Eesti Pank

FINANCIAL STABILITY REVIEW

2/2014

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

The Review is available to read at: http://www.eestipank.ee.

Copies can be ordered by telephone on +372 668 0998, or by fax on +372 668 0954

or by email from trykis@eestipank.ee.

ISSN 1736-1184
Layout and design Urmas Raidma
Printed by Folger Art

Contents

FINANCIAL STABILITY ASSESSMENT

The international financial environment

The main factors influencing international financial markets this year have been that growth has been weaker than expected and inflation very low. Central banks in advanced countries have consequently kept their monetary policies accommodative. Because interest rates have been low, investors are making efforts to seek out investments that could bring them better returns. While prices for financial assets in general have risen, the interest rates for lower-quality bonds have fallen quite a lot. The effect of heightened geopolitical tensions this year on global financial markets remained short-term and minor. The size of the rises in the prices of financial assets has increased the danger that those prices will fall sharply.

The euro-area economy grew more slowly than expected in the second quarter of this year and the outlook for faster growth worsened. Coming on top of the long-term problems of unemployment and indebtedness, the economic sanctions introduced in response to the conflict between Russia and Ukraine started to affect trade and increased uncertainty. Although things improved for big euro-area banks, the stock of non-performing loans continued to grow. The profitability of banks faces challenges not only from the need for write-downs of loans but also from low interest rates and the risks from economic growth remaining slow. Confidence in banks is expected to improve after the European Central Bank has completed its comprehensive assessment before the single banking supervision under the European Union starts.

The real economy and loan quality

The Estonian economy grew modestly in the first half of this year, as it did last year. The real estate market stabilised and household confidence remained the same as last year. Rising incomes allowed some growth in housing loans taken out. Although investment activity did not recover in broad terms, there was an increase in corporate borrowing from the second quarter on. Borrowing still grew more slowly than the economy as a whole, and there was no increase in the indebtedness of companies and households.

The labour market has started to adjust to slower economic growth, and wage growth has slowed, though it still remains fast and affected corporate profits in the past half year. As corporate capitalisation and liquidity are at high levels, the payment behaviour of companies remains good and short-term difficulties should not create difficulties with payments. Higher incomes and low base interest rates mean that the ability of households to service their loans has remained good. The strong financial position of companies and households has helped the loan quality of the banks to improve, and this should continue next year too.

Strength of financial institutions

The improvement in the quality of the loan portfolio helped maintain the profitability of banks. There was less influence on profitability than before from the return to performance of loans that had earlier been written off. Profits helped boost the capitalisation of the banks. In international comparison, the Estonian banking sector remains very well capitalised and the capital levels are well above the minimum requirement.

Banks increased their liquidity buffers in the first half of this year and partially used foreign funds to do so. The funding of banks is still mainly based on deposits, and growth in retail deposits has remained fast throughout this year. Faster growth in lending meant that the improvement in the ratio of loans to deposits slowed. At the same time, most banks fund their loan portfolios fully from retail deposits.

The position of the Estonian banking sector with Russian residents is very small. The effect of the conflict between Russia and Ukraine on banking will be seen primarily in an increase in loan losses, but even there the effect will be small.

The insurance industry was affected by low interest rates, and life insurance companies are more exposed to the negative effect from them than non-life insurance companies are. Interest rates remaining low will create problems in the future in maintaining the profitability of assets for both life and non-life insurance companies.

Settlement systems

The Eesti Pank gross settlement system TARGET2-Eesti has worked without significant incident this year. The liquidity buffers of banks were sufficient that settlements were made without any problems arising and few banks used the intra-day lending facility of the central bank. The ESTA retail settlement system operated by Eesti Pank was closed down in February this year, and so domestic interbank retail payments moved to the cross-border STEP2 settlement system managed by EBA Clearing. The move went smoothly and did not pose any danger to financial stability.

Eesti Pank assessed how the securities settlement system managed by Eesti Väärtpaberikeskus as the overseer of payment and settlement systems met the new requirements for minimising risks to financial infrastructure and for ensuring the efficiency of the system. Eesti Pank found that the system met most of the requirements. The overseer considers that risk management needs to be improved and changes must be introduced by 1 July 2015.

Risks to financial stability

The risks to Estonian financial stability in the next half year are small at present, in autumn 2014. Risks are being reduced above all by the good financial position of Estonian companies and households, and by the high capitalisation of the banking sector, while the danger of imbalances in the economy is lower. The conflict between Russia and Ukraine has clearly increased uncertainty about the external environment, and a widening of tensions could lead risks to increase rapidly. Low interest rates could change financial behaviour, and this could increase risks in the financial sector and the real estate market.

The Eesti Pank assessment of financial stability for autumn 2014 sees three main risks:

1. A deterioration in the external environment, including the effect of the conflict between Russia and Ukraine, could lead to a downturn in Estonia and worsen the loan quality of banks.

The euro-area economy grew more slowly than expected in the first half of this year and the outlook for recovery in growth has worsened. The impact of Russian sanctions on trade and on confidence has been added to the long-term problems and will be felt particularly in Estonia's near neighbours and main trading partners. A delay to the recovery in growth will increase the chances of investors reassessing the financing conditions for sovereign debt, which had improved of late. It is also possible that the results of the comprehensive assessment of the banks could reveal that the banks have more need of capital, which could lead to a deterioration in financing conditions for banks.

The conflict between Russia and Ukraine has increased geopolitical risks, which could affect the Estonian economy and financial stability. The direct and indirect effects on the Estonian economy and financial sector of the sanctions that the European Union and Russia have imposed on each other are small. Although Russian import restrictions have had an impact in some sectors and companies, the impact still remains quite modest for the business sector as a whole. As the capitalisation of banks is strong and loan quality is good, a possible increase in problem loans does not pose a major danger to financial stability. A further widening of the conflict and additional sanctions could increase the risks to economic growth and financial stability.

The strong financial position of Estonian companies and households means that loan quality for the banks is good and in the baseline scenario of the forecast it will continue to improve. Problem loans increase in the risk scenario of a worsening of the external environment, which considers a two-quarter reduction in exports, but they do so by less than after the downturn of 2008-2009. Although banks earn less profit than in the baseline scenario because of their additional provisions, the capitalisation of banks remains good.

2. A reassessment of the risks to the Nordic economies and banks by financial markets will increase the financing and liquidity risks of the banks.

Expectations of growth in the Nordic countries have deteriorated in recent months as export opportunities have worsened. The Nordic economies have been affected by the slower growth in the euro-area economy and they are also more exposed than the European Union average to risks related to Russia. The Russian economic sanctions have the most effect on Finland, where economic growth is not being given support from domestic demand, unlike in the other Nordic countries. The economic integration of the Nordic countries means that investors treat the region as a single whole, so problems in one country could lead to a change in risk assessments for all the Nordic countries.

Although the economy has grown more slowly than expected, real estate prices in Sweden have continued to rise and housing loans to grow, indicating a further build-up of risks. The rapid growth in Swedish real estate prices is supported by growth in household incomes, low interest rates and particular features of the loan and real estate market. The large Swedish bank groups mainly use funds from financial markets to finance their loans for housing, and this increases the risks to financial stability.

The banks are made more vulnerable because the market-based financing is partly short-term and in foreign currency. There is a danger with such a model that if the investors in the Nordic economy should reassess the risks to the Nordic economy or banks because of an external shock, it could make the financing of bank groups much more difficult or expensive. On top of this, a fall in real estate prices could lead to lower economic activity levels because of a reduction in private consumption and investment, and this could worsen loan quality.

As subsidiaries and branches of the Nordic bank groups have over 90% of the Estonian banking sector, and Swedish banks have over 80%, then there would be a significant impact on Estonian financial stability if this risk were to be realised. This is partly because the risk of negative economic growth passing to Estonia through external trade would increase, and partly because of the financing and liquidity risk to banks that

would come through the banking groups. The Swedish financial supervisory authorities have announced measures to dampen the risks by increasing the liquidity and capital requirements of banks.

3. Low interest rates and rising incomes will accelerate the rise in Estonian real estate prices, which will increase the risks to the financial system.

Prices in the Estonian housing market have been rising more slowly since the second quarter of the year, and the number of transactions is lower than a year earlier. Although wages are rising more slowly, real estate prices may start to climb again if demand is boosted as interest rates remain low and incomes rise.

The earlier rise in real estate prices has increased the profitability of projects for real estate developers, and so the supply of residential space is increasing. This should ease the shortage of supply of high-quality property that is driving price rises, and so should ease price pressures. Although the total value of housing loans issued by the banks has increased, the risk margins on loans and the loan conditions have not changed.

Measures to lower risks to financial stability

There will be several important changes in macroprudential supervision: a single rulebook for recovering solvency in banks and for crisis management came into force in the summer; single banking supervision begins in November; and measures to strengthen bank capitalisation have been passed or planned in Sweden, Norway and Denmark.

As the Estonian economy and banking sector are very exposed to risks from the external environment, a worsening of that environment could lead to a rapid deterioration in loan quality and a weakening of the financing position of banks. To reduce risks from the vulnerability of the structure of the economy and banks, Eesti Pank introduced a 2% systemic risk buffer for banks from 1 August 2014.

Eesti Pank not only assesses and aims to reduce structural risks, but also observes factors that affect the credit cycle. Changes to the Credit Institutions Act that came in on 19 May 2014 gave Eesti Pank the right to set requirements for the conditions of loans issued by credit institu-

The main risks to Estonian financial stability

A deterioration in the external environment, including the effect of the conflict between Russia and Ukraine, could lead to a downturn in Estonia and worsen the loan quality of banks	↑
A reassessment of the risks to the Nordic economies and banks by financial markets will increase the financing and liquidity risks of the banks	→
Low interest rates and rising incomes will accelerate the rise in Estonian real estate prices, which will increase the risks to the financial system	↓

arrow indicates changes in the risk level from the assessment of April 2014

minor risk *major risk*

tions. The new macroprudential tools Eesti Pank plans to use are a limit on the loan-to-value (LTV) ratio of new housing loans, a limit on the debt service-to-income (DSTI) ratio, and a limit on the maximum maturity of loans. The levels planned for the limits are based on the current conditions of housing loans issued by banks, and the purpose of the requirements is to ensure that the conditions on housing loans from the banks take sufficient account of possible risks. If the risks around housing loans increased, Eesti Pank would be able to set stricter requirements.

As the indebtedness of Estonian companies and households has not increased and credit growth is forecast to be lower than nominal economic growth this year, and considering other indicators of the credit cycle, Eesti Pank does not find it necessary to set countercyclical buffers for banks in the fourth quarter of 2014 or the first quarter of 2015.

1. FINANCIAL MARKETS

1.1. THE INTERNATIONAL FINANCIAL ENVIRONMENT

International financial markets[1]

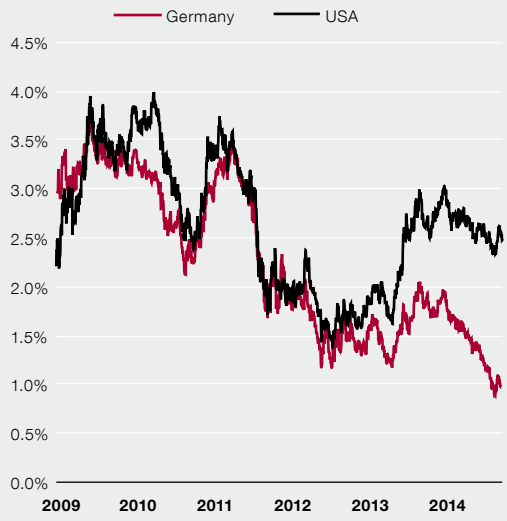
International financial markets have been influenced this year by the consistently accommodative **monetary policy** of the major central banks, which has been deployed in response to weak global economic growth and very low inflation. As inflation expectations are exceedingly low, the European Central Bank announced additional measures to stimulate the monetary policy environment at the start of September. This move has held interest rates and the volatility of financial asset prices exceptionally low.

Investors are searching for yield, and prices of financial assets have been rising constantly. Interest rates on corporate and **sovereign bonds** have fallen to their lowest levels since the crisis (see Figure 1.1.1). Interest rate spreads on sovereign bonds have also fallen very low, and the conditions for debt financing for the governments of the euro area countries with the worst problems have improved markedly as a result (see Figure 1.1.2). The high demand for yield has led to increased issuing of low-grade **bonds**, while **stock markets** have climbed to new peaks (see Figure 1.1.3).

Higher prices for riskier assets indicate a **build-up of risk** in the financial system. The relative improvement in the performance of the US economy compared to those of other advanced regions, and the increase in economic growth there, will lead the Federal Reserve to raise base interest rates. After substantial rises in asset prices, the **end of monetary policy stimulation** may create instability in the financial markets. As bond prices are very high, even a small change in interest rates will have a significant effect on them.

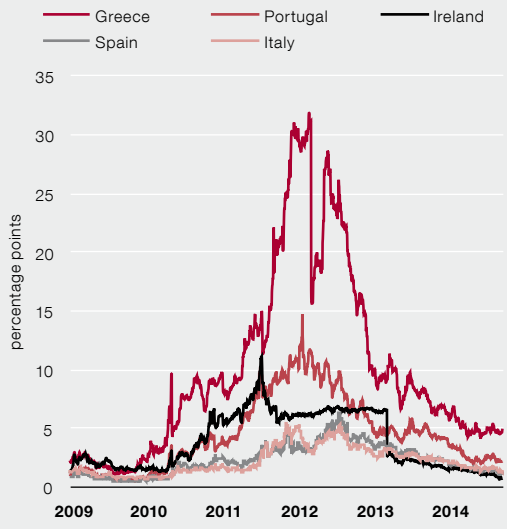
1 This review covers market data from the end of March 2014 to the middle of September.

Figure 1.1.1. Interest rates on ten-year government bonds of Germany and the USA



Source: Bloomberg

Figure 1.1.2. Spread of ten-year bonds of Greece, Portugal, Ireland, Italy and Spain over Germany



Source: Bloomberg

If interest rates start to rise and investors then decide to change their strategy in the new circumstances, the market for **lower-rated bonds** will be vulnerable, as will the shares that were bought in the search for higher yield. If interest rates for risk-free assets start to rise, then some money will be re-directed to higher quality bonds with more stable yield. Another danger for the lower-grade bond markets is that banks are not holding as many bonds on their balance sheets because of changes in the legal requirements. The **liquidity** of this segment of the bond market may as a result be much lower during a downturn in the market than many investors are assuming. This in turn will increase the risk of a major fall in the prices of financial assets.

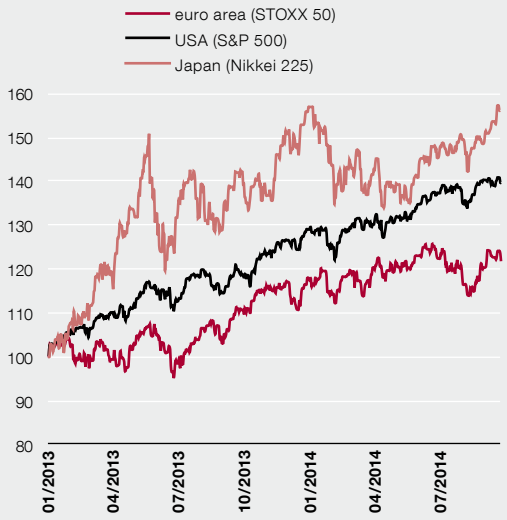
The second main danger for international financial markets is **geopolitical circumstances**, notably a worsening and widening of the conflict between Russia and Ukraine, a further spread of the crisis in the Middle-East, or the emergence of any other geopolitical clashes. The impact of geopolitical tensions on financial markets has so far been short-lived and small. Depending on the nature and extent of tensions, they could yet cause a sharp change in prices of financial assets.

The state and the risks of European Union banking

Although confidence in banking in Europe has improved somewhat in the past half year, vulnerabilities still remain in the banking sector. Banks have had to deal with new legislation coming into force, particularly changes resulting from the introduction of the banking union (see Box 1). The biggest problem for banks remains the vulnerabilities in their balance sheets.

Banks have continued **cleaning up their balance sheets**, and **provisions** have increased

Figure 1.1.3. Stock indices in the euro area, Japan and the USA (1 Jan 2013 = 100)



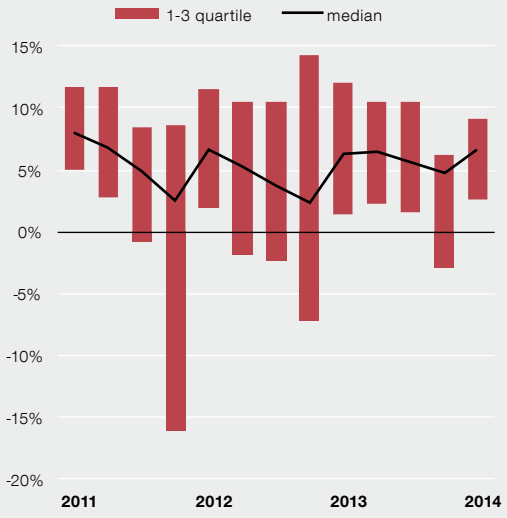
Source: EcoWin

significantly. The clean-up of the balance sheets can be attributed to the comprehensive assessment and to preparations for the launch of the banking union. The stock of problem loans grew in the early part of this year, albeit at a somewhat slower rate. The growth in the stock of problem loans means that larger loan loss provisions are needed, and this is currently one of the main reasons why profits are still small. In the current economic climate, asset quality could deteriorate for those banks that have large exposures in emerging market economies.

There remain limits on the ways that profitability and bank lending can be increased. The **profitability** of the biggest banks in the euro area[2] improved slightly both in 2013 and in early 2014 from a year earlier (see Figure 1.1.4). However, many banks still made a loss in the last quarter of last year. This was primarily because of the

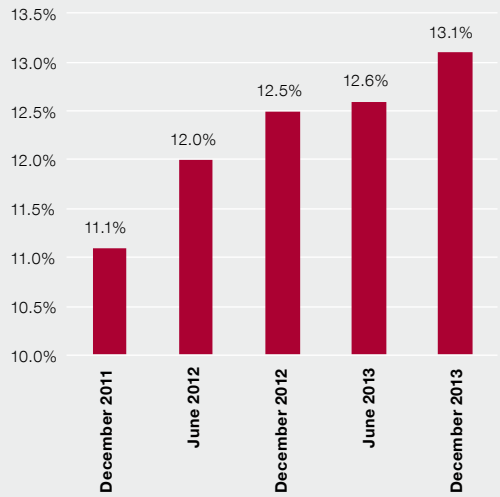
2 Under the definition of the European Banking Authority this applies to 56 large banks.

Figure 1.1.4. Return on equity ratio of large European banks



Source: ECB

Figure 1.1.5. Tier 1 capital ratio (weighted average) of large European banks



Source: EBA

increased provisions, though there were also one-off factors in the form of changes made in advance of the comprehensive assessment, high litigation charges, and a significant decline in fixed-income trading revenues. Profitability will also be held back in future by the low interest rate environment and the prospect of a weak macroeconomic outlook.

