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# FINANCIAL STABILITY REVIEW

**1**/2012

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# FINANCIAL STABILITY ASSESSMENT

## Financial environment

The stability of the Estonian financial sector and the country's economic development is still at risk from the sovereign debt crisis in the euro area. Even though the tensions on the global financial markets were eased by the provision of longer-term Eurosystem loans in the first months of 2012, the fundamental problems behind the deterioration of the crisis and the anxiety of the financial markets are yet to be eliminated. Several euro area countries are still facing an excessive budget deficit and a high debt burden. The apparent fragility of the European banking sector and the weak outlook for economic growth attest to the vulnerability of the European financial system and persistence of the sovereign debt crisis.

The extended provision of longer-term liquidity by the euro area central banks in December and February reduced the risks related to the refinancing of banks' debt obligations and improved the general financing conditions. The interbank money market and bond interest rates dropped significantly, and the bond issuances by banks picked up after a six-month slump. At the same time, there is a continuous increase in demand for long-term funding, which is difficult to satisfy under the current market conditions.

The alleviation of the tensions brewing in the euro area was also well embraced by the stock markets. Stock prices have also been supported by the expected growth in global economy. Nonetheless, the weak economic environment in the European Union remains a significant risk factor. On the one hand, modest demand curtails the revenues of the non-financial sector and increases labour market risks. On the other hand, it curbs the growth in financial sector assets and profitability, and adds to the banks' credit risks. Even though the banks' financial position has improved in a majority of the European countries, negative developments regarding the cash flows or collateral of the non-financial sector may exert

pressure on the capitalisation of banks. This may undermine the confidence of the financial markets once again.

## Real economy and loan quality

Despite the volatile external environment, the financial position of Estonian companies and households improved in 2011, and remained fairly good at the beginning of 2012. This was supported by the economic growth, which boosted corporate revenues and stimulated the labour market. On the other hand, companies and households have enhanced their financial buffers, preferring to reduce their indebtedness, despite the lower interest rates. This sort of balance sheet strengthening may be considered a natural part of the adjustment after a boom and subsequent decline, albeit the financial behaviour of the non-financial sector is also motivated by caution, which is rooted in low confidence.

The decrease in external demand will have a negative impact on the cash flows of exporters in 2012. Even if the increase in domestic demand partially offsets the drop in corporate revenues, there remains a risk that the slowdown of economic growth may complicate the fulfilment of loan obligations for some borrowers. For now, the slowdown of economic growth has not added significantly to labour market risks. The low level of the key interest rates supports the loan repayment ability of both companies and households.

The improvement in the loan quality of banks has exceeded expectations in recent months. While in the first half of 2011, the slow recovery of loan quality proved disappointing, considering the enhanced economic activity, a portion of the non-performing loans started to perform again in the last months of the year. Looking forward, the improvement of the stock of problematic loans is expected to slow, owing mainly to the write-off of bad debts. The share of loans overdue for more than 60 days is expected to drop to 4.3% by the end of the year.

### **Strength of financial institutions**

The improved loan servicing ability of companies and households has allowed banks to reduce the provisions previously established for loan losses. As the loan quality improvement has already largely materialised, the volume of provisions released is expected to drop going forward. Similarly, no significant increase in loan losses is expected in the forthcoming months. We can thus presume that the quality of assets will not affect the net profit to be posted by the banks in 2012.

Net interest income makes up a bulk of the revenues of banks operating in Estonia. Due to the high share of loan agreements with a floating interest rate, the net interest income is highly sensitive to changes in market interest rates. As the Euribor has declined significantly at the beginning of 2012 and is expected to retain a low level by the market participants, the interest income of banks will decrease. This will be compensated to some extent by the increase in deposit volumes, with deposits being a relatively cheaper resource for banks, compared to market-based funding.

The quick growth in deposits has contributed to the more stable funding structure of banks, and the availability of credit to the Estonian economy is less dependent on the funding situation of the parent banks. Against the backdrop of a lower demand for credit, the growth in deposits has also supported the increase in the banks' liquid assets.

The aggregate capital adequacy of the Estonian banking sector advanced to a remarkable 19.6% at the end of 2011. This was mainly conditioned by the change in the Swedbank group structure in the middle of the year. Still, the level and quality of capital in the banking sector was high, even without the above transaction. At the end of the year, all banks were able to fulfil the 10% minimum reserve requirement, even when considering only the higher-quality Tier 1 own

funds. The forecasted developments with respect to overdue loans and profitability are expected to further enhance the capitalisation of banks. Furthermore, the stress test has confirmed that the current capital buffer of the banking sector is sufficient for covering loan losses even in case of significantly more negative developments.

The impact of the changes in global market conditions on the rest of the Estonian financial intermediaries is diverse. The insurance companies will be more vulnerable over the next six months, given the low money market interest rates and the structure of their investments. If the volatility of the stock markets remains low, it will help reduce the risks inherent in investment and pension funds.

### **Settlement systems**

Important settlement systems functioned smoothly in the second half of 2011. No major malfunctions have occurred after the incident on July 25 and the banks have adjusted to the needs of the Eurosystem framework. The minimum reserve requirement for the Eurosystem banks was lowered by half at the beginning of 2012, further reducing the liquidity buffer available for settlements and requiring continuous monitoring of the potential liquidity risk. Since the beginning of 2012, the banks operating in Estonia have the option of using a collateral pool for monetary policy transactions with the central bank. This allows the banks to smoothly acquire additional liquidity from the central bank, which lowers the liquidity risks.

In 2011, the Estonian payment market was mostly influenced by the transition to the euro, which lowered the price of cross-border euro payments and increased the use of card payments. Similarly to Finland and Sweden, card payments contribute over a half of the non-cash payments in Estonia, with the share of card payments continually growing. Payment orders make up more than a third of the non-cash

payment instruments. Considering the EU objectives in the field of e-trading, we can expect an increase in the use of internet banking payments throughout Europe, including in Estonia.

## **Conclusions**

Even though the sovereign debt crisis in the euro area countries eased at the beginning of 2012, the European financial sector remains vulnerable. The smallest of negative developments, which undermine the arduously restored confidence, may trigger deterioration in the market situation again. The stability of the European financial system depends largely on the resolving of the debt crisis and the extent of the slowdown in economic growth. It is critical for the financial sector to maintain its ability to serve as a financial intermediary, rather than adding to the risk of economic decline, when the availability of credit deteriorates or other balance sheet restrictions are applied.

The risk to the Estonian financial stability may still be associated mostly with the uncertainties stemming from the euro area debt crisis. Firstly, it is still uncertain whether, and to what extent, the resulting tensions may exacerbate the funding situation and conditions of the parent banks operating in Nordic countries. Secondly, the deepening of the debt crisis may curtail the orders and aggravate the financial position of foreign trade partners that are critical to the Estonian economic growth.

The confidence of the financial markets in Nordic banks remained high during the critical times of the end of 2011. Confidence was secured by the high capitalisation of the banks, and the strong macro-economic and fiscal position of the countries. Trust of markets is crucial for Swedish banks, compared to a majority of other European countries, since the developments of the finan-

cial markets have a relatively greater impact on the funding structure of Swedish banks. Confidence is also supported by the government decisions, which ensure a higher capital buffer for systemically important banks. Such conservative approach towards Swedish banking groups is quite relevant to Estonian financial stability and serves to reduce financial stability risks at a time when uncertainties stemming from the euro area debt crisis prevail and the Swedish economic growth is slowing down.

Even though the general economic environment in Europe is weaker, compared to the previous year, this may not significantly affect the loan repayment ability of Estonian borrowers. Due to the improved financial position and buffers built in recent years, companies and households are much stronger than before the economic decline of 2009. Considering the increase in real income, the low interest rates and the stable real estate market, even a more active financial behaviour could be expected of the non-financial sector. So far, the uncertain external environment, which dampens the confidence of Estonian companies and households, has counteracted the faster loan growth pressures and has encouraged to further reorganise the balance sheets.

Due to the growth in deposits, the funding of Estonian banks is less and less dependent on the credit mediated by the parent banks. At the same time, although to a different degree in different banks, liquidity and capital management is still centralised on the parent bank group level. Recent years have shown that the central liquidity management of strong parent banks supports the liquidity of banks in the conditions of a financial crisis. However, it is still important for the banks to have efficient solutions to unexpected liquidity problems on the local level (e.g. a stronger liquidity buffer or sufficient collateral for transactions with the central bank).

# I. FINANCIAL MARKETS

## GLOBAL FINANCIAL MARKETS<sup>1</sup>

In the autumn of 2011, tensions on the financial market were fuelled by the **sovereign debt crisis** in the euro area. The interest rate spreads of French, Spanish, Italian and other sovereign bonds over the interest rate of German bonds widened until the end of November, indicative of a spill-over of the crisis (see Figure 1). The rating agencies Standard & Poor's, Fitch and Moody's lowered their credit ratings for nearly all euro area countries. The interest rates of German short-term and medium-term bonds still dropped at the end of 2011 (see Figure 2). Remarkably, the interest rates of German and Dutch bonds with a term of up to 12 months were negative for the first time in history, fuelled by a strong demand.

The mood of the markets gradually started to pick up at the end of December. Among other things, this was supported by the two three-year liquidity operations, which were conducted by the Eurosystem and boosted the funds available to euro area banks by a total of nearly 500 billion euros. This instilled confidence in the banks and markets, reducing the interest rate spread of the bonds of euro area peripheral countries over the interest rates of German bonds.

The approval of the bail-out package for Greece and the restructuring of debts alleviated the Greek debt burden and reduced the risk of undesirable market developments. Nevertheless, the implementation of the so-called collective action clause (CAC) by Greece was a testament to partial insolvency. In euro area peripheral countries, great pressure was also exerted on Portugal. Still, successful bond auctions were held in several euro area countries. Discussions started also on the option of combining the European Financial Stability Facility (EFSF) and the European Stability Mechanism (ESM) in order to protect the euro area financial system

<sup>1</sup> The Financial Stability Review covers the period from 30 September 2011 to 31 March 2012.

Figure 1. Spread between 10-year bonds of Greece, Portugal, Ireland, Italy and Spain with Germany

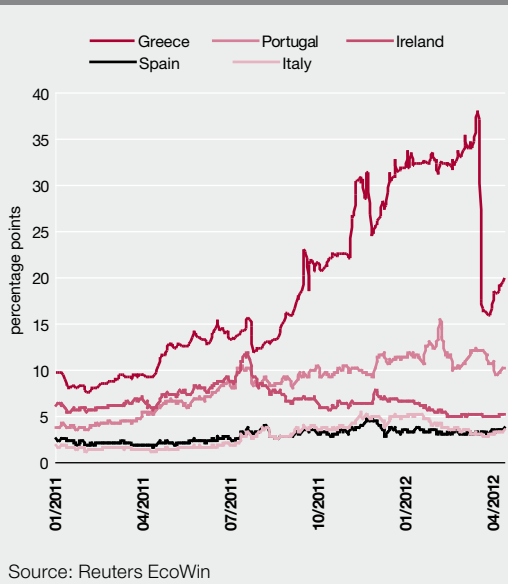
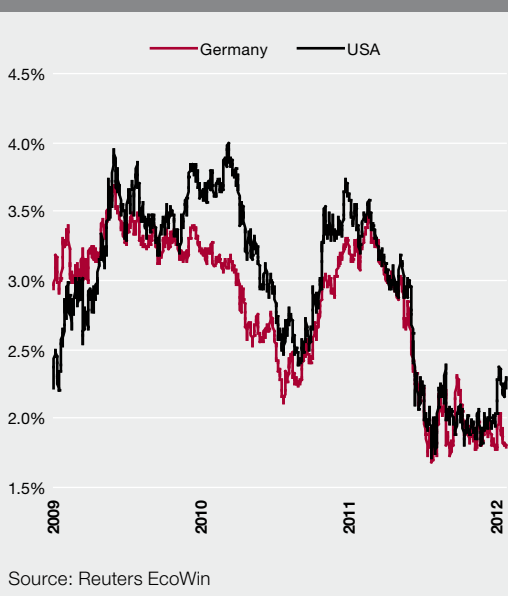


Figure 2. Ten-year interest rates on German and US government bonds



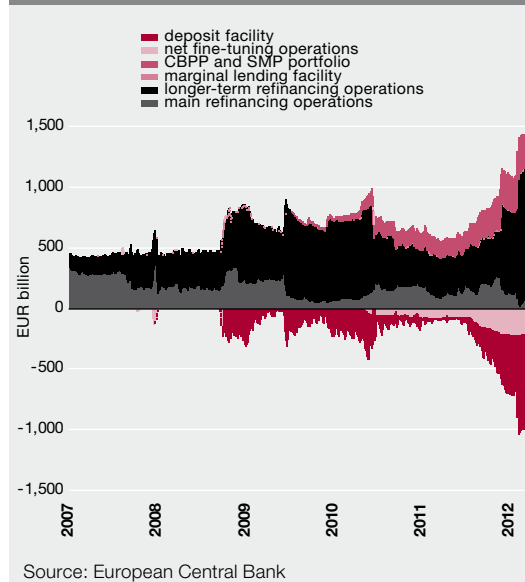
against significant deterioration. The pledge of the US Federal Reserve to keep the interest rates at a very low level until the end of 2014 also had its positive effect. The above factors, along with other contributors, improved the situation in the financial sector. This improvement was reflected in the narrowing of the credit default swap (CDS) spreads of both euro area and US banks.

The outlook for global growth has somewhat improved, fuelled by stronger growth in industrial output in the last few months, more evident in Asian countries and the United States. The euro area GDP may retreat to some extent in 2012, although the more recent data suggest a possible stabilisation of economic activity.

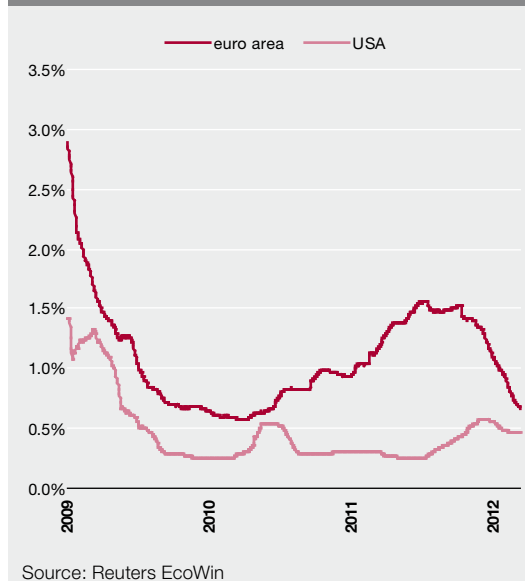
The dynamics in **money markets** differed in the United States and the euro area. The federal funds rate was left untouched, with the Federal Reserve making a pledge to keep interest rates at a very low level at least until the end of 2014. Still, the recovery in economic activity reduced the probability of the Federal Reserve using measures of quantitative easing. The European Central Bank, on the other hand, responded to the economic decline and the outlook of deceleration of inflation by lowering the key interest rate. The rate was lowered twice (in November and December 2011), by a total of 50 basis points to 1%. The minimum reserve requirement of banks was lowered from 2% to 1%. The money market was also stabilised by two liquidity operations with a term of three years. This helped to ease the tensions brewing on the markets, and push down the interest rates (see Figure 3). By the end of March, the three-month and six-month Euribor rates stood 78 and 68 basis points lower, respectively, than at the end of September (see Figure 4).

The four-fold increase in the use of the ECB's deposit facility in the last six months – from 200 billion euros to 800 billion euros in March – attests to increased liquidity on the market. In

**Figure 3. Eurosystem's monetary policy operations**



**Figure 4. Three-month interbank money market rates in the euro area and the USA**



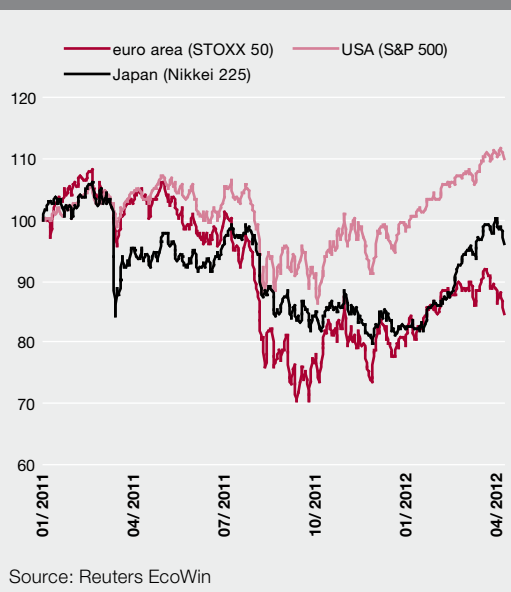


addition to the Federal Reserve, swap agreements were also concluded with the central banks of the United Kingdom, Japan, Canada and Switzerland with the aim of offering liquidity in foreign currency, where necessary. Advanced economies who lowered their key interest rate alongside the Eurosystem included Australia (by 50 basis points to 4.25%), Norway (by 75 basis points to 1.5%) and Sweden (by 50 basis points to 1.5%). The central bank of China lowered the minimum reserve requirement by 1 percentage point to 20.5%.

**Currency markets** saw the euro depreciate against other major currencies. This was mainly prompted by intensification of the sovereign debt crisis in the euro area in autumn and the increase in the Eurosystem's balance sheet volume. The euro fell most against the so-called commodity currencies (the Canadian dollar, the New Zealand dollar, and the Australian dollar). The appreciation of the US dollar was driven also by the improvement in economic indicators. With regard to major currencies, the euro only rose against the yen. The exchange rate between the Swiss franc and the euro did not change much, as the central bank of Switzerland maintained its previous policy of preventing appreciation of the franc against the euro.

