Eesti Pank

FINANCIAL STABILITY REVIEW

1/2014

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FINANCIAL STABILITY ASSESSMENT

The international financial environment

In the past year the international financial environment has been affected most by the gradual recovery in economic activity in advanced countries and a worsening of risk assessments for emerging countries. Changes in risk assessments have already affected the yields and prices of financial assets and exchange rates and caused a partial capital outflow from those markets. A possible further increase in tensions in emerging markets could have a negative impact on the value of assets invested there.

Economic activity in the euro area has increased since the middle of 2013 and the expected acceleration of economic growth should help reduce the credit risk of the banks. At the same time, growth is fragile and varies from country to country, with the result that uncertainty about loan losses and the ability of banks to absorb them has continued. Before the European Central Bank takes on its role of single bank supervisor, comprehensive assessments are being carried out for the biggest banks in the euro area. The comprehensive assessment, which will look at the financial positions and resilience to risk of the banks on a uniform basis, will help boost the confidence of investors in the banks of the euro area and create better conditions for a recovery in the euro area economy.

The real economy and loan quality

Borrowing activity by Estonian companies and households has been uneven in the past six months. Modest external demand and a certain degree of uncertainty led companies to invest less in 2013, and so loan growth slowed down. At the same time, growth in household incomes and in activity in the housing market backed by low interest rates has boosted borrowing for housing. Lending growth overall has remained modest, and in the first months of 2014 the total stock of loans and leases was around 1% larger than a year earlier and the indebtedness of both companies and households in relation to GDP continued its decline of the past four years.

Although the Estonian economy grew more slowly in 2013 and rapid wage rises reduced the profitability of companies, this did not harm the loan repayment ability of companies. The labour market remained favourable for households and supported their ability to repay loans as wages rose and base interest rates were low. The stronger financial position of companies and households was reflected in an improvement in the loan quality of the banks. The volume of loans overdue by more than 60 days declined due to the recovery in the loan repayment ability of clients and the write-offs of problem loans from the balance sheets, and by the end of 2013 the share of non-performing loans had fallen to its pre-crisis level of under 2%. The baseline scenario of the December forecast by Eesti Pank expects that long-term overdue loans will decline this year too.

Low interest rates in 2013 may have seen households looking more to increase the return on their savings outside the regulated financial sector, leading to high growth in deposits in savings and loan associations, which have provided higher interest rates on deposits than commercial banks. As long as depositing in such financial firms is not widespread, the volume of deposits is small, and households are aware of the related risks, the direct impact on systemic risks is minor.

The unregulated payday loan market does not pose a large direct risk to financial stability either, as the value of loans issued in this market is relatively small when set against the total value of loans to households. However, if payday loans are used to address payment problems for

other loans, then the financial problems of those taking out payday loans could deepen and their ability to repay could worsen further.

Strength of financial institutions

The improvement in the quality of the loan portfolio supported the profitability of banks. The negative impact of low base interest rates on net interest income will decline further as less costly demand deposits grow and more loans are taken out with higher interest margins, and so an increase in profitability can be expected this year. This will support the capitalisation of the banking sector, which was high in European Union comparison for both risk-weighted assets and total assets at the end of 2013.

The share of deposits in the funding structure of banks increased. The loan portfolio grew noticeably more slowly than deposits, meaning that the loans to deposits ratio fell even further over the year and loans and deposits were almost equal in volume for the banking sector as a whole in spring 2014. The liquidity of the biggest banks is managed centrally at the parent bank level, but the majority of banks have also held sufficient liquidity buffers at the local level too.

The profitability of the insurance sector is held back by low interest rates, which have a negative effect on the investment income of insurance companies. Despite this, the solvency of the insurance sector has remained quite good and the liquidity risk is small.

Payment and Settlement systems

The interbank payment systems – the ESTA retail payment system and the TARGET2-Eesti system for large value payments – functioned smoothly and without major disruptions. The liquidity buffers were sufficient, so no settlement problems arose and few banks used the intra-day lending facility of the central bank.

From 1 February 2014, interbank retail payments, which had earlier been settled in Estonia, have been settled using the SEPA-compliant STEP2 cross-border system. As such payments account for one fifth of all domestic credit transfers, it is important for the stability of the financial system and the smooth circulation of money that STEP2 function without disruption. The operational principles of STEP2 are different from those of ESTA, which was used previously, and the risks are also different. Initial assessments are that the transfer of the Estonian domestic retail payments will not increase the risks to financial stability.

Risks to financial stability

Most of the risks to Estonian financial stability in the next half year are small at present, in spring 2014. Risks are being reduced above all by the gradual recovery of the economy in the euro area, by the strengthened financial position of Estonian companies and households, and by the high capitalisation of the local banking sector. The geopolitical tensions in Ukraine have however increased uncertainty about the external environment, and a deterioration in the situation could lead risks to increase rapidly. The risk of imbalances arising in the Estonian economy has also increased. Low interest rates could encourage changes in financial behaviour, which could lead to an excessive build-up of risks in the Estonian real estate market and the financial sector.

The Eesti Pank assessment of financial stability for spring 2014 sees three main risks.

1. A worsening of the risk assessment for the Nordic economies and banks will increase the funding and liquidity risks of the parent banking groups.

While the rise in real estate prices in Norway has subsided, prices for housing in Sweden and household indebtedness both continued to increase in spring this year. This indicates that risks are building up further. The relatively strong growth in recent years can largely be explained by rises in household incomes in Sweden, low interest rates and the structural features of the national real estate market. However, this growth increases risks to financial stability, as Swedish banks fund the ever-increasing financing of housing with funds from the financial markets. A funding model which is excessively based on market confidence can be rather fragile. The Swedish banks are made more vulnerable because the market-based funding is partly short-term and in foreign currency.

There is a danger with such a model that if the risk assessments of investors about the Nordic economy, the ability of households to service their debts, or the banks should worsen, because of an unexpected external shock for example, it could make the funding of banks more difficult or a lot more expensive. On top of this, a fall in Nordic real estate prices could amplify a reduction in private consumption and investment and cause loan repayment difficulties for borrowers.

As Nordic bank groups have over 90% of the Estonian banking market, and Swedish banks have around 80%, then there would be a significant weakening of 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 links would increase, and partly because of the funding and liquidity risk to banks that would come through the banking groups.

Steps have been taken in Sweden to dampen the risks by strengthening the capital and liquidity buffers of banks. The Swedish central bank and supervisory authority have noted the need for measures to help limit the credit growth of households and to reduce the indebtedness. It is also considered necessary to make the funding structure of banks more balanced.

2. A deterioration in the external environment could damage the outlook for economic growth in Estonia and worsen the loan quality of banks.

Economic growth in the euro area has been modest thus far despite increased economic activity, and varies greatly between countries. Unemployment, high indebtedness of the public and private sectors and the low profitability of banks mean that several euro area economies are vulnerable to any negative developments in the international economic environment and financial markets. Risks may be increased in the next half year by unfavourable developments in emerging markets. It is possible that investors will lose confidence in whether countries recovering from the crisis will stick to their reform programmes. It is also possible that the results of the comprehensive assessment of the banks could reveal that the capitalisation of banks is weaker than has been assumed by the financial markets in their risk assessments.

Estonian economic growth in 2013 was again supported by domestic demand, which draws on growth in household incomes and consumption. However, a small and open economy needs exports as the base for long-term growth, and so rapid wage growth at a time of weak or falling external demand may start to restrict the ability of the economy to grow and may increase the risks to the ability to repay loans.

The events in Ukraine have increased the geopolitical risks that could in different ways affect the Estonian economy and financial stability depending on how the risks are realised and how the public and private sectors are able to react. The direct exposures of the Estonian financial sector in Ukraine and Russia are small and so the immediate systemic risk is limited. The indirect effect of a possible reduction in foreign trade, including through our main trading partners or other countries, could be quite large though. A general increase in uncertainty could hold back economic activity in Estonia and more widely in Europe.

The improvement in the financial position of Estonian companies and households and their reduction of leverage mean that their ability to repay loans has been relatively good so far and the baseline scenario of the forecast expects it to improve further. Non-performing loans increase in the risk scenario, which assumes a marked drop in external demand, but they do so by notably less than after the downturn of 2008-2009. The capitalisation of the Estonian banking sector would be reduced by increased loan losses, but the larger banks would still be able to meet the capital requirements because their current capital buffers are sufficient. Capitalisation will be further backed up by the systemic risk buffer of 2% that is planned to be set by Eesti Pank.

3. The rapid rise in Estonian real estate prices may affect the financial behaviour of households and companies and lead risks to the financial system to build up.

Prices for Estonian apartments increased in the last quarter of 2013 by more than 20% year on year, and have continued their trend of rapid growth this year. Although wage growth has also accelerated, real estate prices have risen significantly faster. The increase in activity in the housing market can partly be explained by an improvement in household confidence and in the labour market. Additionally, the rise in real estate prices has allowed those households who had bought property with loans in 2006-2007 when real estate prices were at their peak to change their housing. Demand that is driven by income growth and the desire to improve living conditions is quite natural. It is also to be expected that demand will increase after recovery from a deep economic downturn when housing purchases were postponed.

The rise in real estate prices is led ever more by the shortage of supply of high quality living space, especially in Tallinn, where demand is highest. Although the rise in real estate prices and the current strong demand could lead to an increase in supply, real estate developers and banks have so far remained quite restrained because of uncertainty about developments in the external environment, the sustainability of demand, and financing conditions.

