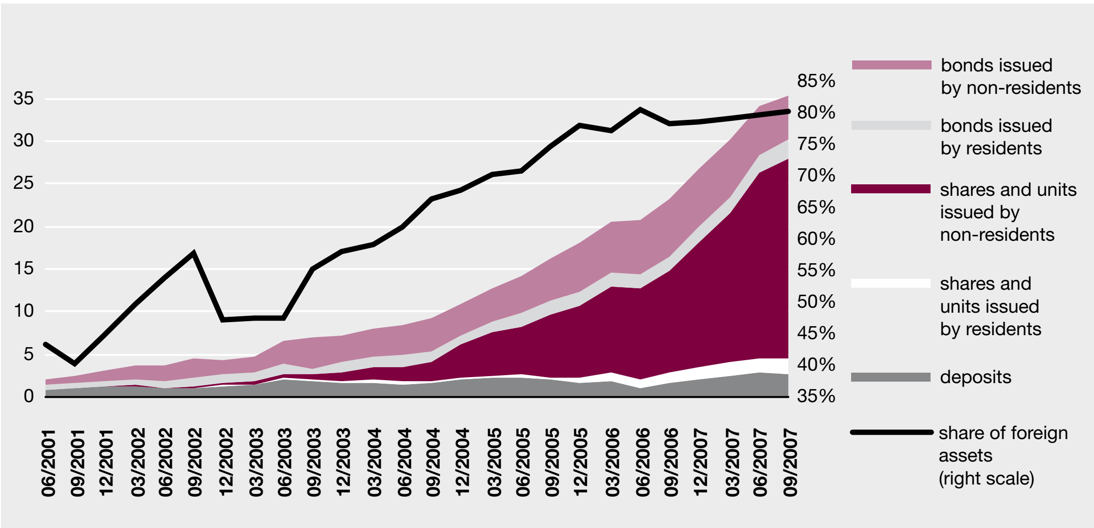

Figure 3. Structure of investment and pension fund assets (EEK bn) and share of foreign assets at end month

(see Figure 3). This occurred primarily on account of investments in the shares and other equity of non-residents. By the end of September, their volume had nearly doubled over the year – by 11.6 billion kroons. Investments in the European Union markets grew by nearly 60%: from 76% a year ago to 78% of foreign assets by the end of September (see Figure 4). The total value of instruments issued to the Estonian equity, bond and fund market among the assets of investment and pension funds registered in Estonia decreased to 11%; i.e., to 3.9 billion kroons.

The pension funds registered in Estonia increasingly prefer to invest in other funds (see Figure 5). At the end of September, all pension funds had invested in investment fund shares or units, whereas third pillar pension funds had invested over two thirds and second pillar pension funds over half of their assets into other funds. Although at least half of equity and interest funds had invested in other funds, the value of investment remained relatively modest: 10% in the case of equity funds and 4% in the case of interest funds.

Six new equity funds and two new interest funds added to list of investment funds during the

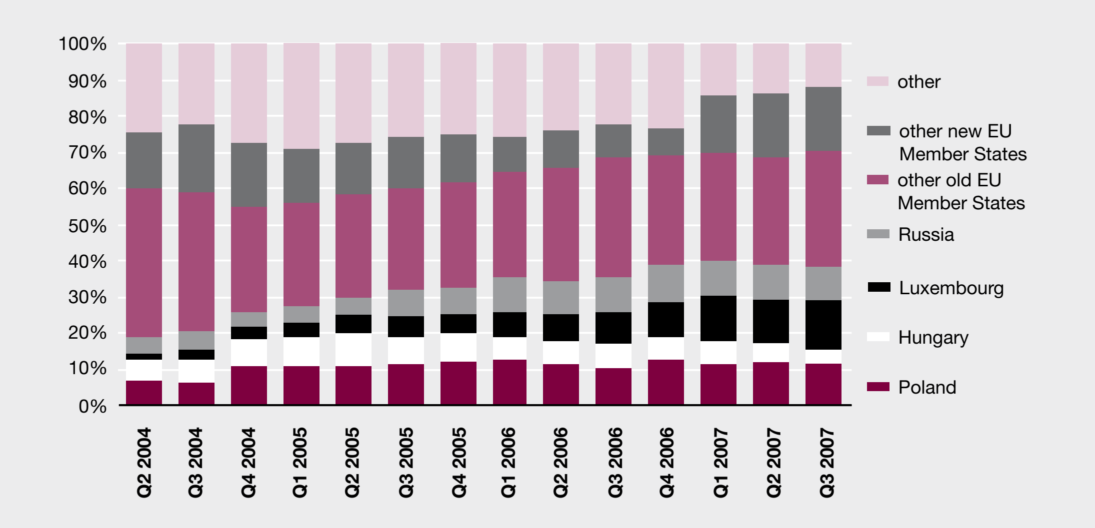

Figure 4. Foreign investments of investment and pension funds by residency at end of period

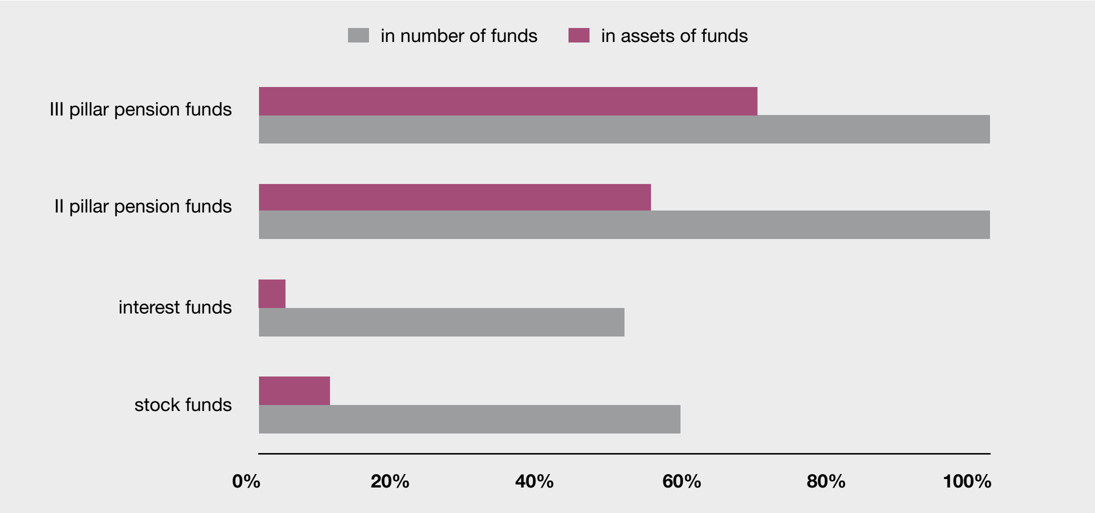

Figure 5. Share of investment fund assets and number in other funds as at 30 September 2007

last half-year. New equity funds included the funds of Sampo Pank and LHV, and AS Avaron Asset Management that received its licence on April 1. At the end of September, their shares composed 4.6% of the total equity fund assets. The total volume of interest funds, however, grew by more than a fifth owing to the launch of Hansapank's Private Debt Bond Fund and Sampo Pank's Fixed Income Strategy Fund. The most popular investment regions of the new equity funds include Central and Eastern Europe. The assets of interest funds have been primarily placed in debt instruments in the European Union.