Major **stock markets** were on the rise from the end of September to the middle of March (see Figure 5). This was conditioned both by the successful solutions to the euro area sovereign debt crisis and the improved economic outlook. Even though the GDP dropped in the euro area, alongside Japan, in the fourth quarter, the economic indicators of the United States proved better than expected and reflected stabilisation of economic activity in other regions, thus contributing to the improvement in the growth outlook. The reduced market volatility and enhanced investor risk appetite reflected the general risk environment. The volatility index of the US stock market, VIX, dropped to the lowest

**Figure 5. Stock indices in the euro area, Japan and the USA (1 Jan 2011 = 100)**



level in the last five years, indicating high market confidence. Confidence was also evident in the stock indices: in G3 countries, the main stock indices rose by an average of 18% from the beginning of the year to the end of March.

**The primary risks to global financial markets**

include the prolongation of the sovereign debt crisis in the euro area and the potential deterioration of the general risk environment. The euro area debt crisis has somewhat eased in 2012 but the situation is still fragile – we cannot be sure that the crisis has been reversed. With the situation in Greece somewhat stabilised, the markets have turned their attention to Portugal and Spain. Boosting banks' funds via liquidity operations may increase the demand for sovereign bonds and high-risk assets, but renewed cash outflow from such assets is likely, if the situation deteriorates. European banks remain cautious in their financing and lending decisions, and have decided to reduce financial leverage to strengthen their balance sheets. Focus must be paid on how to avoid the negative impact of a significant decrease in financial leverage, while

ensuring the required level of financing of the real economy in the European countries and strengthening the banking sector's resilience at the same time (see also background information *Reduction of financial leverage in European banks*).

Similarly to autumn, the macroeconomic outlook remains a key risk factor. The outlook for global economic growth has somewhat improved in recent months, but the risks related to external demand persist, with a small economic decline expected in the euro area. While in the United States the decrease in unemployment is driving growth in private consumption, unemployment has continued to grow in the euro area. A weaker economic environment would, once again, add to banks' credit risks. Furthermore, in advanced economies, the need to stimulate economy and the labour market coincides with the need to ensure sustainability of fiscal policy. The global imbalances of current accounts and exchange rates remain significant. Additional risks are posed by oil price hikes that stem from the oil embargo on Iran and some improvement in the global growth outlook.

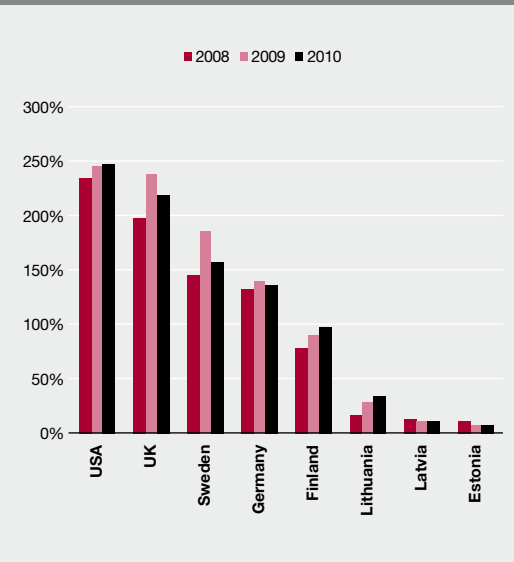
## ESTONIA'S FINANCIAL MARKETS

### Bond and stock markets

The banking sector makes up a bulk of the Estonian financial sector. The local bond market is thus not very attractive to market participants. Compared to other countries, the Estonian bond market is extremely small (see Figure 6). The total volume of bonds issued as at the end of February 2012 amounted to 539 million euros, or 3.4% of GDP.

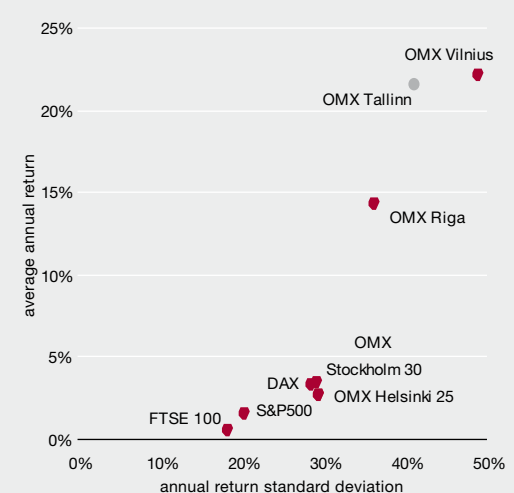
The primary bond market remained passive from September 2011 to February 2012. A monthly average of 5.4 million euros worth of new bonds were issued. This is comparable to the last year's level.

Figure 6. Total volume of bonds issued to GDP



Sources: Eurostat, European Central Bank, US Census Bureau, US Bureau of Economic Analyses

Figure 7. OMXT annual return and standard deviation compared to other stock market indices for 2001–2011



Source: Reuters Ecowin

The share of the local bond market in the Estonian financial sector is not expected to increase, with the volume of new bond issues remaining small.

The Tallinn Stock Exchange is also quite small in volume. The shares of 15 companies were listed on the Tallinn Stock Exchange at the end of February 2012, with the total capitalisation amounting to 1.2 billion euros, or 8.7% of GDP.

Positive trends on the securities markets at the beginning of 2012 also affected the prices of the shares listed on the Tallinn Stock Exchange. The stock index OMXT advanced by nearly 13% in three months. The OMXT is known to be highly volatile – compared to other stock market indices, the OMXT has shown the quickest average rise and the greatest fluctuations in the past decade (see Figure 7). This is conditioned by the size of the Tallinn Stock Exchange and its low liquidity. The Tallinn Stock Exchange is thus expected to remain quite volatile in the near future.

The average 12-month turnover for the past 12 months amounted to 14 million euros at the end of February 2012. The ratio between the 12-month turnover and the capitalisation stood at 12%, dropping by 3 percentage points from last year.

The portion of shares held by foreign investors has not changed on the Tallinn Stock Exchange in the last two years (see Figure 8). Residents continue to hold over 60% of the shares.

### Investment funds

The 12-month yield of investment fund shares turned negative in the middle of 2011 due to the stock market decline and the related uncertainties (see Figure 9). The average 12-month yield of equity funds has somewhat improved since September, when the decline was reversed on the stock markets, but remains negative. The yield of interest funds, on the other hand, was posi-

Figure 8. Investors on the Tallinn Stock Exchange by residency

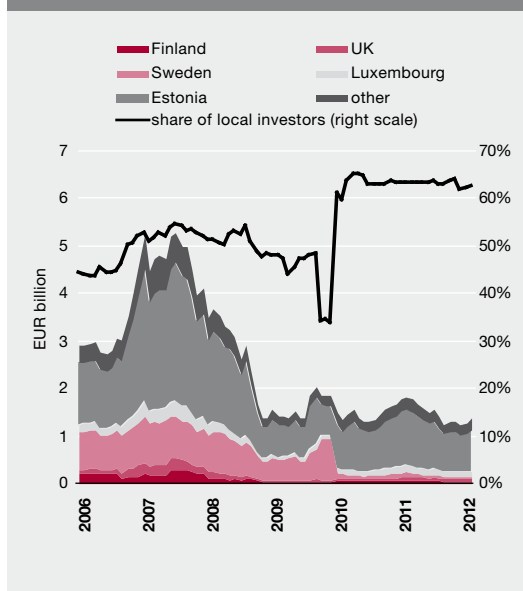
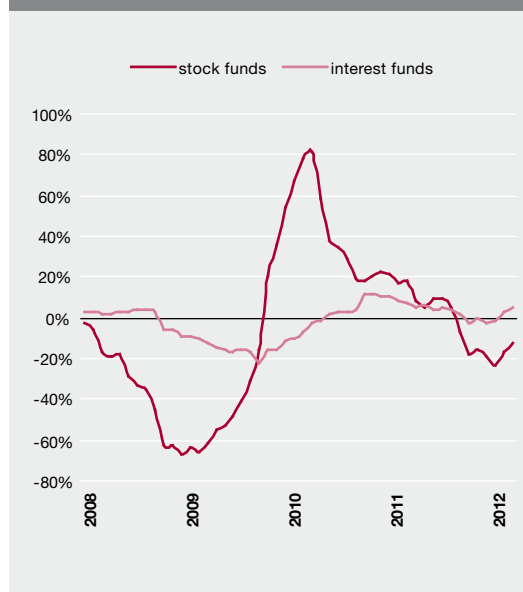


Figure 9. Average 12-month yield of investment funds



tive in January 2012. As at the end of February, the average 12-month yield of equity and interest fund shares stood at -13% and 5%, respectively.

The annual yield of pension funds focusing mostly on debt securities (indices EPI-00 and EPI-25) was also positive at the end of February (see Figure 10). The 12-month yield of EPI-50 and EPI-75 funds, on the other hand, was negative, standing at -1% and -2%, respectively.

The total assets of investment funds amounted to 487 million euros at the end of February 2012, having dropped by nearly 20%, year-on-year. This is due to the fall in securities prices and cash outflow. The total assets of pension funds grew by nearly 11% over the year and amounted to 1.3 billion euros at the end of February 2012.

The proportion of external assets in the assets of investment and pension funds has decreased to some extent compared to the end of August 2011, but remains high. At the end of February, external assets made up 79% of the total assets of funds.

The geographical breakdown of investments has shown no major changes over the past six months, with two-thirds of the investments made in the registered securities of other European countries. The proportion of investments in securities of euro area countries with problematic public deficit and sovereign debt<sup>2</sup> amounted to 13% at the end of February (see Figure 11). Most of these include investments made in Irish fund shares. The investment structure allows to conclude that the direct impact of the euro area sovereign debt crisis on the Estonian investment and pension funds is minor.

<sup>2</sup> Greece, Portugal, Ireland, Italy and Spain.

Figure 10. 12-month change in second-pillar pension fund indices

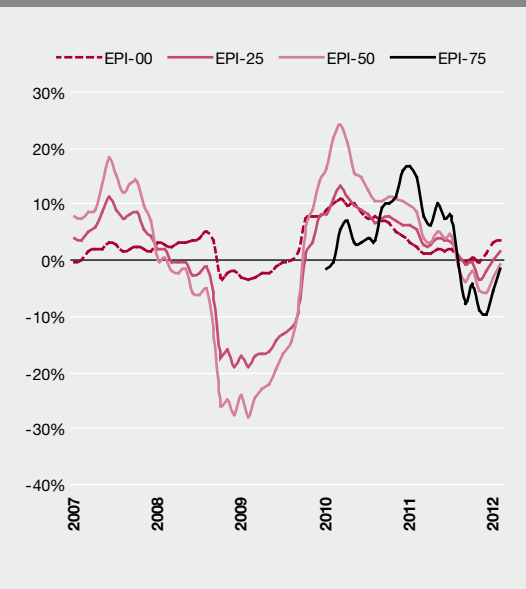
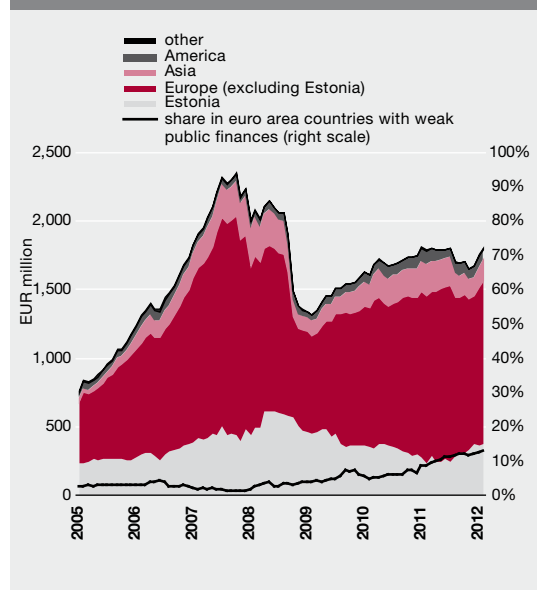


Figure 11. Geographical distribution of investment and pension funds assets



## MARKET-BASED FINANCING OF BANKING GROUPS

### Financial strength of the groups of parent banks

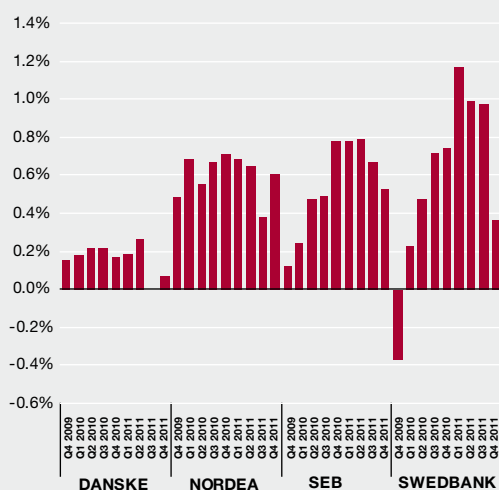
The operating profit figures for the second half of 2011 of the parent bank groups of four of the largest banks operating in Estonia dropped to some extent, compared to the first half of the year (see Figure 12). The reasons were varied, including impairment of financial investments or the goodwill of subsidiaries.

The recovery of provisions in banking groups, who had previously made huge provisions for loan losses, lost its pace in the last two quarters of 2011. Therefore, the positive impact of the recovery on operating profit will remain modest in the near future.

The capitalisation of banking groups remained stable in the second half of 2011. The Tier 1 ratio exceeded 10% for all banking groups at the end of 2011, with the capital adequacy ratio above 12% in the majority of banks.

At the end of November 2011, the Swedish central bank, the Ministry of Finance and the Financial Supervision Authority proposed to the Swedish government to raise the capital requirements of systemically important Swedish banks above the new Basel framework. The proposal was designed to further strengthen the stability of the Swedish banking sector and minimise any threats to the Swedish economy. According to the proposal, an additional capital requirement of 3% would be established for systemically important banks in 2013 and then raised to 5% in 2015. The common equity Tier 1 ratio would thus be raised to 10% in 2013 and to 12% in 2015. The countercyclical capital buffer requirement of 0–2.5% may be added, where necessary. Considering that major Swedish banks are well capitalised, the banks are already quite close to meeting the requirements.

Figure 12. Profitability of banking groups



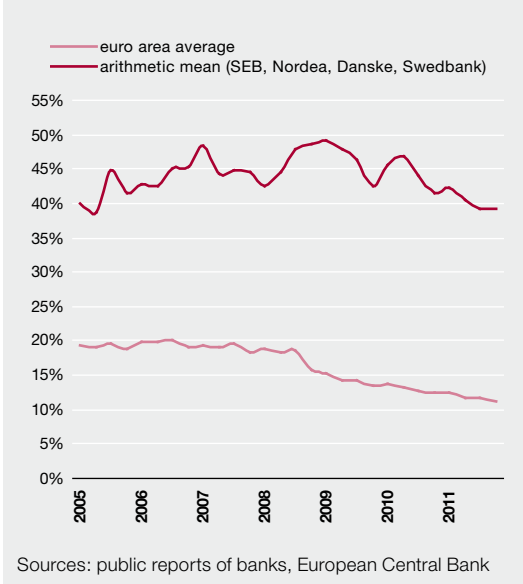
Sources: public reports of banks

### Funding and liquidity of parent banks

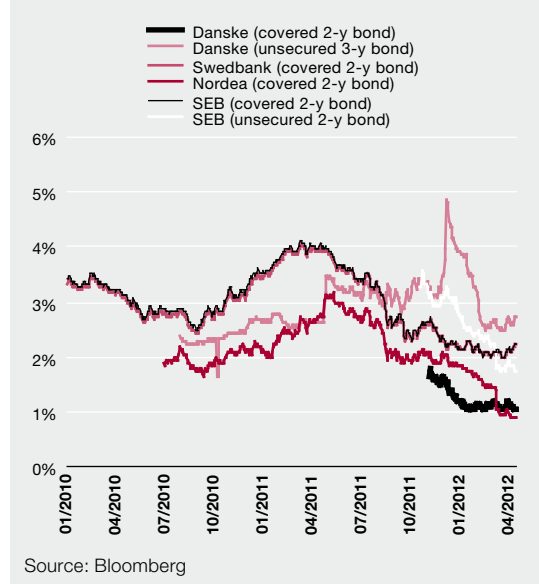
The proportion of market-based funding in the funding structure of the parent banking groups of the banks operating in Estonia has decreased in recent years. This is prompted by the quick growth in deposits, which exceeds the growth in the loan portfolio (see Figure 13). At the same time, the proportion of market-based funding of the banking groups operating in Estonia remains quite high, compared to other euro area banks. The events on the financial markets will thus continue to influence the financing of parent banks.

The three-year liquidity operations offered by the Eurosystem eased the tensions on the financial markets and had a positive effect on the risk assessments of market participants. The credit default swap (CDS) spreads of the euro area and Nordic banks decreased since December 2011 (see Figure 14).