Low interest rates enhance the risk that the constant strong growth in real estate prices that has prevailed so far will lead to overly optimistic expectations among households. Alongside transactions to purchase a living space, there has also been an increase in investments in real estate looking to get a better return on assets than that from the interest paid on deposits. The rise in real estate prices has meant that the ability of Estonian households to purchase residential space has weakened, and unfavourable developments in the external environment could lead to a setback in the real estate market too. Investments in real estate, like in other investment assets, need to consider not only the possible return but also the risks associated with the value of the asset and its cash flows, and the costs of holding the asset.

One factor lowering the risks to financial stability is that households have used a lot more of their own funds in purchasing real estate than they did during the last boom in 2005-2007 and bank loans are financing a smaller part of the real estate transactions. As long as bank lending standards are not eased and the loan growth of households remains moderate, there is no great risk to financial stability from real estate prices temporarily rising faster than nominal economic growth. If credit for housing purchases increases, it will be important that banks continue to follow responsible lending principles when assessing the loan repayment ability of borrowers and do not amplify growth in real estate prices by setting excessively low requirements for down payments.

The main risks to Estonian financial stability

A worsening of the risk assessment for the Nordic economies and banks will increase the funding and liquidity risks of the parent banking groups	
A deterioration in the external environment could damage the outlook for economic growth in Estonia and worsen the loan quality of banks	
The rapid rise in Estonian real estate prices may affect the financial behaviour of households and companies and lead risks to the financial system to build up	

arrow indicates changes in the risk level from the previous assessment of October 2013

minor risk major risk

Measures to lower risks to financial stability

Measures taken at European Union level and in the Nordic countries play an important role in reducing risks to Estonian financial stability. The European Stability Mechanism (ESM) and the decision to build the banking union on three pillars give a solid base for increasing confidence in the European financial sector. The most important among the recent measures for macroprudential supervision are the entry into force in the European Union of the legal framework for capital requirements (CRD IV/CRR) at the start of 2014; the introduction of the single supervisory mechanism in the euro area in November 2014; and the measures planned and passed in Sweden, Norway and Denmark to reduce the build up of risks and to strengthen the capitalisation and liquidity of banks.

As the Estonian economy and banking sector are very exposed to risks from the external environment, which could see an unexpected worsening of the economic environment very rapidly lead to an increase in problems in loan repayments and a deterioration in the profitability and capitalisation of banks, Eesti Pank announced in autumn 2013 that it was planning to set an additional 2% systemic risk buffer requirement on banks' capital from 2014. The requirement will be imposed by a decree of the Governor of the bank after changes to the credit institutions act have been implemented and the cross-border notification of the measure has been made as agreed in the European Union.

Eesti Pank has focused a lot of attention not only on assessing and reducing structural risks, but also on observing cyclical developments in credit. As real estate prices in Estonia have grown

rapidly in recent years, it is important that the lending standards and conditions of banks not be excessively loosened under pressure from any possible strengthening of competition. In the current environment, it should be checked when housing loans are issued whether the borrower's down payment and ability to service the loan are sufficient.

As the indebtedness of Estonian companies and households has continued to decrease 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 a counter-cyclical buffer requirement for banks' capital in the second and third quarters of 2014.

Capital requirements in Estonia from 2014

		Core Tier 1 (CET1) requirement	**Total own funds requirement**
Base requirement		4.5%	8%
Buffer requirements	systemic risk buffer*	2%	
	capital conservation buffer	2.5%	
	counter-cyclical buffer	0%	
Total capital requirements		**9%**	**12.5%**

* the systemic risk buffer requirement will come in under a decree of the Governor of Eesti Pank

1. FINANCIAL MARKETS

1.1 THE INTERNATIONAL FINANCIAL ENVIRONMENT

International Financial Markets[1]

The main factors affecting international financial markets in the past half year have been the monetary policy decisions of central banks and an improvement in the outlook for economic growth in Europe.

The aggregate index for economic activity in the euro area indicates that the recovery is continuing, and in February 2014 the index was at its highest for two and a half years (see Figure 1.1.1). The global activity index and the activity indices for the USA are also higher than a year ago. The **outlook for economic growth** in advanced countries was clearly better overall at the start of spring than it was a couple of years ago, but growth remains modest. The European Central Bank March forecast predicted growth of 1.2% for the euro area for 2014 and an acceleration from 2015.

The cuts by the European Central Bank in the **monetary policy interest rates** in November 2013 made sure that interest rates would remain low. This caused the euro to fall for a time against the dollar and brought down the interest rates on sovereign bonds.

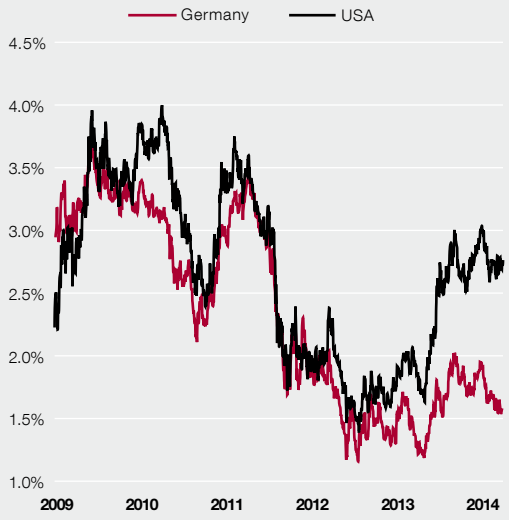
At the end of 2013 the Federal Reserve in the USA started gradually to reduce its quantitative easing programme of buying treasury securities and mortgage-backed securities. The tapering of the accommodative monetary policy in the USA means that financial conditions around the globe have tightened somewhat, and this in turn has had an impact on the financial markets in several emerging countries. The impact of this on share prices and exchange rates in emerging markets

1 The review covers market developments from the end of September 2013 to the end of March 2014.

Figure 1.1.1 Euro area Purchasing Managers Indices

Source: Bloomberg

Figure 1.1.2. Interest rates on ten-year government bonds of Germany and the USA



Source: EcoWin

was not that negative if the figures for December are compared with those of May 2013, when the first hints of an end to the securities buying programme reached the markets.

Interest rates on US and German sovereign bonds were up in sovereign bond markets in the last months of 2013 (see Figure 1.1.2). The rise was primarily due to expectations of changes in the global liquidity environment. Tensions meant that investors lost their appetite for risk in emerging markets at the start of 2014 and demand increased for higher quality US and European bonds and this brought interest rates down on those bonds.

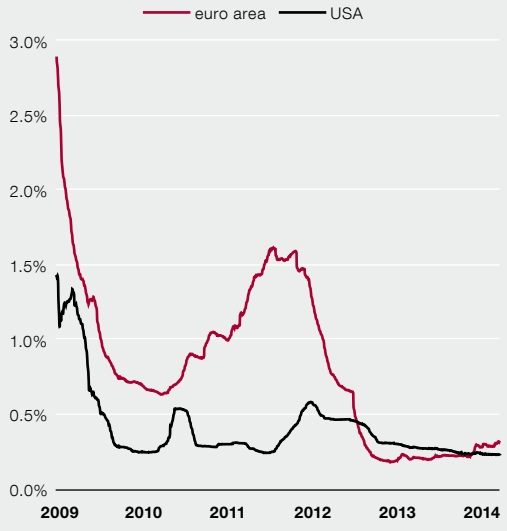
The interest spread over Germany for the short-term and long-term bonds of the euro area countries affected by the crisis decreased, mainly as investors looked for bonds with a higher yield when interest rates were very low (see Figure 1.1.3). Increased demand drove the interest rates on short and long-term Italian bonds down to very low levels. The closing of the interest rate spread was also aided by improved economic figures and more positive assessments from rating agencies, which gave a lift to investor confidence.

Even though the European Central Bank lowered the base interest rate for the euro area in November, **money market interest rates** rose somewhat at the end of the year and the overnight rates became more volatile (see Figure 1.1.4). This is partly because the excess liquidity in the euro area was reduced as banks started to repay ahead of schedule the loans they had taken from the central bank under the three-year long-term refinancing operations. Money market interest rates in the euro area have however remained very low for almost two years.

Figure 1.1.3. Spread of ten-year bonds of Greece, Portugal, Ireland, Italy and Spain over Germany

Source: EcoWin

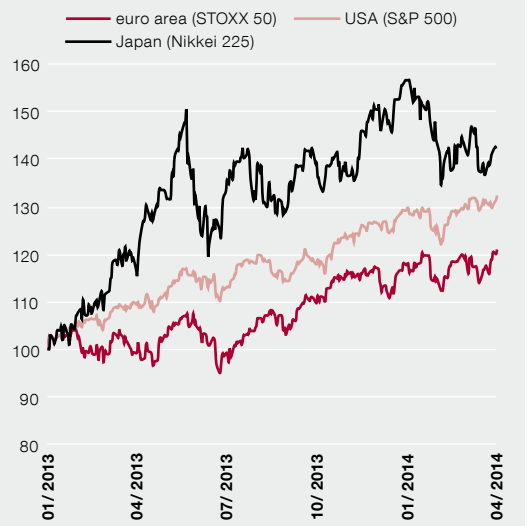
Figure 1.1.4. Three-month interbank money market rates in the euro area and the USA



Source: EcoWin

Stock markets in advanced countries continued to rise. The volatility indices for **share prices** fell at the end of last year, but in the beginning of 2014 volatility increased again. This has been particularly driven by the US Federal Reserve starting to exit its programme of securities purchases and an increase in uncertainty surrounding emerging markets. While share prices in emerging countries generally fell, the market indices in the G3 countries continued to rise, and at the start of April the main US index, the S&P 500, climbed to its highest level ever (see Figure 1.1.5). Although the geopolitical stresses coming from the crisis in Ukraine did not have any significant effect on global financial markets, the exchange rates of the Russian and Ukrainian currencies saw notable falls, as did Russian share prices.