Pension funds and insurance

At the end of October 2007, the number of subscribers to the **second pillar** of the pension system amounted to approximately 553,000 persons; i.e., about 60% of the labour force. During the past year, the volume of the second pillar funds grew by 54% (3.6 billion kroons) and stood at 10.2 billion kroons towards the end of September.

About 41,000 persons (nearly 4.5% of the labour force) had subscribed to the **third pillar** pension funds by end-October 2007. Within the year, the total volume of the third pillar pension funds grew by 68% (400 million kroons). At the end of the third quarter of 2007, the volume of the third pillar together with pension insurance stood at 3 billion kroons, the share of pension funds comprising 32.8% of that.

The **structure of pension fund assets** followed the trend of previous quarters. The percentage of investment fund shares and units in the structure of second pillar pension fund assets increased even further (see Figure 6). A year ago they comprised 34%, whereas this year 54% of assets have been invested in the funds (see Figure 6). Fund investment is a positive development, as it helps to hedge risks.

At the end of the third quarter, the percentage of investment fund shares and units had increased also in the investments of third pillar pension funds on account of other instruments: from 50% to 68% (see Figure 7). In terms of countries and regions, the percentage of Western European countries in pension fund assets has climbed within the past year. Central and Eastern European countries, on

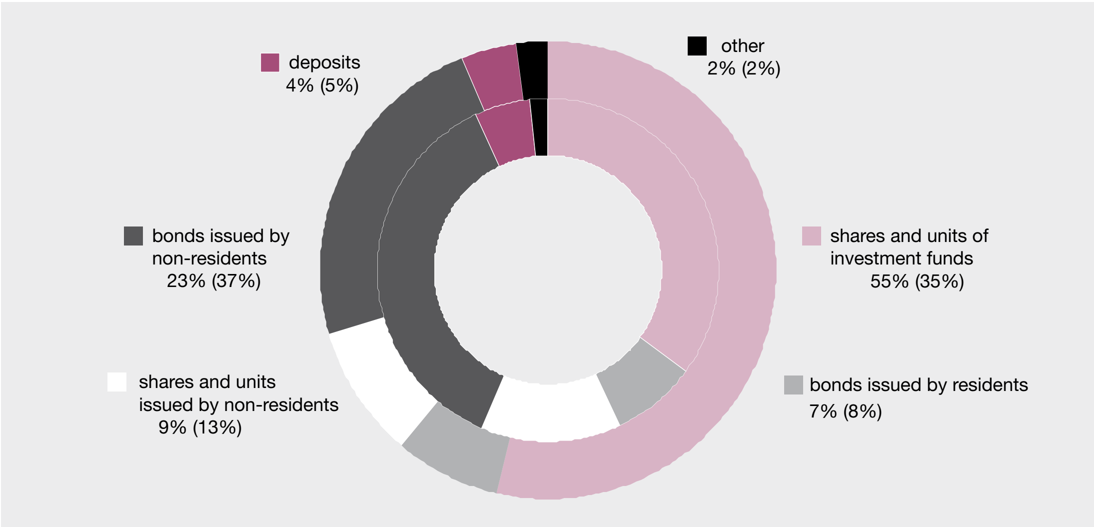

Figure 6. Structure of II pillar pension funds' assets as at 30 September 2007 (position on 30 September 2006 indicated in brackets)

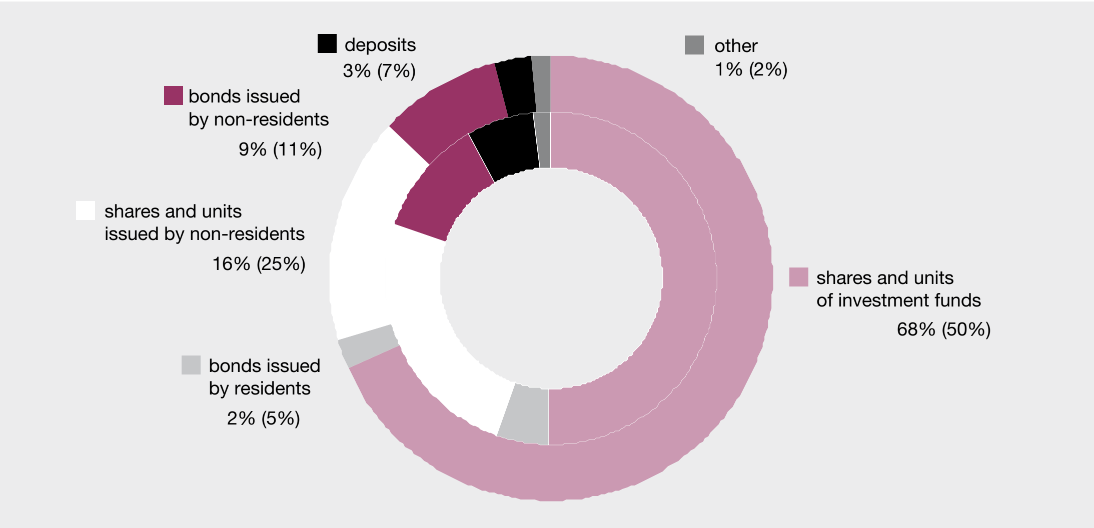

Figure 7. Structure of III pillar pension fund assets as at 30 September 2007 (position on 30 September 2006 indicated in brackets)

the other hand, have witnessed a downturn in investment (from 36% to 29%).

The **annual yield** of Estonian pension funds has remained in line with the developments in global financial markets. Despite remarkable corrections in the financial markets, all pension funds have nevertheless recorded positive yields during the year (see Figure 8). The yield has generally remained very good, as the favourable global economic situation and the reform of Estonian pension system that introduced pension funds have well overlapped. However, a future drop in the yield cannot be ruled out.