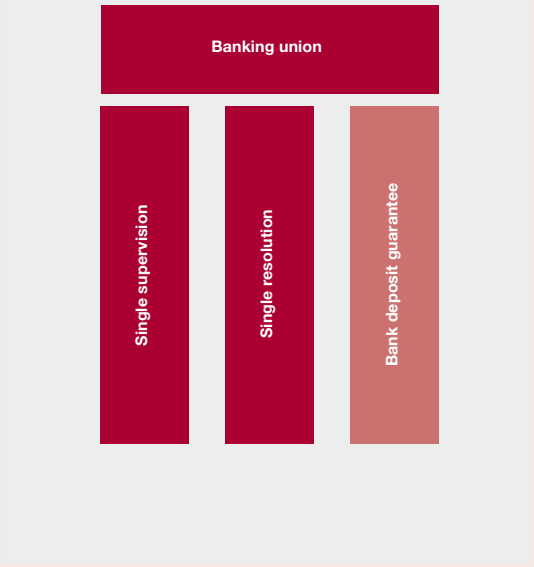
Despite the weak profitability and low economic growth, the **capital positions** of European banks as a whole have strengthened significantly (see Figure 1.1.5). The levels of capitalisation vary from country to country, and in some countries the banks haven't even managed to attain the required levels of capitalisation. With loan losses and weak profitability, balance sheets have been strengthened mainly through equity issuance. Improved confidence among investors and consistently favourable market conditions have helped in raising additional capital.

Box 1: The current state of the single European banking union

Following the global financial and debt crisis, the European Council decided in June 2012 to strengthen the European Union's financial framework and set out the aim of creating a banking union. This was based on three pillars: a single supervisory mechanism for banks, a single resolution mechanism and a bank deposit scheme (see Figure B1.1). The banking union covers all the member states of the euro area, but it is expected that states that are not in the euro area will also join. Preparations were started in autumn 2013 for the first pillar of the banking union and discussions about the second pillar started at the end of 2013. The third pillar has been put

on hold for now and deposit insurance will continue to be regulated in future by the EU directive on deposit guarantee schemes.

Figure B1.1. The three pillars of banking union



Single supervision

Single supervision will increase Europe's financial integration and stability. To improve the sustainability of the European banking system, a single framework is being introduced for banking supervision that will strengthen and harmonise the supervisory practices used up until now. When the regulation on the single supervisory mechanism[3] comes into force from 4 November 2014, the European Central Bank will directly supervise more than 120 systemically important banks in the euro area. The ECB is responsible for single supervision and will work with the national competent authorities at the same time to coordinate their work. National authorities will retain supervisory responsibility for less important banks. The banks licensed in Estonia that will pass under the direct supervision of the European Central Bank are Swedbank and SEB[4].

Before it assumes its direct supervisory role, the European Central Bank worked with the national authorities to carry out comprehensive assessment of the banks[5] to get a sufficiently clear picture of the financing of the commercial banks. The stress test is being complemented for the first time by an asset quality review. More detailed results from the assessment will be published for individual banks and for countries and also as an aggregated report. The reports on the banks will contain a summary of their main financial figures and detailed results from the asset quality review and the stress test. This will be accompanied by further important information on additional capital issuance in 2014. The results will be published in the second half of October 2014, immediately before single banking supervision starts. If the baseline or adverse scenarios of the stress tests reveal that any bank is short of capital, that bank will have two weeks to submit a capital plan to the national competent authority, describing how the shortfalls will be covered and from where.

3 EU regulation 1024/2013

4 Banks covered by single supervision: http://www.ecb.europa.eu/pub/pdf/other/ssm-listofsupervisedentities1409et.pdf?d719f862cf7c9cef3b85830f463bda3f

5 A more detailed assessment is given in Financial Stability Review 1/2014.

Single resolution mechanism

Detailed discussions for the second pillar of the banking union started in summer 2013, and in July 2014 the Council of the European Union approved the regulation for the single resolution mechanism[6]. Single resolution means that decisions on resolving crises in banks in participating countries will be taken centrally and tax payers will be protected effectively. Decision-making is coordinated to a defined extent. A central single resolution board will be set up to make sure that crises are handled the same way throughout the European Union, and to reduce problems of coordination between member states.

The single resolution board will also manage the single resolution fund that will be set up. The target size of the fund will be 1% of covered deposits, or around 55 billion euros, which will be collected in contributions paid by the banks over eight years. Each bank's contribution is based on the fixed amount determined from that institution's liabilities and a risk adjusted contribution that depends on the risk profile of that institution.

The new single resolution mechanism will start operating from 1 January 2016. The resolution tools are set out in the directive on the recovery and resolution of credit institutions and investment firms[7], which came into force in summer 2014.

From deposit guarantees to a directive on deposit guarantee schemes

The third pillar of the banking union, the harmonisation of guarantees for bank deposits, remains on a back burner for now. The current deposit guarantee system of the European Union was extended by changes to the current directive on deposit guarantees. Among the changes was the harmonisation of definitions for the scope of covered deposits and the shortening of the deadline for repayment from twenty days to seven by 2024 under the directive on deposit guarantee schemes[8]. The directive entered into force in summer 2014.

6 EU regulation 806/2014

7 EU directive 2014/59

8 EU directive 2014/49

1.2. ESTONIAN FINANCIAL MARKETS

Bond and stock markets

The local Estonian securities markets are small in size and quiet in activity. The total capitalisation of bonds issued and stocks quoted on the exchange stood at 2.3 billion euros at the end of August 2014, or 12% of GDP. The small size of the market means that the risks to Estonian financial stability from the local securities markets are small.

A rapid increase in the last quarter of 2013 in the volume of bonds issued proved temporary and was caused by large issues by individual companies (see Figure 1.2.1). The increase in activity in the bond market was not broad based and 19 million euros of new bonds were issued in the first half of 2014, which was about the same as a year earlier.

Because issue volumes for new bonds were low, the total capitalisation of bonds shrank by 4.3% from the start of the year to 541 million euros by the end of August, or 2.8% of GDP.

The secondary market for bonds became even more passive in the first half of the year and an average of around 900,000 euros of transactions were made in each quarter, which is around one third of the quarterly average of the last two years.

The OMXT index of the Tallinn stock exchange fell at the start of March because of geopolitical tensions to below where it had started the year, and the rise in subsequent months was not enough to offset that fall, meaning prices remained down on the exchange (see Figure 1.2.2). By the end of September the index had lost 6% of its value from the start of the year.

The fall in share prices reduced the capitalisation of the Tallinn exchange by 141 million euros over

Figure 1.2.1. Total volume of bonds issued and new bonds issued quarterly

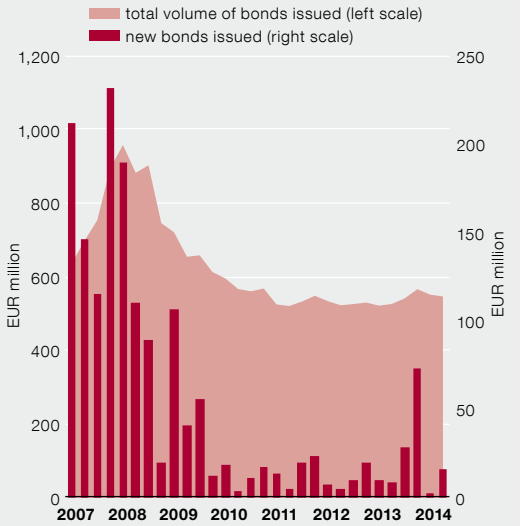
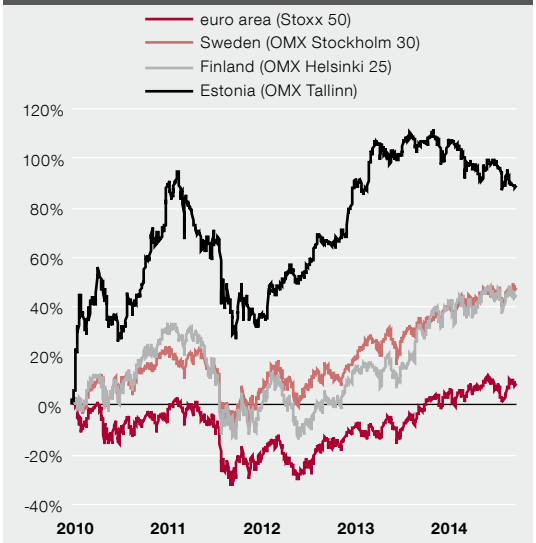


Figure 1.2.2. Tallinn Stock Exchange OMXT index and euro area, Finnish and Swedish indices, change from the beginning of 2010



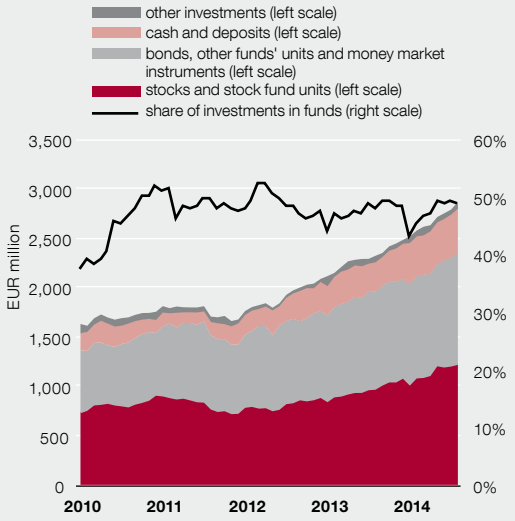
Sources: Bloomberg, Eesti Pank calculations

eight months, so that it stood at 1.7 billion euros or 9.1% of GDP at the end of August.

Trading was thin on the Tallinn exchange throughout the first eight months of the year and turnover was lower in all of those months than the average monthly turnover of the past five years at 11 million euros a month. A majority of the transactions were with the shares of six companies, which together accounted for 90% of all the transactions on the exchange.

The share of non-resident investors was somewhat lower than at the start of the year and their investments provided 40.3% of the capitalisation of the exchange by the end of August, having ended last year with 42%. The biggest retreats were among investors from the Cayman Islands, the USA and Finland. The largest foreign investors were those from Luxembourg, who accounted for 10.7% of the total market value, and those from the Cayman islands, who accounted for 6.9%.

Figure 1.2.3. Structure of investment and pension fund assets and the share of investments in funds

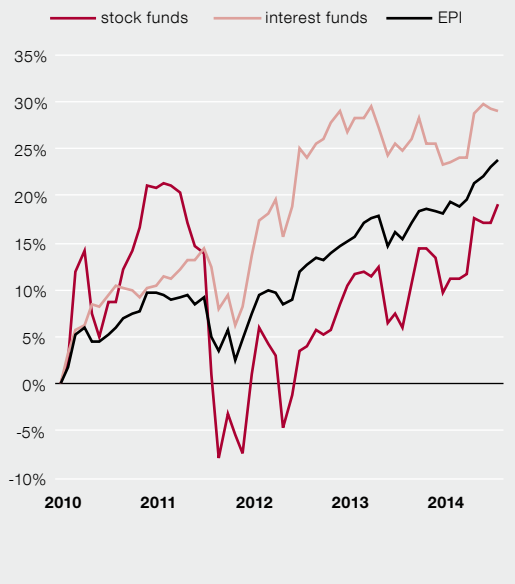


Investment and Pension Funds

The value of the assets of investment funds increased over the year to the end of August by 14.6%. This came from both growth in the value of investments and inflows of cash into the funds. Assets of the second pension pillar were up 18.7% from the start of the year and those of the third pillar by 10.5%. The assets of investment and pension funds were worth almost 2.9 billion euros at the end of August (see Figure 1.2.3) or 15% of GDP. The majority of the assets of the funds were accounted for by the 2.2 billion euros of the pension funds.

The annual returns of both investment and pension funds was positive at the end of August (see Figure 1.2.4). The net value of units in equity funds increased on average by 12.3% over the year and those in interest funds by 3.3%, while

Figure 1.2.4. Changes in the net asset value of investment fund units and the EPI index of Estonian Pension Funds from the beginning of 2010



the EPI index showing the general return of pension funds was up 7.4%.

The structure of investment and pension fund assets has not changed particularly over the past year. Shares and equity funds held 42% of total assets at the end of August, bonds and bond funds 39% and deposits 16%. There was again a relatively large share of fund investments in the structure of investment assets, as almost half of the assets of investment and pension funds were in units of other funds in August this year.

The share of foreign assets in the assets of investment and pension funds was no different at the end of August from what it was at the end of last year at 74%. A dominant proportion of the foreign assets were securities registered in other European countries, which made up 63% of total assets at the end of August. The share of total fund assets that were invested in registered securities in Russia and Ukraine at the end of August was only very small at 1.2%, meaning the direct impact of geopolitical tensions on the value of the assets of Estonian pension and investment funds was also very small.

Box 2: Returns on mandatory funded pensions and the factors affecting them

Mandatory funded pension funds are intended to ease the problems caused by demographic changes and to provide additional income for people beyond retirement age. Everyone born after 1983 must join a mandatory pension fund and this means many people are affected, so in consequence the return on the funds needs to be sufficient and should help achieve the aims of the mandatory funded pension.

The return on mandatory funded pension funds is measured using the EPI indices. There are four of these with different risk levels, called EPI-00, EPI-25, EPI-50 and EPI-75, which cover pension funds which have 0%, 25%, 50% and 75% respectively invested in shares[9]. When considering the return on pension funds it is important to look at real returns as well as nominal returns, as these take account of changes in general price levels and allow assessment of whether the real value of the savings going into the pension is actually increasing.

The nominal value of units in pension funds had risen by the end of July this year by between 2.9% and 4.5% a year on average since the funds were set up, depending on their level of risk. The average real return has been positive for most of the pension funds covered by the EPI-50 and EPI-75, which have larger weightings of shares (see Figure B2.1). However, the value of the other funds with less than 50% in shares has fallen on average.

The return of pension funds is mainly affected by three factors: the overall return of securities markets, the structure of pension fund assets, and the operating costs of the funds.

The average return on securities markets since the pension funds were started does not compare well with earlier returns, and the returns in 2002–2013 were clearly lower than the average

9 The EPI-75 index is not directly comparable with the other three as it was first calculated only in 2010.

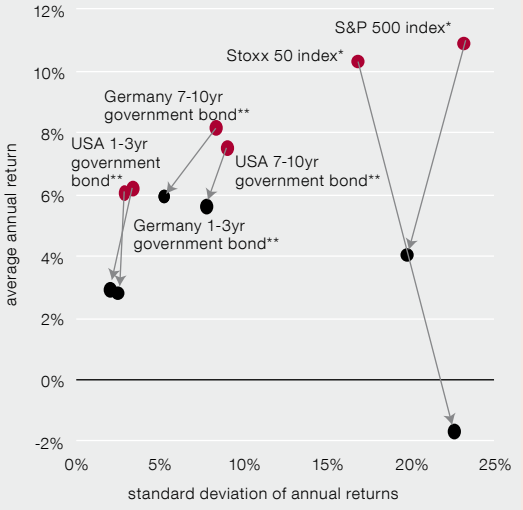
for the preceding years (see Figure B2.2). The overall return on securities markets was affected a lot by the major fall in share prices during the global financial crisis, as the S&P 500 in the USA was down 38% in 2008 and the Stoxx 50 index in Europe was down 44%. The sharp fall in share prices had a negative effect on the returns of pension funds, and the EPI indices fell between 2% and 27% in 2008. The largest losses in value were in pension funds with a heavy weighting of shares. The fall in the pension funds with larger investments in shares in 2008 was almost three times the average annual return prior to that. Investments in shares have historically been riskier than investments in bonds due to the higher volatility of the stock market, but in the longer term investments in shares have had higher returns than investments in bonds.

The assets of Estonian pension funds include a relatively large share of fund investments, which have been at around 50% for five years. This is reflected in the relatively passive investment strategy of the pension funds, as only a relatively small 6% of total pension fund assets are invested directly in company shares. The share of fund investments varies quite widely though and there is no major link between a fund's return and the share of fund investments for the pension funds with larger exposure to shares. This means the relatively large share of investment in funds does not have a significant impact on the return of funds exposed to shares. The average return on bond funds with a larger share of fund investments has in the past three years in general remained

Figure B2.1. Estonian Pension Fund indices and inflation-adjusted Estonian Pension Fund indices

Sources: Pensionikeskus, Statistics Estonia, Eesti Pank calculations

Figure B2.2. Changes in average annual returns of securities markets and changes in standard variations of annual returns



* 1990–2001 vs. 2002–2013
** 1992–2002 vs. 2002–2013
Source: Bloomberg, Eesti Pank calculations

below that of funds with a smaller share in fund investments (see Figure B2.3).

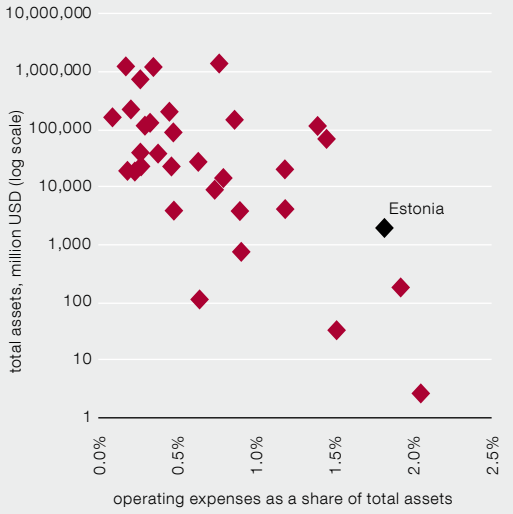
The management fees for pension funds in the Estonian second pillar are fixed and do not generally depend on the volume of assets in the fund or on its returns. The global pension statistics published by the OECD in 2013 show that the operating costs of Estonian pension funds as a ratio to assets were among the highest of any nation in 2012 (see Figure B2.4[10]). This means the operating costs of Estonian pension funds are eating away relatively more of the net return than is the case elsewhere. As the total size of assets of Estonian pension funds is smaller than in other countries, the cost economies of scale are also modest.

The biggest impact on the average return of Estonian pension funds since they were started has come from the fall in securities prices caused by the global financial crisis, which significantly reduced the value of the assets of the funds. The return has also been brought down by operating costs, which are relatively larger than those in other countries. Pension funds with larger investments in shares have managed to make a positive real return since they were set up, but the real net value of units of pension funds with larger investments in bonds has on average fallen at the same time. As the negative impact of low interest rates will probably continue in the near future, the return on funds investing mainly in bonds is likely to remain poor for the time being.