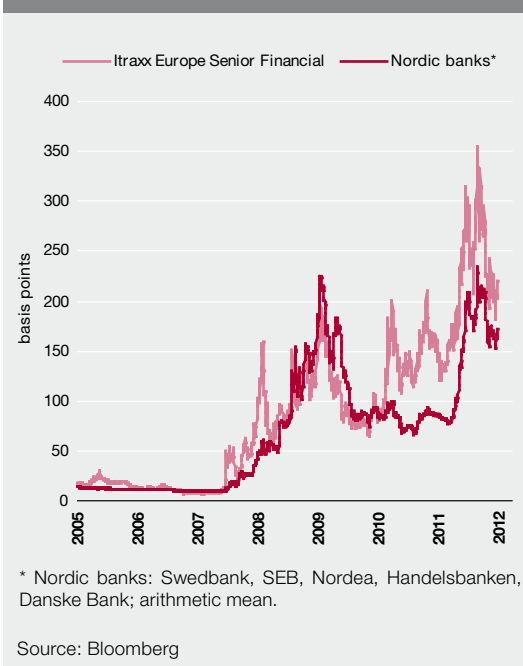
**Figure 13. Banking groups' share of wholesale funding in total loans compared to average of euro area banks**



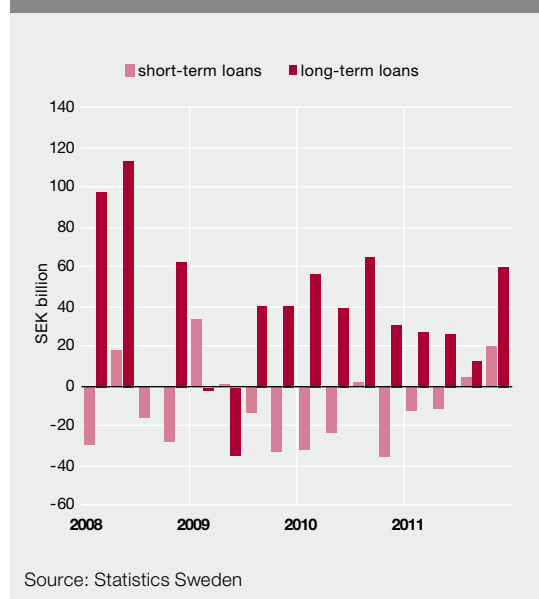
**Figure 15. Parent banks' bonds yield to maturity**



**Figure 14. CDS premiums of Nordic and European banks**



**Figure 16. Net borrowing of Swedish banking groups in SEK instruments**



The price of funding of Nordic banks with respect to both covered and unsecured bonds has declined from December 2011 (see Figure 15). The cost of market-based funding of banking groups is thus lower.

In the second half of 2011, Swedish banking groups issued more longer-term than shorter-term bonds, and therefore the average maturities of bonds extended (see Figure 16).

The liquidity of Swedish banks has improved in recent quarters. This is conditioned by a greater portion of longer-term funding in the funding structure of banks, on the one hand, and increase in liquid assets, on the other.

Even though the liquidity risk has decreased, to some extent, the funding structure of Swedish banks remains vulnerable, as the proportion of short-term bonds issued by the banks is still relatively high.

## II. REAL ECONOMY AND LOAN QUALITY

### CREDIT PORTFOLIO OF BANKS<sup>1</sup>

**Loans and leases** issued by banks to the non-financial sector totalled 14.7 billion euros at the end of February 2012 (see Figure 1).<sup>2</sup> New loan turnover remains low. Loan repayments thus exceed new lending and the loan stock is shrinking. By February, the loan stock had decreased by 3.7%, year-on-year. All in all, the loan stock has decreased by over 17% from its peak in 2008. On account of somewhat increased borrowing by companies and households, the decrease slowed down in the second half of 2011.

One of the factors contributing to the decline in the credit portfolio of banks is the write-off of uncollectible receivables. In 2011, banks wrote off a total of 171 million euros worth of uncollectible receivables (1.2% of the credit portfolio). Corporate loans constituted 80% of the write-offs. The high volume of uncollectible receivables is likely to trigger further write-offs in the forthcoming years.

Borrowing is expected to remain modest and the credit portfolio to shrink further owing to the slow increase in economic activity in 2012. The credit portfolio is expected to grow in 2013, but there is a risk, stemming from the potential slowdown of global economic growth, that credit growth will fall short of expectations.

Albeit the loan turnover has shown a modest growth, the amortisation of various types of loans continues to shape the **structure** of the portfolio. The share of household loans in the portfolio is rising due to the long maturities of housing loans. At the end of February, 50% of the portfolio consisted of household loans (see Figure 2). Loans to the real estate sector made up a bulk (18%) of corporate loans. Active

<sup>1</sup> Includes loans, leases and factoring.

<sup>2</sup> Includes also loans and leases issued to non-residents in the amount of 0.3 billion euros.

Figure 1. Loan stock and annual growth

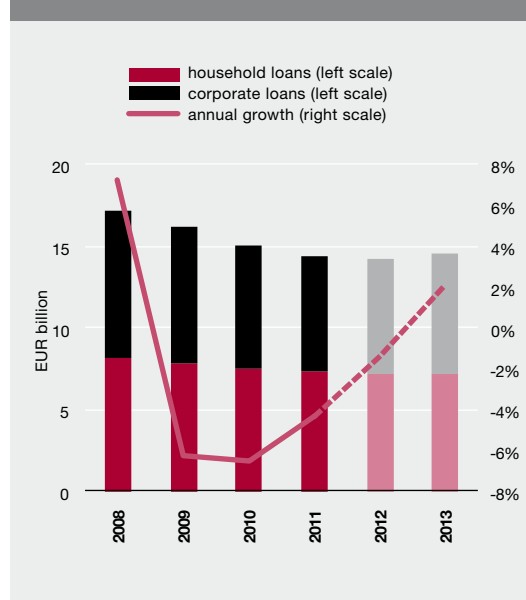
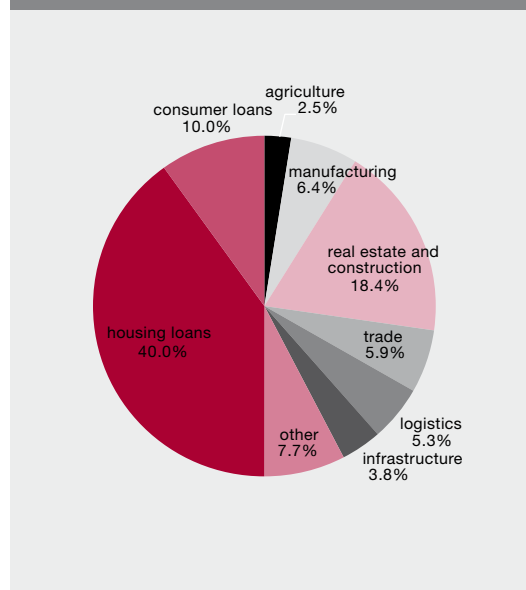


Figure 2. Structure of banks' credit portfolio as at 29/2/2012





borrowing has increased the loan stock for trade and logistics.

Risks to the banks' credit portfolios are still to a great extent related with the real estate market. At the end of February, nearly 60% of total loans had been issued to sectors directly bound to real estate<sup>3</sup>. The share of loans with real estate as the primary collateral (mortgage loans) is bigger still, standing at 80% (see Figure 3). At the same time, this share has remained unchanged since 2007. Against the backdrop of a stabilisation of the real estate market, the risks to banks that stem from real estate remain virtually the same as six months ago.

#### LOAN REPAYMENT ABILITY OF COMPANIES

Economic performance, outlook and foreign trade indicators point to a slowdown of economic growth in the last quarter of 2011.

In the winter of 2012, the financial position of companies was much better than in the previous periods, and they were more resilient to contingent risks. Still, maintaining the profitability level may prove difficult against the deterioration of the external environment.

#### Economic performance indicators

**Sales revenues** grew by 17.8% in 2011 (see Figure 4). Growth was evident in all sectors, the manufacturing sector (26%) and the construction sector (23%) being the greatest contributors. Growth in turnover slowed down in the second half of the year, and annual growth dropped to 14.9%. In contrast, the sales figures of small (less than 10 employees) and medium-sized (50–99 employees) enterprises advanced at double the average speed in the second half of the year. Growth was slower in enterprises with over a hundred employees, with their sales

<sup>3</sup> Loans to real estate and construction companies, and household housing loans.

Figure 3. Bank loan collaterals

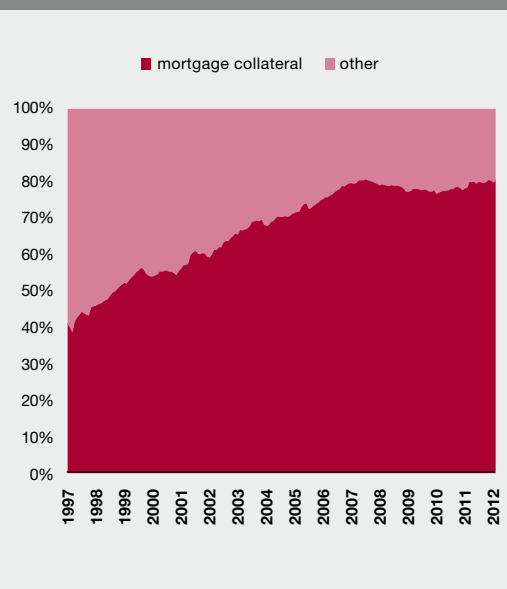
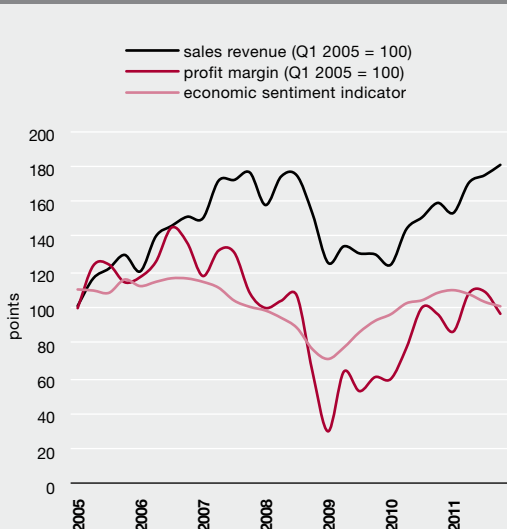
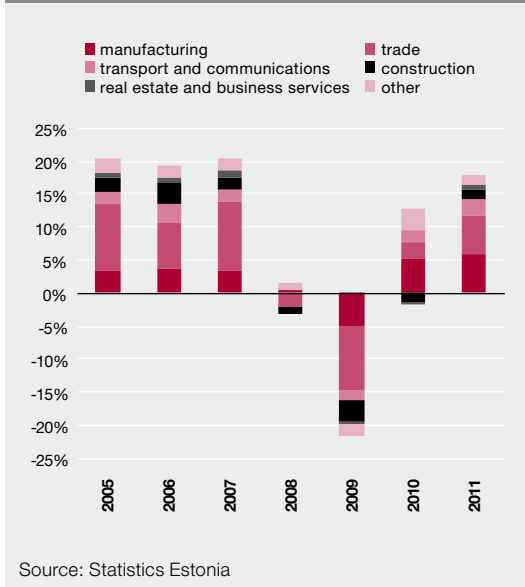


Figure 4. Corporate sector's economic results and economic sentiment indicator



Sources: Statistics Estonia, Estonian Institute of Economic Research

Figure 5. Sales revenue growth by sectors



increasing by 7% from a year ago. Sales were primarily supported by the 25% year-on-year growth in exports in the second half of the year (see Figure 5).

**Expenditures** rose by 16.5% in 2011 but annual growth nevertheless dropped to 14.5% in the second half-year. **Total profit** was 40% larger than in 2010. Profit figures reached the level of 2006, falling a mere 20% short of the historical high. The growth proved slower in the second half of the year but total profit still increased by 20% year-on-year. The results varied by sectors, with a 4% decrease in the manufacturing sector and a 42% increase in trade (see Figure 6).

The **establishment of new companies** remained dynamic throughout 2011. A total of 15,235 new companies were registered, which is 27% more than last year. The number of liquidations was 20% lower than in 2010. The number of **bankruptcies** was also 62% smaller in the second half of 2011, compared to the same period last year (see Figure 7). Even though the

Figure 6. Profitability by sectors

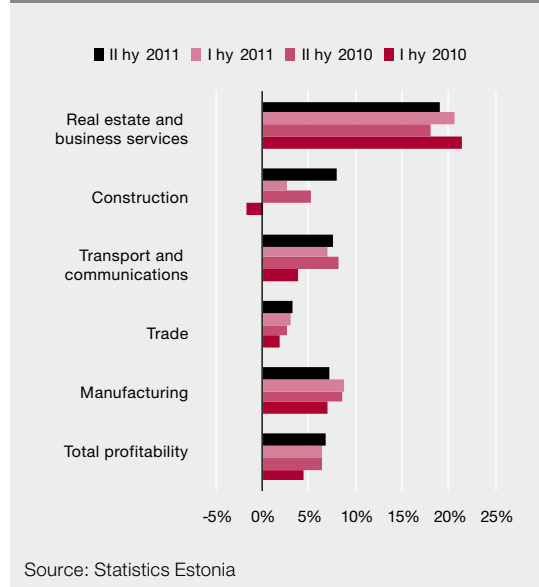
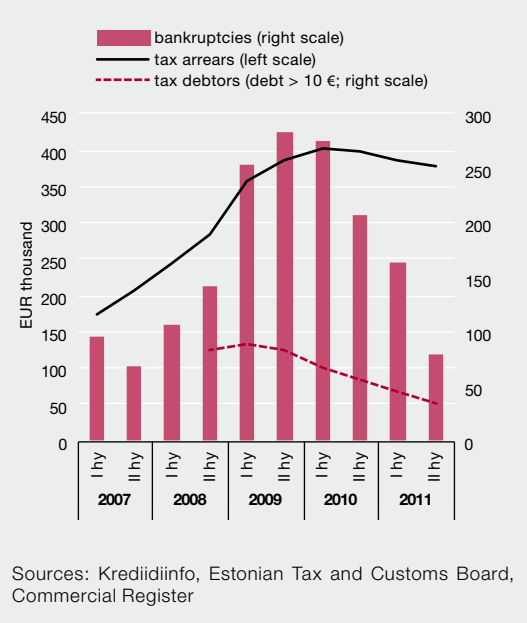


Figure 7. Tax arrears, tax debtors and bankruptcies



number of announced bankruptcies dropped to the lowest level in recent years, the number of bankruptcy petitions remained relatively high.

The number of companies with **tax arrears** decreased by 22%, which indicates that the improved financial position of companies has also contributed to the fulfilment of tax obligations. Still, the total tax debt of companies did not change much. The majority of the 380,000-euro tax arrears date back to 2008-2009. The number of companies with **payment defaults**<sup>4</sup> has fallen by 19% and the total amount of payment defaults by 8%.

### Financial assets and liabilities

Corporate **financial assets** showed strong growth in the second half of 2011. **Deposits** in domestic banks increased by 9%, year-on-year. While time and savings deposits grew by 26%, overnight and demand deposits remained more or less on the same level. The increase in corporate deposits can probably be attributed to good financial results and modest investments.

The **coverage of debt liabilities by deposits** improved in the second half of 2011, supported by strong growth in deposits and continuous shrinking of the corporate debt (see Figure 8). At the end of 2011, the stock of corporate loans and leases was 6% lower than in the previous year. The corporate debt to domestic banks and leasing companies amounted to 46% of GDP at the end of 2011, shrinking by 9 percentage points during the year (see Figure 9). The total indebtedness, which includes bank loans as well as foreign borrowings and inter-corporate borrowings, contracted in the third quarter to 95% of GDP.

<sup>4</sup> Source: Krediidinfo.