Figure 1.1.5. Stock indices in the euro area, Japan and the USA (1 Jan 2013 = 100)



Source: EcoWin

The main risks affecting international financial markets, as observed in March 2014, came from various sources.

- **A possible worsening of risk assessments for emerging markets.** Emerging markets, which were subject to major capital inflows in recent years largely as a result of the loose monetary policy in the USA, can present a risk as a tighter monetary policy could cause a major and sharp reduction in investment. Furthermore, this could prompt market participants there to move their funds to the safer financial markets in the euro area and the USA. Outflows of capital and a fall in asset values accompanying an increase in risk aversion among investors could reduce the profitability of the American and European banks that have been more active in those markets.

- **Possible geopolitical tensions stemming from the events in Ukraine.** The impact on global financial markets of the crisis in Ukraine, which deepened in March 2014, has initially been quite minor. A stronger impact may be felt in several European countries primarily if there were to be a deterioration or partial interruption to the financial and trade ties signed with Russia. A continued political stand-off could cause a sell-off of financial assets and a general worsening of risk assessments. The impact of this could spread beyond the countries that have been directly affected by the conflict so far.

- **Potential failure to fulfil the structural reform programmes in countries that have been in crisis.** Although interest rates on bonds have fallen in the past year for the countries that were affected by the crisis and stock markets have risen, this has led to increased expectations of further improvement. If recovery were to be hindered in those countries or if structural reforms

were not to be carried out to the required extent, this could provoke a strong negative reaction in the financial markets. Continued reform is needed in order to reduce the high levels of unemployment and large government debt burdens.

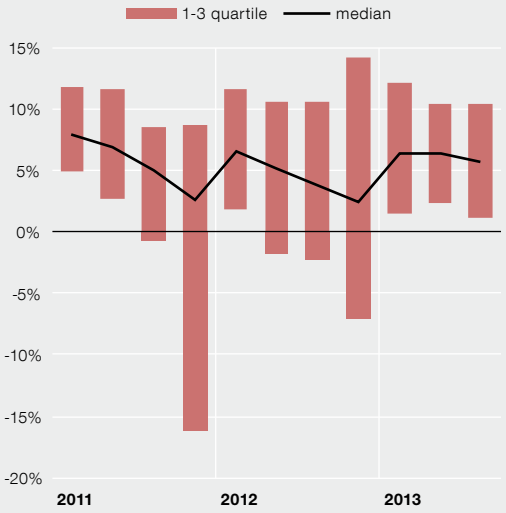
The state and the risks of European banking

Although the situation in banking in Europe has improved somewhat in the past half year, vulnerabilities still remain. The profitability of the larger banks in the euro area[2] fell in 2013 (see Figure 1.1.6). Profitability will also be held back in the near future by low interest rates and the prospect of a weak macro economy.

The effect of loan quality on profitability varies between countries because of the differences in their economies. The stock of non-performing loans continued to grow in the second half of 2013, albeit at a somewhat slower rate. The continuing growth in non-performing loans could indicate that banks have started to report such loans more accurately than before and have cleaned up their balance sheets but it could also indicate a continuing deterioration in loan quality. The risks that arise from the weak economy suggest that loan loss provisioning will continue.

The reduction in profitability caused by loan losses limits the ability of banks to boost their equity from profits, which could then weaken their resilience against shocks. The capital positions of European banks as a whole have been strengthened by increases in capital and a reduction in risk-weighted assets. Risk-weighted asset holdings can be lessened through adjustment of risk assessments alongside natural reductions and sales. This can be done by changing the parameters of a risk model or investing part of the portfolio in assets of a lower risk weight category, including sovereign bonds. The share of problematic assets remains particularly high on the balance sheets of banks from the countries most hit by the euro area debt crisis, and this means the banks in those countries are more vulnerable to negative developments in the economy. This makes the upcoming comprehensive assessment of the banks (see Box 1) necessary in order to establish clearly the quality of the balance sheets of the banks and their resilience, to increase confidence in European banks, and to create a base for a recovery in the euro area economy.

Figure 1.1.6 Return on equity ratio of large European banks



Source: ECB

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

Box 1: Preparations for the Single Supervisory Mechanism – comprehensive assessment

Before it assumes its direct supervisory role, the European Central Bank is working with the national supervisory authorities to carry out comprehensive assessment of the banks (see Figure 1B.1). This should give the clarity that is needed about the finances of the significant banks of the euro area, which will come under the direct supervision of the European Central Bank from 4 November 2014. National supervisory authorities will continue to supervise less significant banks under the coordination of the European Central Bank. The assessment will cover 128 of Europe's biggest banks, covering approximately 85% of the banking assets of the euro area, and the results of the assessment will be released in autumn 2014. The banks licensed in Estonia that will be assessed and passed under the direct supervision of the European Central Bank are the three largest, Swedbank, SEB and DNB.

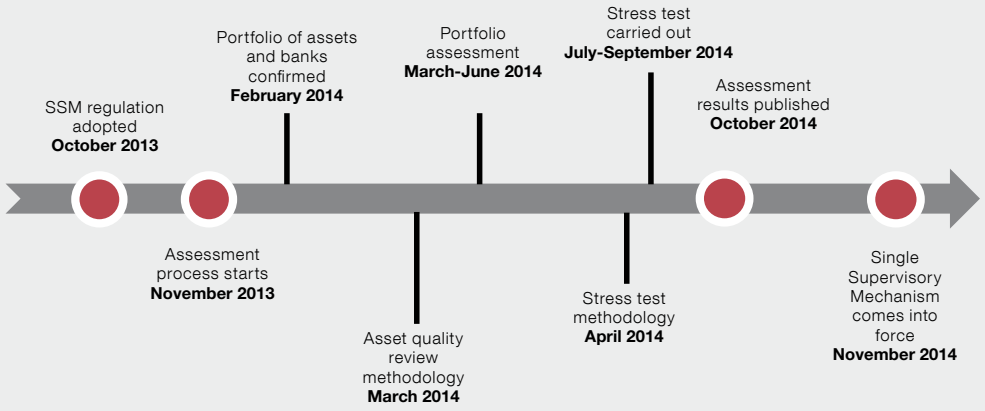
The aim of the assessment

The aim of the assessment is to make the balance sheets of the significant banks more transparent and rebuild investor confidence in European banks so that the banks can start lending to each other again and lending to businesses and households can recover. This will boost economic activity, which will stimulate recovery in the economy as a whole. If capital shortages are identified during the assessment, capitalisation will need to be strengthened. The assessment will also have the effect of advancing the consistency of supervisory practices across Europe.

The stages of the assessment

There are three pillars to the assessment, a supervisory risk assessment, an asset quality review and stress test.

Figure 1B.1. Timeline for comprehensive assessment



In the risk assessment, the national supervisory authorities will address the main indicators for the balance sheets of the banks, covering liquidity, leverage and funding risks. The analysis will cover both backward and forward-looking information to assess the intrinsic risk profile of each bank, its position in relation to its peers and its vulnerability to a number of exogenous factors.

The asset quality review will cover assets using harmonised definitions and will be broad and inclusive. The review aims to establish whether the banks have correctly valued loans and other assets on their balance sheets.

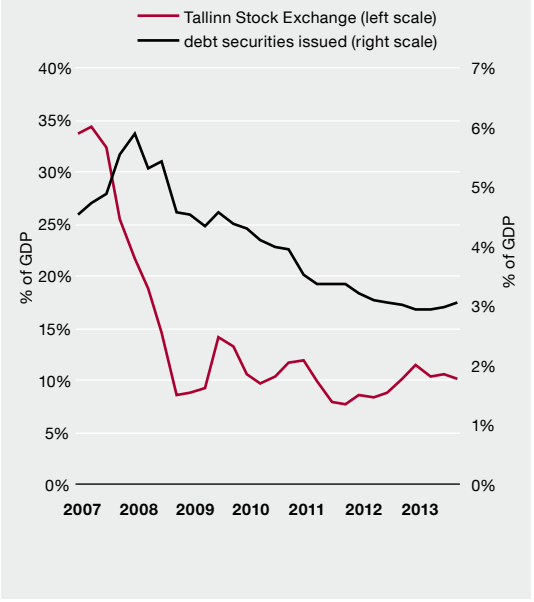
The stress test will build on the results of the asset quality review and will be carried out jointly by the European Central Bank and the European Banking Authority. The stress test will cover credit, market, funding and securitisation risks. The results will give a forward-looking view of the banks' shock-absorption capacity under stress. The baseline scenario of the stress test will have a capital threshold of 8% of Common Equity Tier 1 and the adverse scenario will have 5.5%.

1.2 ESTONIAN FINANCIAL MARKETS

Bond and stock markets

The local Estonian securities markets are small in size and rather quiet in activity terms. The total capitalisation of bonds issued and stocks quoted on the exchange stood at 2.4 billion euros at the end of 2013, or 13% of GDP (see Figure 1.2.1). The small size of the market means that the risks to Estonian financial stability from the local securities markets are small.