Figure B2.3. Annual average return of pension funds (2011-2013) and share of investments in funds

Sources: Pensionikeskus, Eesti Pank

Figure B2.4. Pension funds' operating expenses as a share of total investments and total assets in selected OECD and non-OECD countries, 2012



Source: OECD Global Pension Statistics

10 The structures of the national pension systems in the Figure may be different.

1.3. MARKET-BASED FINANCING OF BANKING GROUPS

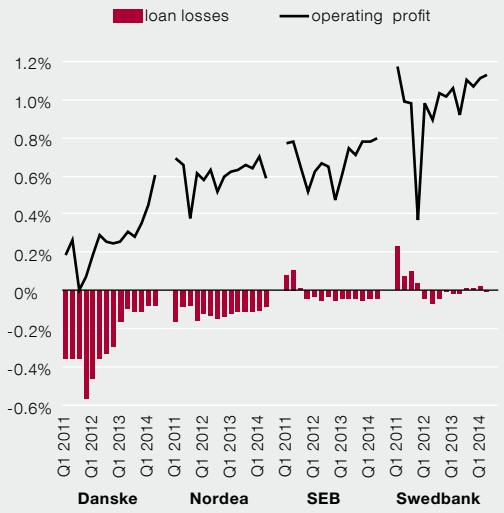
Financial strength of the groups of parent banks

The **operating environment** of the Nordic banks has been affected by low interest rates in the past half year, and together with continuing confidence in the banks this has lowered the cost of market based funding, though at the same time it has also reduced the net interest margin earned from the difference in the prices of lending and deposits. Low base interest rates have reduced the cost to clients of servicing loans and have encouraged investment activity. Rises in stock markets have led to increases in the value of assets under management and have also increased the income earned from service fees.

The **profitability** of the four biggest bank groups operating in Estonia was stable or increasing in the first half of 2014 (see Figure 1.3.1).

Improved profits and the expectation of stricter requirements have led to improved **capitalisation of the banking groups**. The Common Equity Tier 1 of Swedbank stood at 20.9% of risk weighted assets at the end of the second quarter, while the figure for SEB was 16%, for Nordea it was 15.2%, and for Danske Group it was 14.5%.

Figure 1.3.1. Nordic banking groups' operating profit and loan losses as ratio of total assets



The banking groups consider that the main danger ahead is that the economies in their regions of operation will recover more slowly than expected. It is expected that the effect of tensions and sanctions between the European Union and Russia will mainly be felt via domestic clients. The banks only have small direct positions in Ukraine and Russia (see Table 1.3.1). The biggest loan positions, at around 2% of total assets of the group, are held by Nordea, which finds that the lending volumes and margins of its subsidiary in Russia did not change significantly in the

Table 1.3.1. Geographic distribution of the positions of Nordic banking groups

	Danske	Nordea	SEB	Swedbank
Sweden	9%	25%	72%	86%
Norway	9%	16%	2%	3%
Demark	67%	24%	1%	0%
Finland	12%	28%	1%	1%
Baltic states	1%	2%	8%	10%
Germany	0%	0%	13%	0%
Russia	0%	2%	0%	0%
Ukraine	0%	0%	0%	0%
other	2%	3%	3%	0%

Source: Banks public reports, Riksbank

first half of 2014. The Finnish economy is most vulnerable to a worsening of trade relations with Russia as Russia takes around 9% of Finnish exports. However, the overall impact of sanctions in the near future is expected not to be very significant.

Although the economic outlook for the Nordic countries has been corrected downwards in recent months, particularly because the recovery in export markets is expected to be slower, a resurgence in the external environment is still expected in the longer term.

While companies are continuing to be quite conservative in their borrowing, the borrowing behaviour of households has not been affected so much by geopolitical tensions or downward revisions of expectations for economic growth, despite high debt burdens[11] (see Figure 1.3.2). As lending has increased, so real estate prices have risen (see Figure 1.3.3).

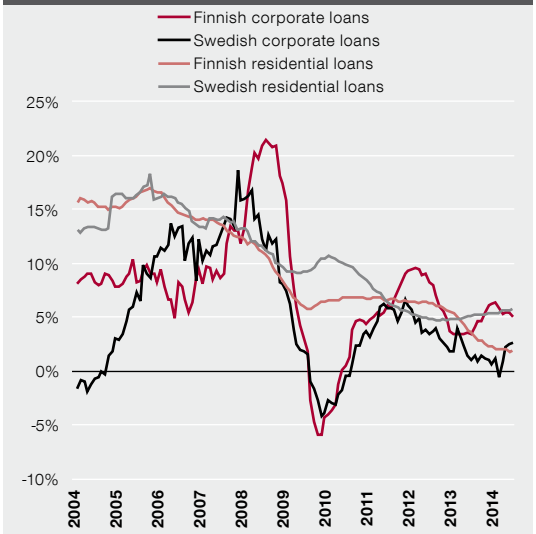
Household debt burdens are seen as a possible accelerator of negative trends in the Nordic countries. It is assumed that any decline in confidence will restrict household consumption, and this will then reduce domestic demand.

To boost confidence in the banks and to head off the dangers that may have been underestimated, the central banks, supervisory authorities and ministries of the Nordic countries have already taken and planned various **measures to increase confidence in the banks**.

In **Sweden** the financial supervision authority announced in September that bank groups there will have to follow a risk weight floor of 25% for real estate loans issued in Sweden (see

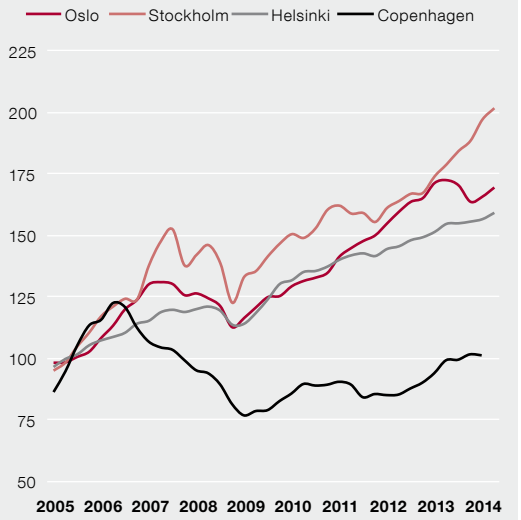
11 The household debt burden in Denmark exceeds 250% of gross disposable income, in Norway it is about 200%, in Sweden it is 150% and in Finland it exceeds 100%.

Figure 1.3.2. Annual loan growth in Finland and Sweden



Source: European Central Bank

Figure 1.3.3. Price indices of apartments in capital cities of Nordic countries



Sources: statistical offices, Valueguard, Association of Danish Mortgage Banks

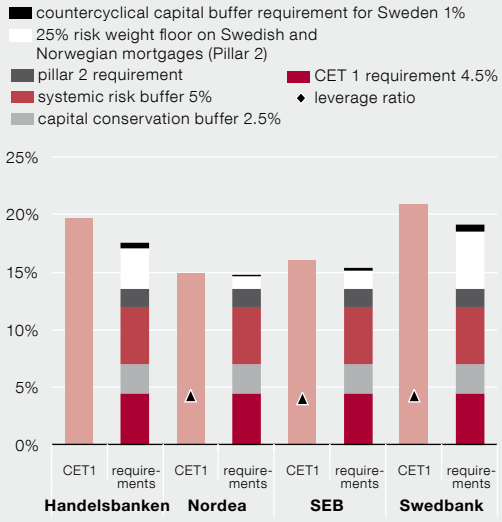
Figure 1.3.4). Norway had already announced a plan to introduce a risk calculation methodology for real estate loans issued in Norway that will have a similar effect to a risk weight floor of 20-25%, and so the Swedish authorities have decided to ask the banks to apply a minimum risk weight of 25% in solidarity on real estate loans issued in Norway. On top of this, from summer 2015 banks will also have to hold common equity tier 1 funds of 1% of loans issued in Sweden to meet the countercyclical buffer requirement. It is expected that in future banks will further reduce their share of non-amortising loans and the principles for assessing the ability of bank clients to service their loans are to be further harmonised.

As well as tightening the capitalisation requirements for real estate loans and imposing a requirement to hold countercyclical buffers, Sweden will introduce a systemic risk buffer of 5% on a consolidated basis for systemically important banks from 1 January 2015. Two percentage points of this is planned as a supervisory requirement.

In **Norway**, increased minimum requirements for risk calculations will apply for domestic real estate positions approximately equalling a risk weight requirement of 20-25%. In addition, a 1% countercyclical buffer will apply for domestic positions from July 2015, and an additional requirements of 1% for systemically important institutions will come into force from July 2015 and July 2016 on top of the 3% systemic risk buffer that currently applies.

In **Denmark** the principles for provisioning for problem loans and risk assessments for banks have been made stricter. Changes are planned to regulations to put more of the risk arising from mortgage-backed securities onto the buyer of the securities. The long-term goal for capitalisation is gradually to raise the CET1 requirement to 10.5% for all banks, while it is planned that requirements for systemically important banks will rise to 13.5% by 2019.

Figure 1.3.4. The major Swedish banks' CET1 capital ratios in Q2 2014 and the planned requirements



Sources: public reports of banking groups, Finansinspektionen

In **Finland** the focus has mainly been on economic policy measures outside the banking sector.

Financing and liquidity of parent banks

Market-based financing supplies almost half of the funding base for Swedish banks and a large part of it is in bonds issued in foreign currencies (see Figure 1.3.5). This makes the funding of Swedish banks vulnerable to shocks in the financial markets that could cause foreign investors to lose their desire to invest in such securities.

Almost half of the funds from financial markets are covered bonds, which are mostly backed by mortgage loans that the banks have issued. Although the value of the collateral provided by

mortgages is sufficiently higher than the value of the covered bonds, with excess coverage of more than 40% for the most part, there remains the danger that it could become harder and more expensive for banks to issue new covered bonds if households should have difficulties meeting repayments.

One possible risk identified by Riksbank in its 2014 Financial Stability Review[12] was the structural liquidity risk of Swedish banks, which reflects the relatively large difference in the maturities of the liabilities and assets of the banks. A large part of the long-term assets of the Swedish banks in the form of housing loans and corporate loans are covered by short-term financing from the financial markets. The structural liquidity ratio[13] calculated by Riksbank is below the average for other comparable European banks for all the larger Swedish banks.

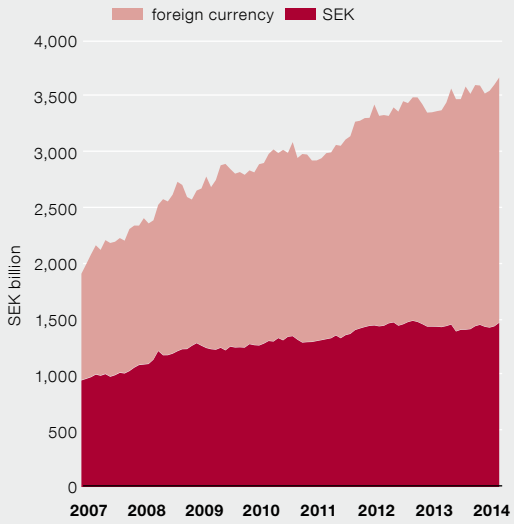
The structural liquidity risk of the Swedish banking system is also exacerbated somewhat by the interlinkages in the market-based financing of the banks. The Riksbank finds[14] that the larger banks held nearly 20% of each other's covered bonds. Some of these are held to maintain liquidity buffers and to fulfil market-maker obligations, which are often financed with very short-term funds like certificates and repos. This means that a part of the long-term loans, principally mortgages, are funded in the banking system by funds that have a maturity of less than a year. Although there is usually sufficient liquidity in the covered bond market, the arrival of tensions could significantly harm liquidity in the market and could lead to problems with funding.

12 Financial Stability Report 1/2014, Riksbank.

13 The structural liquidity ratio shows the proportion of less liquid assets that are covered by stable financing.

14 Financial Stability Report 1/2014, Riksbank.

Figure 1.3.5. Wholesale funding of the major Swedish banks



Source: Riksbank, Financial Stability Report 1/2014

To strengthen the funding structure of the banks, the eight largest banks in Sweden have been subject to a minimum liquidity coverage ratio, LCR, of 100% since 2013, both in overall terms and for the euro and the dollar separately. The Swedish central bank has recommended to the supervisory authorities that a separate LCR of 60% should be set for the positions of the banks in Swedish krona.

The latest economic reports from the banks make clear that their short-term liquidity is good and their buffers are sufficient. The banks exceeded the minimum liquidity coverage ratio, both overall and for the euro and the dollar separately. As a relatively large part of the funding from financial markets is in foreign currency however, the liquidity buffers of the banks are also mainly in foreign currency, and the liquidity in Swedish krona is backed by foreign exchange swap contracts. This is why the LCR in krona is

lower and was 50% for the biggest bank groups last year in the estimate of Riksbank.

Market participants have so far considered Swedish banks to be relatively secure and this has allowed them to get funding from the markets easily and cheaply. The market interest rate of the covered bond, the main market-based funding instrument used by the Swedish parent groups, fell even further this year (see Figure 1.3.6).

Figure 1.3.6 Average covered bond yields of Swedish parent bank groups*

Source: Bloomberg, Eesti Pank calculations
*Swedbank, SEB, Nordea (arithmetic average)

2. THE REAL ECONOMY AND LOAN QUALITY

2.1 THE CREDIT PORTFOLIO OF BANKS[15]

The total volume of **loans and leases** given by banks to the non-financial sector started to increase in the second quarter of 2014, having grown very slowly in the first quarter. At the end of August the credit portfolio stood at 15.5 billion euros and had grown by 3.3% over the year (see Figure 2.1.1).

The corporate loan portfolio grew more slowly year on year in the first quarter, mainly due to reduced borrowing from the logistics and infrastructure sector. Growth picked up again in the second quarter. The fastest growth over the year was in the loan portfolios of real estate and construction and the manufacturing sector (see Figure 2.1.2). Growth slowed in the loan portfolio of the primary sector, but it still remained quite fast, and relatively fast growth was also seen in loans to the trade sector from the second quarter. The largest growth was in long-term loans for investment, though there was also a significant increase in short-term loans to manufacturing and trade, particularly in the form of factoring and overdrafts. At the end of August the corporate loan portfolio stood at 8.1 billion euros and had grown by 4.9% over the year.

The household loan portfolio continued to expand in the first half of the year, and by the end of August its annual growth had reached 1.6%. Even though the real estate market stabilised in the second quarter, one fifth more new housing loans were issued during the first eight months of the year than in the same months of the previous year. Repayments of old loans meant that the total stock of housing loans grew only moderately, by 2.1% over the year. The decline in the stock of other household loans went into reverse this year. The car lease portfolio has been grow-

15 The credit portfolio contains loans, leases and factoring.

Figure 2.1.1. Annual growth rates of banking sector loans and leases to businesses and households

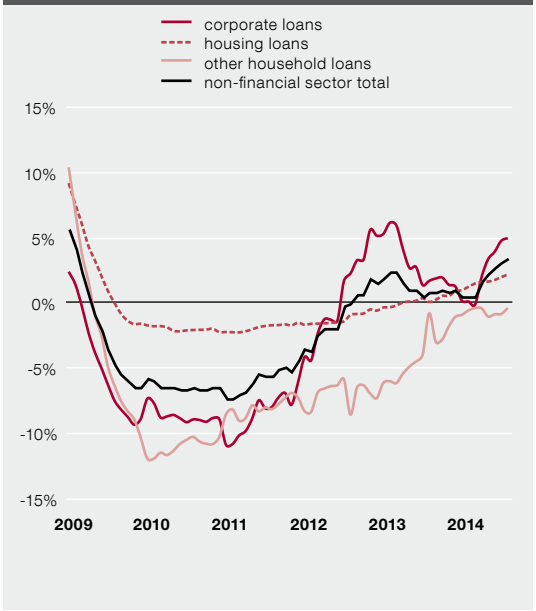
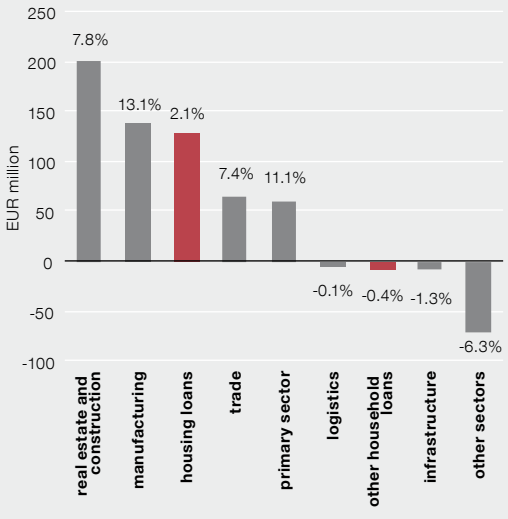


Figure 2.1.2. Annual growth in loans and leases to businesses and households as at 31/08/2014

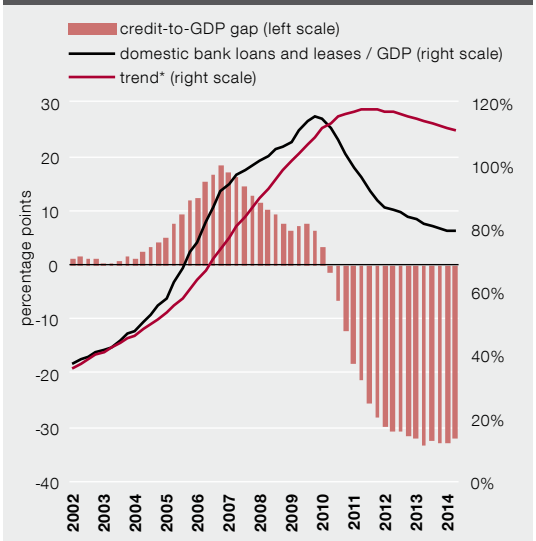


ing for several years, but in the second quarter consumer loans started to increase gradually and so the total portfolio of other household loans has started to grow in recent months as a result. At the end of August the total portfolio was still 0.4% down on a year earlier, and overdrafts, credit cards and consumer loans were 3.1% down, but the stock of car leases was 8.5% larger over the year.

The structure of the credit portfolio of banks saw the share of corporate loans increase slightly, mainly due to increased lending to the manufacturing, real estate and construction, trade, and primary sectors. The share of housing loans in loans to households increased.

Eesti Pank's updated forecast released in autumn 2014 predicted that the credit portfolio of the non-financial sector will grow by 3.9% this year and this growth is expected to speed up to 4.5% next year.