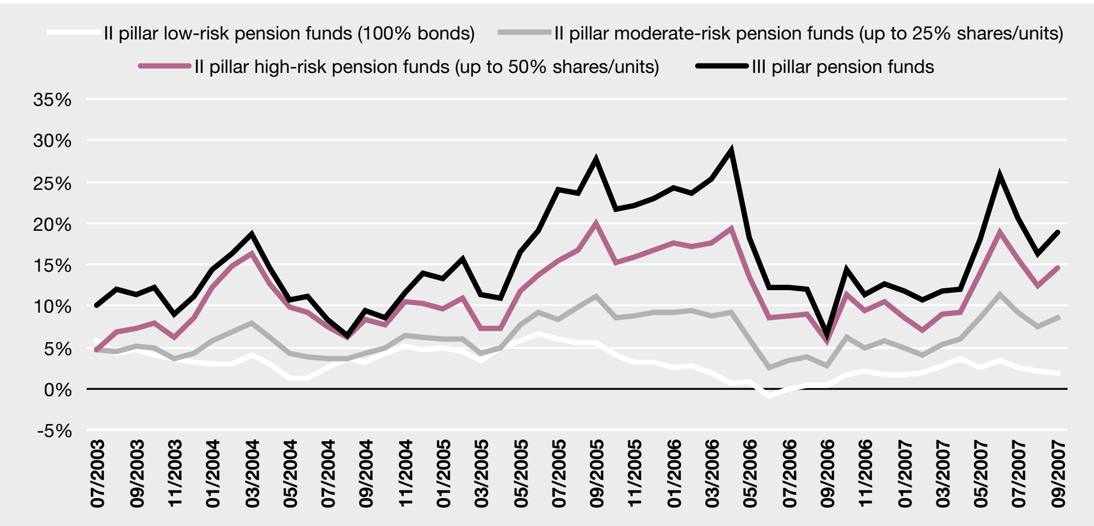

Figure 8. Annual yield of pension funds at end-month

Insurance

Life insurance

This year's developments in the life insurance market can generally be characterised by the establishment of European companies in Estonia. This means that some life insurance companies coordinate their activities in the Baltic States via companies established in Estonia. Last year (from the fourth quarter of 2006 to the third quarter of 2007), the **profit** of life insurance companies, including life insurance companies operating as European enterprises, totalled 201 million kroons. This exceeds last year's figure by more than three times.

The **gross premiums** collected this year on insurance contracts concluded only by Estonian residents amounted to 1.8 billion kroons. During the year, the volume of collected gross premiums increased by 26.5%. The largest contribution to growth came from unit-linked life insurance gross premiums, which increased by 44% (see Figure 9).

The **balance sheet total** of life insurance companies stood at 7.8 billion kroons at the end of the third quarter of 2007. Year-on-year, it grew by 3.2 billion kroons, that is by 49%. The investments related to unit-linked life insurance contracts comprised 52% of the balance sheet total of life insurance companies at the end of the third quarter. During the past year, these investments have increased by 2.3 billion (130%). As for the **structure of investments** made to cover other insurance contracts, the share of stocks and other securities has risen (from 32% to 45%) and that of bonds and other fixed-income securities has fallen (from 51% to 40%).

Non-life insurance

In 2007, the **profit** of non-life insurance companies reached 406 million kroons, exceeding the figure for 2006 by 4%.

The distribution of the **market shares** of non-life insurance companies has changed considerably with the year, mostly because of tighter competition. The property insurance company established by one bank has done especially well and has grown its market share by as much as 8% during its first year of activity.

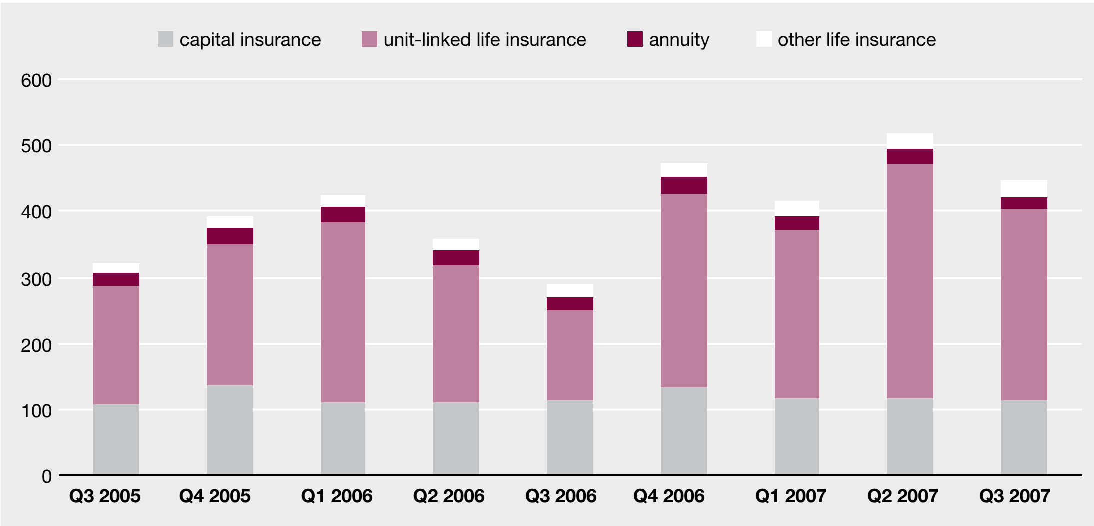

Figure 9. Gross premiums collected by life insurance companies (EEK m)

The **gross premiums** collected by non-life insurance companies with the year amounted to 3.6 billion kroons and exceeded the year-ago figure by 19%. The largest contribution to growth came from the insurance of land vehicles (y-o-y growth 25%) and private property (21%; see Figure 10).

The **balance sheet total** of non-life insurance companies was 4.8 billion kroons at the end of the third quarter of 2007, having grown by 1 billion kroons (24%) year-on-year. The investments of non-life insurance companies accounted for 87% of the balance sheet total – approximately as much as in the previous year. The percentage of shares and units in **the investment structure** is on the rise (in the first quarter of 2007, shares and units comprised 6.8% and in the third quarter already 11.4% of investments), whereas that of bonds and other fixed income securities is decreasing (from 73% in the first quarter to 66% in the third quarter). Nevertheless, we can again conclude that the investments of non-life insurance companies are relatively conservative.