Figure 1.2.1. Ratio of Tallinn Stock Exchange capitalisation and debt securities issued to GDP



The volume of new bonds issued was three and a half times as large in 2013 as in 2012 (see Figure 1.2.2). This was mainly because of a limited number of large issues, which meant that activity in the primary bond market did not show broad-based growth.

Turnover increased in the secondary market in 2013 by 13%, but it still remained a quarter below the average of the three previous years. A total of 16.2 million euros of bond transactions were made in 2013, which is equivalent to less than 3% of the total value of bonds issued.

The increase in issues of bonds led to an increase in the total volume of bonds, which rose by 7% over the year. At the end of December the total value of bonds was 565 million euros, or 3% of GDP, which means that the Estonian local bond market remains the smallest in the European Union.

After passing its peak of 2011 in March 2013, the OMXT index of the Tallinn stock exchange has changed little (see Figure 1.2.3). The increase in tensions in Ukraine in the first days of March 2014 initially affected the Tallinn exchange less than other exchanges, but the general rise in uncertainty did have a negative impact in the markets later on. Share prices fell in Tallinn as a result and were below where they started the year by the second half of March. In the middle of March the OMXT was 3% lower than at the beginning of the year.

Trading activity did not change significantly in the second half of 2013 or in early 2014 and the average monthly volume of transactions of 16 million euros last year was around the average of the previous four years. A majority of the transactions on the Tallinn exchange are made with the shares of four companies, which together account for more than 80% of all the transactions on the exchange.

The stock market capitalisation has not changed much since the middle of 2013 due to the lack of movement in share prices. At the end of February 2014 the capitalisation stood at around 1.9 billion euros or 10.3% of GDP.

The share of investors resident in Estonia changed little during the year and their investments accounted for 59% of the capitalisation of the Tallinn stock exchange at the end of February 2014. Investors from Luxembourg accounted for 11% of the total capitalisation, the largest single non-resident share, while those from the Cayman Islands accounted for 7%.

Investment and Pension Funds

The improvement in market sentiment in summer 2013 had a beneficial effect on the returns

Figure 1.2.2. Total volume of bonds issued and new bonds issued quarterly

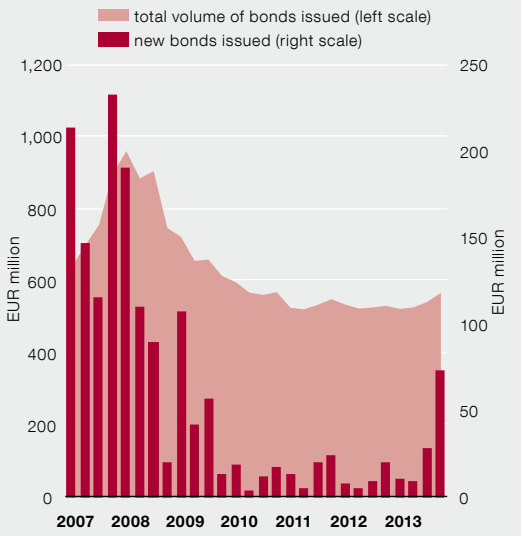
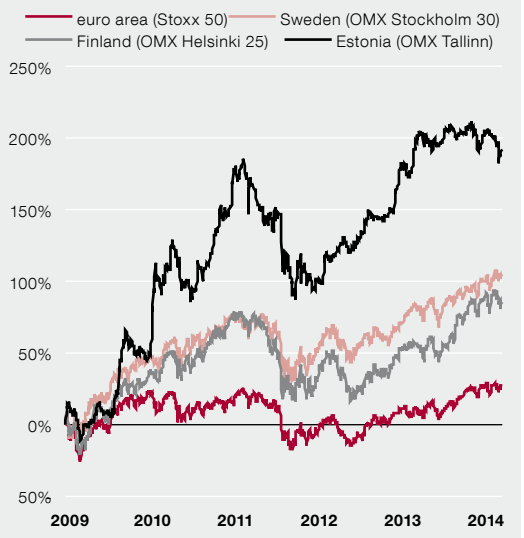


Figure 1.2.3. Tallinn Stock Exchange OMXT index and euro area, Finnish and Swedish indices, change from the beginning of 2009



Sources: Bloomberg, Eesti Pank calculations

of investment funds and pension funds, and by the end of the year a majority of funds had climbed above where they had started the year (see Figure 1.2.4). The net value of units in equity funds increased by 4.5% over the year and the EPI index showing the general return of pension funds was up 3.2%. Interest funds ended the year in negative territory however as market interest rates rose last year, pushing down the price of the bonds in the portfolio. The net value of units in interest funds fell by an average of 2.7% over the year.

The value of investment fund assets changed in different ways for different types of fund. Equity fund assets grew by nearly a fifth as prices of securities rose and new money came in, and at the end of the year they were worth 378 million euros (see Figure 1.2.5). Interest fund assets decreased by nearly 10% however, due to both falls in value and a net outflow of money. The value of pension fund assets for both the second and third pillars continued to increase, and by the end of the year second pillar funds had 1771 million euros of assets and third pillar funds had 105 million.

Changes in the structure of investment and pension fund assets were relatively small in 2013. The share of equity investments increased during the year by 1 percentage point and deposits did so by 0.6 point, while the share of bonds declined by 1.7 points. There remained a relatively large share of fund investments in the structure of investment assets and around half of investment and pension fund assets by volume had gone into other funds at the end of the year (see Figure 1.2.6).

The share of foreign assets in the assets of investment and pension funds was not much different from what it was at the end of 2012

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 2009

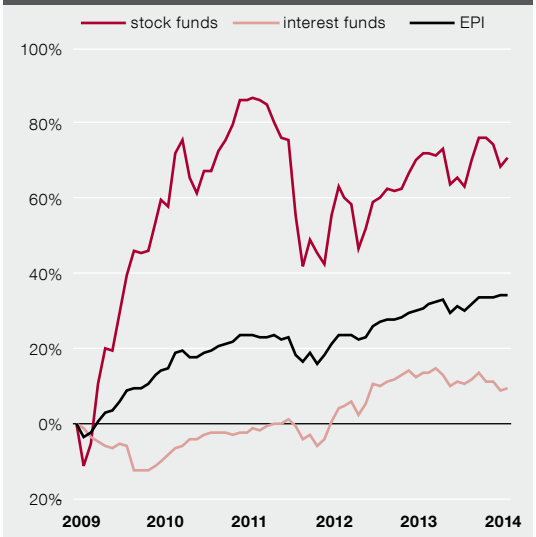
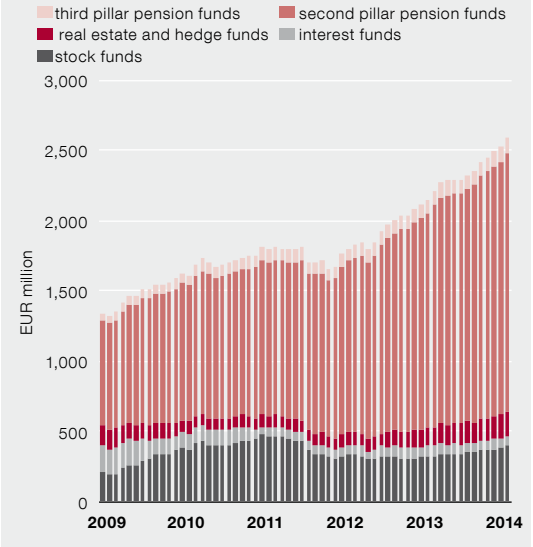


Figure 1.2.5. Investment and pension fund assets at month-end



and accounted for nearly three quarters of investment and pension fund assets at the end of 2013. 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 the year.

1.3. MARKET-BASED FUNDING OF BANKING GROUPS

Financial strength of the groups of parent banks

The operating environment for Nordic banks saw base interest rates remaining low in 2013 and economic growth proving slower than expected. Looking ahead, the main risks are the continuation of weak demand in the main export markets and a fall in domestic consumption if household confidence deteriorates.

A significant risk is posed by the large indebtedness of households, which has grown alongside the rise in real estate prices. The speed at which real estate prices have risen has varied from country to country. Prices in Sweden have risen more than in the other Nordic countries and their growth rate picked up even further in 2013. The only Nordic country where real estate prices rose less quickly in the second half of the year was Norway (see Figure 1.3.1).

Despite the difficult operating environment the **profitability** of the largest banking groups in the Nordic countries has remained strong. The return on equity of the largest Swedish bank groups exceeded 10% and the profitability of the Danske Group began to rise (see Figure 1.3.2).