Figure 8. Volume and growth of corporate deposits

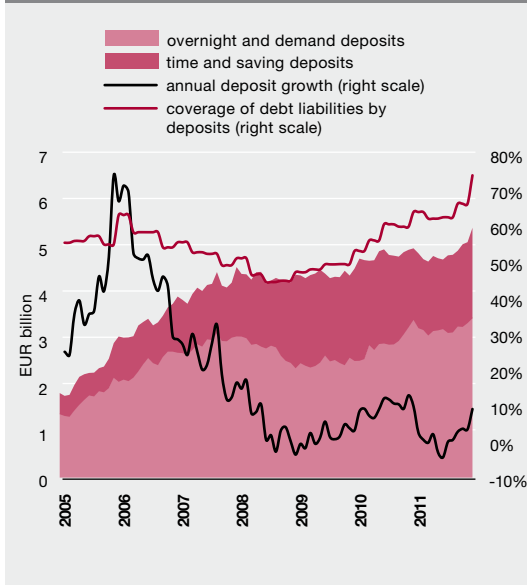
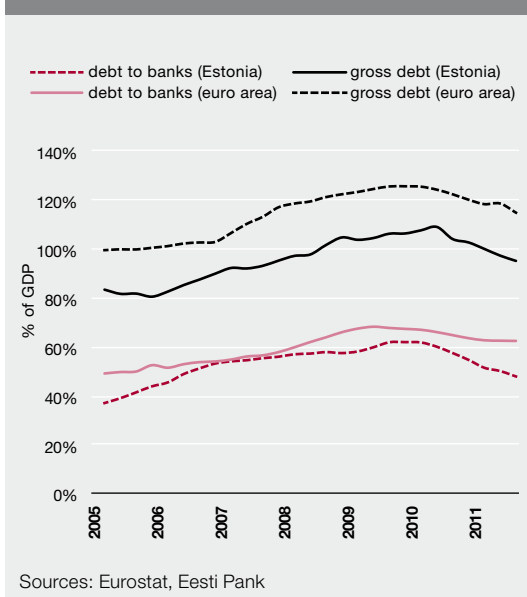
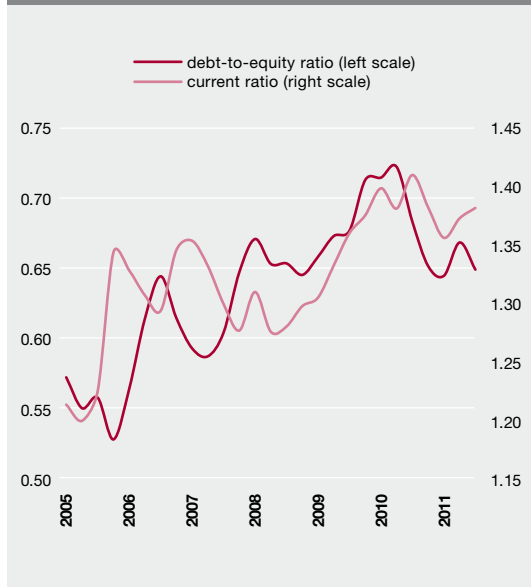


Figure 9. Debt-to-GDP ratio



Sources: Eurostat, Eesti Pank

**Figure 10. Indicators of companies' loan repayment ability**

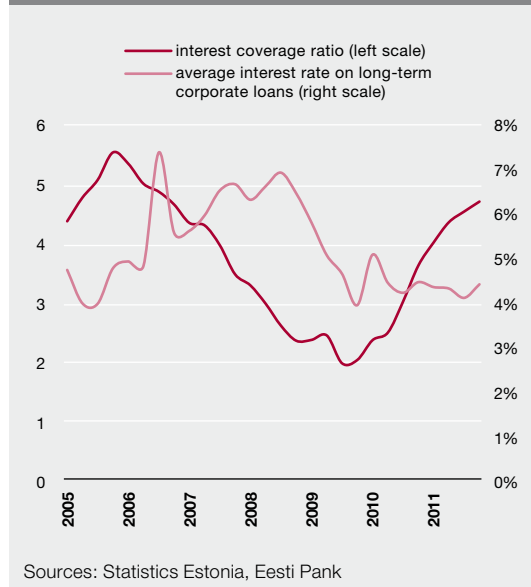


### Loan repayment ability

Various balance sheet and loan repayment ability indicators reveal that companies are better capitalised than in previous periods, and their loan repayment ability has improved. For instance, the **debt-to-equity ratio** has dropped considerably after peaking in mid-2010 (see Figure 10). At the same time, the **current ratio** (coverage of short-term debt by liquid financial assets) remains relatively high compared to the long-term average.

The **interest coverage ratio**, which is more dependent on market outlooks, improved even further in 2011, as the key interest rates and margins of banks dropped, the operating profit of companies increased and borrowings shrank (see Figure 11). As the euro area interest rates and banks' margins are not expected to rise in the forthcoming quarters, the loan repayment ability of companies will mainly be threatened by a decline in global demand. The cash flows of companies may thus shrink and hamper their loan repayment ability.

**Figure 11. Interest coverage ratio and average interest rate on long-term corporate loans"**



Sources: Statistics Estonia, Eesti Pank

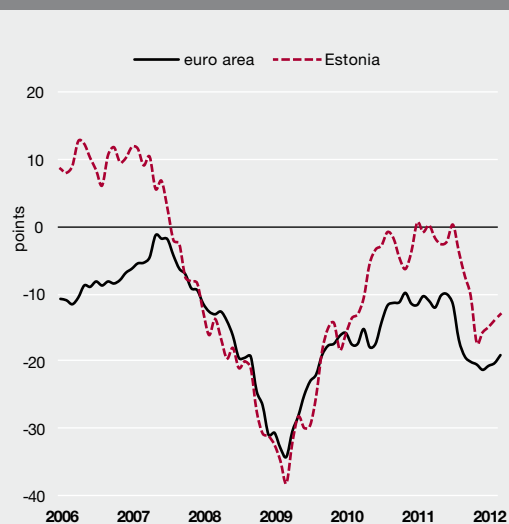
### LOAN REPAYMENT ABILITY OF HOUSEHOLDS

The consumer **confidence** indicators rose for the fourth month in a row in both Estonia and the entire euro area. In this respect, Estonia has persistently performed better than any other European country (see Figure 12).

The expectations of households for the economic situation of the country, as well as the household itself, have improved, while the outlook for the labour market and the ability to save is negative. Consumer confidence is dampened by the relatively rapid rise of the consumer price index and the increase in unemployment.

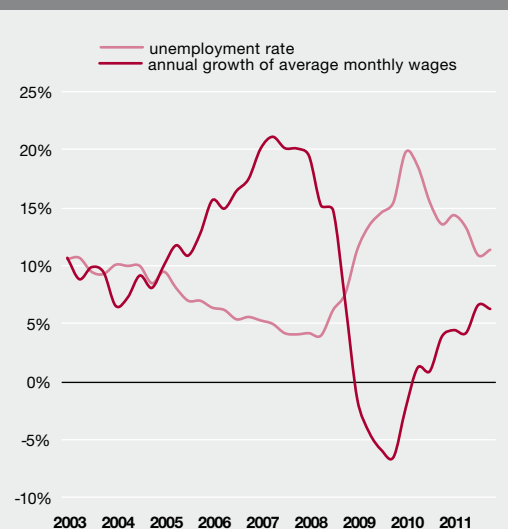
Changes in the labour market, as well as wages and salaries, have helped to hedge the risks related to household income (see Figure 13). **Employment** rose to nearly 60% of the working population in the fourth quarter of 2011, fuelled by a drop in unemployment and inactivity. The **unemployment** rate stood at 11.4% in the last

Figure 12. Consumer confidence indicator



Sources: Estonian Institute of Economic Research, European Commission

Figure 13. Unemployment rate and average gross wage growth

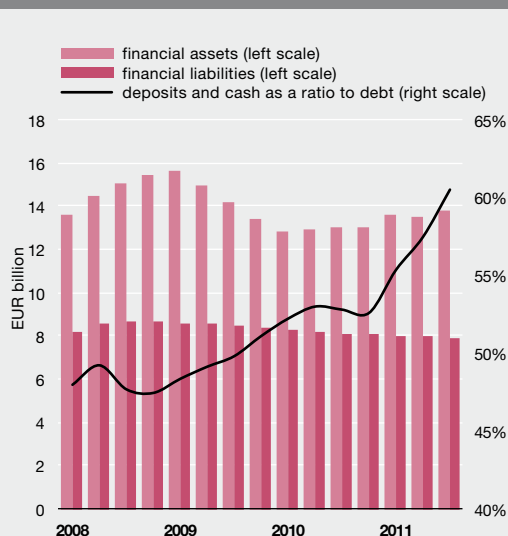


Source: Statistics Estonia

quarter of the year, a little higher than in the third quarter. In addition to seasonal factors, this may be attributed to the slowdown of economic growth. The year-on-year 4.4-percentage-point drop in unemployment is the fastest in the last two decades. Furthermore, in 2011 the average annual unemployment rate dropped to the lowest level for the last three years. Economic growth slowed down in the fourth quarter and was negative compared to the third quarter (-0.2%). Considering the time lag in the labour market's response to changes in real economy, the drop in the unemployment rate may slow in the forthcoming quarters, along with a decline in employment growth. However, this is not expected to pose any real threat to financial stability.

Average **gross monthly wages** rose by an annual 6.3% in the fourth quarter to 865 euros. After a decline of eleven quarters, real wages, which also consider the impact of changes in consumer prices on the purchasing power, started to rise in the third quarter, with the annual growth being 2.1% in the fourth quarter.

Figure 14. Financial position of households



Based on financial account data, the improvement in the capital buffers of households was clearly reflected in their **financial position**, which has been supported both by growth in financial assets and decline in financial liabilities (see Figure 14). Year-on-year, financial assets grew by 5.7% in the third quarter of 2011 and liabilities shrank by 2.7%. Growth in financial assets has picked up, while liabilities have diminished at a slower pace.

Cash and deposits of households covered 60.5% of their total debt burden in the third quarter of 2011. This ratio has advanced by a remarkable 15 percentage points from last year. The tendency of households to maintain liquid financial instruments changed after the adoption of the euro – the share of cash decreased, while that of deposits increased (see Figure 15).

Compared to previous quarters, growth in household **deposits** in banks operating in Estonia slowed down at the beginning of 2012, but was nevertheless relatively strong at 10%, despite the low interest rates (see Figure 16). Half of the total deposits of households consisted of overnight and demand deposits, which increased by 10%

Figure 16. Household deposits

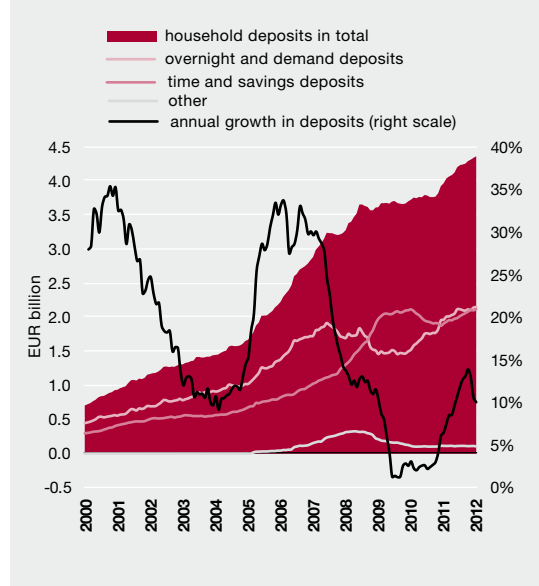


Figure 15. Annual growth in household cash and deposits by components

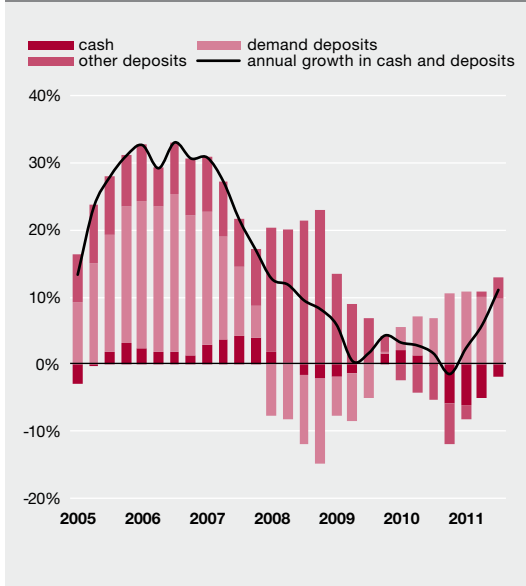
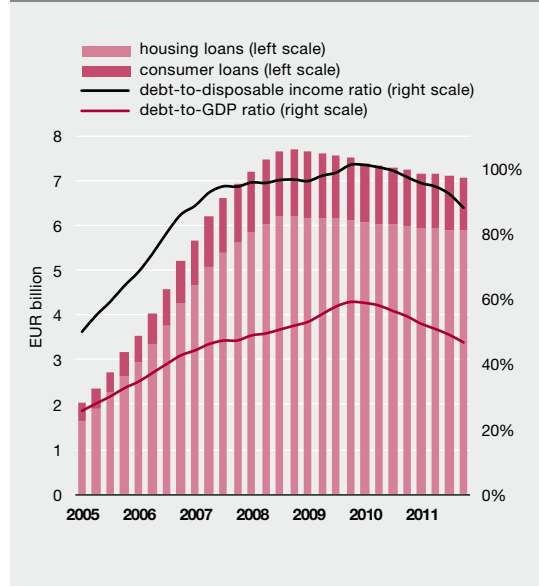


Figure 17. Household indebtedness

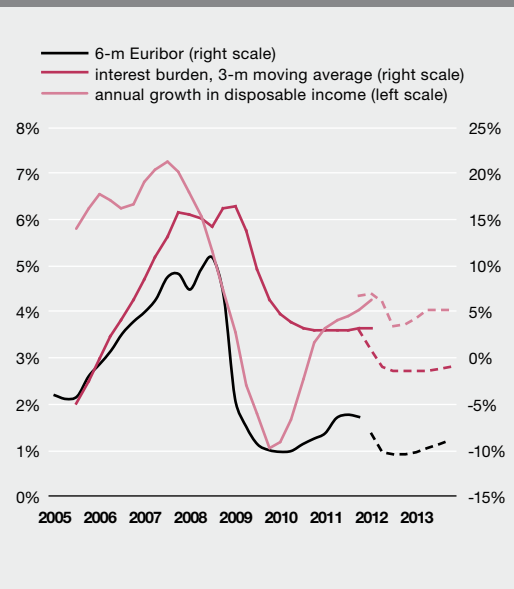


during the year. Time and savings deposits rose by 11%. Other deposits, consisting of investment deposits tied to the securities market yield, shrank by 6.2%.

The household **debt burden** contracted further in the second half of 2011. At the end of the year, the debt burden constituted 46% of GDP and 88% of disposable income, having decreased by 8 and 9 percentage points respectively, year-on-year (see Figure 17).

The household **interest burden** (the ratio of interest expenditure to disposable income) stood at 3.9% in the third quarter of 2011 (see Figure 18). As the autumn forecast of Eesti Pank expected disposable income to rise and the loan stock to contract, the forthcoming quarters are expected to ease the interest burden of households and to minimise the risks to their loan repayment ability. However, the risk to disposable income growth, which stems from the slow-down of global economic growth, remains high.

Figure 18. Household interest burden and disposable income

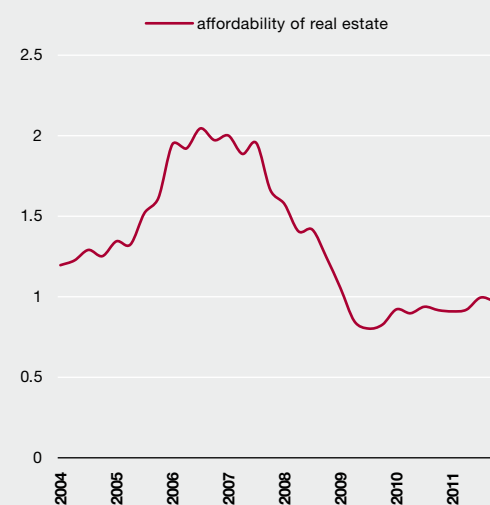


## Developments in the Estonian real estate market

### Housing market

The housing market was quite indifferent to the negative external developments in the last six months. One of the factors contributing to market activity was the statistically high real estate purchasing power. The real estate affordability indicator of an average wage-earning Tallinner was 0.97 in the fourth quarter of 2011. The minor increase in the demand for real estate has been fuelled by improved housing loan availability in the last two years. The real estate market has also benefited from private investors in search of cheaper real estate, given the current volatility in the money markets. Market recovery boosted the number of forced sale trans-

Figure 19. Affordability of real estate with average wages in Tallinn



Sources: Statistics Estonia, Land Board, Eesti Pank

actions in enforcement by 16% in 2011, with a total of 833 objects sold. 4.8% of all real estate transactions were conducted at bailiff auctions. The financial volume of these auctions is estimated to be 5–6% of the total market volume.

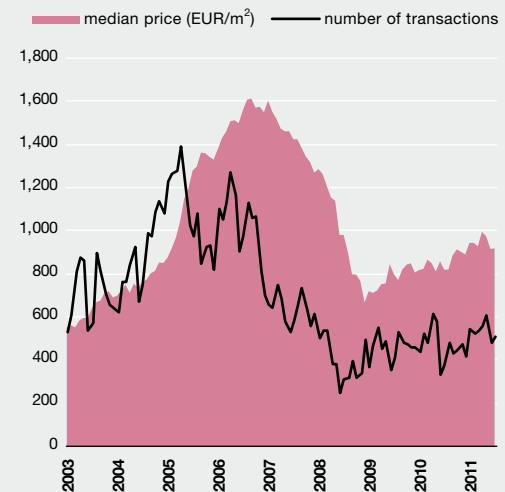
Although the number of transactions on the Tallinn apartment market has grown by more than 10% and the median price by 13% in the last six months, both the transactions and the prices have remained on the levels of 2004-2005 for quite some time (see Figure 20). The value of the transactions has grown mainly owing to an increased share of more expensive objects and new developments in the total number of transactions.

While the first half of 2011 saw many new developments, the supply of new residential space has dwindled this year. The number of sales offers, which continued to grow throughout the year, has declined since late 2011. This can largely be attributed to the decline in new developments. 23% fewer building permits were issued for residential space in the last two quarters of 2011 compared to a year ago (see Figure 21). As the market demands an improvement in living conditions, a significant decline in supply may exert upward pressure on real estate prices. Still, the waning supply is reinforced by banks who are boosting the sale of collaterals appropriated during the crisis. The total assets appropriated by the banks operating in Estonia amount to an estimated 80 million euros (unaudited data).

#### **Office and commercial premises market**

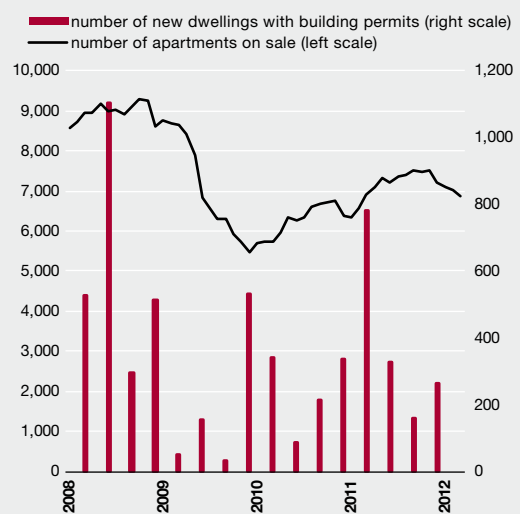
For many owners of office and commercial premises, the year 2011 proved successful. The rental market for office and commercial

**Figure 20. Number of transactions with apartments in Tallinn and median price**



Sources: Land Board, Eesti Pank

**Figure 21. Supply on real estate market in Tallinn**



Sources: register of construction works, Statistics Estonia, spot.city24.ee



space is generally stable. The purchase and sale market for office space, on the other hand, remains passive, with a persistent lack of interest. The banks have also taken a more cautious approach to office and commercial space development, compared to previous years.