Figure 2.1.3. Ratio of domestic bank loans and leases to GDP and the credit-to-GDP gap



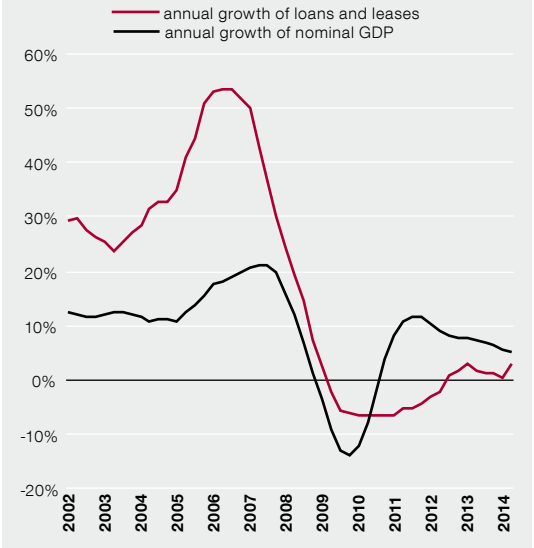
Sources: Statistics Estonia, Eesti Pank
* HP filter (lambda = 400,000)

Assessment of the need for a countercyclical buffer requirement

Countercyclical capital buffers are applied to increase the resilience of the banking sector and to reduce the impact of the economic cycle on the lending behaviour of banks. Countercyclical capital buffers need to be required if excessively fast credit growth is leading to risks building up and systemic risks increasing.

The starting point for assessing the need for a countercyclical capital buffer requirement is the credit-to-GDP ratio and its deviation from the long-term trend, the credit-to-GDP gap. The credit-to-GDP gap in Estonia has been negative at about 30 percentage points since 2012, and is calculated to remain negative for the next several years (see Figure 2.1.3). However, a negative

Figure 2.1.4. Annual growth of the loan and lease portfolio of banks and nominal GDP



Sources: Statistics Estonia, Eesti Pank

credit-to-GDP gap does not make it impossible that increases in debt could start to create systemic risks sooner, and so other indicators also need to be considered in the assessment of the need for buffers. It is most important to observe changes in credit growth and how it differs from economic growth. Growth in the loan and lease portfolio to the non-financial sector has been relatively moderate this year and has remained slower than nominal economic growth (see Figure 2.1.4). The updated forecast released in September by Eesti Pank expects that credit growth in the non-financial sector will be slower than nominal GDP growth in 2015 and 2016, and so Eesti Pank does not consider it necessary to impose countercyclical capital buffers in the fourth quarter of this year or the first quarter of next.

2.2. THE LOAN REPAYMENT ABILITY OF COMPANIES

Although the financial results of companies in the first half of 2014 worsened somewhat, their repayment ability remained good. The relatively rapid improvement in their results in recent years, moderate borrowing, and a conservative approach to paying out dividends mean that the liquidity and capitalisation of companies have been good. Their ability to repay is also supported by very low interest rates and these factors together have allowed the payment behaviour of companies to improve too, and this has reduced the volume of problem loans[16]. The current financial buffers are very probably sufficient to prevent major payment problems arising if short-term difficulties crop up. In the longer term it is important when external demand recovers and how quickly, and whether the adjustment in wage costs to the reality of slower economic growth continues.

The general economic environment and corporate financial results

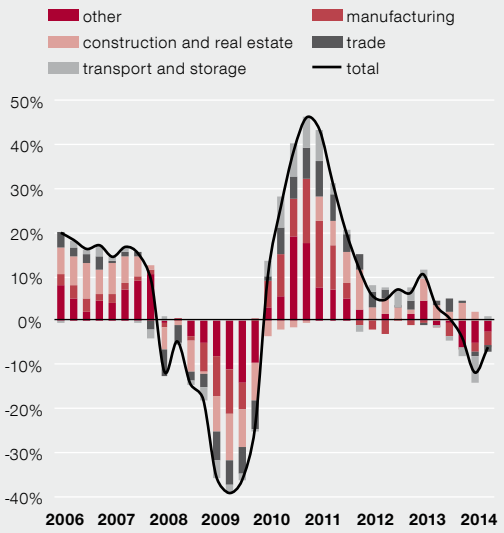
Developments in the external environment have remained uncertain. There was some recovery in growth in the euro area in the second half of last year and at the start of this, but growth ceased in the second quarter. Economic confidence worsened in the third quarter, and the sanctions imposed by Europe and Russia on each other added to this. While growth has continued to stall in Finland, it has remained quite fast in Sweden, Latvia and Lithuania, with support from domestic demand.

Like it did last year, **the Estonian economy** continued to grow modestly in the first half of this year. Growth was still barely noticeable in the first quarter, but in the second it picked up to 2.4% year on year. Growth is still mainly supported by domestic demand, and exports have remained at a fairly constant level for the past year and a half.

The financial results of Estonian companies are somewhat worse than they were last year. Corporate **sales turnover** was about the same in the first half of this year as it was a year earlier. Although the labour market has started to adjust to moderate economic growth, wage growth remained quite fast in the first half of the year despite slowing. Corporate **profits** are down on a year earlier as a result (see Figure 2.2.1). Profits have fallen in most sectors, including manufacturing, wholesale, construction, energy, and transport and storage. Profits have, however, increased in real estate, retail trade, finance and insurance activities, and accommodation and restaurants.

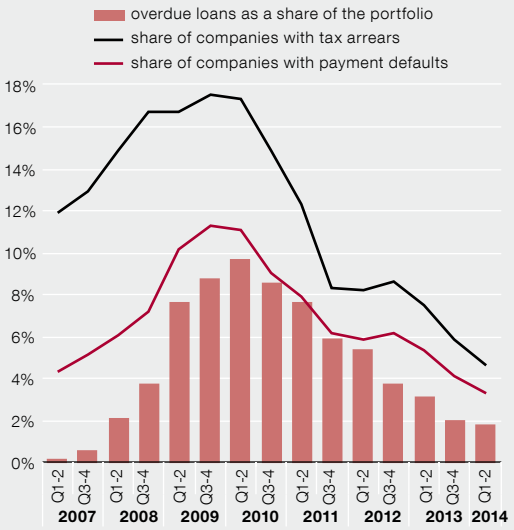
16 See also section 2.5 Asset quality

Figure 2.2.1. Profit (operating surplus and mixed income) growth by sectors



Source: Statistics Estonia

Figure 2.2.2. Payment behaviour of companies



Sources: Krediidiinfo, Eesti Pank

Payment behaviour of companies and bankruptcies

The payment behaviour of companies continued to improve in the first half of the year. The shares of companies with **payment defaults** and **tax arrears** both fell to the lowest levels seen in the past eight years (see Figure 2.2.2). These shares fell for companies of all sizes in almost all the main sectors. The share of companies with payment defaults and tax arrears is still highest in accommodation and restaurants and in construction.

Although the **number of bankruptcies** has risen slightly, it is still very low at around the level it was during the boom.

Financial status and payment capacity of companies

Slower nominal economic growth and somewhat increased borrowing mean that the decline in

Figure 2.2.3. Indicators of the ability of companies to repay loans

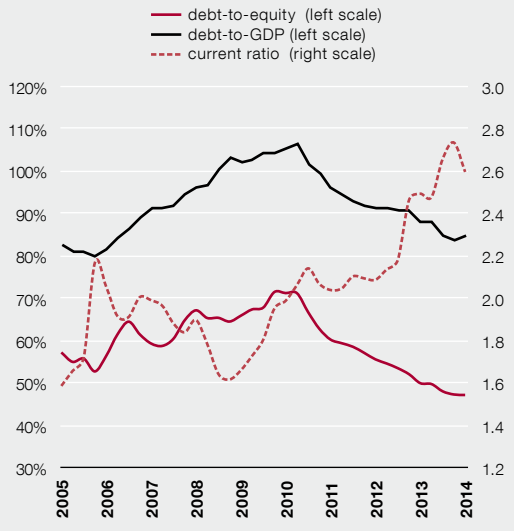
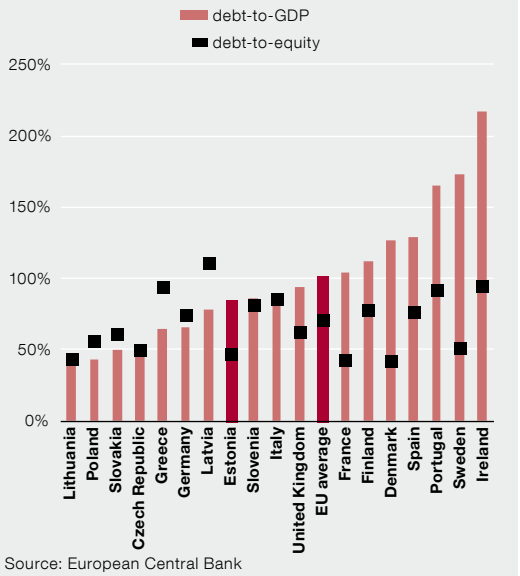
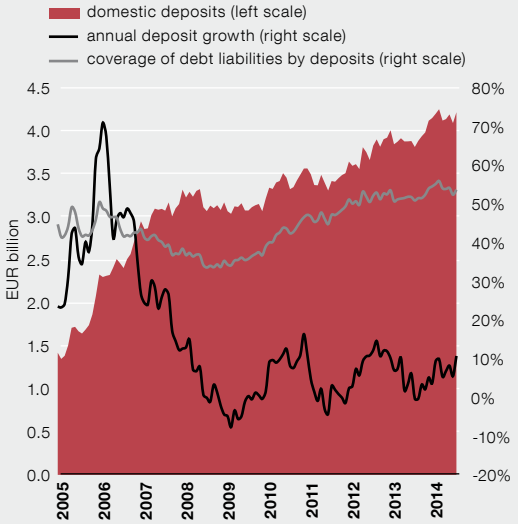


Figure 2.2.4. Corporate indebtedness and leverage in selected European Union countries at end 2013



Source: European Central Bank

Figure 2.2.5. Volume and growth of corporate deposits



corporate **indebtedness**, or debt as a ratio to GDP, has stopped. Corporate **financial leverage**, or the ratio of corporate debt to equity, still fell further at the start of this year as companies reinvested the lion's share of their profits, meaning the growth in corporate equity was again relatively fast (see Figure 2.2.3). The indebtedness and financial leverage of Estonian companies is relatively small in comparison to the past decade and to other member states of the European Union (see Figure 2.2.4).

The financial buffers of companies continue to increase. Rapid growth in deposits means that the ratio of deposits to debt liabilities is high by the standards of the past decade, despite some acceleration in growth of the corporate loan portfolio (see Figure 2.2.5). The corporate **interest burden** is being held down to an extent by very low base interest rates, as it was earlier.

2.3. THE LOAN REPAYMENT ABILITY OF HOUSEHOLDS

Consumer confidence in both Estonia and the euro area remains higher than its long-term level, but in recent months it has declined slightly (see Figure 2.3.1). This is borne out by data from the Estonian Institute for Economic Research, which show that the main reason for a fall in the confidence of Estonian residents has been worries about the outlook for the economy. At the same time, expectations for savings and the labour market have not changed much. The consumer price index has remained very stable this year and that has lowered consumers' expectations about inflation.

Rises in gross monthly wages slowed in the second quarter of the year to 4.8% from 7.3% in the first quarter (see Figure 2.3.2). Rapid wage growth was not in line with lower levels of economic

Figure 2.3.1. Consumer confidence indicator

Sources: Estonian Institute of Economic Research, European Commission

Figure 2.3.2. Unemployment rate and average gross wage and deposit growth

Sources: Statistics Estonia, Eesti Pank

activity as the profits of companies were eroded in the difficult external environment. Labour costs have so far increased at the expense of profit margins, and so a correction in wage growth was to be expected. As consumer prices have risen only moderately over the year, real wages increased by 4.8% in the second quarter.

Unemployment fell year-on-year for the second quarter in a row (see Figure 2.3.2) and in the second quarter it stood at 6.9% and was below the euro area average. The fall in unemployment was affected by the decline in labour force participation. The employment rate increased slightly to 63% of the working-age population, which is close to where it was in 2007 and 2008.

Annual growth in household deposits started to pick up at the end of last year and by the second quarter of this year it had reached 7.9%. Growth in deposits was aided by rapid wage growth, though it was probably also raised by falling

Figure 2.3.3. Household deposits

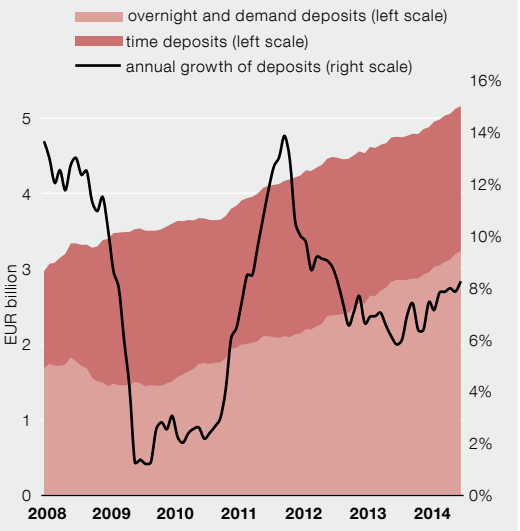


Figure 2.3.4. Household indebtedness

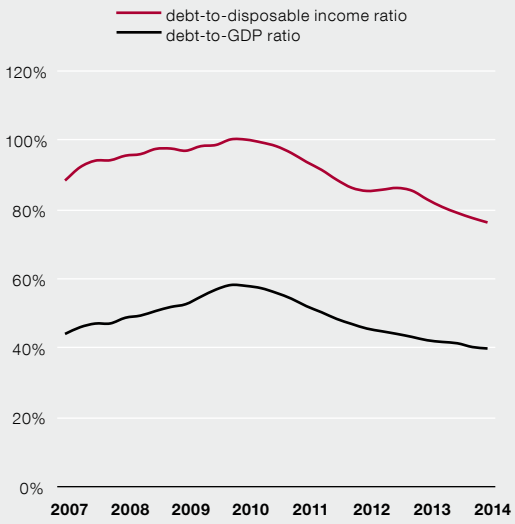
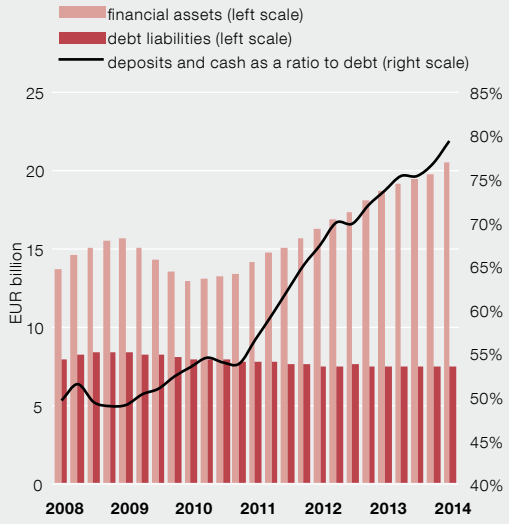


Figure 2.3.5. Financial position of households



confidence. As interest rates on term deposits are low, the main growth has been in overnight and demand deposits, which increased in value to 3.2 billion euros. The value of term deposits has remained at 1.9 billion euros for more than a year by now (see Figure 2.3.3).

The household debt burden has fallen steadily since 2010 and debt as a ratio to disposable income fell below 80% in the second quarter of 2014, while the debt burden fell to 40% of GDP (see Figure 2.3.4).

The financial position of households is generally good as debt liabilities have not changed much while household financial assets have increased at the same time (see Figure 2.3.5). Household deposits and cash as a ratio to total debt are at a high level, climbing to nearly 80% in the second quarter.

The household interest burden remained low in the first and second quarters of this year (see

Figure 2.3.6. Household interest burden

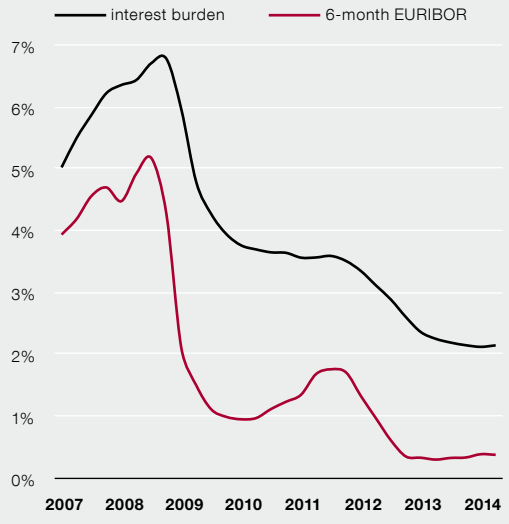


Figure 2.3.6). This was helped by slow growth in the loan and lease liabilities taken on. Interest rates on loans and leases have remained low at the same time and household disposable income has increased.

As wage growth has slowed but remains positive and the labour market is generally favourable, there is no reason to doubt the continued ability of households to repay their loans.

Box 3: Macroprudential requirements for housing loans

Changes to the Credit Institutions Act that came into effect on 19 May 2014 gave Eesti Pank the right to set requirements for loans issued by credit institutions. Among these were limits on the loan-to-value (LTV) ratio, the borrower's debt service-to-income (DSTI) ratio, and the maximum maturity of loans. Unlike many other European Union member states, Estonia has not previously set these limits as a numerical value in regulations or in the supervisory guidelines. The banks operating in the credit market have set their own internal limits on these ratios and have defined the principles for the calculation of reasonable debt burdens for borrowers in line with the EFSA's guidelines for responsible lending.

The requirements for loans are an important part of those macroprudential tools that aim to prevent excessive loan growth and financial leverage and to increase the resilience of credit market participants to any negative events. As the LTV and DSTI limits restrict the loan amount available to borrowers, they help to reduce demand for real estate financed with loans during the upswing of the real estate cycle, and help reduce upward pressure on housing prices.

Demand for loans from Estonian households has been modest in recent years and the lending standards of banks are generally appropriate for the current macroeconomic environment, so the new requirements for lending can be introduced in such a way that they do not significantly affect the current credit environment. Setting these limits is important for avoiding credit booms, as they help stop standards being loosened if competition between the banks increases in the housing loan market. If risks start building up significantly in the real estate market and the risk behaviour of lenders and borrowers amplifies the cyclical upswing, then Eesti Pank will be able to tighten the requirements that are already in place. It is assumed that this would lead to a reduction in lending and would lower the chances of a housing bubble inflating.

Eesti Pank plans to introduce three limits concurrently to regulate the issuance of housing loans (see Table B3.1). The requirements will apply for housing loans issued in Estonia by all banks operating in Estonia, including the branches of foreign banks. The requirements will apply from the start of 2015. The baseline for deciding where to set the limits will be the banks' lending standards in the autumn of 2014. Macroprudential requirements for mortgage lending have also been applied to most of the parent banks of banks operating in Estonia, and there is, for example, an LTV limit of 85% in Sweden and Norway.