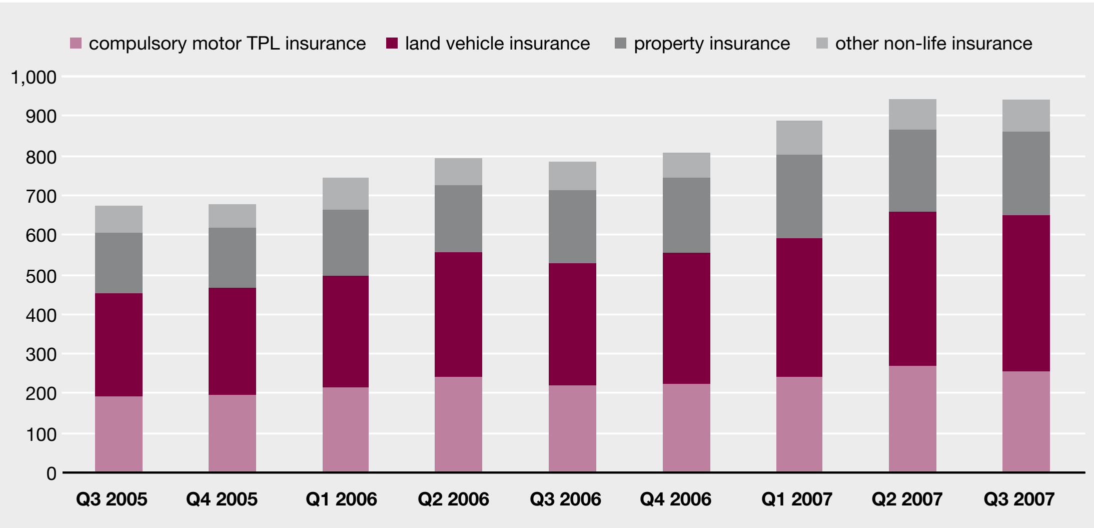

Figure 10. Gross premiums collected by non-life insurance companies (EEK m)

V PAYMENT SYSTEMS

Interbank payment and settlement system

Despite the addition of payments via the euro area's settlement system TARGET, during the last half-year the growth in the number of payments settled via Eesti Pank's Real-Time Gross Settlement System (EP RTGS) decelerated to 24% by the end of September (see Figure 1). Since joining the TARGET, Estonian bank customers have initiated an average of 75 express euro transfers and received about seven payments settled via the TARGET per day.

From the fourth quarter of 2006 until the third quarter of 2007, an average of 306 payments were settled via the EP RTGS, 81% of which were customer payments. The average value of domestic express payments initiated by bank customers was 4.5 million kroons. That of cross-border euro payments was significantly smaller, remaining at the level of 520,000 kroons. The average turnover of payments settled through the EP RTGS grew by 52% and reached an average of 4.4 billion kroons per day. The number of payments has grown owing to transactions via the TARGET during the last year, whereas the turnover of payments has increased primarily because of currency purchase and sale transactions with their year-on-year growth accelerating to 140%.

The **growth in the number of payments settled through the Settlement System of Ordinary Payments** (ESTA) accelerated to 13% by the end of the third quarter and amounted to an average of 87,000 payments per day (see Figure 2).

The average daily turnover of ESTA payments also increased, but by the end of September the growth had slowed to 28%. The average daily turnover of the year amounted to 1.4 billion kroons during the period under review. The average value of the payments settled through the ESTA reached 16,500 kroons.

Since June 14, most banks operating in Estonia have been applying the **interbank direct debit system**, which enhances the effectiveness of do-

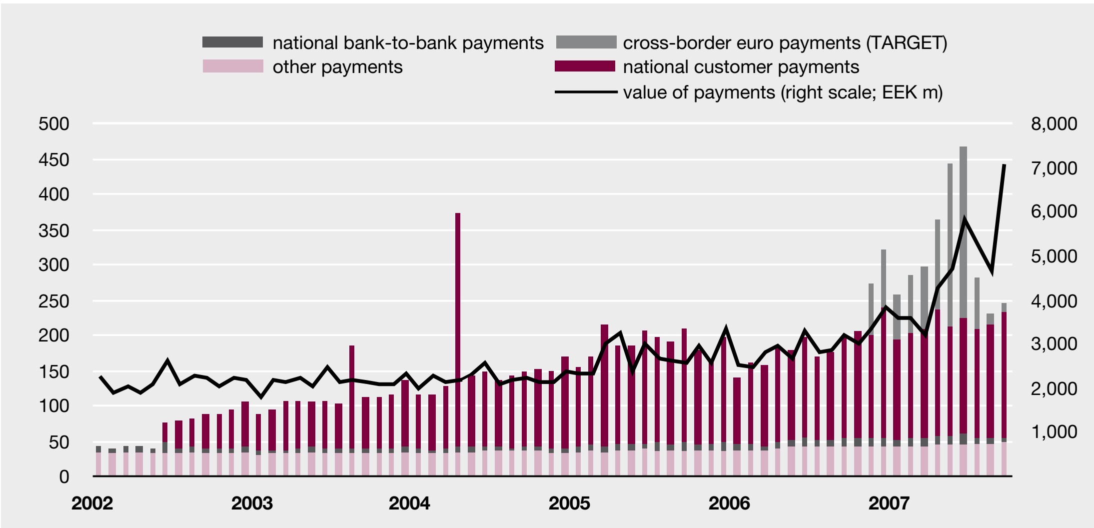

Figure 1. Number of payments processed per day in the EP RTGS and their average daily value per month

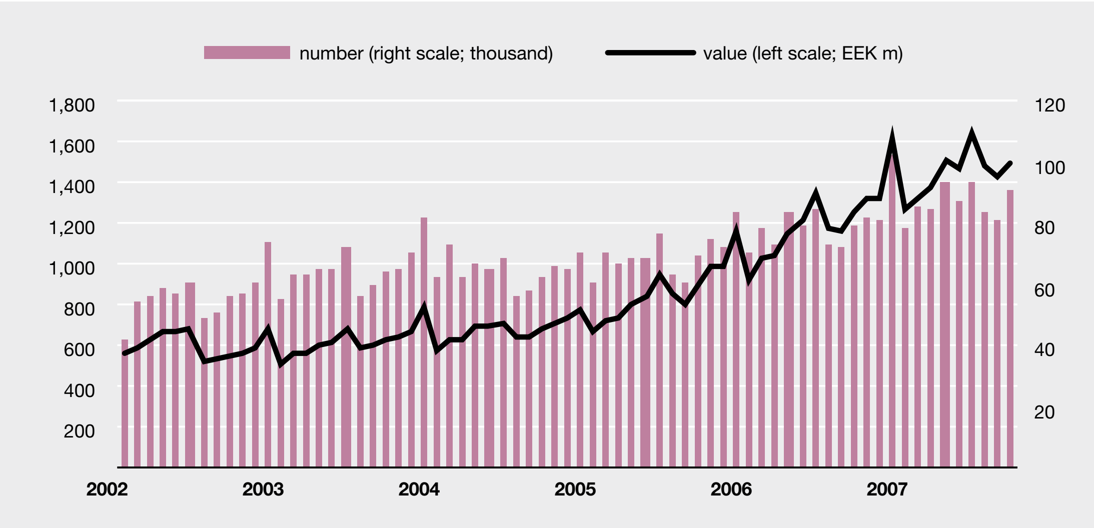

Figure 2. Number of payments processed per day in the ESTA and their average daily value per month

mestic interbank retail payments. The new service enables customers to use domestic direct debits also if the accounts of the payer and the payee are not held with the same bank. The information logistics company AS Itella is responsible for the interbank information exchange and provision of payment information. In October, 2,500 interbank payments were initiated based on direct debits.