In assessing the profitability of the banks, it is important to remember that the Nordic groups have a relatively moderate share of own funds,

Figure 1.2.6. Structure of investment and pension fund assets and the share of investments in funds

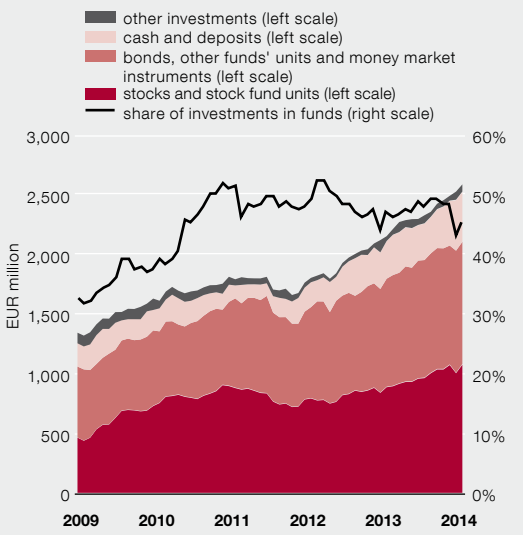
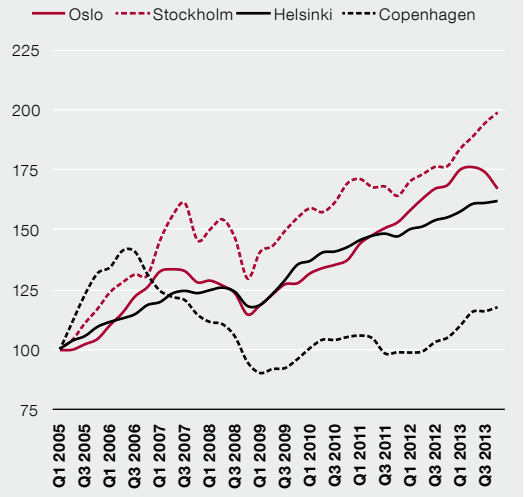


Figure 1.3.1. Price indices of apartments in capital cities of Nordic countries (2005 Q1=100)



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

meaning that the profitability of the larger groups as a ratio to equity remains close to the European average (see Figure 1.3.3). The profitability of the four biggest groups as a ratio to assets was between 0.2% and 0.7% in 2013.

The growth in deposits has helped reduce the interest expenses of the banks, while income has increased from loans with fixed interest rates. Profitability has also been supported by income earned from asset management and from intermediating issues of corporate bonds, and by the small share of problem loans.

All four of the largest bank groups operating in Estonia decided to raise their **dividend** rates in 2013 and the dividend payout ratio[3] climbed for some groups to its highest level in ten years.

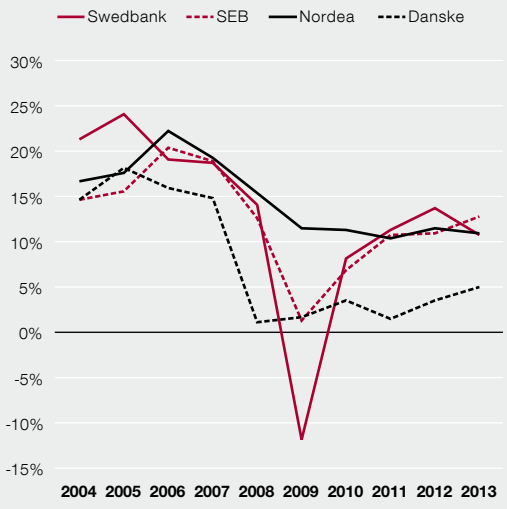
Steady profitability and the modest numbers of problem loans have led to an increase in **capitalisation** (see Figure 1.3.4). The Core Tier 1 capital for the SEB group exceeded the capital adequacy level calculated under the principles of both Basel II and Basel III by 17% last year, and that of the Swedbank group exceeded it by 18%. As internal rating models put a lot of weight on the earlier quality of loans, the loans issued in the Baltic states are still considered significantly more risky than loans to similar sectors in the Nordic countries.

Under more conservative calculations, which consider at least 80% of the risk assets found with the Basel I methodology, the Core Tier 1 equity of the SEB group was 11.7% at the end of 2013 and that of the Swedbank group was 11.3%.

To slow the accumulation of risks and strengthen the resilience of the banks the supervisory au-

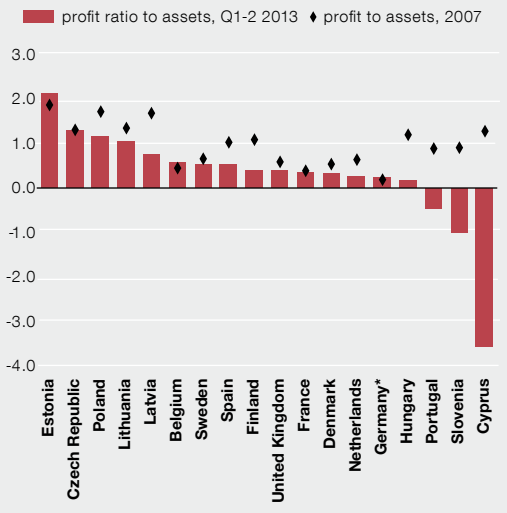
3 Dividends paid out as a share of total profits.

Figure 1.3.2. Banking groups return on equity



Source: Bloomberg

Figure 1.3.3. Banking sector profitability



Source: European Central Bank
* major banks

thorities in the Nordic countries have imposed **additional measures.**

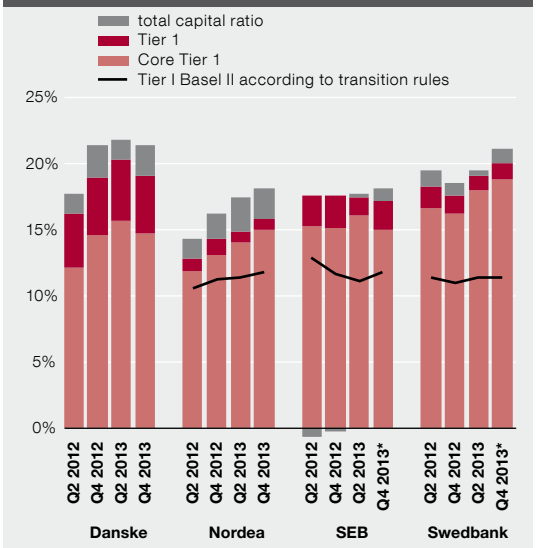
- In **Sweden** a risk weight floor of 15% has been in place for mortgages since May 2013, and the supervisory authority has announced its intention to raise this to 25%[4]. The banks have been advised to reduce the share of very long term loans and interest-only loans and to strengthen their capitalisation by raising the CET 1 capital requirement to 12% by 2015. To lower liquidity risk it has been recommended that the maturity mismatch between funds used and those loaned out should be reduced. Since 2013, the eight largest banks in Sweden are subject to a minimum liquidity coverage ratio, LCR, of 100%, both in overall terms and for the euro and the dollar separately.

- In **Norway** the use of transitional Basel I floors has been extended. This means that if the internal assessment methods of a bank show that the need for capitalisation is smaller than the requirement found using the earlier Basel I principles, the bank must expect capital requirements to be at least 80% of the amount calculated under Basel I. The CET 1 of banks in Norway must cover 9% of risk assets, with a general requirement of 4.5%, a capital conservation buffer requirement of 2.5% and a systemic risk buffer requirement of 2%. The systemic risk buffer requirement will rise on 1 July 2014 by one percentage point. It is also planned that a 1% additional requirement will be introduced for systemically important banks in 2015 and 2016 and a counter-cyclical buffer requirement is under consideration. To lower the risks from real estate loans, minimum requirements for the calculation of capital requirements for such loans are under review.

- In **Denmark** the principles for writing down non-performing loans have been clarified and bank-based risk assessments have been reviewed. The law that has been passed gradually transfers more of the financing risk of mortgage-backed securities onto the buyer of the securities. The long-term goal for capitalisation is to set a requirement of 10.5% for all banks, while it is planned that requirements for systemically important banks will rise gradually to 13.5% by 2019.

- In **Finland** the focus so far has mainly been on economic policy measures outside the banking sector. The measures affecting the banking sector will be planned during the transition to the Capital Requirements Directive CRD IV.

Figure 1.3.4. Capital adequacy of Nordic parent banking groups



Sources: public reports of banking groups
*Based on Basel III

4 Banks may have capital adequacy ratios calculated using internal models, but the supervisory requirements are that they cover any shortfall from the 15% risk weight floor for mortgages with their own capital.

Funding and liquidity of parent banks

The Nordic parent groups base their finances on funds from financial markets much more than other large banks in Europe do. Bonds issued make up almost 40% of the balance sheet (see Figure 1.3.5), and around half of these are covered bonds.

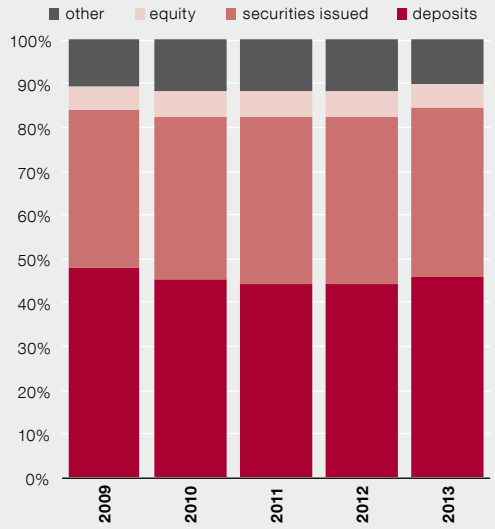
Deposits are relatively small in relation to loans in the Swedish banking groups in international comparison. This is a consequence of the wide coverage of investment and pension funds in Sweden, which means that a smaller proportion of household savings reaches banks as deposits. This makes the bank groups more vulnerable to risks arising from the financial markets and from the difference in the maturities of loans and bonds. Although deposits grew somewhat faster in volume in 2013 than bonds did, the reduction of other debt liabilities meant that funding from the financial markets did not change much as a share of the balance sheet.

Quite a large proportion of the funding of Swedish banks from the financial markets comes from bonds issued in foreign currencies, which make up a particularly large share of short-term bonds with a maturity of less than one year (see Figure 1.3.6). The share is so large because the local Swedish market for short-term paper is small, making it cheaper and easier for banks to issue short-term bonds on foreign markets in foreign currencies. The bonds in foreign currency also give the banks access to a broader base of investors, allowing them to disperse their market-based funding across the markets.