Table B3.1. Eesti Pank's proposed requirements for housing loans

	Requirement	Maximum permitted level
1	**Loan-to-value (LTV) limit for housing loans** Limit on the ratio of a housing loan to the value of the real property used as collateral	85%*
2	**Debt service-to-income (DSTI) limit** Limit on the ratio of total loan and interest payments of a new housing loan and all current loans of a household to the net income of the household	50%
3	**Maximum length of a housing loan**	30 years

* For housing loans guaranteed by state foundation KredEx the maximum limit of the LTV is 90%
Allowed exceptions: up to 15% of the amount of housing loans issued in a month

To ensure that banks have sufficient flexibility in making decisions about lending and in assessing the risks associated with it, and thus to help make sure that the credit market operates as efficiently as possible, Eesti Pank plans to add another regulatory option that would permit banks to issue a predefined share of housing loans that breach the limits.

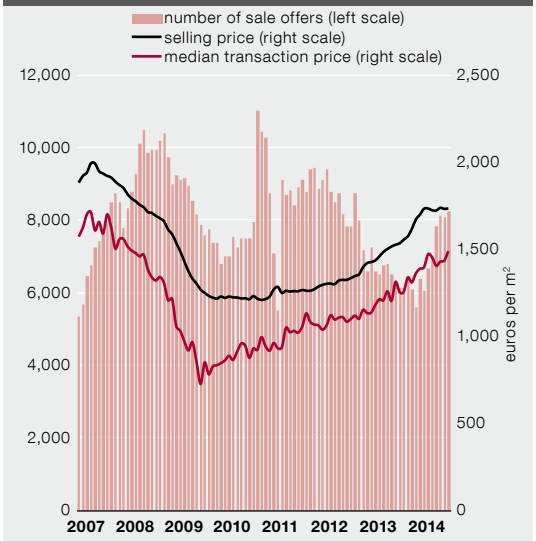
2.4. THE REAL ESTATE MARKET

The housing market

The Estonian real estate market has started to stabilise as prices are rising more slowly and the number of transactions has clearly fallen. At the start of the year the number of apartment transactions was 13% up on the year, but in the third quarter the number of transactions was down 12% on average for the whole of Estonia, and down 10% in Tallinn. Both resident private people and foreigners made fewer real estate transactions in the third quarter for the first time. At the same time, the number of properties on sale on the real estate website KV.EE has been increasing since the middle of last year (see Figure 2.4.1). The price index for apartments stopped rising in the second quarter of this year (see Figure 2.4.2). The price index for land with buildings, which sees around half the number and value of transactions that apartments do, rose slightly, as did that for land without buildings.

The median apartment price in Estonia rose by 8% in the third quarter of 2014, which is less than

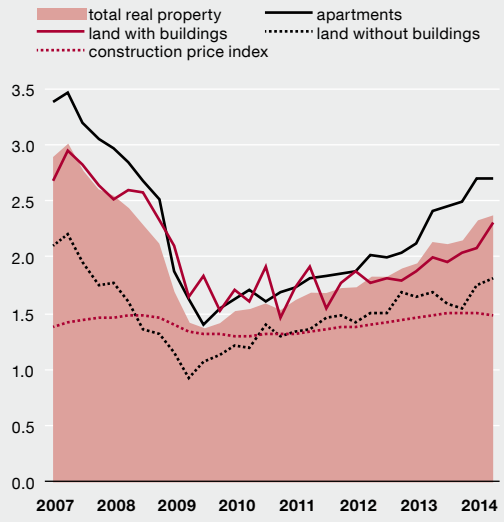
Figure 2.4.1. Selling and transaction prices of Tallinn apartments and number of sales offers



Source: KV.EE

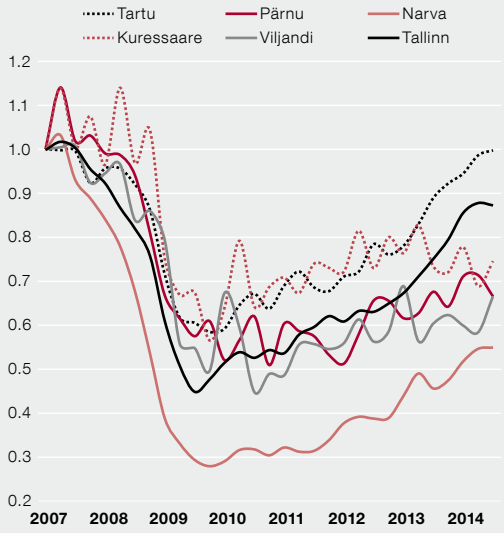
in the first half of the year, and prices are rising more slowly in all the larger towns in Estonia (see Figure 2.4.3). The median price of a square metre in an apartment in Tallinn has been between 1300 and 1400 euros since the start of the year,

Figure 2.4.2. Real property price indices, Q2 2003 = 1



Sources: Estonian Land Board, Statistics Estonia, register of construction works

Figure 2.4.3. Growth in median square metre price for apartments, Q1 2007 = 1



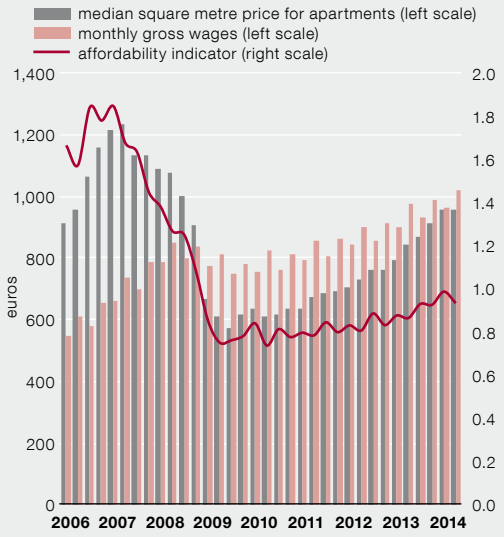
Source: Estonian Land Board

and this is 15% below the peak reached at the height of the boom in 2007.

The housing affordability index, which shows the relationship between the median price of apartment transactions and average gross wages, has been rising for a long time. This indicates that real estate prices are rising faster than gross monthly wages (see Figure 2.4.4). The affordability indicator averaged 0.94 in Estonia in the second quarter of the year and was slightly higher in Tallinn, as usual, at 1.16. The worsening affordability of apartments has probably also driven the rise in the index for rents, which was up 13% over the year in July, when the index hit an all-time record peak and stood 75% higher than in 2005.

Low interest rates and the rise in real estate prices in the past quarters have made real estate development projects more profitable. This is reflected in the number of permits issued for

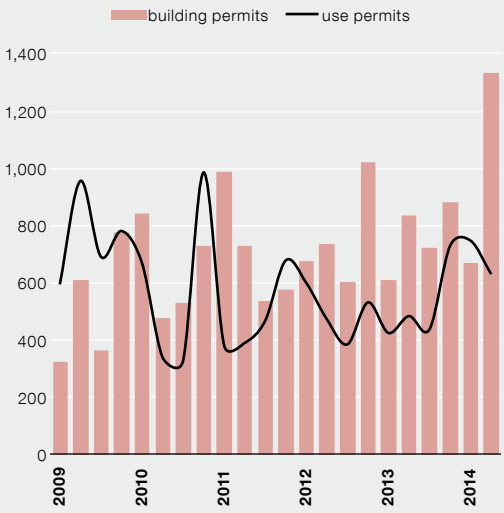
Figure 2.4.4. Real estate affordability



Sources: Estonian Land Board, Statistics Estonia

building residential space, which jumped to over 1300 in the second quarter (see Figure 2.4.5). Although it is some time since so many building permits were issued, looking back further there was a point when over a thousand building permits were commonly issued in a quarter, and during the boom some 4000 building permits were issued per quarter.

Figure 2.4.5. Building and use permits issued for residential real estate



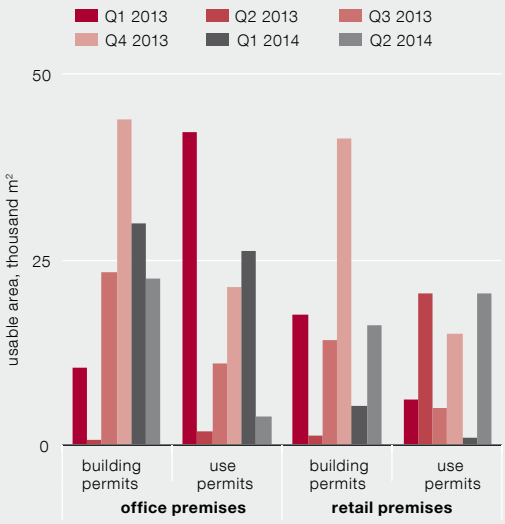
Sources: Stiatistics Estonia, register of construction works

The commercial property market

The average usable area of the new non-residential buildings to be built under the building permits issued was 30% larger in the second quarter of this year than a year earlier. The usable area of retail premises where work has started was notably bigger, increasing from the 10–20,000 square metres a quarter that has been typical in recent years to around 137,000 square metres.

Real estate administrators variously put the available office space in the second quarter at 3–7%, though the occupancy rate for high-quality office buildings in central Tallinn was almost 100%. As the usable area of office space with building permits increased both at the end of last year and in the first half of this, the amount of available space may soon start to increase somewhat once the development projects are completed (see Figure 2.4.6).

Figure 2.4.6. Building and use permits issued for commercial real estate



Source: Statistics Estonia

2.5. QUALITY OF ASSETS

The quality of the loan portfolio of the banks continued to improve in the first half of 2014, but more slowly than before. **The stock of loans overdue by more than 60 days** fell to 251 million euros by the end of August and was 28% smaller than a year earlier. Overdue loans made up 1.8% of the total portfolio, which was 0.8 percentage point less than a year before (see Figure 2.5.1).

Figure 2.5.1. Share of overdue loans and provisions in the loan stock

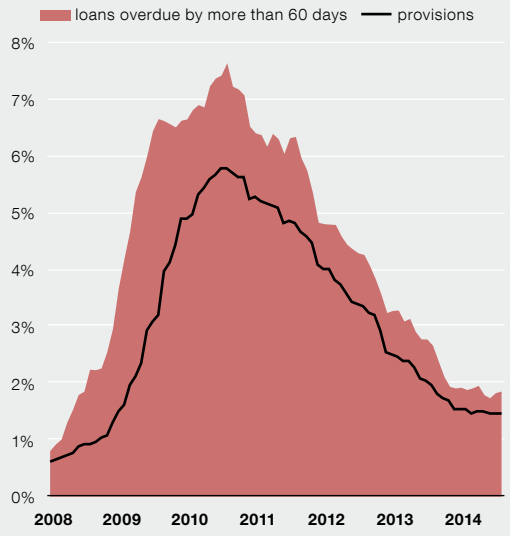
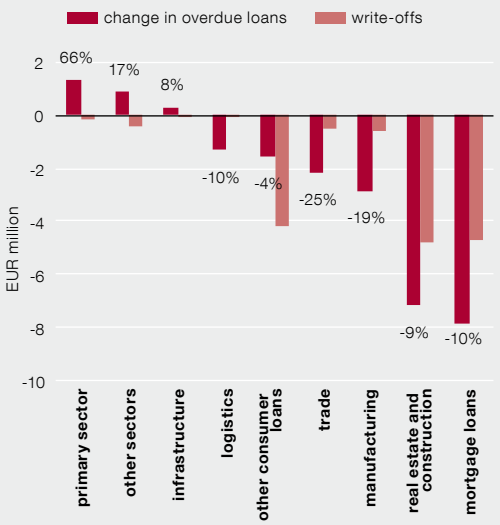


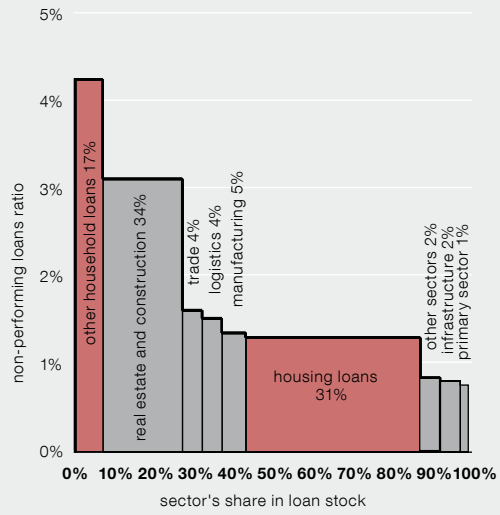
Figure 2.5.2. Change in loans overdue by more than 60 days and write-offs in the first half of 2014



Although the value of overdue loans increased slightly in the first quarter, it started to shrink again in the second. This was primarily driven by write-offs, which accounted for about 75% of the reduction in overdue loans in the first half of the year. The amount of write-offs can vary quite widely, and for example they only accounted for less than half of the reduction in overdue loans in the second half of last year.

The main reduction in overdue loans in the first half of the year came in loans to the real estate and construction sectors and in housing loans (see Figure 2.5.2). Loan quality also improved substantially for trade, manufacturing and logistics companies. Although there was an increase in overdue loans to the primary and infrastructure sectors in the first half of the year, these small sectors continue to be among the best for loan quality as fewer than 1% of loans were overdue in August (see Figure 2.5.3). There is no direct threat to financial stability from any of these changes.

Figure 2.5.3. Structure of the loans overdue by more than 60 days as at 31/08/2014*



*Area represents sector's share in loans overdue by more than 60 days

The quality of the loan portfolio also improved because of a reduction in the number of **loans restructured** because of repayment problems. The stock of loans restructured but overdue by less than 60 days fell to 208 million euros by the end of August and was down 64 million euros or 24% on the year. Such loans accounted for around 1.5% of the portfolio at the end of August, at which point 3.4% of the loans in the portfolio were restructured or long overdue, which was 1.3 percentage points fewer than a year earlier

Together with the fall in overdue loans there was also a reduction in **provisions**, which stood at 199 million euros at the end of August, which is one quarter less than a year earlier. The ratio of provisions to overdue loans remained high at around 80% in August and 1.5% of the loan portfolio was covered by provisions.

The **securities portfolio** of banks operating in Estonia was more than twice as large at the end of August as it was a year earlier at 1.5 billion euros. Although most of the increase in the securities portfolio came last year, it increased by another 15% this year and accounted for 7.2% of the assets of the banking sector. A large majority of 80% of the securities in the portfolio are sovereign bonds and bonds of credit institutions and other financial institutions. The largest increase has been in the holdings of sovereign bonds, and mainly in those issued by large Western European countries like France, Germany and the Netherlands. There has however been a decline in the stock of securities of financial institutions since the start of the year, particularly those of firms from Germany and Luxembourg, though the holdings of securities from French credit and financial institutions have increased significantly.

The conflict between Ukraine and Russia has increased the risk of securities from those countries, but this does not have a major impact on banks operating in Estonia as there were no holdings of Ukrainian securities at the end of August and Russian securities accounted for about one thousandth of the total securities portfolio of the banking sector.

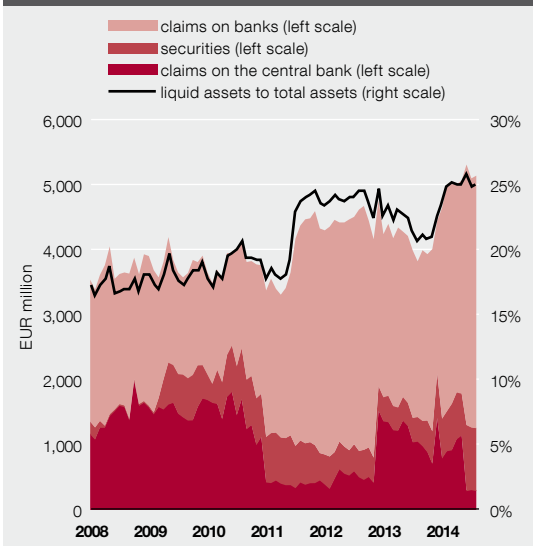
3. THE STRENGTH OF FINANCIAL INSTITUTIONS

3.1. BANKS

Liquidity and funding

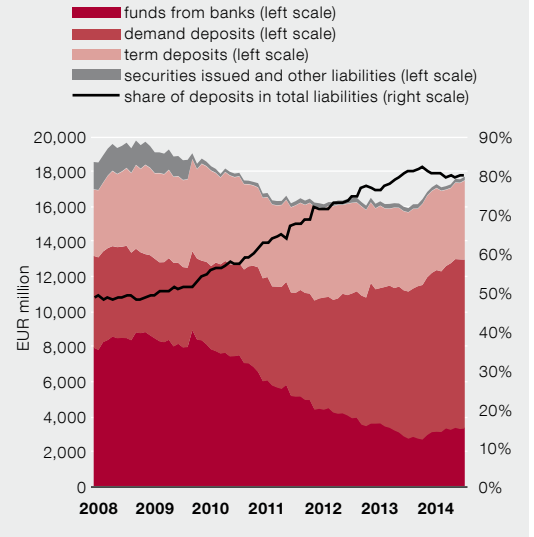
The **stock of liquid assets** of banks operating in Estonia has increased significantly this year and stood at 25% of total assets at the end of August (see Figure 3.1.1). The decision of the European Central Bank in June to make the standing deposit facility rate negative changed the **structure of the liquid assets** of the banks significantly. Since the decision came into force, the banks have held only the amount of assets at the central bank that is necessary for them to meet the minimum reserve requirements. The assets that were earlier held at the central bank were mainly directed into deposits with other banks while the portfolio of liquid securities has also been increased. Securities issued by central governments and banks accounted for almost one fifth of the total liquid assets of the banking sector at the end of August.

Figure 3.1.1. Banks' liquid assets and their share in total assets



The funding of the Estonian banking sector is still mainly based on deposits, and growth in **retail deposits** has continued to be strong this year, reaching 10% at the end of August. Retail deposits make up 80% of the liabilities of banks, and overnight and demand deposits alone account for more than half (see Figure 3.1.2). As low interest rates do not encourage clients to use term deposits for their money, the main growth in retail deposits this year has been in demand deposits, while term deposits have remained about where they were at the end of last year.

Figure 3.1.2. Structure of banks' liabilities



Non-resident deposits supply one fifth of the retail deposits in the Estonian banking system and they totalled 2.3 billion euros at the end of August, which is about the same as at the end of last year. The growth in non-resident deposits is generally more variable than that in resident

deposits, and this year it has not been any more volatile than usual. Three quarters of all non-resident deposits are in demand deposits and the risk of an outflow is much higher with them than it is for domestic deposits. The risk is mitigated because the banks with a higher proportion of non-resident deposits generally hold larger liquidity buffers than the average.

Although the funding of the Estonian banking sector has become ever more deposit-based over the past five years, some banks increased their **funding from other banks, including parent banks** again at the end of last year and the start of this. This was mainly done in order to increase liquid assets. As a result the **market funding risk ratio**[17] of the banking sector improved from a year before and stood at -8% at the end of August.

Although deposits increased strongly again, the acceleration in growth in the loan portfolio means the **loan to deposit ratio** of the banking sector improved more slowly. It has remained close to where it was at the end of last year throughout this year and it reached 105% at the end of August (see Figure 3.1.3). The banks fund their loan portfolios from various sources, but the majority finance their loans fully with deposits.