Payment intermediation

Payment environment

No unexpected changes occurred in the retail payment environment in the past year. The Estonian payment environment has developed considerably over years and has reached a very high electronic level (see Background Information *International comparison of the Estonian payment environment and the use of various payment instruments*). The survey conducted by TNS Emor on payment habits confirms the growing popularity of payment instruments provided by banks. As much as 86% of Estonian households use these channels to make regular payments and only 48% also use alternative options. The constantly growing popularity of standing orders, direct debits and Internet banking contributes the most to the increasing use of bank services, particularly in rural areas and among households with lower incomes.

The share of people making card payments has grown steadily too. Moreover, this share is rising primarily in households where payment cards are already in use. In addition, the number of ATMs and POS accepting payment cards has increased. At the end of September, there were nearly 15,000 such POS and over 800 ATMs (see Figure 3).

One of the reasons for the popularity of making payments via banks is that more and more people prefer to receive their incomes on bank accounts. Only 15% of Estonian residents aged over 18 get their income in cash. Cash is mainly used for paying retirement pensions but even this habit is waning. The receipt of incomes to bank accounts has primarily been fostered by the decrease of cash payments in rural areas.

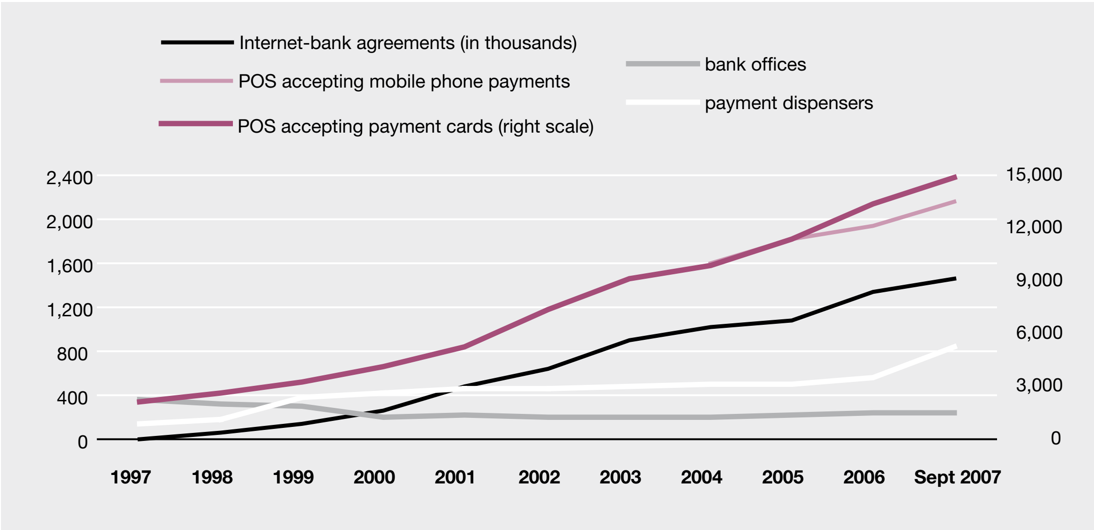

Figure 3. Channels for retail payments in Estonia (end-of-period figures)

Payments intermediated by credit institutions

From among non-cash payment instruments, card payments and credit orders are the most widespread: 56% and 37%, respectively (see Figure 4). The most popular credit order channels are the Internet bank and telebank: the former comprised 24% and the latter 10% of all non-cash payments during the period under review.

The majority of transactions are card payments, but their value generally remains low. A large part of non-cash payments is made via the Internet and telebank: 25% and 15%, respectively. The volume of transactions conducted via the Internet witnessed the fastest growth (40%) during the year, but the volume of card payments rose rapidly as well (35%).

Use of payment cards

By the end of the third quarter of 2007, credit institutions had issued 1.7 million payment cards. The number of payment cards grew by approximately 10% within the last year (13% in 2006). Among those, 74% were active, which means that at least one payment transaction had been made with the card during the accounting period. The survey of TNS Emor revealed that card payments are mostly made with debit cards, as they are also more popular with people.

The share of debit cards has been close to 80% over the past three years, losing a couple of percentage points to the growth of credit cards every year. Nonetheless, the number of active debit and credit cards has remained virtually unchanged for the last three years. 80% of all debit cards are active, while the respective figure for credit cards has dropped from 60% to 54%.

The majority of the credit cards are instalment cards (see Figure 5). Charge credit cards are gradually losing popularity; their share amounted only to 11% at the end of September.

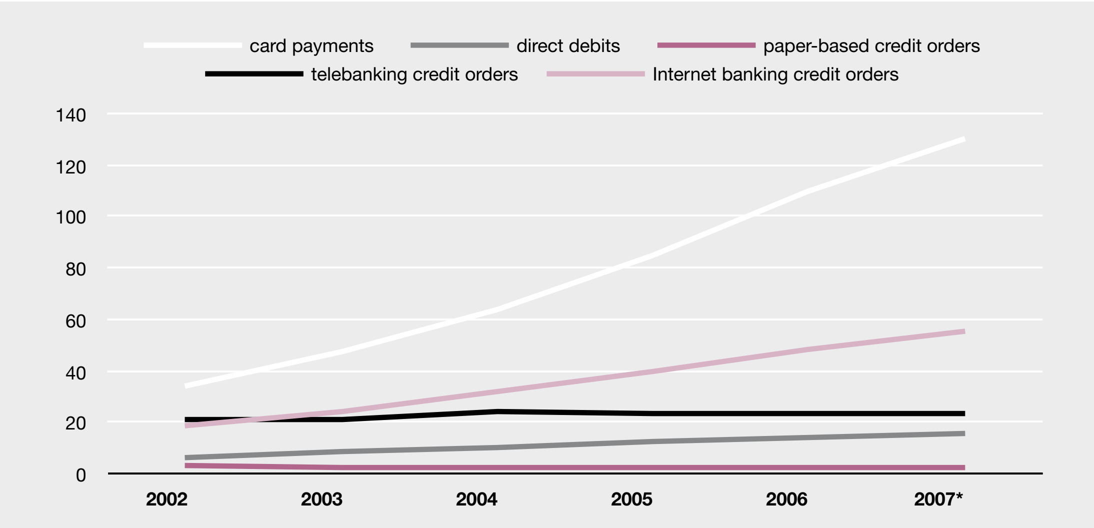

Figure 4. Most common payment instruments in Estonia (million pieces)