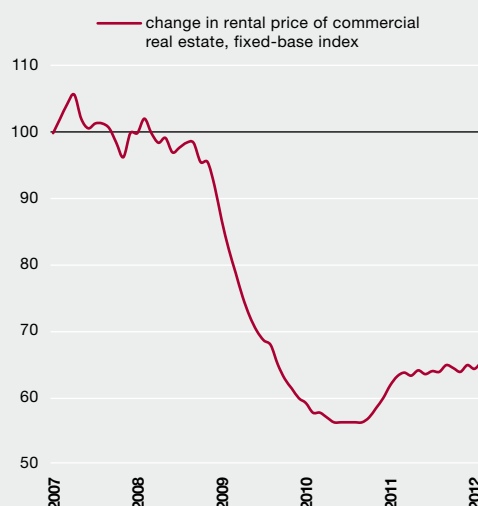
With the supply of office space showing no major changes, the vacancy rate has dropped against the recovery of economic activity. At the end of 2011, the average vacancy rate was 7% for first class and over 25% for lower class premises. The rental prices for office space have not showed a significant increase. In the second half of 2011, the price was 11–15 euros per square meter for office space with a good location and access, and nearly a third lower for lower-class premises.

Still, quite some pressure on the rental prices can be noted in 2012 (see Figure 22). The increase in rental prices for office space has been fuelled by the enhanced demand for first-class office premises. The construction of new office buildings has been hampered by the rise in construction prices in 2011. New developments are also held back by the lack of solvent customers – for the construction of new office buildings, the rental agreements should be concluded at up to 20% higher prices.<sup>5</sup> The state is currently the most prominent player in the office space construction market.<sup>6</sup> Even though building permits were issued for construction volumes several times higher (see Figure 23), new developments should not pose any threats to the vacancy rates of existing buildings, or lower the market price.

<sup>5</sup> Source: Uus Maa.

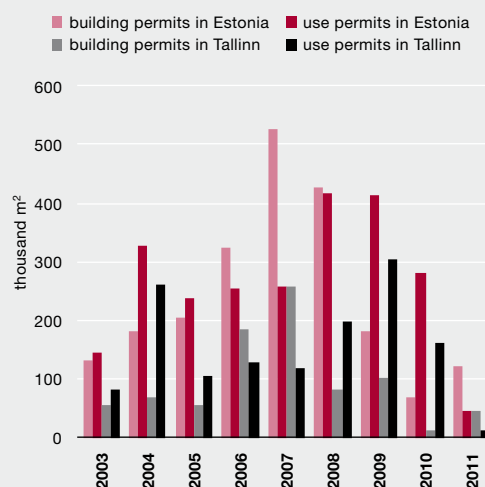
<sup>6</sup> The new buildings of the Tax and Customs Board, and Statistics Estonia.

Figure 22. Tender price of commercial real estate in Tallinn (1 Jan 2007 = 100)



Sources: spot.city24.ee, Eesti Pank

Figure 23. Commercial real estate with building and use permits in Estonia and in Tallinn



Sources: Statistics Estonia, Eesti Pank

Estonia witnessed active construction of commercial premises between 1997 and 2004. The keyword for 2011 is the expansion of existing shopping centres. With consumption recovering since the second half of 2010, shopping centres are experiencing a significant increase in turnovers and visitor flows. For years, demand has exceeded supply in the commercial sector, with many shopping centres thus operating at 100% occupancy

rate. The price level varies, depending on the location. Still, the near 0% vacancy rate has allowed the owners to raise rental prices by at least 10%<sup>7</sup>.

The real estate market is expected to remain stable in 2012, as the volatile economic environment urges both sellers and buyers to be flexible.

<sup>7</sup> Source: Arco Vara.

## QUALITY OF ASSETS

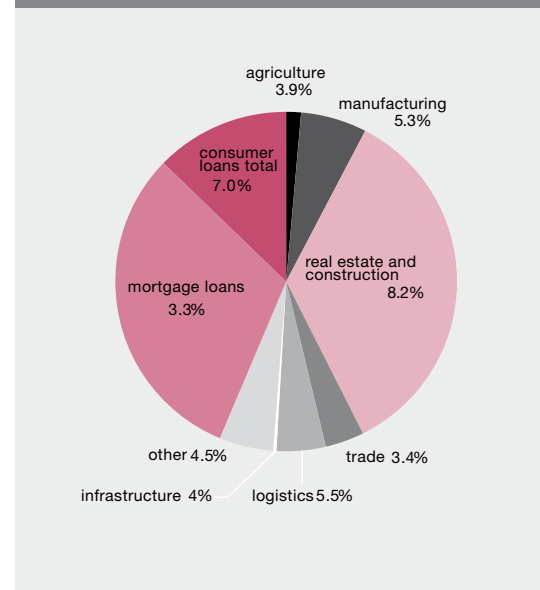
The asset quality of banks largely depends on the quality of the credit portfolio,<sup>8</sup> with loans constituting 80% of the assets. At the end of February, the stock of loans overdue for more than 60 days amounted to 624 million euros, or 4.8% of total loans granted to companies and households. Two thirds of non-performing loans consist of loans to the real estate sector – loans to real estate and construction companies and household housing loans (see Figure 24).

The quality of the credit portfolio has improved, as expected. The stock of **loans overdue for more than 60 days** shrank by 181 million euros in the last two quarters of 2011, with the share of overdue loans dropping to 4.8% of total loans by the end of 2011. Similarly to previous quarters, the decrease in overdue loans was mainly due to write-offs in the second half of 2011, with the related impact being smaller than in the first half-year (see Figure 25). Banks wrote off a total of 105 million euros worth of uncollectible receivables in the third and fourth quarters of 2011. This means that nearly 58% of the decrease in overdue loans may be attributed to write-off, and the remainder to the recovery of loans or foreclosures.

In the first half of 2011, strong export growth led to a decrease in overdue loans in the manufacturing sector. In the second half-year, the same

<sup>8</sup> This chapter only considers bank loans without leases and factoring, which make up over 90% of the aggregate credit portfolio.

Figure 24. Loans overdue for more than 60 days as at 29/2/2012 and percentage in the sector's portfolio



trends were evident in the trade sector (see Figure 26). As for housing loans, a mere 20% of the decrease in the stock of loans overdue for a longer period of time may be attributed to write-off. Thus, more housing loans have started to perform once again, or foreclosures have increased. The same cannot be said for consumer loans, though.

The **provisions** for contingent loan losses declined by 118 million euros in the second half of 2011, owing mainly to the write-off of uncollectible receivables. Albeit the provisions have

Figure 25. Quarterly change in loans overdue for more than 60 days and write-offs

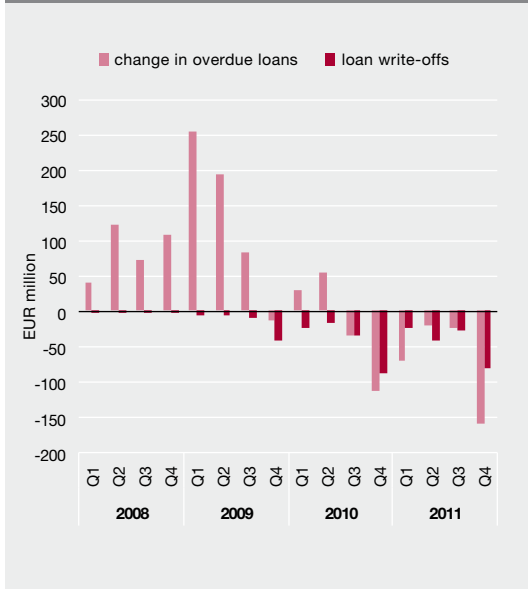
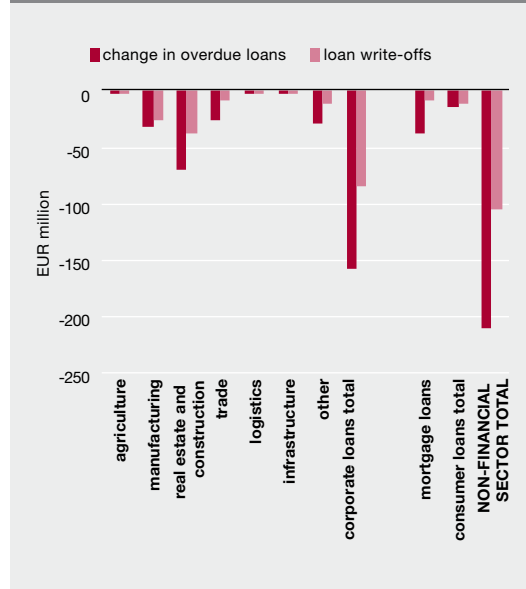


Figure 26. Change in loans overdue for more than 60 days by sector (July to Dec 2011)

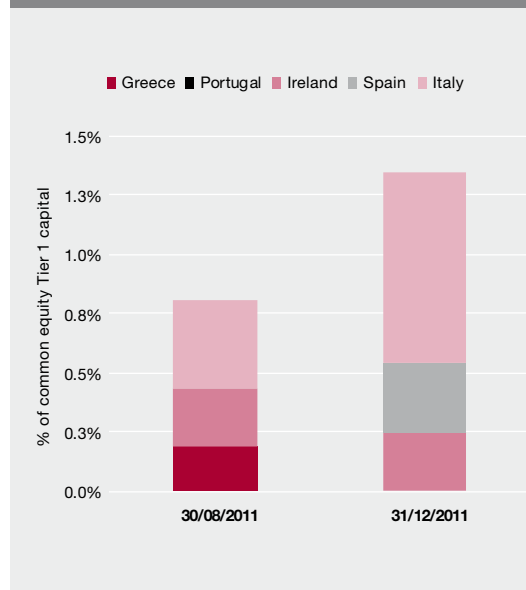


been declining for nearly 18 months, the ratio of provisions to overdue loans has remained high against the stock of overdue loans. By the end of 2011, the ratio of provisions to loans overdue for more than 60 days had advanced even further – to 84%. This means that 4.1% of the total credit portfolio was charged to loan losses.

The **trading books** of the banks operating in Estonia are relatively modest. Tradable securities made up a mere 4% of the assets of banks at the end of February 2012. Compared to the end of August 2011, the banks had increased investments in the securities of distressed euro area countries<sup>9</sup> by more than 2.5-fold to approximately 22 million euros. The associated risks to the capitalisation of the banking sector still remained very low, as the securities positions only constituted 1.3% of the Tier 1 capital of the banking sector at the end of December (see Figure 27). Although the securities positions have increased, their direct impact on the banking sector’s capital through write-downs remains negligible, even in the worst case scenario.

<sup>9</sup> Including the bonds of financial institutions and sovereigns of Greece, Portugal, Spain, Italy and Ireland.

Figure 27. Banking sector’s holdings of distressed sovereign bonds



### III. THE STRENGTH OF FINANCIAL INSTITUTIONS

#### BANKS

##### Liquidity and funding

Year 2011 witnessed rapid growth (15%) in the total volume of **liquid assets** of banks operating in Estonia. At the end of November, total liquid assets of banks amounted to a record high 4.6 billion euros (see Figure 1). In addition to the Swedbank transaction,<sup>1</sup> the growth of assets was fuelled by the increase in deposits, which banks no longer needed for financing the shrinking credit portfolio and invested them in liquid assets instead. The structure of the assets followed the trends of recent years: claims against banks advanced by 6 percentage points in the last six months to 81% at the end of February 2012. By then, the liquid assets of banks had dropped from their peak by a total of nearly 239 million euros. The drop was especially evident in December and concerned all asset categories.

Over the years, the banks have increased the share of liquid assets in their total assets. This share was 24% at the end of February, which is 20% higher than before the lowering of the reserve requirement in September 2010. This was prompted by strong growth in liquid assets and contraction of the banks' balance sheets.

The banks have continued using the **deposit and credit facilities provided by the central bank** as a measure for additional liquidity management (see Figure 2). The standing deposit facility is more popular, with five to seven banks frequently using that facility. The modest use of the central bank's credit facility indicates that the banks operating in Estonia have succeeded in engaging sufficient resources from deposits and from other banks, despite the sovereign debt crisis, uncertain economic outlook and the tensions in the money market. The banks have thus had no need to engage large volumes of monetary policy loans offered by the central bank for liquidity management.

<sup>1</sup> Disposal of Swedbank's subsidiaries.

Figure 1. Liquid assets and their share in total assets

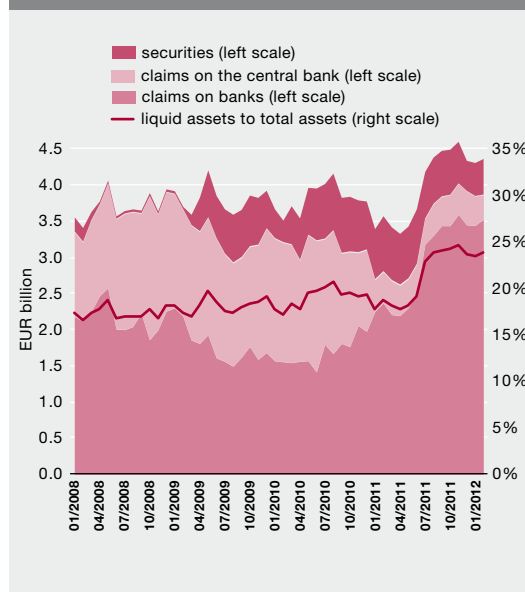
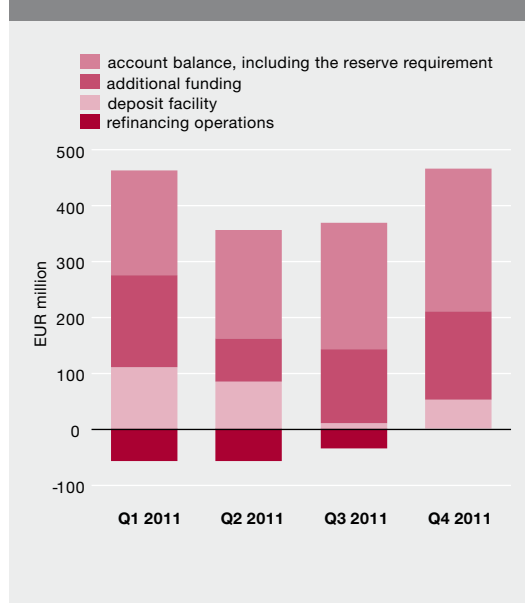


Figure 2. Assets and loans with the central bank



The end of 2011 and the beginning of 2012 saw no major changes in the funding of banks – the strong growth in deposits continued and banks became less reliant on their parent banks (see Figure 3). Borrowings from other banks dropped by a nearly a third during the year, to 4.4 billion euros. The growth in deposits and the smaller share of external borrowings raised the **share of deposits in funding** to as high as 72%, compared to last year's 64%. At the same time, the banks' credit portfolios contracted, with the ratio of loans to deposits dropping to a low level of 119% by the end of February. The financing risk of banks is abating, with no expectations of a growth in the stock of loans issued. Deposits will grow and the coverage of loans with deposits will increase further.

The growth in the share of demand deposits has triggered a fall in resources with a maturity of over 12 months to 8.6% of the total resources engaged by banks. The growing deposits are being used for making repayments to the parent banks, which often have a longer maturity. The **maturity structure of funding** will thus shorten (see Figure 4). On the other hand, the change in maturity structure, conditioned by the growth in demand deposits, might not raise the liquidity risk of banks, as customer deposits are still regarded as the safest and most stable source of funding.

The **market-based funding risk ratio** for the banks operating in Estonia is a negligible 1%. The banks' liquid assets are more or less on par with the funds engaged from markets. This means that, in case of any temporary difficulties in engaging funds from the market, the banks are able to use their liquid assets. By drawing conclusions from the banking crisis that began in 2008, banks have started to pay much more attention to liquidity and the risk of market-based funding of assets. This ratio<sup>2</sup> indicates the

<sup>2</sup> Market-based funding risk ratio = (market-based funding – liquid assets) / total assets. Market-based funding covers long-term and short-term wholesale funding, including loans and inter-bank deposits.