Figure 3.1.3. Loan-to-deposit ratio

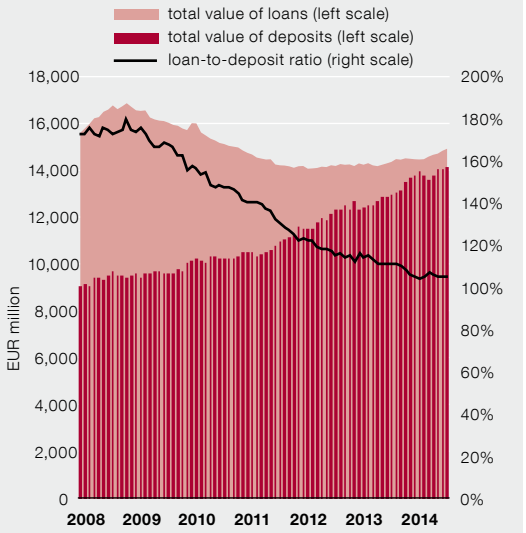
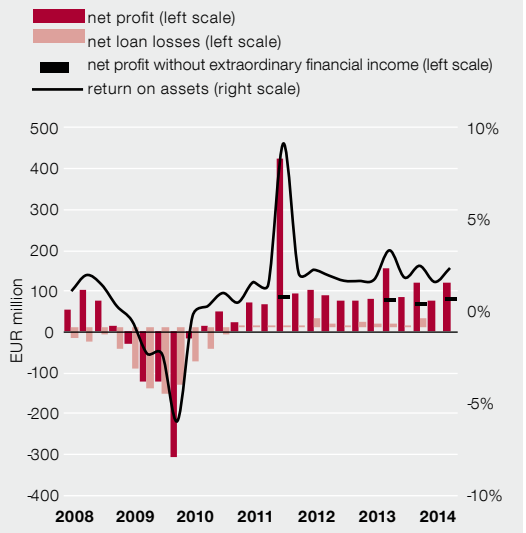


Figure 3.1.4. Banks' net profit and net loan losses



Profitability

The profitability of the banks remained strong in the first half of 2014. Without one-off dividend payments, net profit was about the same as in the first half of the previous year, and was nearly 4% larger than in the second half of that year (see Figure 3.1.4). The average profitability of bank assets remains stronger than in most of the other European Union countries at 1.6%.

17 Market funding risk ratio = (market-based funding - liquid assets) / total assets. Market-based funding means funds from other banks, including parent banks, and bonds that have been issued.

The aggregate **interest income** of the banks has been more or less steady for more than a year now and has increased nominally, though less so as a ratio to total assets (see Figure 3.1.5).

The **cost of funding** for banks has been held down by generally low base interest rates, the large share of deposits in liabilities, and the low cost of deposits. The increase in the share of deposits has this year been offset somewhat by increases in external funds used mainly for liquidity management, although the cost of such funds has not significantly affected the overall funding costs of the banks.

The lack of competition between banks for deposits has also helped keep down the cost of funding but the small amounts paid out on deposits have reduced interest among clients in longer-term depositing and increased the share of demand deposits (see Figure 3.1.6).

The interest income earned by banks should continue to increase to some extent in future as the share of loans with high marginal rates has continued to increase in the loan portfolios of the banks after a period of rapid loan growth (see Figure 3.1.7).

The temporary volatility in the **fee income** of the banks in the last quarter of last year and the first quarter of this was caused mainly by the accounting impact of changes in the structure of one banking group. There was little change in the structure of service fees for the other banks.

In Estonia the largest banks earn around 60% of their income from fees and services from payment transfers. In future banks can be expected to reduce their costs for payment transfer services somewhat because the system used previously for domestic transfers has been closed

Figure 3.1.5. Banks' interest income and expenses as a ratio of assets

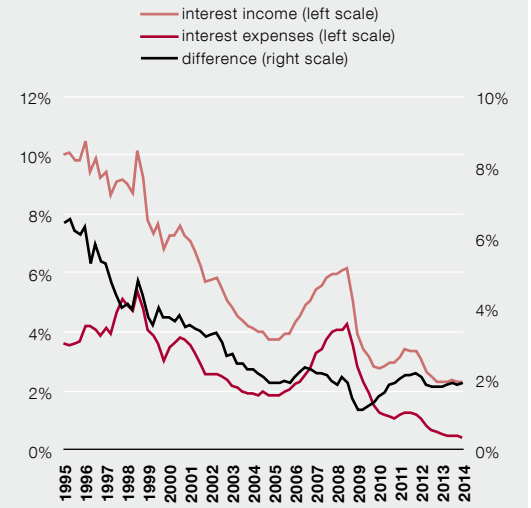
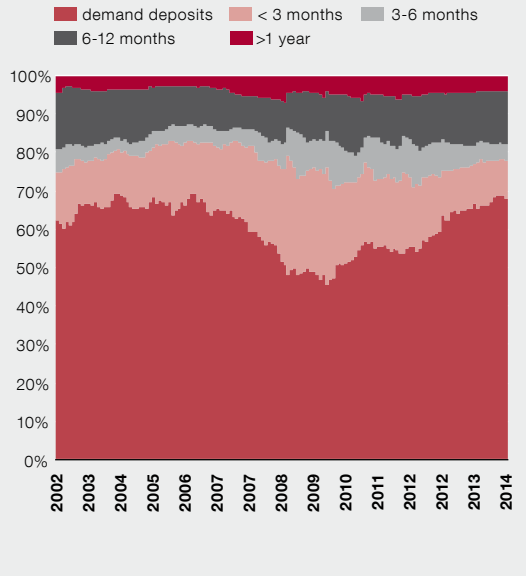


Figure 3.1.6. Structure of deposits by maturities



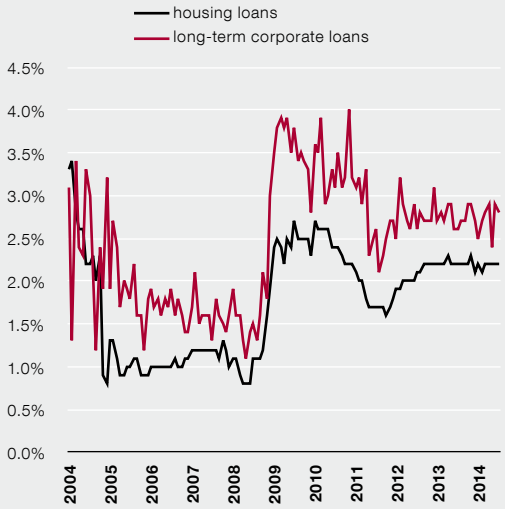
and retail payments are now settled through the same system as cross-border payments. The fee income of the banks depends to a large extent on volumes, and also on how much clients will do to find cheaper service providers.

The effect of earlier **write-offs** returning to performance has been smaller this year. Although a few new problem loans were added to the stock, the value of former write-downs starting to perform again was some 8 million euros more than the value of new write-downs. As a result the impact of the reversal of earlier write-downs contributed only around 5% of the net profit of the banks in the first half of the year, where it had been almost 40 million euros, or more than 10% of net profit, in the previous year.

The **operating costs** of the banks were somewhat lower in the first half of the year than a year earlier, mainly due to reductions in administration costs. Although it can be assumed that banks want to improve their cost efficiency, rising wage costs indicate this can better be achieved by increasing the assets under management rather than by reducing nominal expenditure.

In future the large share of loans with floating interest rates will mitigate the interest income risks of the banks, and interest income will be boosted by growth in the share of loans with higher marginals among assets. The cost of funds for the banks depends largely on the decisions of depositors about where to invest their savings. Competition for deposits has been quite quiet recently, with the result that the interest paid on term deposits has shrunk and the share of demand deposits has increased. Tougher competition could lead to something of a rise in the cost of funding for banks, though this assumes they would search more actively for investment opportunities or lower their current loan margins.

Figure 3.1.7. Interest margins above 6-month EURIBOR on residential loans and long-term corporate loans



Capitalisation

The consolidated balance sheet of the banking groups[18] grew by 4% in the first half of 2014. The **structure** of assets in the consolidated balance sheet saw a decrease in cash and equivalents and an increase in other financial assets (see Figure 3.1.8). The total volume of the credit portfolio remained around the same, but it shrank as a share by 2.4 percentage points to 71.4%. There was an increase on the liabilities side in deposits at credit institutions. Retail deposits have increased at the same rate as the total balance sheet and they continue to make up 65% of it. Equity continues to be around 19% of the balance sheet.

New single capital requirements started to apply to banks in the European Union from the start of 2014 and as a result, the 10% capital adequacy

18 For this section, the figures for the banks have been consolidated, covering Swedbank, SEB, DNB, Bigbank, Eesti Krediidipank, LHV, Tallinna Äripank and Versobank.

Figure 3.1.8. Aggregate balance sheet of the banking sector

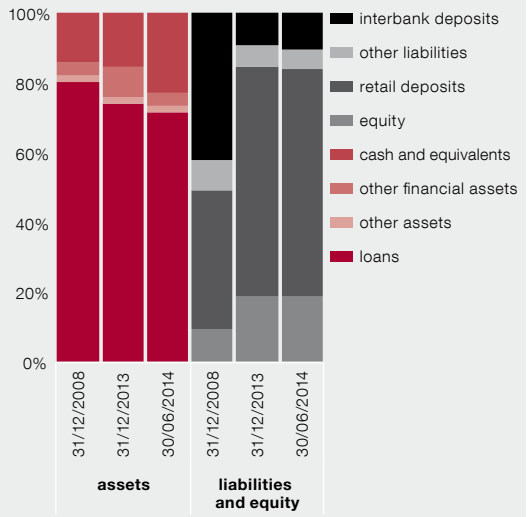
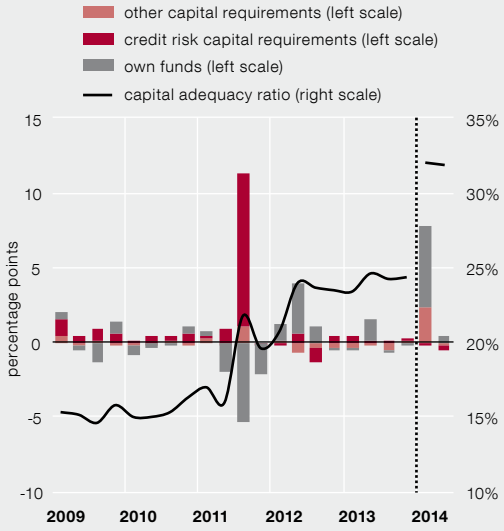


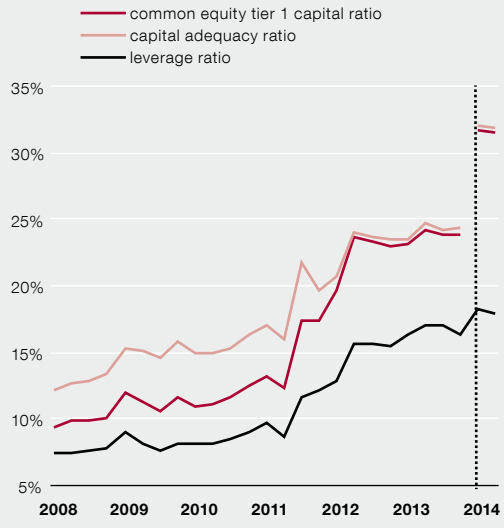
Figure 3.1.9. Quarterly change in capital adequacy ratio by components



requirement that had applied in Estonia since 1997 was lowered to 8%. As an additional 2% systemic risk buffer requirement has applied for all banks and banking groups licensed in Estonia since 1 August, the requirement for CET1 rose to 9% of risk-weighted assets.

In international comparison, the Estonian banking sector remains very well capitalised and easily passes the minimum capital requirements. The **Common Equity Tier 1** rate rose by the end of the second quarter of the year to 32% and the capital adequacy ratio was 7.5 percentage points higher than at the end of last year (see Figure 3.1.9). The main driver of the change was good profitability last year, which allowed equity to increase. There was also a rise in the capital adequacy ratio because of a change in the reporting method, which reflects the way minimum equity requirements are recognised in the transition period to the Basel II capital calculation method.

Figure 3.1.10. Capital and leverage ratios



Banks prefer to hold equity in Estonia because Estonia has a favourable tax system. The strong capitalisation of Estonian subsidiaries has led one banking group to announce its intention to pay some 60% of the income earned in Estonia to the parent bank in dividends.

The **financial leverage ratio**[19] of the banking groups rose at the start of this year to 18% and remained about the same throughout the first half of the year (see Figure 3.1.10). The leverage ratio has increased by around 1 percentage point from a year earlier, and as it isn't affected by changes in risk assets, it changed by significantly less than the capital adequacy ratio. Despite this the financial leverage ratio of the Estonian banking sector is high and proves again that the banks here are well capitalised.

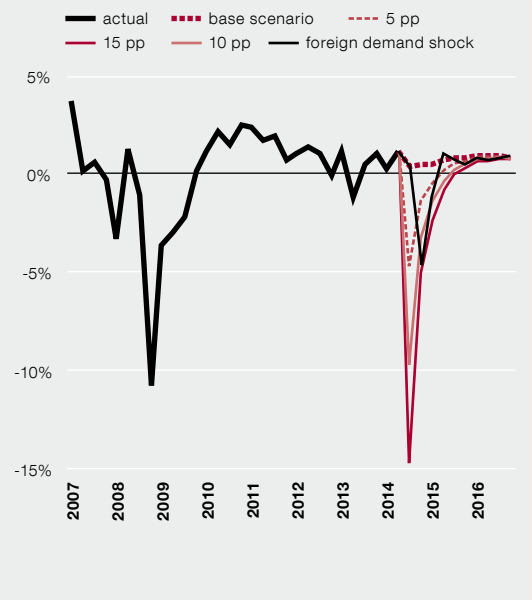
19 Tier one own funds as a ratio to assets.

Box 4: Forecast and stress test of overdue loans in the banking sector

Requirements from the macro economy

The forecast and stress test for overdue loans[20] is based on the updated forecast published by Eesti Pank this September, which puts economic growth at 2.1% in 2014, rising to 2.5% in 2015 as unused capacity is deployed and external demand picks up. In the baseline scenario the loan portfolio grows moderately in 2014 and increases over the whole year by around 3.9%. Lending grows faster in 2015 to 4.5%, mainly due to faster growth in other loans to companies and households. As the real estate market continues to stabilise, the growth in housing loans will remain about the same.

Figure B4.1. Quarterly real GDP growth assumptions for base and risk scenarios



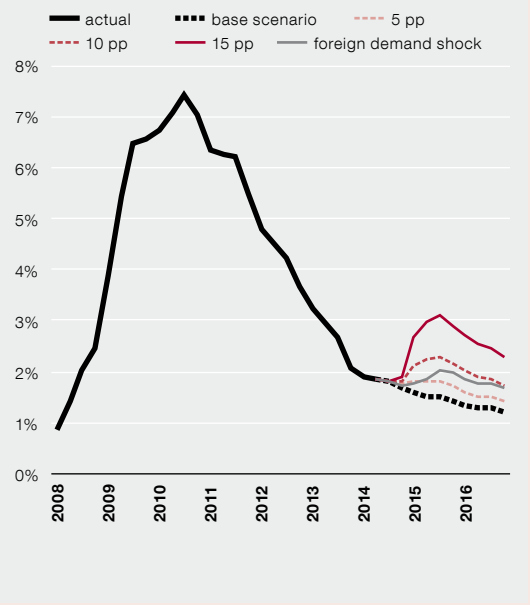
Three risk scenarios were modelled alongside the baseline scenario, in which a one-off shock of 15, 10 or 5 percentage points was given to economic growth in comparison to the baseline scenario. An additional macro model was used to link the effect of the shock to other economic indicators so that their impacts on each other could be seen too. From this, three complete risk scenarios of differing severity were produced (see Figure B4.1). The credit risk model is then used for assessing the potential impact of the baseline and risk scenarios on the Estonian banking sector.

20 Loans overdue for more than 60 days.

Forecast for overdue loans

In the baseline scenario the share of overdue loans in the loan portfolio continues to decline, and the quality of corporate loans and housing loans in particular improves in 2014. The share of other loans to households that are overdue did not change significantly over the year, and the faster growth forecast for 2015 sees the quality of the portfolio continue to improve across all types of loan. The reduction in overdue loans is aided by consistently low interest rates and accelerating economic growth, while household loans are also affected by unemployment staying low and wages growing moderately. The reduction in the stock of overdue loans will slow somewhat in 2016, mainly in housing loans to households, where the ratio of overdue loans is already quite low. In the baseline scenario the share of loans overdue by more than 60 days falls to 1.7% by the end of 2014 (see Figure B4.2). The loan portfolio continues to improve at the same rate as was described in the forecast for overdue loans in the previous Financial Stability Review, and the ratio of overdue loans falls to 1.4% by the end of 2015, and to 1.2% by the end of 2016. A large part of the decline in overdue loans will again be a consequence of write-offs, meaning that the actual share of loans that are overdue could be quite different from the forecast.

Figure B4.2. Loans overdue by more than 60 days as a ratio of the loan portfolio



The risk scenarios consider highly unfavourable developments for the real economy with a serious impact on the ability of clients to pay and thus on the banking sector. Depending on the risk scenario used, the average share of overdue loans increases to 1.8–3.1%, then starts to fall gradually. The effect is slightly smaller for the largest banks in the risk scenario and the share of overdue loans reaches 1.5–2.5% for them, depending on the size of the shock, and then starts to shrink gradually so that it is about 0.5 percentage point below the peak by the end of the forecast horizon in all the risk scenarios. Smaller banks are more susceptible to the risk scenario and the share of overdue loans reaches 5–8.7% for them, depending on the size of the shock. Although the cumulative effect in the worst risk scenario is similar to the impact of the crisis of 2008, the reaction of overdue loans in both large and small banks is much more modest. The reaction is also smaller than in the risk scenario in the previous Financial Stability Review, as borrowers are less vulnerable

to economic shocks than they were. The financial position of borrowers and their ability to service their loans are stronger than before as the debt-to-income ratio has fallen and both companies and households have managed to increase their financial buffers. The ability of borrowers to repay is also supported by low interest rates in both the baseline and risk scenarios.

Reduced external demand scenario

The scenario of a fall in external demand describes the hypothetical situation where foreign demand falls in the fourth quarter of 2014 by 10% against the baseline scenario and by a further 5% in the first quarter of 2015. The first fall includes Estonian exports to Russia, which dry up almost completely. The second fall comes from European trading partners, whose exports to Russia fall, leading to a fall in Estonian exports to those countries. The reduction in exports to Russia has a limited impact on the Estonian economy, as a large part of those exports are made up of products imported to Estonia. As some of the exports to Russia are from the intermediary trade permitted by Estonia's geographical location and these can probably not be redirected anywhere else, Estonia's potential GDP will also shrink. As a result of these factors, GDP growth in the fourth quarter of 2014 and the first quarter of 2015 is smaller than in the baseline scenario, and GDP ends up around 7% lower (see Figure B4.1). Unemployment rises by the second quarter of 2015 to 10% and remains there to the end of the forecast horizon.