* forecast

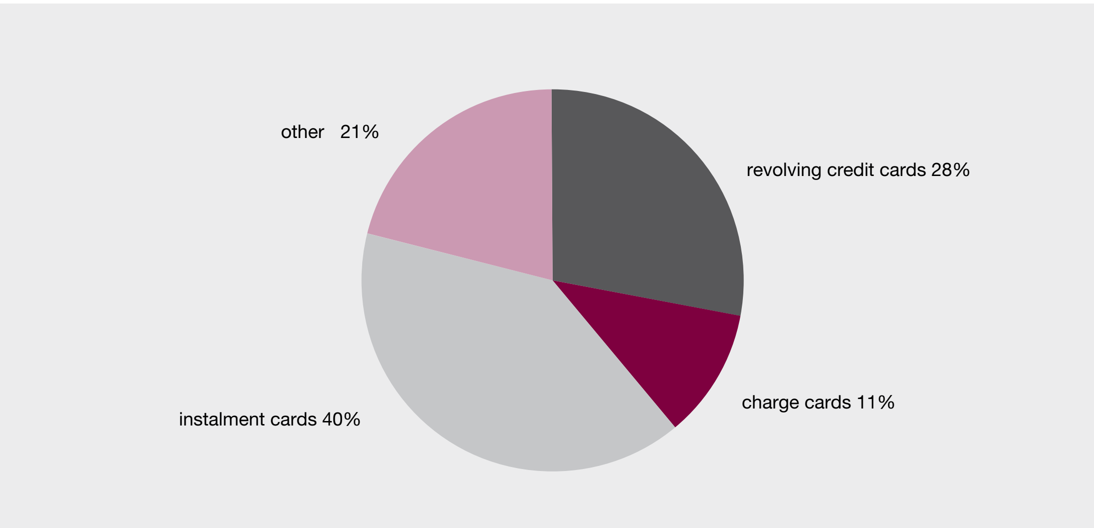

Figure 5. Share of credit cards in Estonia (as at September 2007)

INTERNATIONAL COMPARISON OF THE ESTONIAN PAYMENT ENVIRONMENT AND THE USE OF VARIOUS PAYMENT INSTRUMENTS[1]

The development of the payment environment is influenced by several factors, such as the transfer instruments used in the past and present, the share of residents that own bank accounts, technological evolution and the introduction of innovative technologies as well as user preferences and comfort. Consumer behaviour has a considerable impact on the activities of payment service providers and vice versa – the payment instruments offered by service providers (incl. service prices and advertising) shape consumer behaviour.

General structure

The EU-25 countries can be divided into separate groups according to the popularity and structure of using non-cash payment instruments. In this respect, Estonia is most similar to Finland and Lithuania, where the main payment instruments are relatively equally card payments and credit orders, while the share of direct debits remains below 10% (see Figure 6). A similar structure of payment instruments can be seen in Belgium, Slovenia, Sweden, Denmark and the Netherlands. In these eight countries the share of electronic payments is above average.

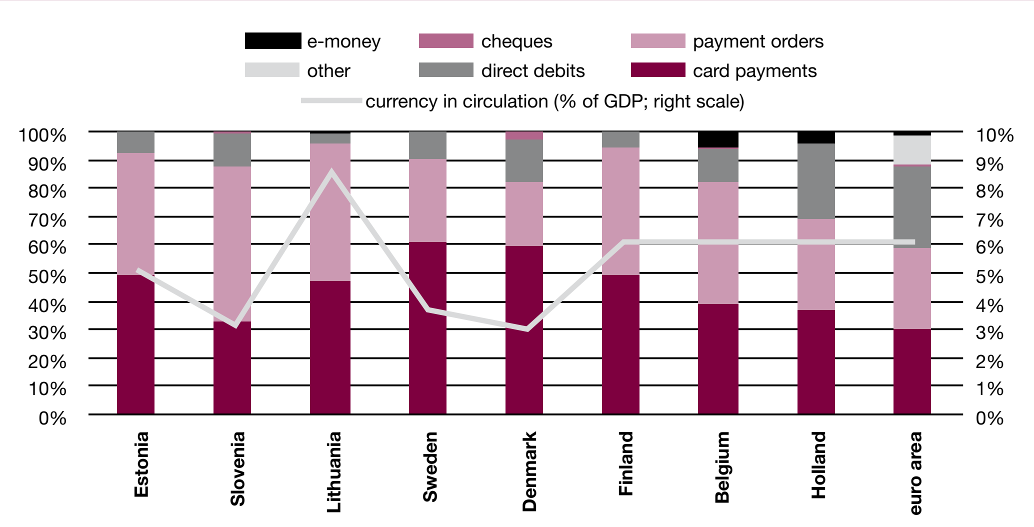

Figure 6. Structure of payment instruments in member states similar to Estonia and currency in circulation outside MFIs

[1] The analysis is based on the ECB's Blue Book and national data from 2006. Slovenia has been discussed separately, as it did not belong to the euro area in 2006.

As regards the entire euro area, the percentages of card payments, credit orders and direct debits are relatively similar. In the majority of countries, card payments are the most popular, followed by credit orders and direct debits. The use of direct debits is more widespread in Spain, Germany and Austria. Most of the new EU countries prefer credit orders; for instance, in Hungary, Poland, Slovakia and Latvia, the share of credit orders exceeds 60%. Cyprus and Malta differ for the popularity of cheques; for example, in Malta over 50% of non-cash payments are made using cheques.

In addition to non-cash payments, the payment environment is also characterised by the share of currency in circulation. From among the Member States under review, Lithuania stands out for its high share of cash, with the currency in circulation outside the MFI sector exceeding 8% of GDP. Thus, Lithuania may be considered rather cash-oriented despite the high level of electronic payments. The share of currency in circulation is the smallest, below 4% of GDP, in Denmark, Slovenia and Sweden. Cash is generally considered as a means of payment but it is also used for saving. The high level of currency in circulation in Lithuania may be explained by different saving habits. The amount of currency in circulation in Estonia is 5.1% of GDP and cash as a payment instrument is not very common in the Estonian payment environment. In this respect, Estonia is at the average level of the euro area, where the share of currency in circulation is 6.1% of GDP. With regard to the non-cash payment structure and currency in circulation, Estonia is closest to our Nordic neighbour Finland.