Although the majority of those bonds are used for financing assets in foreign currencies, the Riksbank estimates[5] that around one quarter

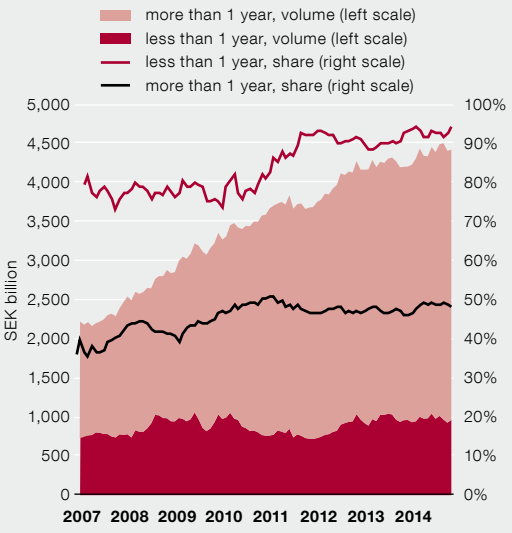
5 Sveriges Riksbank Economic Review 2014:1.

Figure 1.3.5. Swedish banking sector structure of liabilities and equity



Source: Statistics Sweden

Figure 1.3.6. Swedish banking sector's total short term and long term debt securities issued and the share of foreign currency debt securities



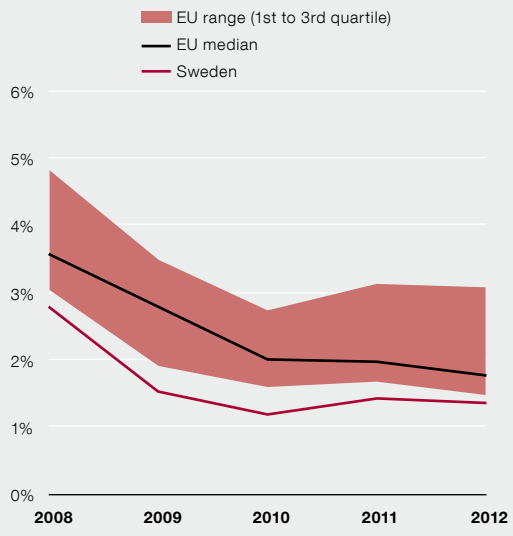
Sources: Statistics Sweden, Eesti Pank calculations

of them are used to finance domestic assets as well. This funding model disperses the funding of the banks through the markets, but it remains vulnerable to any change in the risk assessment of the financial markets.

The markets have so far considered the Swedish banks to be less risky than other European banks and so funding has been relatively cheap and easily accessible for Swedish banks, which is reflected in their lower interest costs (see Figure 1.3.7). The market interest rate of the covered bond, the main market-based funding instrument used by the Swedish parent groups, continued to fall from autumn 2013 (see Figure 1.3.8).

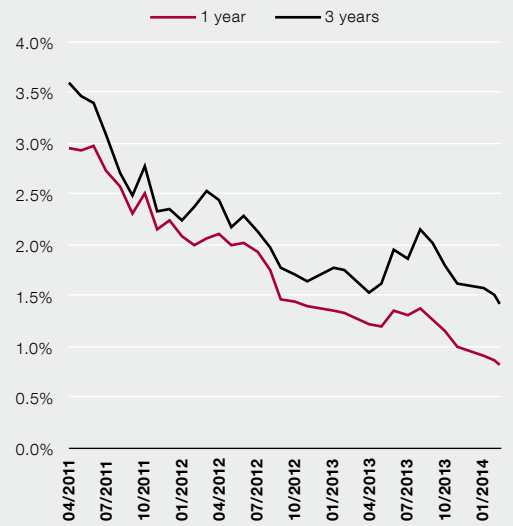
The annual reports of the banks make it clear that at the end of 2013 the liquidity ratios showed the liquidity of the banks to be good and the buffers sufficient. The banks exceeded the minimum liquidity coverage ratio of 100%, both in overall terms and for the euro and the dollar separately.

Figure 1.3.7. Interest expenses of banks as a ratio to total liabilities



Sources: ECB, Eesti Pank calculations

Figure 1.3.8. Average covered bond yields of Swedish parent bank groups*



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

2. THE REAL ECONOMY AND LOAN QUALITY

2.1. THE CREDIT PORTFOLIO OF BANKS[6]

The total volume of **loans and leases**[7] given by banks to the non-financial sector stood at 15.1 billion euros at the end of 2013. The moderate growth that had started in 2012 receded in the second half of 2013 and the annual growth in the loan portfolio slowed to 0.9% by the end of December (see Figure 2.1.1).

Annual growth in the corporate loan portfolio, which has been falling since the second quarter, was down to 1.2% by the end of 2013. Growth mainly slowed because of a decline in the short-term financing portfolio, though the more gentle growth in long-term loans also contributed. The short-term portfolio shrank in almost all sectors, with only trade needing more short-term financing than before in order to cover working capital needs following a revival in domestic demand. Growth in long-term financing slowed because growth levelled off in the loan portfolio for logistics and infrastructure. The increase in the corporate loan portfolio has consequently again been driven mainly by agriculture and manufacturing (see Figure 2.1.2).

The revitalisation of the real estate market meant that 2013 saw more activity in **housing loans**. There was an increase of 21% from 2012 in the volume of new housing loans issued, which led the housing loan portfolio to recover gradually and grow over the year by 0.8%.

Other household loans continued to decline in volume and the portfolio was down 1.1% over the year. Different types of loan experienced different movements however, as overdrafts and credit card loans shrank by 7.1% and consumer loans by 3.5%, while the portfolio of car leases increased by 10%.

6 Includes loans, leases and factoring.

7 Also includes 217 million euros of loans and leases to non-residents.

Figure 2.1.1. Banking sector loans and leases to businesses and households

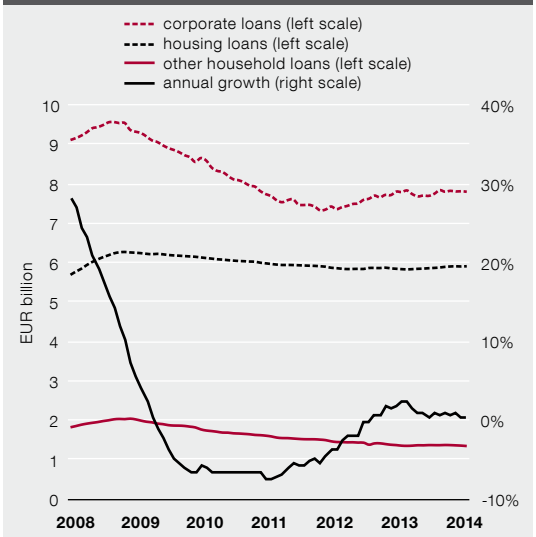
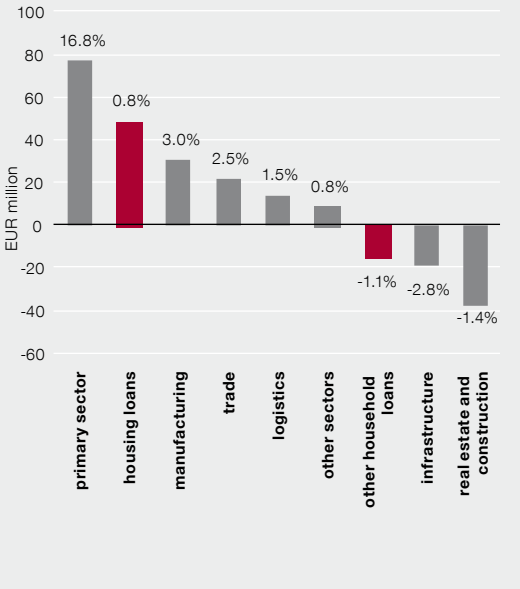


Figure 2.1.2. Annual growth in loans and leases to businesses and households as at 31/12/2013



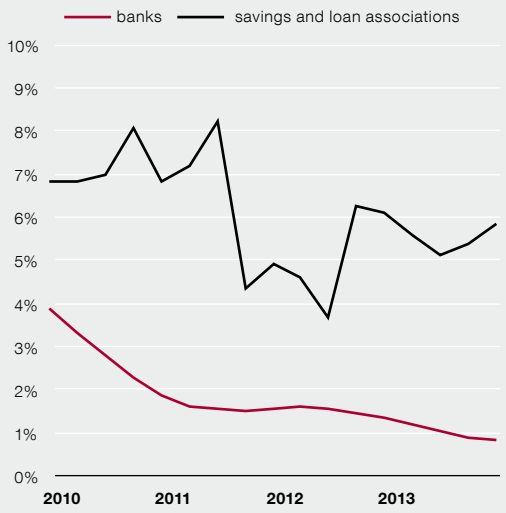
Box 2: Developments and risks for savings and loan associations

Savings and loan associations are cooperative financial institutions whose main business is providing members with deposit and loan facilities. Many savings and loan associations also offer other financial products, such as guarantees, leases, factoring and insurance brokering. Savings and loan associations are regulated by the Savings and Loan Associations Act. Unlike banks, savings and loan associations cannot accept deposits from the public, and they do not fall under the Financial Supervision Authority.