Lower economic growth and the higher unemployment rate mean that payment difficulties become more common and the share of loans overdue rises to 2% (see Figure B4.2). Overdue loans increase particularly for corporate loans and other household loans, while the quality of the housing loan portfolio is affected somewhat less. The external demand shock scenario affects the quality of the loan portfolio by more than the risk scenario with a shock of 5 percentage points, but by less than the scenario with a shock of 10 percentage points. The effect lasts longer however, and the share of overdue loans declines more slowly than in the other risk scenarios and the unemployment rate remains high for a long time. Large provisions mean that the profits of banks in the external demand scenario are about 8% smaller than in the baseline scenario, although capitalisation still remains high.

Box 5: THE BAIL-IN MEASURES FOR CREDIT INSTITUTIONS IN THE NEW CRISIS MANAGEMENT FRAMEWORK

This summer the European Parliament and the Council of the European Union agreed on a single set of rules for the European Union for the recovery and resolution of credit institutions and investment firms[21]. The new framework is to harmonise the options available for intervention by crisis management institutions if problems appear and to reduce the need for state

21 http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32014L0059&from=EN

aid. Although closure and liquidation under normal insolvency procedures should always be considered first for insolvent credit institutions, there may be cases where this could lead to contagion of other parts of the financial system and could cause systemic disruption. In this case the public interest may be better served by restoring the viability of the credit institution or the part of it providing critical functions.

The principles for application of the crisis resolution measures

The principles to be followed in the application of crisis resolution measures are further clarified in the directive, including those to be followed for applying the bail-in measure. These principles ensure that there is a common understanding of how the possible costs are to be shared. The directive states that losses are to be borne first by shareholders and then by creditors in accordance with the order of priority of their claims under normal insolvency proceedings. Creditors of the same rank are always to be treated equally. Crisis prevention and crisis resolution should be carried out under the principle that no creditor should bear more of the losses than they would have had to if the credit institution were wound up and liquidated under insolvency procedures.

The bail-in measure

An important innovation in the directive is the ability to require credit institutions not only to cancel or write down shares or other capital instruments, but also to convert to equity or reduce the principal amount of claims or debt instruments of the creditors of the institution. This means that creditors can be expected to join shareholders in contributing to the recovery of the firm.

The bail-in tool may include:

- a reduction in the principal of the eligible liabilities or in the outstanding amount due;
- the cancellation of debt instruments other than secured liabilities;
- the conversion of eligible liabilities into ordinary shares or other instruments of ownership.

Bail-in measures in the European Union

Bail-in measures have been applied in the European Union in recent years and in 2013 there was a lot of publicity around the inclusion of creditors and depositors with deposits of over 100,000 euros in the resolution of Laiki Bank (Cyprus Popular Bank) and Bank of Cyprus. Previously, in 2011, the senior bank debt holders of Amagerbanken and Fjordbank in Denmark had had to contribute to the recapitalisation of those banks. Bail-in measures have also been used in the Netherlands and Spain, while the shareholders and subordinated creditors of Banco Espirito Santo in Portugal had to bear losses this year.

The right of early intervention

A major change in the directive is that the bail-in measure may be applied even when a credit institution is still meeting the prudential requirements but a rapid deterioration of its financial condition means it is likely in the near future to infringe the requirements.

Minimum requirements for own funds and eligible liabilities

The new framework gives member states the right to require credit institutions to hold at all times a pre-defined level of eligible liabilities in addition to own funds available to absorb losses to restore the viability the credit institution. The application of a minimum requirement of own funds and eligible liabilities shall remain a voluntary option for each member state. The directive still sets the restriction that state aid may be used to restore the viability of a credit institution only after losses totalling not less than 8 % of total liabilities including own funds have already been absorbed.

Scope and application of the measures

The bail-in tool is not to be applied to claims that are secured, collateralised or otherwise guaranteed. Claims that relate to goods and services which are critical to the daily functioning of the institution and those necessary for the continued operation of the institution are also excluded. This means that depositors covered by deposit guarantee schemes of up to 100,000 euros per depositor should not bear any losses in the resolution process.

To reduce the risks of contagion, the bail-in measure is not to be applied to liabilities arising from a participation in payment systems which have a remaining maturity of less than seven days, or liabilities to institutions, excluding entities that are part of the same group, with an original maturity of less than seven days.

In order to ensure continuity of critical functions, the bail-in tool should not apply to liabilities to employees of the failing institution or to commercial claims that relate to goods and services critical to the daily functioning of the institution.

The new requirements come into force in 2016. As this is a directive, the member states will need to transpose the terms of it into national law. The Ministry of Finance, Eesti Pank and the Financial Supervision Authority have set up a working group to prepare the drafts of these laws.

3.2 INSURANCE COMPANIES

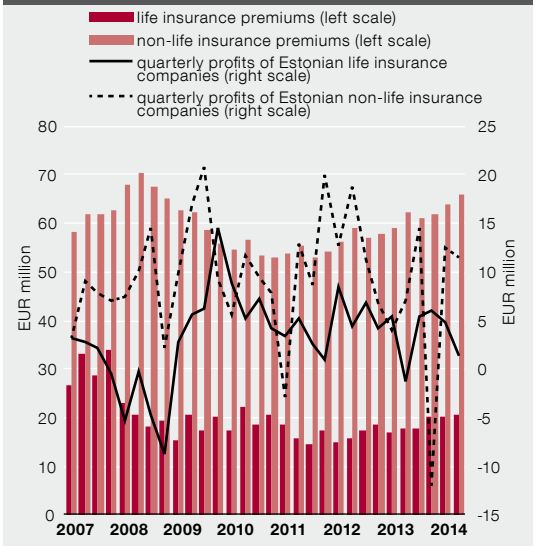
The main risk facing **European insurance companies** in recent years has been low interest rates. Life insurance companies are more exposed to negative effects from the interest rate environment than non-life insurance companies are, because of the long-term nature of their liabilities. The Estonian insurance industry also showed this in the first half of 2014. The operating profit of non-life insurance companies, which is the insurance technical result and the net income from investment, more than doubled from a year earlier, while the profitability of the insurance activities of life insurance companies did not improve. Although insurance companies benefited from the re-pricing of assets due to the fall in interest rates and so investment income increased, lower interest rates also meant that liabilities became more expensive for life insurers. The biggest challenge for life insurers is consequently to retain and increase their earlier profitability.

The total profitability of **Estonian insurers** increased in the first half of 2014. Insurance companies earned 30 million euros in net profit in the first two quarters of the year, which is more than one million euros more than in the whole previous year. The capitalisation of the Estonian insurance market has remained good, and the own funds of insurance companies were many times larger than the capital requirements in 2013.

Life insurance

The growth of the Estonian life insurance market accelerated in the first half of 2014 and life insurers took in 16% more in **premiums** than in the first half of the previous year (see Figure 3.2.1). Despite the good conditions for sales of insurance, life insurance companies did not see the insurance technical result improve. Although financial markets favoured higher investment income, the gain from the revaluation of financial assets was offset by an increase in life insurance provisions. As a result the insurance technical result remained about the same as a year earlier at over 7.5 million euros.

Figure 3.2.1. Profit of insurance companies and premiums collected



Sources: Statistics Estonia, Eesti Pank

The investment strategies of Estonian insurance companies are relatively conservative. Investment portfolios are dominated by bonds, a little over 60% of which are issued by governments, and financial investments are fairly well distributed within this. **Net investment income** was more than four times higher in the first half of 2014 than a year earlier (see Figure 3.2.2). The sharp growth in net investment income came mainly from the revaluation of assets, as a large part of the bonds are carried at fair value. This meant the falls in yields on sovereign bonds led to an improvement in investment returns due to the reassessment of asset values. Net income

Figure 3.2.2. Yield of the investment portfolio and net investment income

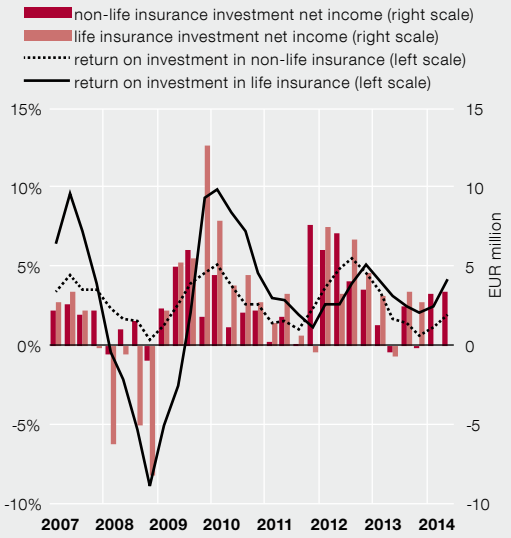
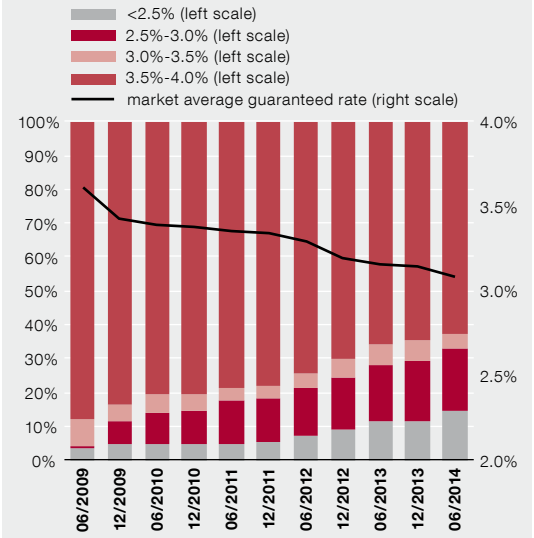


Figure 3.2.3. Distribution of guaranteed rate contracts by interest rates and the market average guaranteed rate

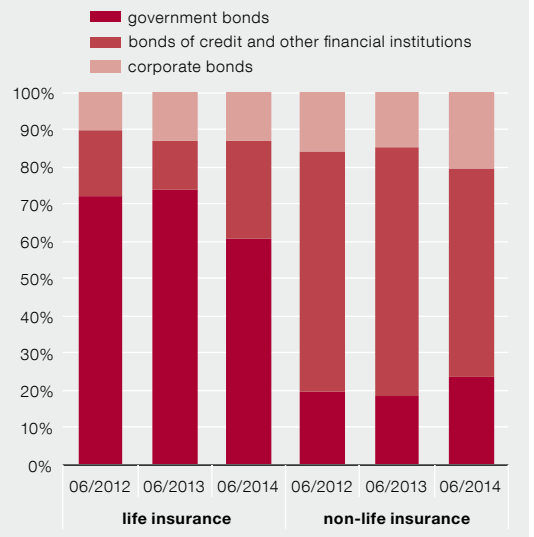


from interest was generally speaking at about the same level as last year.

The average yield of the investment portfolio rose from 2% last year to 4% by the end of the second quarter of 2014, making it higher than the average return of 3.1% guaranteed to insurance clients (see Figure 3.2.3). Although the gap between the average yield of the investment portfolio and the guaranteed rate for insurance clients is no longer negative, it is still only small. A prolonged period of low interest rates has made it notably harder to earn a profit on products with a guaranteed return, and has prompted companies to look for more profitable investments. The structure of investment of life insurers has already changed somewhat.

While the bond portfolio is again mainly filled with sovereign bonds, their share fell from 74% in the first half of last year to 61% in the first half of this (see Figure 3.2.4). More has been invested

Figure 3.2.4. Debt security investment of insurance companies by issuer



in bonds of credit institutions and other financial institutions so that somewhat greater income could be earned. As a result of low interest rates for deposits, term deposits declined markedly in the investment portfolio of Estonian life insurers. Their share of less than 20% of the portfolio in the first half of 2014 was nine percentage points smaller than a year earlier (see Figure 3.2.5). However, the share of term deposits in the **investment portfolio of Estonian insurance** companies still remains significantly larger than the European average of 5%[22].

Figure 3.2.5. Investments of insurance companies

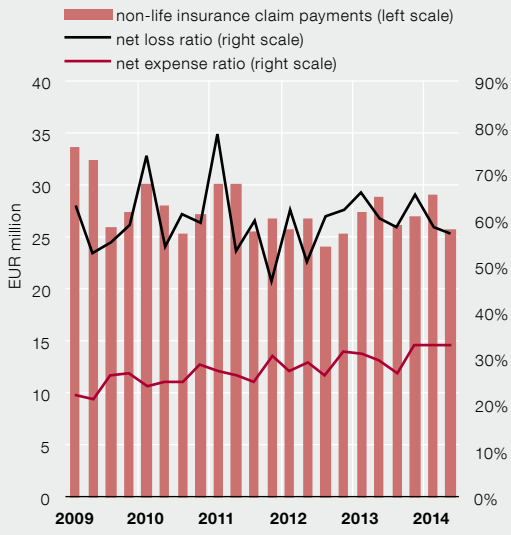
Non-life insurance

Like the life insurance market, the non-life market continued to grow this year. **Premiums** of 130 million euros were collected from Estonian residents, which was 7% more than a year earlier. Insurance activities became more profitable and slightly less was paid out in claims in the first half of the year than a year ago. The combined effect of the decline in pay-outs for claims and the rise in non-life premiums meant that the net loss ratio fell in the second quarter from 60% to 57% (see Figure 3.2.6).

Net investment income increased sharply, and while **net interest income** fell by 25%, net investment income was around nine times higher than in the first half of the previous year. It mainly increased because of the revaluation of assets.

The higher income from sales of insurance and lower pay-outs for claims net of reinsurance together helped lift the insurance technical result. These factors and the strong growth in net investment income helped improve the operating profit of non-life insurance significantly. **Operating profit** reached 28 million euros in the first half

Figure 3.2.6. Estonian non-life insurers' claims, net loss and net expense ratios



Sources: Statistics Estonia, Eesti Pank

22 EU/EAA (re)insurance statistics – statistical annex to EIOPA Financial Stability reports (2013).

of the year, which is more or less the same as the operating profit earned in the whole of 2013.

As was the case for life insurers, the share of term deposits in non-life insurers' **financial investment portfolio** declined by 11 percentage points from a year earlier to 16% at the end of the second quarter. The financial investments of non-life insurance companies remain focused on bonds and other fixed-income securities, which make up around 80% of the portfolio. The credit risk of the investment portfolio may be considered relatively small as the issuers of the bonds have high credit ratings, and over 75% have a rating of at least A.

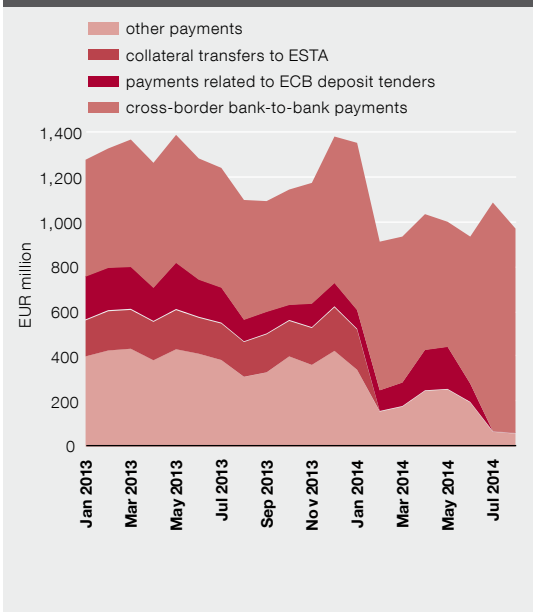
4. SYSTEMICALLY IMPORTANT PAYMENT AND SETTLEMENT SYSTEMS

4.1. INTERBANK PAYMENT SYSTEMS

An average of 487 payments per day were made through the **TARGET2-Eesti large-value payment system** in the first half of 2014, with a total value of 1 billion euros (see Figure 4.1.1). This means that 90 more payments were made per day than in the first half of the previous year, but the total value was 13% smaller. The increase in the number of payments was driven by the closure of the ESTA retail payments system, as there were twice as many domestic customer payments in TARGET2-Eesti after ESTA closed at 140 payments a day.

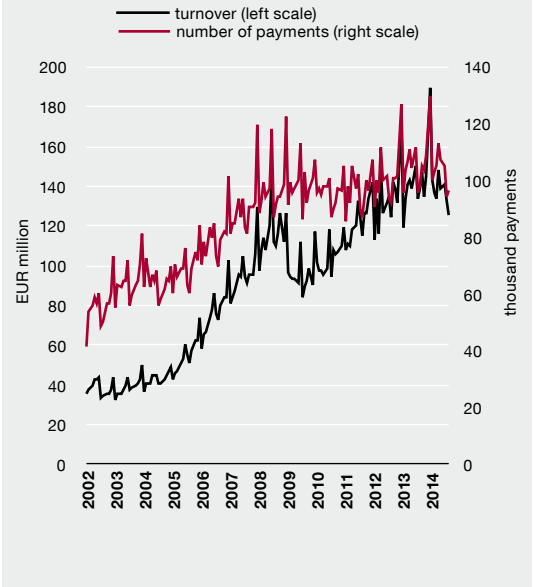
The biggest impact on the value of TARGET2-Eesti came from the closure of ESTA and ending of ESTA collateral payments from February and the ending of deposit tenders of the European Central Bank in June. In the first half of the previous year, 13% of the total value of TARGET2-Eesti had been ESTA collateral transfers and 14% had been payments for deposit tenders.

Figure 4.1.1. Structure of the value of TARGET2-Eesti



Eesti Pank closed the ESTA retail payment system on 1 February and Estonian domestic retail payments are now settled through the STEP2 system run by EBA Clearing. STEP2 settled as many domestic payments in Estonia in the first half of this year as ESTA did in the first half of the previous year, with an average of 106,000 payments per day (see Figure 4.1.2). The value of domestic payments settled in STEP2 was 2% more than a year ago in ESTA.

Figure 4.1.2. Payments made in settlement systems ESTA and STEP2 (daily averages)



4.2. RISKS TO THE PAYMENT AND SETTLEMENT SYSTEMS AND THE OVERSIGHT ASSESSMENT

There are two systemically important payment and settlement systems operating in Estonia: the large-value payment system **TARGET2-Eesti** and the **securities settlement system**.

TARGET2 and its component system **TARGET2-Eesti**, which is run by Eesti Pank, worked without any significant incidents[23] in the first half of 2014 (see Figure 4.2.1). There were six minor incidents during that time, which did not interrupt the availability of the system and the availability rate of both the single shared platform and the TARGET2-Eesti component system was 100%.