Figure 3. Structure of liabilities

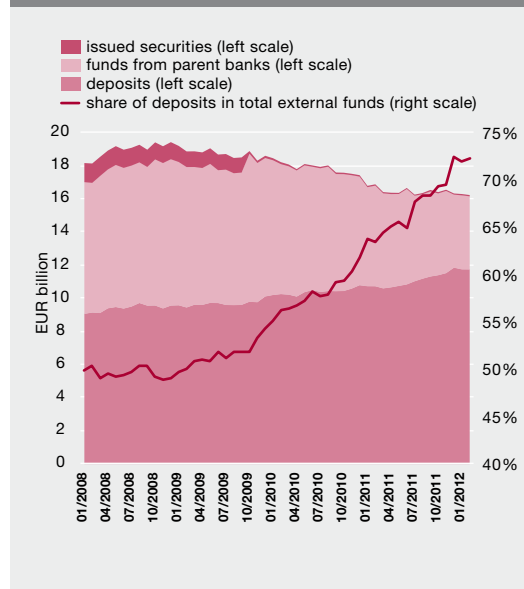
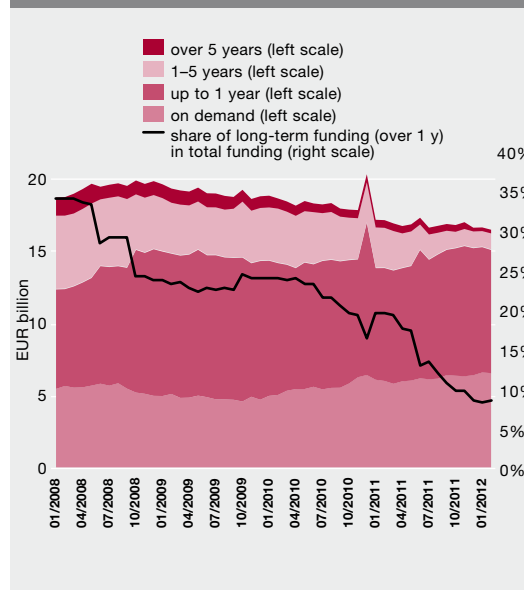


Figure 4. Funding by maturity



extent to which the bank relies on market-based funding instead of core funding (e.g. customer deposits). The indicator is especially important in the context of recent events, with many banks facing liquidity problems during the financial crisis due to inability to engage funds from the markets.

### Profitability

The banks operating in Estonia posted a **net profit** of 663 million euros in 2011. The biggest net profit in the last 20 years was mainly generated from the sale of Swedbank's Latvian and Lithuanian subsidiaries to the parent bank<sup>3</sup>. The revenue from the sale amounted to more than 50% of the annual net profit of the banking sector (see Figure 5). More importantly, the growth in economic activity boosted the net profitability of banks even without considering the extraordinary revenue. Net profit increased by 1.7% with respect to assets, and only fell a little short of the average level for 2000–2005 (see Figure 6).

In 2011, banks reduced the provisions established in previous periods for loan losses. The restatement of loan losses in the amount of 19 million euros contributed nearly 6% of the annual net profit. A majority of the recovery of loan quality has already taken place – loan provisions are curbed more and more by the write-offs of non-performing loans (see Chapter II *Quality of assets*). The revenue from restatement of loan losses is thus expected to remain modest in the future.

The **net profit before loan losses** increased by 9% in 2011.<sup>4</sup> This was supported by the increase in interest income, while financial income dropped by a remarkable 38%. The forecasted

<sup>3</sup> See background information *The impact of changes in Swedbank's legal structure on the aggregate balance sheet and capital of the Estonian banking sector*, Financial Stability Review 2/2011.

<sup>4</sup> Hereinafter the indicators do not include the extraordinary financial income earned by Swedbank.

Figure 5. Net profit and net loan losses

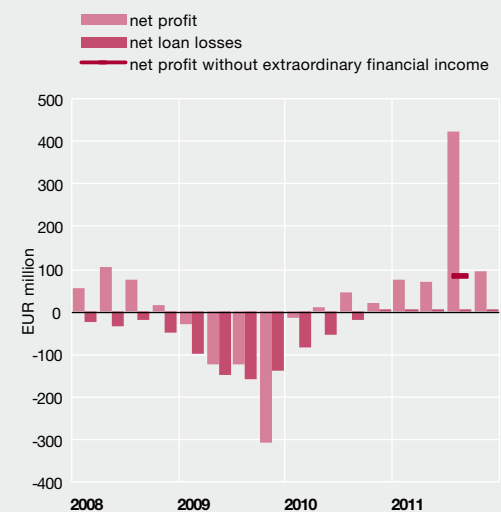
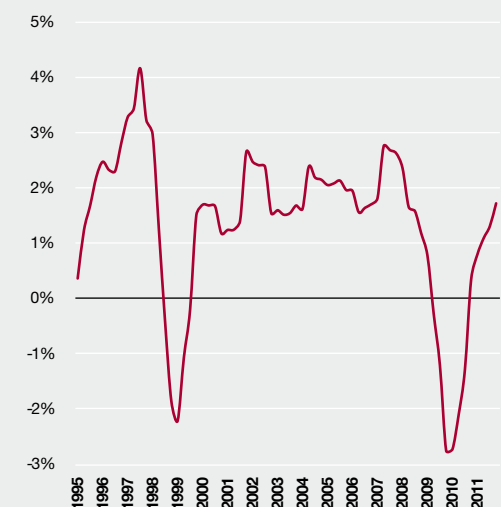


Figure 6. Return on assets (% of average assets per quarter x 4)



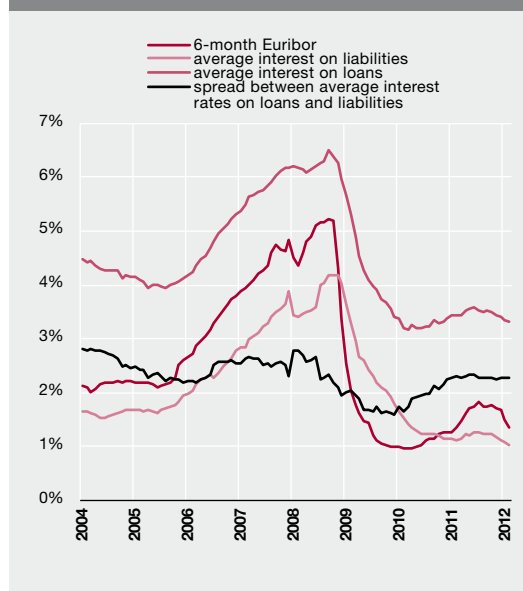
decrease in fee and commission income in connection with the adoption of the euro slowed down in the second half of 2011. At the end of the year, the banks' fee and commission income was only 3% smaller than in the previous year. The drop in the fee and commission income was thus smaller than expected. In addition to the growth in economic activity, this may be attributed to enhanced card payments (see Chapter IV *Payment market*).

The 21% increase in **net interest income** was supported by the rise in the Euribor until the autumn of 2011. This prompted the rise in interest income beyond the increase in interest expenses. Even though the lowering of the Euribor, which started at the beginning of the autumn, remained quite modest in the fourth quarter, it reversed the nine-quarter increase in interest income. Due to the high portion of loan agreements with a floating interest rate (91% of the loans issued to the non-financial sector as at the beginning of 2011), interest income is closely associated with money market interest rate changes. Considering the significant lowering of the Euribor in the first months of 2012, and the time lag for the pass-through of market interest rates, the interest income is expected to drop throughout 2012.

Besides the declining key interest rates, the growth in interest income will be curbed by the shrinking credit portfolio in the forthcoming months. Even though new lending has gained momentum, it will take time before the higher margins of these loans (compared to the boom times) will start significantly influencing interest income.

The average interest rate on banks' liabilities, which affects the interest expenditure of banks, showed minor changes in 2011 (see Figure 7). The cost of funding has been kept stable by the huge portion of low-yield demand deposits in the

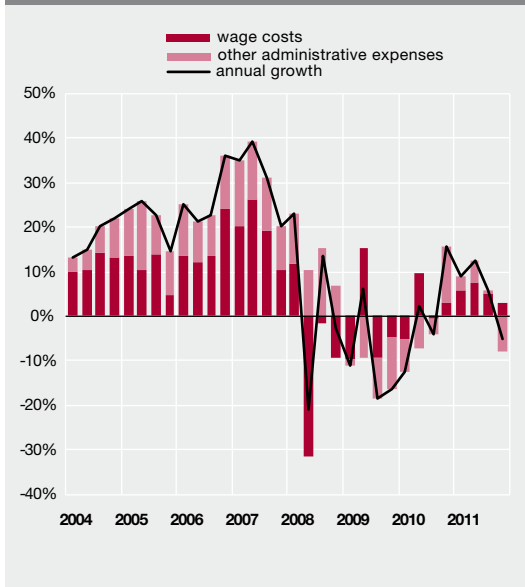
**Figure 7. Average interest rates on loans and liabilities and 6-month Euribor**



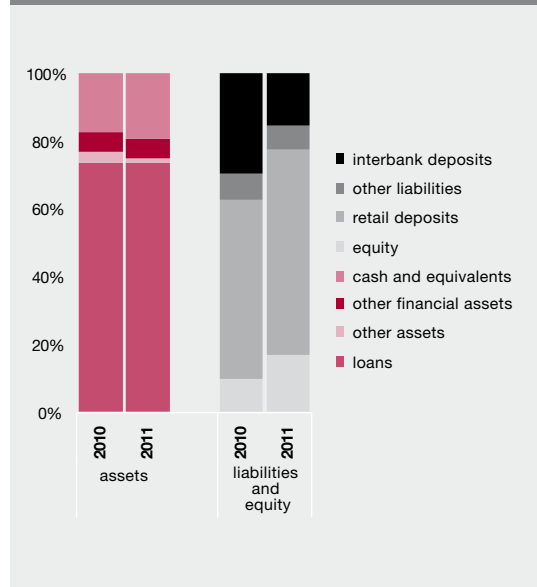
liabilities of banks. The share of demand deposits was 28% of the total liabilities at the end of 2011, rising by 5 percentage points during the year. As the cost of funding cannot, in all probability, be lowered at the pace of the Euribor, the banks must make do with a lower interest income than in 2011.

The **administrative costs** of banks increased by 5% in 2011. This was caused by the 10% rise in wages (see Figure 8). Other administrative costs remained more or less on par with 2010, as the extraordinary expenses related to the adoption of the euro were offset by the general cost-cutting in banks. The total income of the banking sector grew faster than the total expenditure, with the cost income ratio improving from 48% to 47% in the year. Considering the deteriorating market outlook, a majority of the banks have set their sights on boosting profitability by enhancing cost-efficiency.

**Figure 8. Annual growth in operating expenses and contributions of wage costs and other expenses**



**Figure 9. Aggregate consolidated balance sheet of the banking sector**

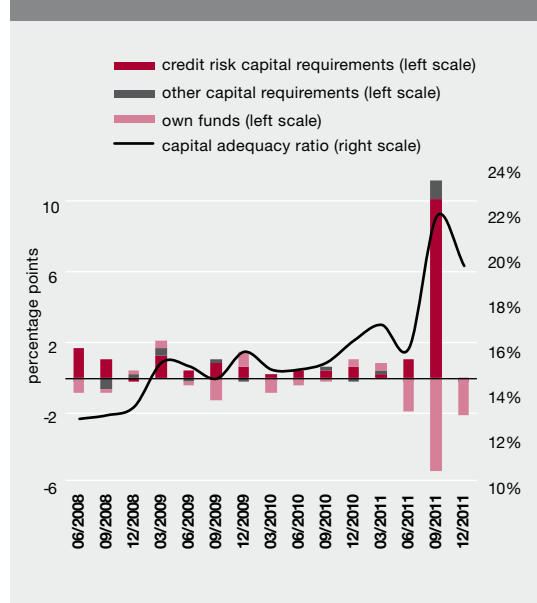


### Capitalisation

In 2011, the **aggregate balance sheet** of the banking sector<sup>5</sup> was affected the most by changes in the ownership structure of the Swedbank group (see Figure 9).<sup>6</sup> As a result, the balance sheet of the banking sector contracted by over 40%, with the structure of the balance sheet strengthening considerably. Repayments of loans taken from other credit institutions raised the share of equity capital in the balance sheet. Furthermore, growth in non-financial sector deposits enhanced the share of retail deposits in funding, while the equity capital of banks was boosted by the profits earned.

Without accounting for the structural change in Swedbank, **capital requirements** for credit risk continued to drop in the second half of 2011, as the credit portfolio declined (see Figure 10). At the same time, capital requirements

**Figure 10. Change in capital adequacy ratio from previous quarter by components**



<sup>5</sup> For this chapter, the figures for the banks have been consolidated.

<sup>6</sup> See chapter *The strength of financial institutions*, Financial Stability Review 2/2011, pp 35–36.



for other risks increased in the second half-year, albeit slowly. Nonetheless, capital requirements changed very little in the second half of the year, compared to previous quarters, when excluding the Swedbank transaction.

The **own funds** kept by the banks for covering risks did not change much in the second half of 2011. At the same time, a significant amount (22 million euros worth) of Tier 2 own funds were repaid. The higher-quality Tier 1 own funds increased in the same amount, fuelled by profits. While own funds shrank in the first half

of the year, the quality improved in the second half-year, as the share of Tier 1 own funds with advanced loan coverage rose to 96%.<sup>7</sup>

The structural change within Swedbank swiftly raised the **capital adequacy ratio** of the banking sector to 19.6% at the end of 2011, which exceeded the established norms by nearly two times. Without considering Swedbank's extraordinary transaction, the capital adequacy ratio of the banking sector showed no major changes in 2011, hovering around 16%.

<sup>7</sup> Swedbank included.

## Stress test of the banking sector

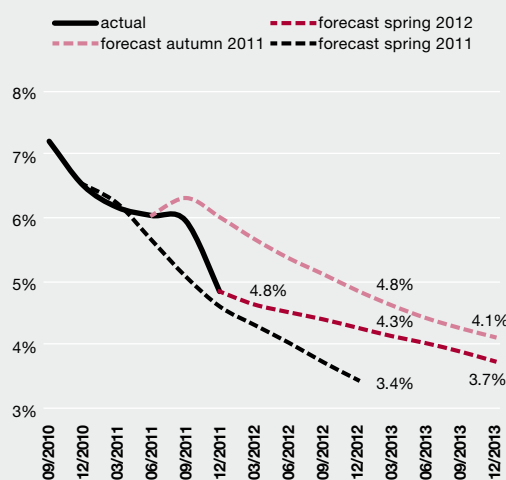
### Forecast

The quality of the banks' credit portfolio improved significantly in the fourth quarter of 2011, when the ratio of loans overdue for more than 60 days to the total loan stock dropped to 4.8%. The loan quality improved faster than expected – the autumn forecast did not expect such a level of overdue loans before the end of 2012.

While in the first half of 2011, the improvement of loan quality could, above all, be attributed to the write-off of uncollectible receivables, the situation changed in the second half-year, especially in the fourth quarter, when the loan quality improved also owing to the recovery of overdue loans (see also Chapter II *Quality of assets*). The strengthening of macro-economy was thus translated into the quality of the credit portfolio with a certain time lag. The actual quality of the credit portfolio was concealed by the charging of some major corporate loans to overdue loans in the autumn of 2011. Therefore, in autumn we assumed the level of overdue loans to drop more slowly.

In 2012, the stock of overdue loans is expected to shrink much more slowly than in 2011, as the economic growth is slowing down based on the autumn forecast. The recovery of loans overdue for a long period of time is probably over, and any decrease in the stock of overdue loans may rather be attributed to write-off of uncollectible receivables. The **share of overdue loans in the credit portfolio is forecasted to drop to 4.3% by the end of 2012, and fall to 3.7% by the end of 2013** (see Figure 11). Still, the stock

Figure 11. Loans overdue for more than 60 days as a percentage of the loan portfolio



of overdue loans may shrink much faster in 2012, if the banks boost the disposal of collateral. As a result, the ratio of overdue loans to the credit portfolio may be up to 1 percentage point lower than expected.

Owing to the write-off of uncollectible receivables, the provisions for loan losses will decrease in 2012. Still, the portion of provisions which will be transformed into profits will not be very large – over 80% of loans overdue for more than 60 days are expected to remain covered with provisions.

The banking sector is expected to earn 280 million euros in pre-provisions profit in 2012. As the credit portfolio is not expected to expand and the key interest rates are dropping, the net interest income of banks will decrease. The banks' profit for 2012 is thus forecasted to be nearly 10% smaller than in 2011.

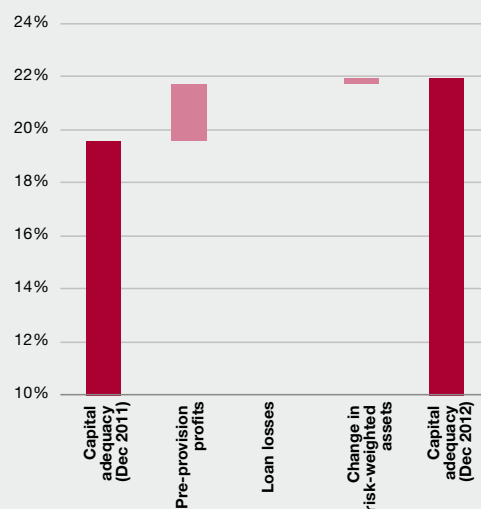
The high capitalisation of the banking sector, 19% as at the end of 2011 (see Chapter III *Capitalisation*), is expected to rise further in 2012.<sup>8</sup> Capitalisation will be boosted by profitability, while the impact of loan losses on capitalisation will be neutral or even positive, given that the banks will make write-downs in a volume comparable with the transformation of previous write-downs into profit. The capital adequacy ratio of the banking sector may rise to an estimated 22% by the end of 2012 (see Figure 12).

### Stress test

The stress-test scenario is based on the alternative scenario of Eesti Pank's autumn forecast, which expects GDP to drop by 4% in

<sup>8</sup> Assuming that Swedbank will not reduce its equity capital due to the extraordinary income earned in 2011.

Figure 12. Projected change in capital adequacy ratio by components



2012 and to remain on this level throughout 2013. As a result, the level of overdue loans will rise to 5.2% by the end of 2012 and to 5.3% by the end of 2013 (see Figure 13). The stock of overdue loans will no longer expand in 2013 – the ratio will advance to some extent, as the credit portfolio shrinks.