Credit orders and direct debits

As regards the average value of credit orders and direct debits as a ratio to GDP per capita, the payment habits in the countries under review are relatively similar (see Figure 7). Lithuania and Belgium are different in that re-

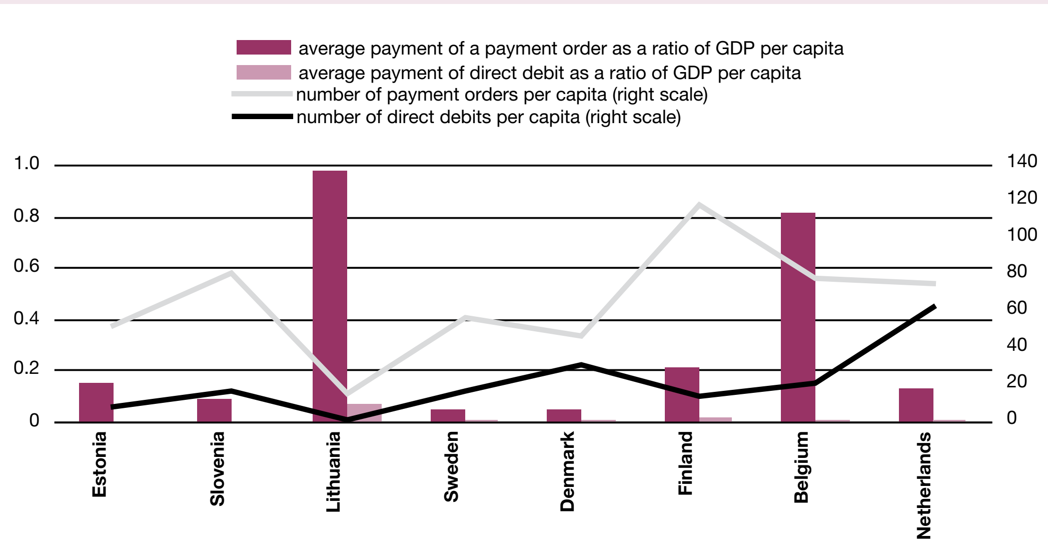

Figure 7. Comparison of the use of payment orders and direct debits in selected EU countries

spect. In Belgium, the ratio of credit orders to GDP per capita is significantly higher due to the greater popularity of e-money. Direct debits are more widespread in the Netherlands, where the average number of direct debit transactions per capita is at least twice higher than in other countries. Credit orders are the most popular in Finland. In Lithuania, on the other hand, neither of the abovementioned instruments are widespread.

Payment cards and ATMs

The number of payment cards per capita is relatively similar in all eight countries under review, namely one card per person (see Figure 8). One of the most card-oriented countries in the EU is the Netherlands, where nearly two cards per person have been issued. Cards are also widespread in Belgium. In terms of the number of cards issued, Estonia is most similar to Finland.

Payment cards are most widely used in Scandinavia, where the ratio of an average card payment to GDP per capita is the lowest and the number of card payments, on the contrary, the highest. Payment cards are the least used in Slovenia and Lithuania. In that respect, Estonia is similar to Belgium where both the ratio of an average card payment to GDP and the number of transactions per payment card were at the average of the countries studied.

One way to illustrate the electronic level of the payment environment is to compare the number of ATMs to that of card transactions. According to a Finnish central bank's survey[2] , the use of cash and its replacement by card payments may be determined by the number of ATMs. However, this can be done only on the assumption that the primary function of ATMs is cash withdrawal. Such a comparison reveals a positive correlation between the use of ATMs and payment cards in advanced economies: the more ATMs there are, the greater the number of card transactions (see Figure 9).

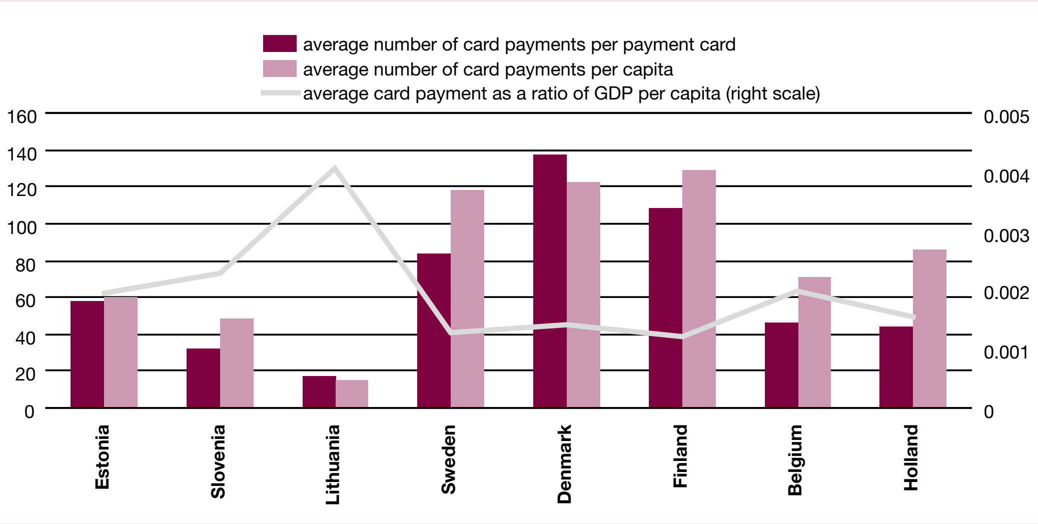

Figure 8. Comparison of the use of payment cards in selected EU countries

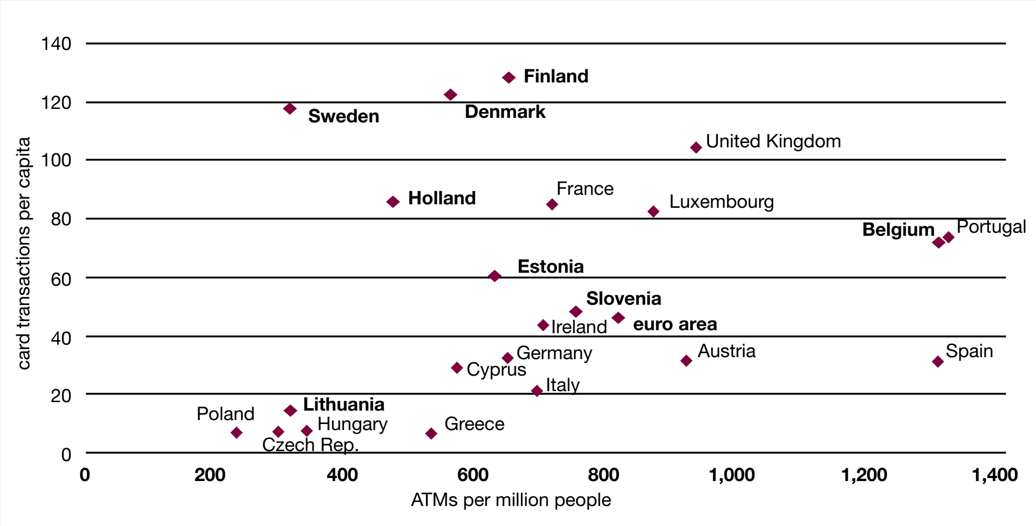

Figure 9. Comparison of ATMs and card payments in selected EU countries

However, there exists also a negative correlation in those eight countries that have a more advanced payment environment and that resemble Estonia with regard to the structure of non-cash payment instruments. Namely, when one indicator grows, another decreases: in countries where card payments are more popular, there are less ATMs and vice versa. Only Belgium and Lithuania are exceptional in that respect. In Belgium, the number of ATMs is extremely high compared to other countries, but one must take into account that ATMs also allow the use of card-based e-money. The general level of electronic payment instruments in Lithuania is lower, which confirms the great popularity of using cash. Estonia is most similar to Slovenia and the euro area average, as regards the electronic level of the payment environment.