The **number** of savings and loan associations has almost doubled in the past decade and at the end of January 2014 there were 20 such associations in Estonia[8]. The greatest number of new savings and loan associations were founded in 2007–2009, but a further three were set up in 2013. In recent years there has been rapid growth in the **membership** of the savings and loan associations, and it reached almost 4700 in January 2014. The main attraction of savings and loan associations over banks is that their deposits have higher interest rates. More than 2000 members had deposits in the associations at the end of 2013, but only around 1100 members had taken out loans from them.

The average interest rate of the commercial banks for term deposits has fallen steadily in recent years, and since 2013 it has been lower than 1%, while the return on investment deposits has not been noticeably better. The **average interest rate on term deposits and savings deposits** at savings and loan associations has remained close to 5% throughout this period (see Figure 2B.1).

Figure 2B.1. Yearly average term deposit interest rate



The higher interest rates have meant that the popularity of depositing with savings and loan associations has risen rapidly and the volume of deposits has grown almost five-fold in the past two years (see Figure 2B.2). In contrast to bank deposits, it is the term deposits of savings and loan associations that have seen the most growth. The share of demand deposits in the associations remains below 10%, while over 60% of bank deposits are demand deposits.

In contrast to traditional banks, anyone wishing to deposit with a savings and loan association must pay a membership fee and a

8 Nine of these are members of the Estonian Union of Credit Cooperatives (EUCC).

Figure 2B.2. Demand and term deposits in banks and savings and loan associations

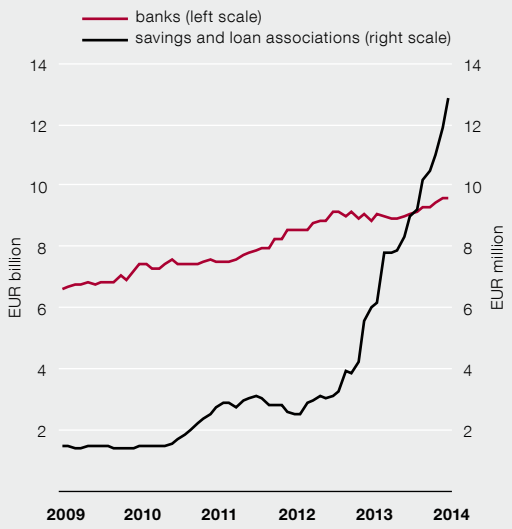
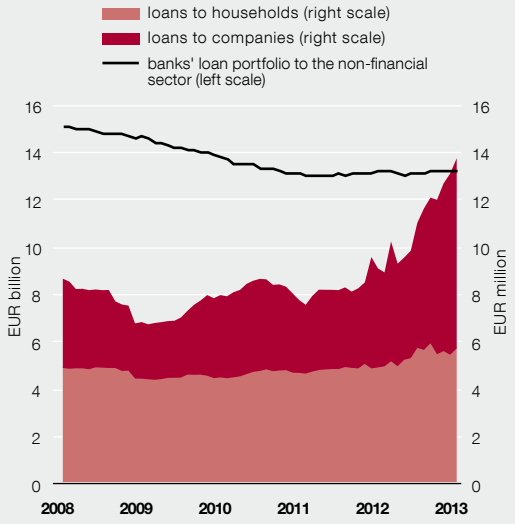


Figure 2B.3. Savings and loan associations loan portfolio to the non-financial sector



contribution[9], which can significantly reduce the return on small or short-term deposits. It should also be noted that interest on deposits in the associations is subject to 21% income tax, which is not the case with bank deposits. Depositing in a savings and loan association is somewhat riskier than doing so with a bank, as deposits with associations are not covered by the deposit guarantee of the Guarantee Fund, unlike bank deposits.

Another important source of loan resources for savings and loan associations alongside deposits has been funds from government loans and foreign aid, which accounted for as much as 30% of assets in 2008[10]. These funds have declined steadily as a share of the total since then, and at the end of January 2014 they made up less than 8% of assets.

The associations not only take deposits from their members, they also issue **loans**, and these have increased in volume by more than 70% during the past two years (see Figure 2B.3). The fastest growth in recent years has been in loans to companies, with the portfolio of such loans almost doubling in a year. Loans to households were up by more than 16% over the year.

As the amounts lent by savings and loan associations are related to the contributions of members[11], the loans tend to be quite small. The average loan to private individuals was less than 6000 euros at the end of 2013, and

9 Under the Savings and Loan Associations Act the minimum possible membership fee is 6 euros, and the minimum contribution of members is 30 euros.

10 The majority of these funds are long-term loans from the Rural Development Foundation.

11 The total loans made to a member of a savings and loan association may not exceed the contribution paid in by that member more than 20 times, nor may it exceed 20% of the association's equity.

to companies it was less than 43,000 euros. Households mainly take consumer loans and businesses take relatively short-term investment loans. The interest rate on loans is mostly close to 10%.

As the associations only lend to their own members, whom they know well, the proportion of **bad debts** is relatively small, standing at about 2.2% at the end of January 2014. If the number of members grows significantly larger however, it will become harder to assess the ability of borrowers to repay their loans.

Despite the rapid growth in savings and loan associations in recent years, their deposits, loan portfolio and assets only account for around 0.1% of the banking sector, and so their impact on the risks to the financial system is small.

2.2. THE LOAN REPAYMENT ABILITY OF COMPANIES

Although the financial results of companies over the past year did not improve as appreciably as before, their finances are still good. The ability of companies to borrow is aided by the very low interest rates and the biggest financial buffers of the past decade. This has allowed the payment behaviour of companies to improve too, and has reduced the volume of problem loans[12]. 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 how far companies can limit the growth of wage costs when they are experiencing slow turnover growth.

The general economic environment and corporate financial results

The Estonian economy continued to grow in 2013, but at a slower rate than in previous years. It grew by 0.8% but growth slowed during the year, though nominal growth remained relatively high at around 6%. Growth was mainly supported by domestic demand, while external demand was again quite modest. Growth slowed partly because of one-off factors and the Eesti Pank December forecast predicted accelerating growth in 2014 and 2015.

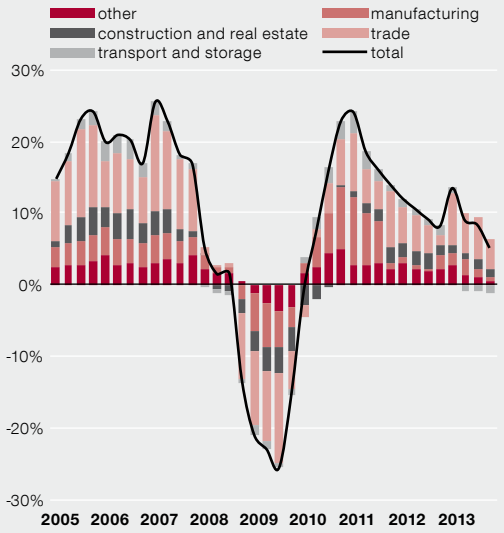
This recovery in growth is mainly threatened by risks related to foreign trade. If the economic downturn in Finland continues or if growth in Sweden and Latvia is more modest than expected, growth in Estonia could be slowed down through lower levels of exports or foreign direct investment. Trade shocks or other shocks connected with Russia and other CIS countries could also reduce exports or hold economic growth back in other ways.

The **sales turnover** of companies has grown more slowly as economic activity has proved modest (see Figure 2.2.1). This is mainly because very large companies have seen turnover growth stop, which is itself mainly a reflection of weak external demand. During the recovery from the crisis the greatest growth in turnover volumes and growth rates has been seen by micro companies with fewer than ten employees. The main reason for this is the increased number of such companies rather than an increase in their average turnover[13].

12 See also section 2.5 Asset quality

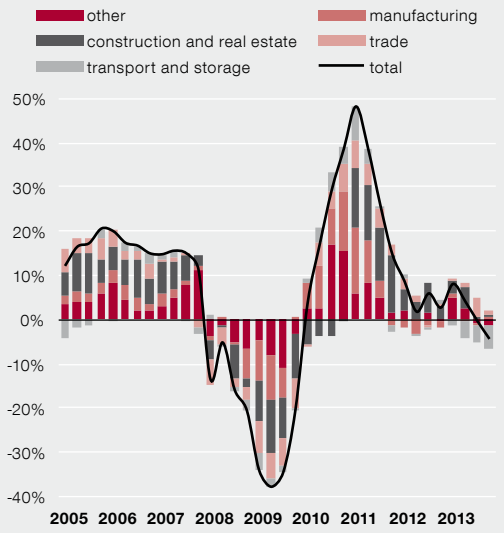
13 The only size group of companies that has seen the number of companies grow in the past four or five years is micro companies, numbers of companies of other sizes have fallen. For the past year and a half the number of larger companies has also started to increase very slowly.

Figure 2.2.1. Sales revenue growth by sectors



Source: Statistics Estonia

Figure 2.2.2. Profit (operating surplus and mixed income) growth by sectors



Source: Statistics Estonia

The sectors that have driven turnover growth have again primarily been the domestically-oriented retail and real estate sectors. Turnover has only grown by very little in export-focused manufacturing industry in recent years.

Company **profits** fell somewhat in the second half of 2013 as sales turnover growth slowed and wage costs increased robustly (see Figure 2.2.2). The decline in profits was not very broadly based though, as it was almost entirely due to transport and warehousing and agriculture, both of which saw profits grow very rapidly in previous years[14]. As profits grew fast before and are now falling on a relatively narrow base, the profitability of Estonian companies remains quite high despite seeing something of a decline.