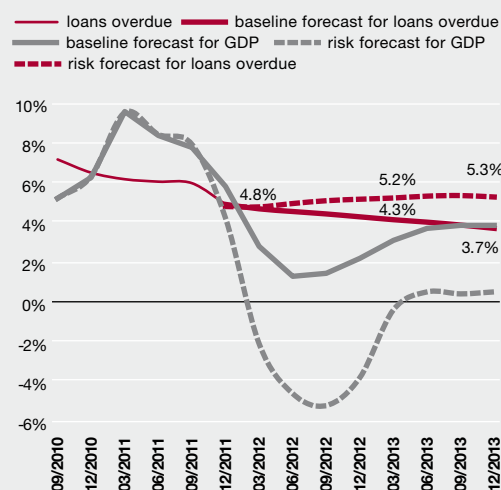
The modest growth in overdue loans in the following periods, compared to the crisis episode of 2009-2010, stems from the relatively small decline in economic activity. We can also assume that the last crisis episode allowed to isolate loan customers with a higher financial leverage and lower loan repayment ability. Other manifestations of imbalance in the non-financial sector have decreased significantly, with the financial position improving (see Chapter II *Loan repayment ability of companies* and *Loan repayment ability of households*). Borrowers are

thus less vulnerable to sudden changes in the external environment.

As the stress-test scenario foresees a growth in overdue loans, the banks must make additional loan provisions to maintain the current conservative level of 80%. According to the scenario, the required additional provision for loan losses amounts to 10 million euros. The pre-provision profits of banks exceeds additional provisions by dozens of times. The materialisation of the stress test scenario will thus have no negative impact on the capitalisation of banks. The capital buffer of the banking sector<sup>9</sup> amounted to 857 million euros at the end of 2011, which is sufficient for surviving another abrupt deterioration in loan quality.

<sup>9</sup> Own funds exceeding the 10% reserve requirement established for securing the capital adequacy ratio.

**Figure 13. Loans overdue for more than 60 days and GDP growth**



## INSURANCE COMPANIES

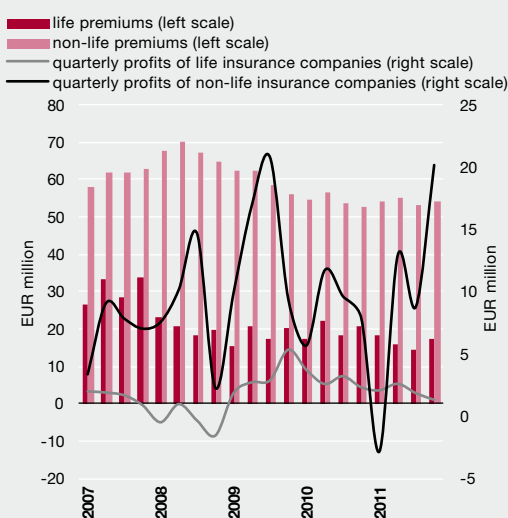
The Estonian insurance market makes up less than 1% of the assets of the local financial system, and will therefore neither trigger nor amplify systemic risks.

The tensions brewing in the August of 2011 also affected the insurance companies operating in Estonia. This impact was manifested in the contraction of the investment income of insurance companies. Insurance activity continued to decline. In the second half of 2011, premiums from insurance contracts were 4.5% smaller than in the same period last year (see Figure 14).

### Life insurance

Life insurance risks increased, to some extent, with the insurance companies taking more risks by the end of 2011. Due to uncertainties on the financial markets, the share of unit-linked insur-

**Figure 14. Profit of insurance companies and premiums from residents**



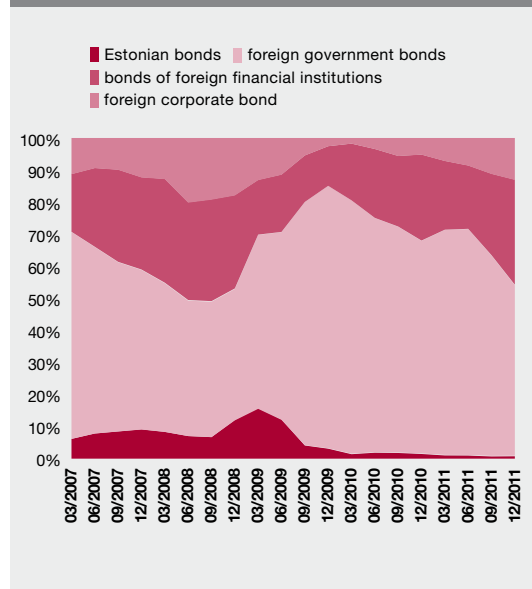
Sources: Statistics Estonia, Eesti Pank

ance products in the sales of insurance companies has significantly decreased, from 50% in 2010 to 35% at the end of 2011. Sales have been supported by the provision of pension and savings products, which has considerably (50%) enhanced pension insurance premiums. As unit-linked life insurance makes up a bulk of investment activity and the particular insurance category did not contribute much to the sales in the second half of the year, insurance companies collected 19% less life insurance premiums in the third and fourth quarter of 2011, compared to the same period last year. At the same time, claim payments have increased by 37%.

In 2011, life insurance companies registered in Estonia posted a profit of 12.2 million euros – half the profit for 2010. The results were especially weak in the last quarter of the year, curbed by the poor investment income. The net investment income was negative in the fourth quarter of 2011, with the annual yield only amounting to 1%. Investment income was also curtailed by the loss from disposal of investments and write-down of securities.

Even though the insurance companies have enhanced the stock of time deposits in their investment portfolio, investments in securities and other fixed-income securities still make up more than a half of financial investments (see Figure 15). As the short-term yield of high-quality sovereign bonds has remained quite low, the share of higher-yield corporate bonds has been enhanced in the portfolio. New purchases were financed through disposal of sovereign bonds. Insurance companies continue to invest in securities which have a higher rating and do not add to the market risk. The liquidity risk of life insurance companies remains low. The liquidity buffer has increased to 174 million euros.

**Figure 15. Debt security investment of life insurance companies by issuer**



### Non-life insurance

The non-life insurance market was positively affected by the economic recovery in 2011. Improved car sales and revival of the housing market kept the sales figures of insurance companies at a stable level. The annual growth in locally collected insurance premiums was positive in the second half of 2011, supported by the branches operating in Estonia. The sales of non-life insurance companies registered in Estonia still proved nearly 4% smaller than in the second half of 2010.

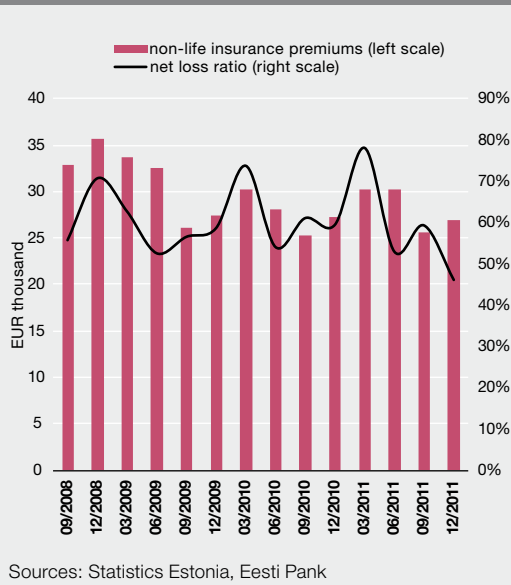
The volume of claims payments in the second half of 2011 remained on par with 2010. Even though operating expenses had increased by 10% due to the increase in administrative costs, the insurance technical results of companies proved excellent, owing to the low level of claims. In the fourth quarter of 2011, the income

from insurance activities exceeded expenses by 14 million euros. The loss ratio dropped significantly, from 59% to 46% (see Figure 16).

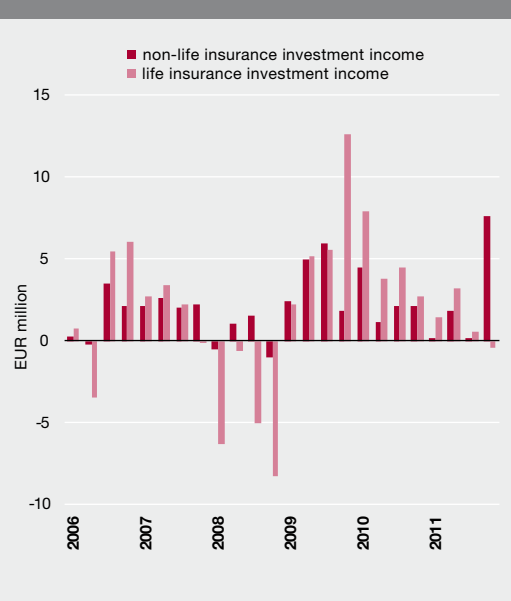
Non-life insurance companies posted a profit of 39 million euros in 2011, which is 12% higher than it was in 2010. Positive contributors to profit included the 20-million-euro net profit earned in the fourth quarter. In addition to excellent technical results, the investment income increased by several times to 7 million euros (see Figure 17). This was due to a single transaction where a non-life insurance company restated the value of its subsidiary, with the new value being 3.7 million euros higher. Still, the annual yield of investments stood at 2%. The volume of financial investments has increased by 11%. Similarly to life insurance companies, non-life insurance companies have mainly invested in bonds and other fixed-income securities. The share of corporate bonds in the portfolio has risen as a result of acquiring securities of Nordic credit institutions.

The total financial assets of the non-life insurance companies amount to 438 million euros, exceeding the liabilities arising from the insurance contract by 245 million euros, net of reinsurance. This provides the banks with an extensive liquidity buffer.

**Figure 16. Claims and net loss ratio in non-life insurance**



**Figure 17. Net investment income**



## IV. SYSTEMATICALLY IMPORTANT PAYMENT AND SETTLEMENT SYSTEMS

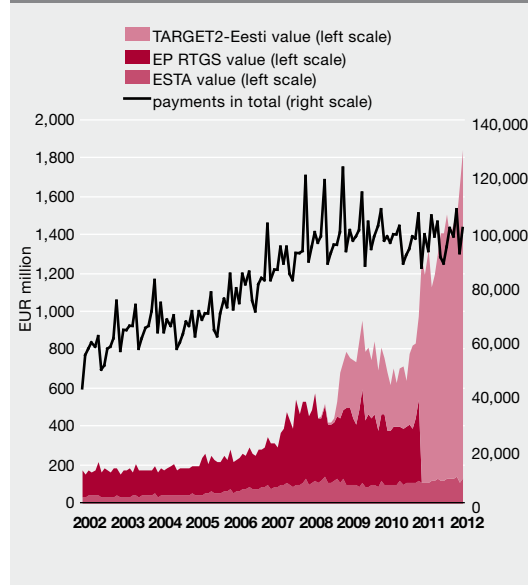
### PAYMENT AND SETTLEMENT SYSTEMS OF EESTI PANK

In the second half of 2011, 99.6% of the payments settled through the interbank payment and settlement systems managed by Eesti Pank were settled in the Settlement System of Ordinary Payments, the ESTA. The payments settled through TARGET2-Eesti constituted 91% of the total value of payments.

An average of 95,548 payments a day were settled in the **ESTA** in the second half of 2011 at a total value of 128 million euros (see Figure 1). During that period, at most 180,000–190,000 payments a day were settled in the ESTA. This remains dozens of times below the performance level of the ESTA (7 million payments a day). The number of payments is exceptionally high on days of payment of pensions, wages and child benefits in the first third of the month. The value of payments settled in the ESTA increased by 19% in the second half of 2011 from a year ago. The number of payments remained the same. The value of ESTA payments reflects the general economic activity. The average size of a payment increased to 1,339 euros in the second half of the year.

An average of 348 payments a day were settled in the **TARGET2-Eesti** in the second half of 2011 at a total value of 1,320 million euros (see Figure 1). The number of payments settled in TARGET2-Eesti doubled and the value increased by 3.6 times year-on-year. Growth resulted from the closure of the EP RTGS after Estonia joined the euro area and the transfer of payments formerly settled in the EP RTGS to TARGET2-Eesti, the transfer of cross-border payments from correspondent banking to TARGET2-Eesti, and the active use of Eurosystem monetary policy instruments (deposit facility, in particular).

Figure 1. Payment and settlement systems of Eesti Pank (average daily value)

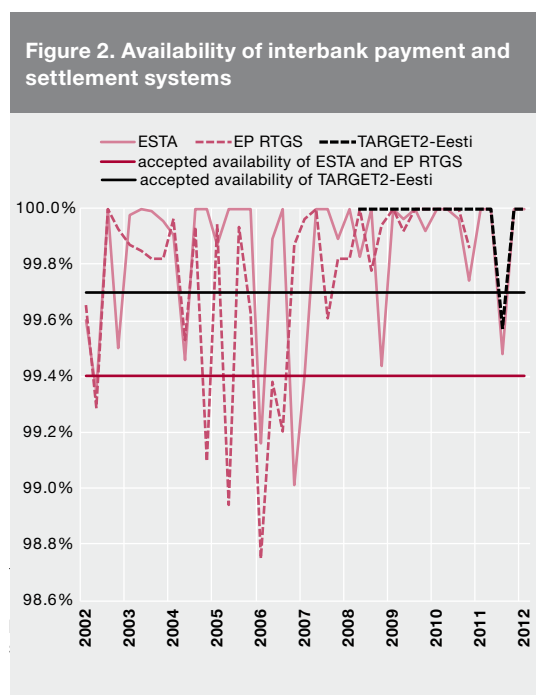


In January 2012, the Eurosystem reduced the banks' reserve requirement ratio from 2% to 1%. Hence, the minimum reserves of the banks operating in Estonia decreased from 226 to 115 million euros. As a result, **the liquidity buffer for settling payments in the payment and settlement systems of Eesti Pank**, decreased too. By the beginning of March 2012, banks' balances on their accounts held with Eesti Pank had decreased to approximately 144 million euros. However, the total value of Eesti Pank's payment and settlement systems has increased and exceeds the funds held with Eesti Pank by more than ten-fold. The decrease in the liquidity buffer has not entailed liquidity issues and banks have not opted for intraday credit. Since the beginning of 2012, in addition to repurchase agreements, it is possible for the banks to use a collateral pool for conducting monetary policy operations (including intraday credit).

## RISKS TO THE PAYMENT AND SETTLEMENT SYSTEMS AND THE OVERSIGHT ASSESSMENT

There was one serious interruption in the operation of the Estonian payment and settlement systems in the second half of 2011, which affected the participants of all local payment and settlement systems. It occurred on 25 July 2011 and started with a failure in the single technical platform of TARGET2.<sup>1</sup> After this incident, the Estonian settlement systems have been operating without any failures.

In the third quarter of 2011, the **availability** of TARGET2-Eesti and the ESTA was 99.57% and 99.48% respectively due to the above-mentioned incident. In the fourth quarter of 2011 and at the beginning of 2012, TARGET2-Eesti, the ESTA and the securities settlement system managed by the Estonian Central Securities Depository have operated smoothly at 100% availability (see Figure 2).



The number of operational problems in the settlement systems that emerged with the adoption of the euro has decreased to a minimum. There were two delays in the collateral transfers to the ESTA in the second half of 2011, which caused a delay in the start of the settlement day for the participant in question. By 10 AM at the latest all the members of the ESTA have been ready to participate in the system. There was no such occasion in the second half of 2011 that a bank did not have sufficient funds to make a collateral transfer to the ESTA.

Based on the oversight assessment, it is not acceptable for the domestic settlements not to function due to operational failures in cross-border systems. The overseers state that even if the daily work of the domestic systems remains dependent on cross-border systems, the managers of domestic systems must provide solutions for emergency situations to be able to make domestic payments independently of cross-border systems. Therefore, measures need to be taken to avoid the non-functioning of the Estonian payment and settlement systems due to failures in the TARGET2 or holidays of TARGET2 that do not coincide with the Estonian public holidays. Those measures are currently under development, which is why it was still not possible, similarly to a year ago, to perform domestic interbank payments and securities transactions in Estonia on 9 April 2012, the Easter Monday.

### Payment market

The Estonian payment market is constantly changing and for years the trend has been towards electronic means of payment<sup>2</sup> and payment instruments<sup>3</sup>. The use of payment instruments changed in 2011 largely due to the adoption of the euro. The impact of the euro

<sup>2</sup> Means of payment include cash, account money and e-money.

<sup>3</sup> Payment instruments include credit transfers (commonly known as payment orders), direct debits, card payments, e- and m-payments.

will increase even further in the coming few years with the implementation of the Single Euro Payments Area (SEPA). In addition to harmonising the service charges for euro payments and shortening the execution time of payments, more attention is paid to enhancing the payment infrastructure, harmonising technical standards and removing the existing cross-border business barriers. This, in turn, contributes to international trade, general economic activity and economic growth. Hence, the aim in Europe is to enhance cross-border e-commerce, including improving the security and trust of card payments over the internet.

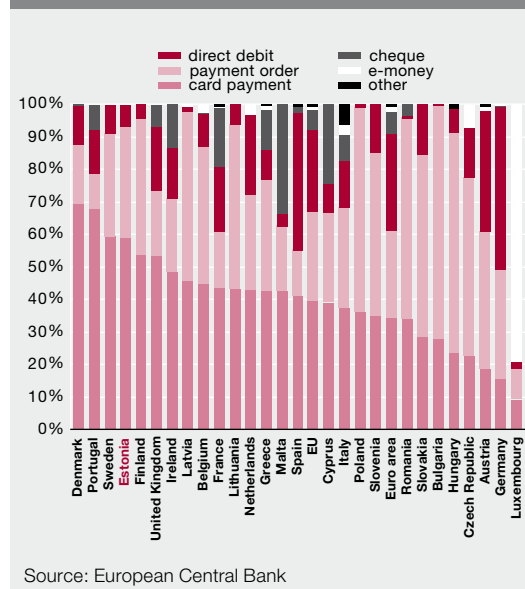
In 2011, 99.5% of the interbank payments in Estonia were initiated electronically. Compared to the **structure of non-cash payment instruments** in other European Union countries,<sup>4</sup> the Estonian structure is the most similar to Finnish and Swedish ones, where card payments constitute 50–60% of the total payments, and the share of payment orders is between 30–40% (see Figure 3).