The banks had sufficient liquidity buffers for the settlement of payments (see Figure 4.2.2). The centralised liquidity management of the banking groups meant that the banks only needed to use the Eesti Pank intra-day lending facility minimally, as the credit line opened against a collateral pool was used by only one bank. The banks did not require overnight credit and the average balance held at Eesti Pank in the first half of 2014 was 286 million euros. The reduction in account balances was encouraged by the decision of the ECB on 11 June 2014 to introduce negative interest rates on its deposit facility.

The securities settlement system managed by the Estonian Central Securities Depository (ECSD) experienced one incident in the first half of 2014 that affected the settlement of securities and reduced the availability of the system. The incident originated with a problem at the network service provider of the ECSD and made part of the system inaccessible for account operators for around two hours. To prevent such incidents happening again, the system operator added some technical checks to detect interruptions in the connection. There was also one minor incident in which the setting of collateral for ESTA was delayed because of a technical issue at the ECSD. The issue was resolved quickly and by 10.00 the ECSD was again ready to work with the retail payment system. The securities settlement system had an **availability rate of 99.9% in the first half of the year**.

23 An incident is significant if it has some impact on several settlement system users or if it leads to measures being put in place to ensure continuity or to a loss of availability.

Figure 4.2.1. Availability of interbank payment systems

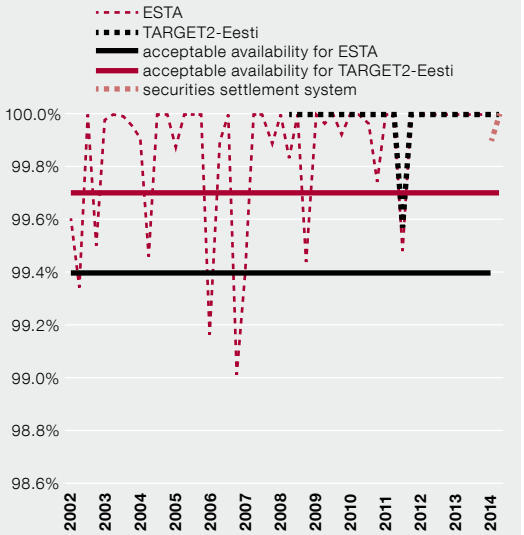
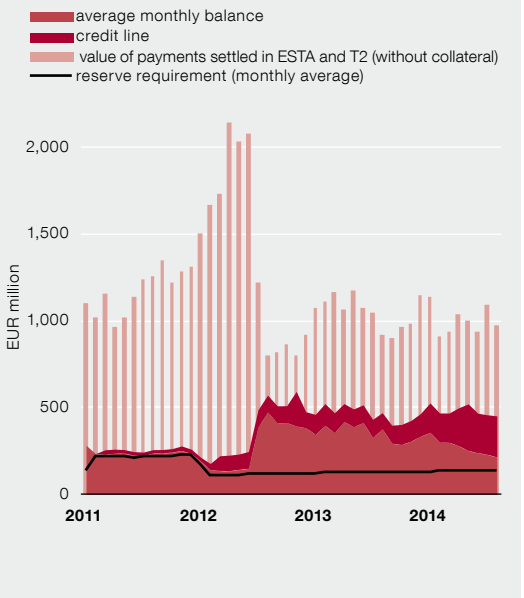


Figure 4.2.2. Value of interbank payments, reserve requirements, and balances held at the central bank



The changes caused by the closure of ESTA were made smoothly. The ESCD has been using the E-riigikassa payment solution of the State Treasury since 1 February 2014 for making payments related to corporate actions and for settling payments of the second and third pension pillars, while development work has continued on the pan-Baltic X-stream technical solution. In addition, the government appointed the ECSD as the registrar of the central register of securities for the next five years, and the new agreement for the maintenance of the register between the ECSD and the Ministry of Finance will come into force from 1 January 2015.

Eesti Pank assessed the securities settlement system using the CPSS-IOSCO[24] principles as new oversight standards and found that the system meets most of the requirements. The overseer considers that risk management needs to be improved and changes need to be introduced by 1 July 2015 (see Box 6).

24 CPSS - Committee on Payment and Settlement Systems; IOSCO - International Organisation of Securities Commissions. From 1 September 2014 CPSS is named CPMI, or Committee on Payments and Market Infrastructures. See http://www.bis.org/cpmi/index.htm.

Changes in the payment market and in oversight led **Eesti Pank to update its framework for the oversight of payment and settlement systems**[25]. The main changes were:

- Eesti Pank started using the new requirements for financial market infrastructure oversight adopted for the Eurosystem by the Governing Council of the ECB on 3 June as its standards for oversight.
- Eesti Pank included the card payment system managed by Nets Estonia AS in the scope of its oversight because of its large share of payments processed and influence on the smooth functioning of currency circulation. Oversight will begin at the start of 2015.
- Harmonisation of European payment standards led to ESTA, the domestic retail payment system, being closed, and oversight of it ending. As Estonian domestic retail payments are now settled through the pan-European STEP2 system, Eesti Pank is involved in overseeing that system through the working groups of the Eurosystem.

25 http://www.eestipank.ee/sites/eestipank.ee/files/files/Maksesysteemid/en/oversight/the_framework_for_oversight_of_payment_and_settlement_systems.pdf

Box 6: Oversight assessment of the securities settlement system

The aim of the assessment

Eesti Pank assessed the securities settlement system run by the Estonian Central Securities Depository (ECSD) using the CPSS-IOSCO principles for Financial Market Infrastructures (FMI) adopted as international oversight requirements for the Eurosystem.

The assessment was started firstly because new and stricter oversight requirements were introduced for financial market infrastructure, and secondly because the ECSD will in future be joining the TARGET2-Securities (T2S) securities settlement platform that is being set up, and it is the job of central banks to assess whether the securities settlement systems joining the platform and the connections between them are eligible for Eurosystem credit operations. This user assessment follows a two-layered approach, meaning the assessment of the securities settlement systems and their links is partly based on the results of the assessment by the overseer.

The services provided by the ECSD for securities settlement are:

- opening securities accounts for physical and legal persons and opening custody accounts;
- maintenance of securities;
- settlement of stock exchange trades;
- matching of over-the-counter (OTC) transactions;
- settlement of free-of-payment (OTC FOP) transactions;
- settlement of delivery versus payment (OTC DVP) transactions;
- settlement of cross-border stock exchange and OTC transactions.

Securities are settled in processing cycles that start every full and half hour between 09.00 and 18.00. Each processing cycle settles exchange, OTC DVP, and OTC FOP securities transfers. The registrar executes the settlement only if account operators have met all the necessary conditions for that.

Settlement is performed using the BIS (Bank of International Settlements) model 1 where both money and securities are settled according to the gross settlement principle, trade by trade. Money settlement is performed using the integrated model in autonomous central bank money where clearing members transfer the money needed for settlement to the ECSD account in TARGET2, and the ECSD returns the money resulting from settlement back to the clearing members at the end of the working day.

The ECSD has set up links with securities depositories in Latvia, Lithuania and Poland. The links with Latvia and Lithuania are bilateral and allow securities registered there or in Estonia to be transferred back and forth between registries. The services that ECSD currently provides to account operators for Latvian and Lithuanian securities are: settlement of stock exchange transactions; settlement of OTC DVP transactions; OTC FOP transactions from the ECSD to the foreign depository or vice versa; and management and storage of securities in an ECSD correspondent account, including processing of corporate actions.

The links to the Polish depository allows the ECSD to make FOP transfers of Estonian securities listed as transferable to the Polish depository and back.

The results of the assessment

Of the 24 oversight principles, 21 apply to the securities settlement system. The oversight principles cover requirements for reducing various risks – financial and operation risks, general business risk, custody and investment risk, and risks arising from tiered participation – and guidelines on governance, risk management frameworks, default procedures, ensuring the efficiency of the system, and disclosure of system rules.

Eesti Pank used the ECSD's own self-assessment, and the laws, agreements, rules and procedures that regulate the operations of the ECSD and the functioning of the system in its assessment of the securities settlement system.

The assessment of the overseer is that **the securities settlement system fully observed the requirements of 12 principles**: 1 – legal basis, 4 – credit risk, 7 – liquidity risk, 8 – settlement finality , 9 – money settlements, 11 – requirements for central securities depositories, 12 – exchange of value settlement systems, 16 – custody and investment risk, 18 – access and participation requirements, 20 – financial market infrastructure links, 21 – efficiency and effectiveness, and 22 – communications procedures and standards (see Table B6.1).

Table B6.1. Outcome of the assessment

Observance level	Principle
Observed	Principles: 1, 4, 7, 8, 9, 11, 12, 16, 18, 20, 21, 22
Broadly observed	Principles: 2, 13, 19, 23
Partly observed	Principles: 3, 15, 17
Not observed	Principles: -
Not applicable	Principles: 5, 10

The assessment showed that the ECSD securities settlement system **broadly observed four principles**: 2 – governance, 13 – participant default rules and procedures, 19 – tiered participation requirements, and 23 – disclosure of rules, key procedures and market data.

The ECSD securities settlement system **partly observed three principles**: 3 – framework for the comprehensive management of risks, 15 – general business risk, and 17 – operational risk.

The requirements for two principles (5 – collateral and 10 – physical deliveries) do not apply to the securities settlement system run by the ECSD.

The assessment of the overseer is that the securities settlement system of the ECSD runs with fixed, transparent and clear rules, most risks are managed appropriately and most of the applicable CPSS-IOSCO principles and key considerations are met in full.

Summary of the findings

The risk management framework used in the Nasdaq group and the rules and standards for risk management are broad-based and thorough, though the internal risk management of the ECSD could be more comprehensive and thorough given the new requirements

There are weaknesses from interdependencies and management of risks arising from service providers. Analysis is also needed of those risks that the ECSD could itself pose to other parties. Compliance with several requirements is affected by insufficient business continuity plan-

ning, and also because the ECSD is still developing a plan for recovering critical services or winding them down in accordance with the requirements. The overseer also finds that the quality of testing of continuity needs to be improved. Furthermore, the CPSS-IOSCO requirements foresee the rapid recovery of critical services, and large-scale system development is probably needed from the ECSD to remedy this.

The risk management framework should reflect tiered participation, or management of risks coming from indirect membership. To make the operation of the securities settlement system more transparent, the ECSD needs to publish information on the system in accordance with the CPSS-IOSCO disclosure framework.

Eesti Pank made several recommendations to the system operator to increase the security of the ECSD securities settlement system and will observe how those recommendations are followed.

Eesti Pank also made one recommendation concerning the ECSD to the Ministry of Finance, as the basis for calculating the reserve capital as decreed to the ECSD by the Ministry of Finance underestimates the real operating costs of the ECSD by about half, and this reduces the reserve capital of the ECSD.

APPENDIX. POSSIBLE IMPACTS OF THE CONFLICT BETWEEN RUSSIA AND UKRAINE ON THE ESTONIAN FINANCIAL SECTOR

The European Union has imposed economic sanctions on Russia for its role in destabilising Ukraine. Most of the sanctions aimed at the economy came into force on 1 August this year, and they were extended on 12 September to a list of non-financial sector companies and by even tighter funding restrictions for banks.

Russia imposed its own counter-sanctions in response on several groups of European Union goods, principally products imported from the agricultural sector. The value of the goods exported from Estonia to Russia last year to which the sanctions will now apply was 76 million euros, accounting for 0.6% of total exports, and 65 million euros of that was produced in Estonia. The impact of the Russian import restrictions on the Estonian economy, given the internal product chains within the European Union, will be around 0.3% of GDP. The restrictions will principally affect companies in food production, agriculture, transport and wholesale.

If sanctions should affect the ability of companies to service their loans, it will still take time for that effect to be felt as an increase in problem loans. There was some increase in short-term overdue loans in the primary sector at the start of summer even before the sanctions were introduced, but after that the increase stopped. In any case, the quality of loans to the primary sector is generally notably better than the average for the business sector, as 0.8% of loans to the primary sector were overdue by more than 60 days in August, while on average 1.8% of loans to the business sector were. The quality of loans to other sectors that are affected by the sanctions is also quite good.

If the impact of the conflict between Russia and Ukraine is limited to the sanctions that have already been imposed, then it will probably be fairly small for the Estonian non-financial economy and for the loan quality of the banks here. However, if the conflict widens, the effect could be much larger, and so the relations of Estonian companies and banks with Russia also needs to be considered.

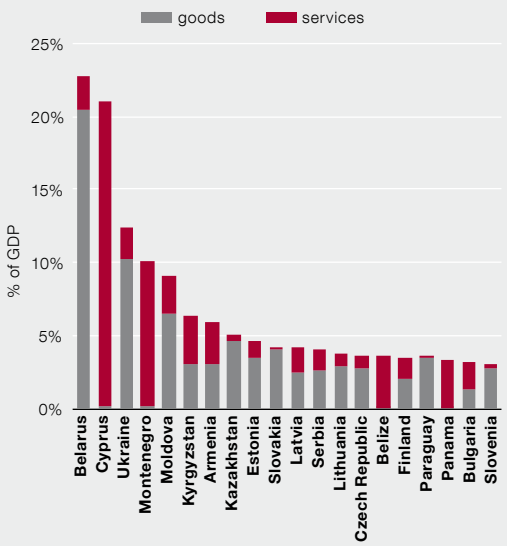
The economic links between Russia and Estonia are smaller than might be expected given the proximity of the two countries and the size of the Russian market. Exports to Russia are large, but are to a significant extent made up of production from other countries that has little connection with the local economy. Estonian exports of goods and services to Russia, including intermediary goods and tourism, are about the same as Estonia's exports to Latvia. Exports of goods and services to Russia are worth 8.8% of GDP according to the methodology used for the Estonian balance of payments. However the foreign trade database of the UN shows that exports of goods and services of Estonian origin to Russia are much smaller at around 5% of Estonian GDP, which is about the same as the figure for Latvia, the Czech Republic or Slovakia (see Figure A.1).

As foreign inputs are used in production, including energy imported from Russia, the direct impact of exports to Russia could be in the order of 3–4% of Estonian GDP. Russia's total impact on GDP is slightly more than that though, as Estonia exports quite a lot to countries that trade closely with Russia, and that are thus exposed to any shock to the Russian economy. International product chains could make Estonia's economic links to Russia some of the tightest in Europe.

Alongside exports, imports of raw materials are also important, as Russia exports raw products that are used as inputs in the European manufacturing sector. Estonian imports from Russia declined after the riots in Tallinn in April 2007, and have remained low since, accounting for around 6% of total Estonian imports in 2013. Gas accounts for a large share of the inputs imported from Russia, though its importance in total Estonian energy consumption is small at around 6% of primary energy.

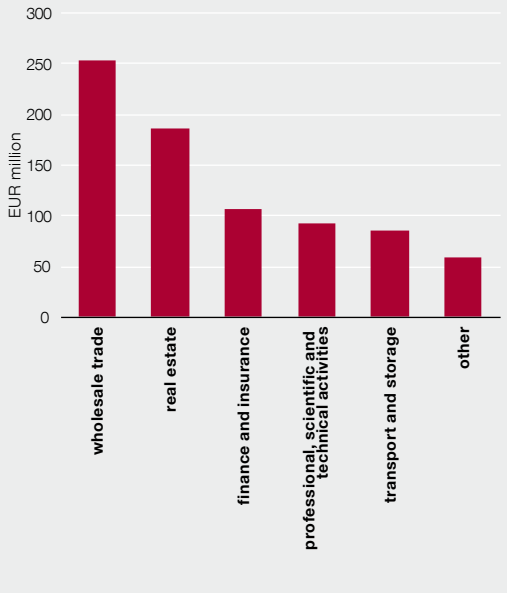
Direct investment in Estonia by Russian residents was 785 million euros at the end of the second quarter of this year, or about 5% of total foreign investment in Estonia and about 4% of GDP. More than half of direct investment went into wholesale trade and real estate (see Figure A.2). Investment in Russia by Estonian residents at the same time was 211 million euros, or slightly more than 1% of GDP (see Figure A.3). The main investments in Russia are in manufacturing, finance and insurance activities, and trade. Both Russian investment in Estonia and Estonian investment in Russia are among the largest in Europe in terms of GDP.

Figure A.1. Russian imports from individual countries as a percentage of GDP in 2012, 20 countries



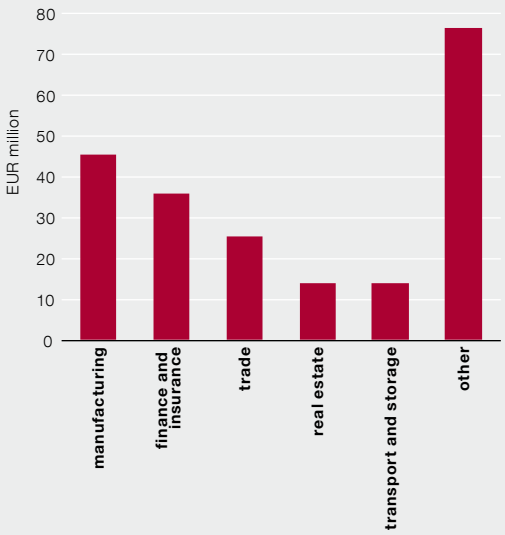
Sources: Trade Map, IMF World Economic Outlook

Figure A.2. Russia's foreign direct investment in Estonia as at 30 June 2014



On top of quantifiable economic links, the effect on confidence and through that on economic decisions is also important. The expectations for future production of the Estonian manufacturing sector declined sharply after the annexation of Crimea by Russia. Such changes in expectations for production are usually accompanied by falls in orders and changes in inventories, but that has not happened to the same extent with this decline in expectations.

Figure A.3. Estonia's foreign direct investment in Russia as at 30 June 2014



The links of the financial sector to Russia and possible risks

The positions of the banks operating in Estonia with Russian residents are generally very small. The aggregate claims of the banking sector on Russian residents was less than 0.2% of assets at the end of August and did not exceed 1% of total assets for most banks.

Banks may be vulnerable not only to direct claims, but also to non-resident deposits if they were to flow out of the banks in the expectation of further sanctions or a sharp deterioration in the economic environment. Deposits have so far behaved as normal. The deposits of Russian residents are fairly small at a total of 232 million euros, which is 1.1% of total banking assets, and although they are a larger share of the assets of some banks, nowhere do they exceed 10% of total assets.

Russian companies and households may also have put assets in Estonian banks through third countries. Non-resident deposits make up 11% of total bank assets, and that has not changed since the end of last year. The share of non-resident deposits is mainly larger than average at smaller banks, whose liquidity buffers are equally above average (see section 3.1 Liquidity and funding of banks).

The direct impact on banks operating in Estonia and on financial stability here of the sanctions that have so far been imposed is quite minor. Firstly this is because the direct positions of local banks with Russia are small and secondly because the impact of the sanctions on the business sector as a whole is quite modest, even if some individual companies are affected a great deal, and so the credit risk to the banks is only small. If the conflict spreads further, the impact may be larger as the positions and funding of individual banks are exposed to risks related to Russia, and connections with Russia remain important for several sectors of the economy.