In addition to the popularity of non-cash payment instruments and payment cards as well as card using habits, the infrastructure may also be characterised by the **number of bank offices** in the country. While in most of the countries studied there are approximately 200 to 400 bank offices per million people, Estonia is again comparable to Belgium as their indicators reach almost 600 (see Figure 10). Meanwhile, the euro area average is even greater – 646. The latest developments in EU Member States confirm that the number of new bank offices is constantly growing, especially in countries where they are less widespread. On the other hand, the functions of bank offices have slowly changed with time: they have primarily become sale and consultation points for more complicated banking products and have decreased the share of cash settlements and depositing services.

Conclusion

The payment habits of the European Union Member States are quite different. There are countries where paper-based credit orders are preferred to electronic payment instruments and where card payments are not popular. There are also countries where cheques or e-money are

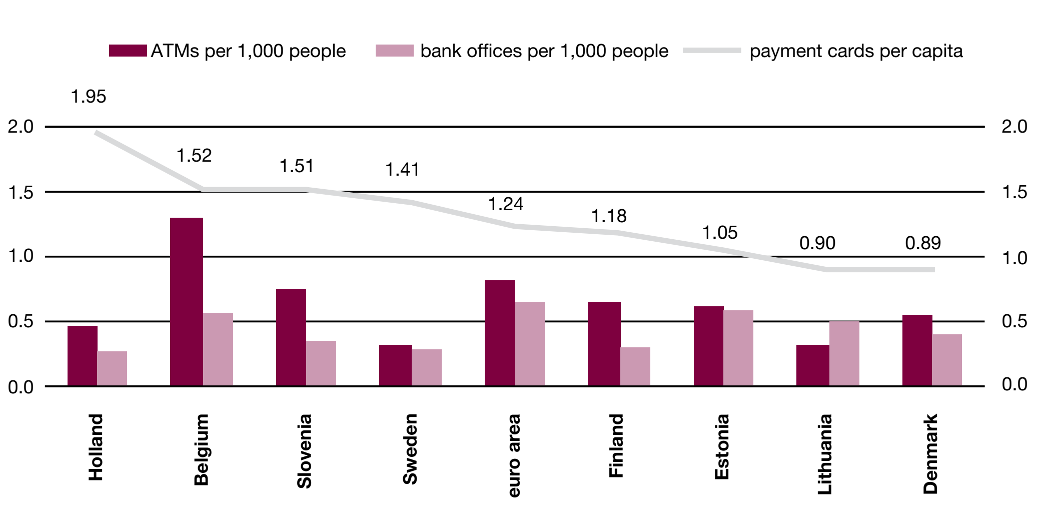

Figure 10. ATMs, bank offices and payment cards in selected EU countries

widely used. As regards the structure of non-cash payment instruments and the number of payment cards issued, Estonia is closest to Finland. In terms of card payments and the number of bank offices, Estonia is more similar to Belgium. As for the electronic level of the payment environment, Estonia is comparable to Slovenia, lagging behind the Nordic countries only in terms of active use of cards. The payment environment currently varies across the Member States and should be harmonised by the implementation of the Single Euro Payments Area (SEPA). Hopefully, Estonia will not suffer any setbacks or standstills while the less advanced payment environments will catch up. Owing to our close links with Nordic banking groups, Estonia will be similar to Nordic countries in terms of payment environment also in the future.

OVERSEER'S ASSESSMENT OF PAYMENT AND SETTLEMENT SYSTEMS

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 in the last half-year.

Although the functionality and principles of the **systemically important settlement systems** operating in Estonia – the EP RTGS and the ESTA – have been structured so as to minimise the materialisation of potential risks, some failures nevertheless occurred in the past half-year (see Figure 11). The EP RTGS encountered five serious failures[3], which interrupted the system's operation for 2 hours and 44 minutes. The ESTA survived two serious malfunctions, caused by software errors after the replacement of programme versions. The operability of the system was not interrupted by these failures and their causes have been eliminated. The failures did not affect financial stability.

The drawback mentioned in Eesti Pank's oversight assessment in 2005 – the lack of an interbank direct debit service on the Estonian market – was eliminated in summer 2007. The new service helps to strengthen competition in the retail payments market by improving the opportunities of smaller banks and increases effectiveness by expanding the services provided to bank customers.

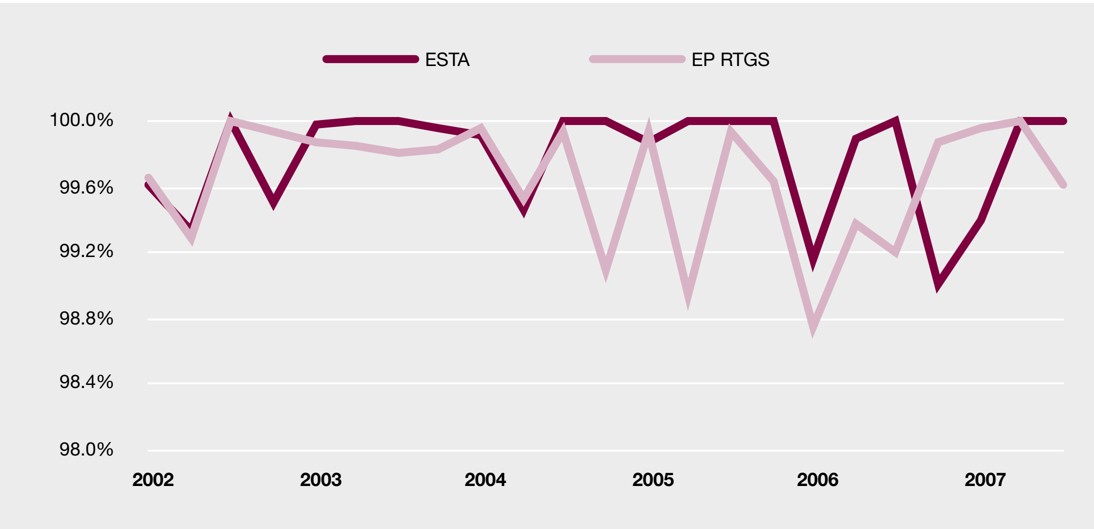

Figure 11. Availability of interbank settlement systems

[3] 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.