Based on the survey on the financial behaviour of Estonian households,<sup>5</sup> mainly standing orders or direct debits and internet banking are used for performing regular payments. Internet banking is the most common payment channel for performing non-regular payments. The number of users of non-bank channels is decreasing. According to 2011 data, only every fourth household is still using these channels. The importance of internet banking payments has increased in nearly all sociodemographic groups, who are using them for both regular and non-regular payments. The main reasons for using electronic

<sup>4</sup> In this context, Germany stands out for the structure of payment instruments. Namely, direct debits include also card payments initiated on the basis of direct debits, which is why the percentages of card payments and direct debits should be considered together for Germany. Source: [http://www.bundesbank.de/statistik/statistik\\_banken\\_zahlungsverkehr.en.php](http://www.bundesbank.de/statistik/statistik_banken_zahlungsverkehr.en.php).

<sup>5</sup> TNS EMOR's F-monitor survey on the financial behaviour of Estonian households, their payment habits and preferences, commissioned by Eesti Pank in 2011.

Figure 3. Breakdown of non-cash payment methods (2010)



Source: European Central Bank

payment channels are convenience, habit and security.

Among **means of payment**, the popularity of account money is increasing. An estimated 94% of the Estonian residents receive their income on their bank accounts (84% in 2008 according to EMOR, 2011). The number of households that use cash is decreasing. In 2011, only one in ten households used it for daily purchases (one in five for major purchases). Card payments are the most common instrument for paying for both daily and major purchases.

It is estimated that every Estonian resident with a bank account has at least one payment card. According to 2011 data, there are an average of 1.33 payment cards per resident in Estonia which are used to spend approximately 156 euros per month (an average of 1.2 cards in 2006 and 108 euros spent per month). Since 2011, all the payment cards issued in Estonia have a chip. All points of sale (POS) accepting card payments have the necessary equipment



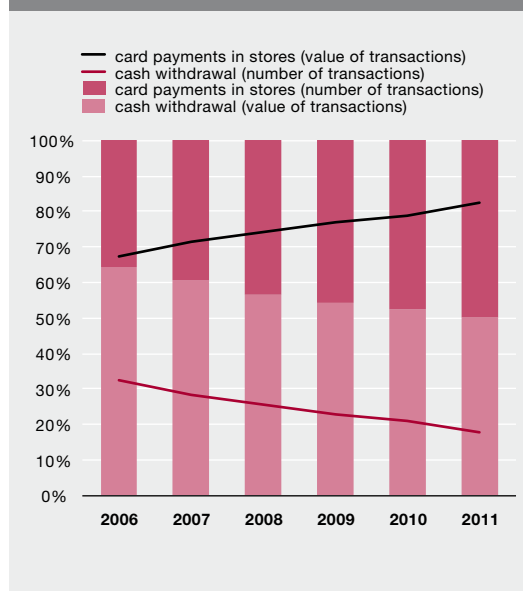
(payment terminals, cash register systems) that by default only read information from the chip and ask for the PIN code. Thus, paying by card can be considered more secure than paying in cash. Indeed, if a card is lost, the money on the bank account will not be lost and in case of a card fraud, clients are protected from losses by legislation.

As a result of the adoption of the euro, Estonian residents started to pay more frequently by card. Compared to 2010 data, the number of card payments increased by nearly 18% and the value by 15% in 2011. The number of cash withdrawals with a card has decreased by 5.3% but the volume has risen by 6.3% from 2010.

The percentage of **card payments**<sup>6</sup> has shown strong growth both in the number and the value of transactions since 2006, while the percentage of cash has witnessed a downward trend (see Figure 4). The reasons for constant growth in card payments include the active sales activity by banks and the fact that merchants, who accept card payments, do not set limits for the minimum amount of card payment.

The survey on the financial behaviour of Estonian households by EMOR indicates that Estonian households prefer to continue using the current payment instruments, and so no change is to be expected in the general structure of non-cash payment transactions. The use of electronic payment channels is promoted by expanding products and services, which creates additional value for customers. Domestic as well as cross-border e-commerce serves as an example here. About 13% of the residents have ordered products or services from abroad over the internet and 21% of the residents are planning to do so.<sup>7</sup> The European Union has set out to double the number

Figure 4. Daily use of card payments and cash



of payments performed through e-commerce by 2015 and to facilitate the performance of cross-border e-payments. Consequently, the use of internet payment instruments, card payments in particular, is expected to increase further in the future, both in Estonia and elsewhere in Europe.

<sup>6</sup> The percentage of card payments = card payments in POS / (card payments in POS + cash withdrawals). The percentage of cash = cash withdrawals / (card payments in POS + cash withdrawals).

<sup>7</sup> TNS Emor, 2011.

### **Deleveraging in the European banking sector: impact on Estonia's financial stability**

*After the culmination of the global financial crisis in autumn 2008, European banks have started to reduce their financial leverage, though much more modestly than the US banks. In the long term, deleveraging is expected and needed, since the leverage of the European banks, as measured by both the assets-to-equity ratio and the loan-to-deposit ratio, is relatively high. However, due to the influence of the euro area debt crisis, deleveraging may prove to be too fast in the short term. This may reduce credit availability and economic growth may be slower than expected.*

#### **What does deleveraging mean?**

Financial leverage shows how many times the total assets of a company exceed its equity. Unlike for real sector companies it is common for banks to use significantly higher leverage. By reducing financial leverage, the bank wishes to increase the share of the equity on its balance sheet. On one hand, this strengthens the balance sheet, while on the other hand, it means the bank reduces the expected return on equity. The deleveraging most commonly occurs in two ways: by increasing the volume of equity or by reducing claims (risk assets).

It is important to consider the changes in private sector debt, when assessing the leverage of the banks. Companies and households may also be interested in tidying up their balance sheets after a period of rapid growth and hence, reduce borrowing. If the decrease in the credit portfolio, both in absolute terms and as a percentage of GDP, company's equity

or household disposable income is primarily based on demand-driven factors and is in line with the long-term growth strategy of the bank, the decrease can be considered positive and supportive of financial stability.

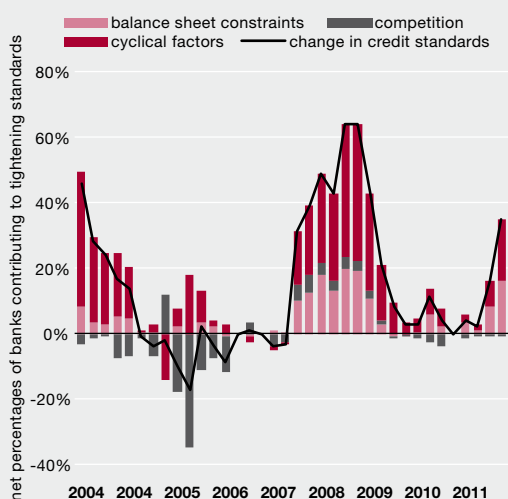
At the same time, banks may be forced to reduce the volume of risk assets in turbulent times on the financial markets. This could be accompanied by the disposal of (non-liquid) assets by considerable write-off. Another possible consequence is a credit crunch that may stem either from shortage of capital, insufficient access to long-term or stable resources, changes in legal framework, or reassessment of banks' business models. As the crisis develops, shortage of capital and lack of funding may deepen even further, since deterioration in the economic situation increases loan losses and growing distrust adds to the funding tensions.

#### **The risk of an excessive deleveraging in the European banking sector**

The loan supply of the European banks has been mainly influenced by the limited opportunities to **engage funding** from the markets. Funding tensions peaked in the last months of 2011, when the euro area debt crisis aggravated and the market-based funding channels were blocked for a large number of banks. This occurred during a time, when banks were faced with a high need for refinancing. These tensions were alleviated to a great extent by the supply of long-term monetary policy operations by the Eurosystem. This may also help to spread the risk of an excessive deleveraging for at least some time.

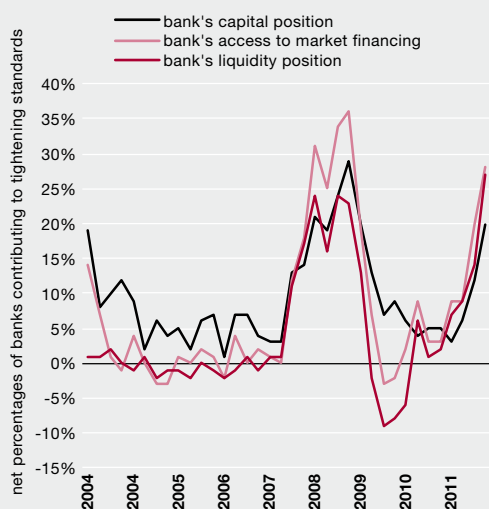
In addition to the availability of debt, the decisions taken to **strengthen capital** with the aim to ensure banks' reliability also have an

**Figure 1. Tightening of credit standards for enterprises and underlying determinants (net percentages of banks contributing to tightening standards)**



Source: European Central Bank "Bank Lending Survey"

**Figure 2. Balance sheet constraints contributing to tightening credit standards for enterprises**



Source: European Central Bank "Bank Lending Survey"

-impact on the deleveraging. According to the recommendations made by the European Banking Authority (EBA), the biggest European banks must increase the capital buffer of Core Tier 1 to at least 9% by the end of June 2012. Assessments based on banks' funding plans show that the banks in question are planning to cover most of the shortage in capital buffer by increasing capital, and a large negative impact on loan supply is not to be expected. In addition to the EBA recommendation to temporarily increase the capital buffer, a number of countries are tightening capital regulation already before the application of Basel III recommendations in the European Union. This could have some effect on the structure of risk assets, but will probably not entail an excessive decline in leverage.

The risk of an excessive deleveraging emanates, in particular, from the possible funding problems of banks, such as the need to adjust the business model so that it would rely more on stable resources. As a result of this balance sheet constraint, European banks have tightened the credit standards for enterprises and households (see Figures 1-2).

Small businesses and households who lack alternative funding channels are the most vulnerable to the tightening credit market. Given that in a crisis, parent banks limit lending first outside their home country (the home bias effect), the countries, where the loan market largely depends on the activities of the parent banks, are more in danger. Banks also tend to renounce those business lines that are not part of their core activities.

Market participants and economists have quite different estimates of the expected volume and pace of the deleveraging in the

European banking sector. The International Monetary Fund (IMF) estimates, on the basis of banks' medium-term business plans, that their assets will decrease by two trillion euros under present circumstances. In other words, the balance sheets will shrink by 7%.<sup>1</sup> Nearly a third of the decrease in assets emanates from reducing the credit portfolios and the rest from selling the assets and securities not associated with the core activities and those of the subsidiaries. The IMF also estimates that if the debt crisis widens, banks' assets may decrease by up to 2.9 trillion euros.

### ***Deleveraging in Estonia***

A decline in banking sector leverage in Estonia was first noticed in the autumn of 2008, when for the first time in monthly comparison the loan portfolio decreased in October. The loan-to-deposit ratio and the volume of parent bank funding were, at the time, still at their peak levels (see Chapter III *Liquidity and funding*). The leverage ratio of the banking sector<sup>2</sup> reached 9 at the end of 2008 and, along with the decline in funding from parent banks, it continued to decrease substantially in the following years, dropping to 7.8<sup>3</sup> at the end of 2011. The financial leverage of major banks has decreased due to both a rise in equity and a fall in assets. The leverage of smaller banks has, however, increased over the past years.

From the autumn of 2008 to February 2012, the loan and lease stock of banks contracted by 17%. Immediately after the culmination of

the global financial crisis in the autumn of 2008, banks substantially tightened the credit standards (for instance, loan margins increased by 2.5-fold) and limited lending. During the deep recession in 2009, banks focused on the quality of their portfolios, seeking solutions for non-performing loans. The high capitalisation of the banks allowed a relatively active restructuring of the loans. In four years (2008–2011), less than 3% of the credit portfolio was written off. In 2010–2011, the credit standards were gradually loosened and several major banks were prepared to finance, under relatively favourable terms, many more creditworthy loan projects than was applied for.

The leverage of the banks operating in Estonia mainly decreased due to substantial changes in the financial behaviour of the non-financial sector. The general indebtedness has decreased, the volume of deposits has increased, and the corporate debt-to-equity ratio has fallen, which indicates that the private sector wishes to deleverage. Since the external environment is still surrounded by uncertainty, the financial behaviour of the non-financial sector remains cautious. Although structural adjustments in the non-financial sector and banks will continue in 2012, a positive growth in loan volumes and a slowdown in the decrease in indebtedness may be expected as soon as confidence picks up.

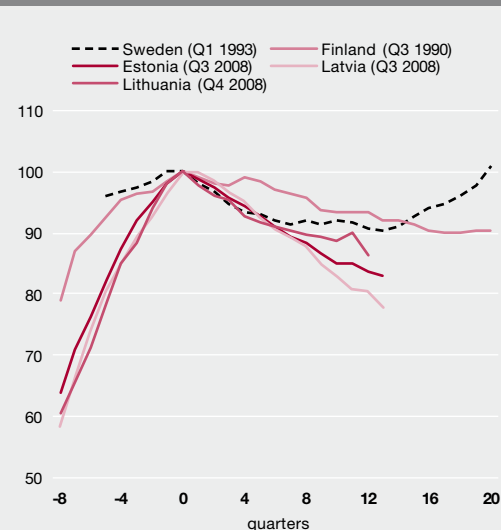
The decrease in loan volumes in the Baltic countries has been somewhat sharper and significantly greater than the developments in Finland and Sweden in the 1990s (see Figure 3). Then again, growth was also stronger in the Baltics during the boom period. Even more substantial changes have occurred in the dynamics of indebtedness (see Figure 4).

<sup>1</sup> Source: IMF "Global Financial Stability Report", April 2012.

<sup>2</sup> The leverage ratio is calculated as the ratio of a bank's total assets to its equity; only the domestic banks and the foreign banks' subsidiaries are accounted for.

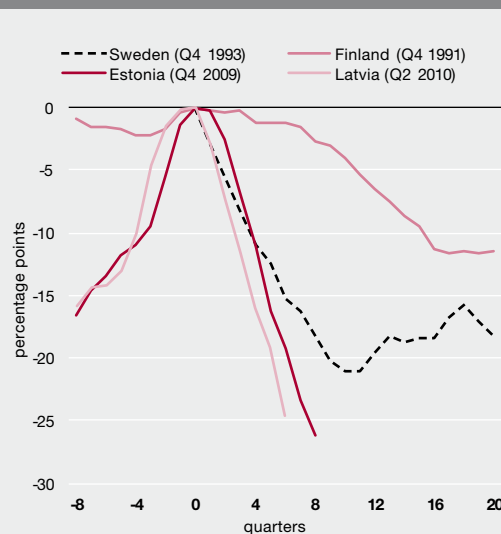
<sup>3</sup> The average leverage ratio of the euro area banks was 2–3 times higher. The leverage ratio of the bigger Swedish banks has also been considerably higher, falling from 25 in 2008 to 23 at the end of 2010 (source: Riksbank "Financial Stability Report", 2/2011).

**Figure 3. Private sector lending stock in Baltic countries, Finland and Sweden before and after the peak (peak level = 100)**



Sources: Reuters EcoWin, Eesti Pank

**Figure 4. Change in private sector loans to GDP ratio in Estonia, Latvia, Finland and Sweden before and after the peak (peak level = 0)**



Sources: Reuters EcoWin, Eesti Pank

Based on the study by the McKinsey Global Institute,<sup>4</sup> the deleveraging following the credit boom usually lasts for 6 or 7 years, during which time the debt-to-GDP ratio decreases by 25 percentage points. By the end of 2011, the loan and leasing stock of the Estonian non-financial sector as a ratio of GDP had already shrunk by 26 percentage points from its peak at the end of 2009. However, given the small size and the more volatile development of the Estonian economy, the accumulation of debt and the following adjustment have been bigger as expected.

***The impact of deleveraging in Europe on Estonia's financial stability***

The deleveraging of the European banks may influence the financial stability in Estonia mainly in two ways. First, emanating from the changing legal framework, in addition to strengthening capitalisation, the parent banks operating in Sweden also wish to establish more stable funding models. This, however, increases funding costs and may affect the growth and structure of risk assets. Apart from the funding strategy, consideration must be given to possible higher funding tensions on the European level that may deteriorate the opportunities of the parent banks to provide long-term financing. Given that the funding of local banks is increasingly more based on retail deposits, the funding risks of the parent banks are somewhat reduced for Estonia. Provided that credit demand will not increase sharply, it is possible to cover the borrowing needs of the Estonian economy by domestic means – by growth in deposits and repayment of loans issued earlier.

<sup>4</sup> McKinsey Global Institute "Debt and deleveraging: The global credit bubble and its economic consequences", January 2010.

Second, Estonia's financial stability may be influenced by the real economic relations with the companies and the households of countries that may face debt distress. Although credit standards have been tightened almost all over Europe, banks are not estimated to deleverage by limiting lending on their core-markets. Therefore, in terms of deleveraging, the external demand of the Estonian economy may be adversely affected primarily by the rising loan servicing costs due to the possible rise in loan margins in Europe.