Payment behaviour and bankruptcies

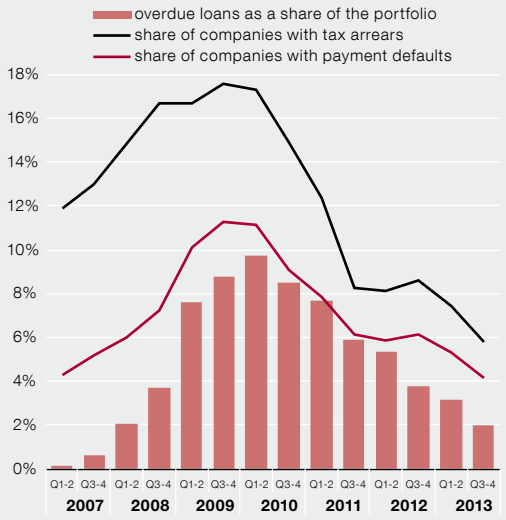
The first sign of a company getting into financial difficulty is often the emergence of payment defaults and tax arrears[15]. The shares of companies with **payment defaults** and **tax arrears** both fell further in the second half of 2013 and were below the levels seen before the crisis. Payment behaviour improved in all main sectors and for companies of all sizes (see Figure 2.2.3).

The number of bankruptcies fell in 2013 as well and was around the same level as before the boom. As the total number of companies has increased since then, the share of companies going bankrupt is close to its lowest level of the past ten years (see Figure 2.2.4). As in the previous year the highest percentages of bankruptcies in 2013 were among companies in accommodation and catering, construction and

14 Without these two sectors, profits would have grown by around 5%.

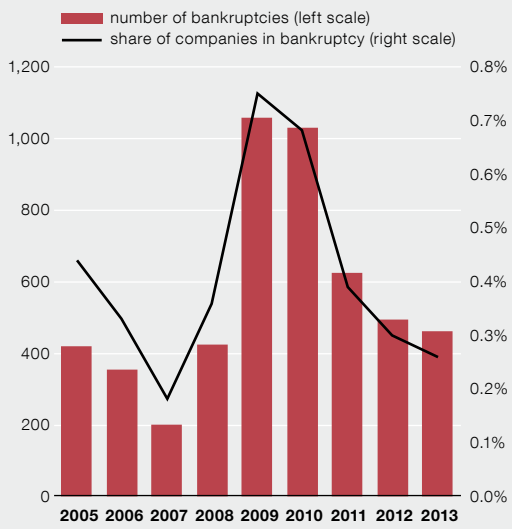
15 A study of bankruptcies in Estonia in 2013 by Krediidiinfo AS showed that almost three quarters of companies that went bankrupt had had tax debts in the previous year.

Figure 2.2.3. Payment behaviour of companies



Sources: Krediidiinfo, Eesti Pank

Figure 2.2.4. Corporate bankruptcies



Source: Krediidiinfo

manufacturing. Data from the Estonian commercial register show that although the number of companies going bankrupt climbed slightly in the first three months of this year, it remains very small.

Financial status and payment capacity of companies

The improvement in the financial circumstances of companies has continued. Because borrowing activity is at a low level, nominal economic growth is still faster than the growth in the loan portfolio, meaning that corporate indebtedness is shrinking. Equity growth has allowed leverage, or the debt to equity ratio, to fall to its lowest level in ten years (see Figure 2.2.5).

The financial risks to companies have also been reduced by growth in their **liquid financial assets**. Corporate deposits have grown as a ratio to GDP and to debt liabilities, meaning that the ability of companies to finance their own activi-

Figure 2.2.5. Volume and growth of corporate deposits

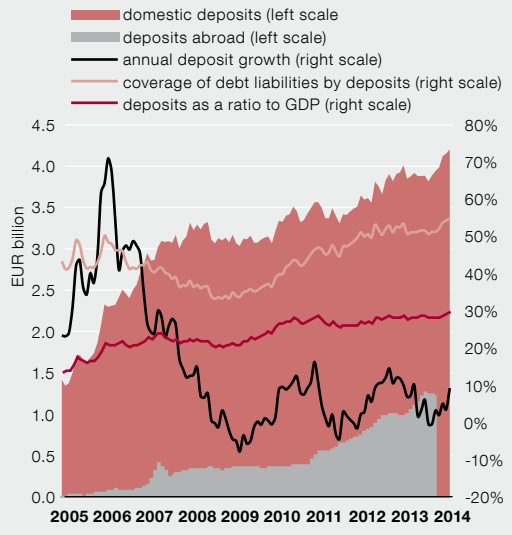


Figure 2.2.6. Indicators of the ability of companies to repay loans

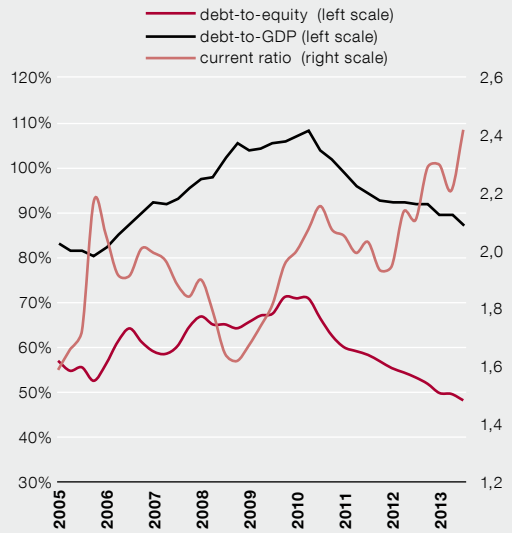
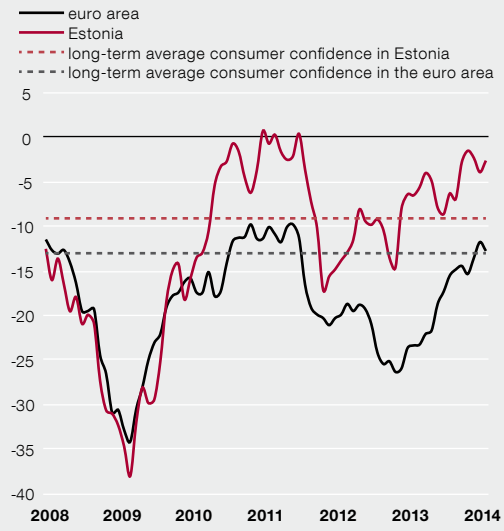


Figure 2.3.1. Consumer confidence indicator



Sources: Estonian Institute of Economic Research, European Commission

ties and repay loans from their deposits if needed has also improved (see Figure 2.2.6). The corporate **interest burden** is being held down to an extent by very low base interest rates as earlier.

2.3. THE LOAN REPAYMENT ABILITY OF HOUSEHOLDS

Consumer confidence continued to improve in the first months of 2014 and remained higher than the long-term average (see Figure 2.3.1). Expectations for the economic circumstances of the family and the state improved the most and inflation expectations are at their lowest level in recent years. Although consumer confidence has improved steadily since the start of last year for the euro area as a whole, the improvement has been larger among Estonian residents after the crisis.

The labour market has favoured households and has helped them reduce the risks relating to their incomes even as economic growth has slowed. Employment reached 62% of the working age population in the fourth quarter of 2013 and increased due to declines in both unemployment and inactivity. The unemployment rate, which has now fallen for four years in a row, rose slightly at the end of the year because of seasonal factors to stand at 8.7% (see Figure 2.3.2).

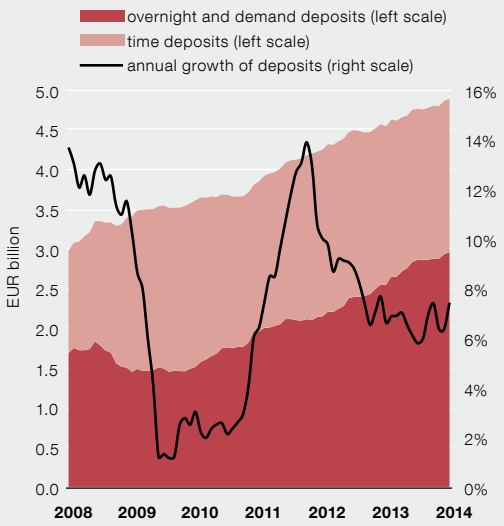
Average gross wages grew by a relatively fast 7.6% in the last quarter of last year, while real wages, adjusted for the impact of consumer price changes on purchasing power, rose by 6%, meaning they have risen in quarterly terms for more than two years.

Household deposits grew relatively strongly (see Figure 2.3.3) and were up 7% over the year in February, primarily due to the growth of 16% in overnight and demand deposits. The share of term deposits and savings deposits in total deposits has fallen consistently because interest rates have been very low.

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

Sources: Statistics Estonia, Eesti Pank

Figure 2.3.3. Household deposits



Household loan obligations have increased slightly in volume since the start of last year, but household indebtedness continued to fall as incomes rose more rapidly (see Figure 2.3.4). Household debt as a ratio to GDP was 41% in the third quarter, and was 79% of disposable income. Indebtedness has fallen by 17 and 22 percentage points from its peak of four years ago.

With support from the favourable labour market and wage trends, the financial position of households improved further in the third quarter of 2013 and buffers increased (see Figure 2.3.5). In 2013 the financial assets of households were 13% larger than a year earlier, mainly because the company shares that make up a part of household financial assets increased in value. The decline in household debt liabilities stopped in the second quarter of last year and by the end of the third quarter they had increased by 51 million euros. Cash and deposits covered 75% of total household debt at the end of the third quarter, which was 5 percentage points more than in 2012.

Figure 2.3.4. Household indebtedness

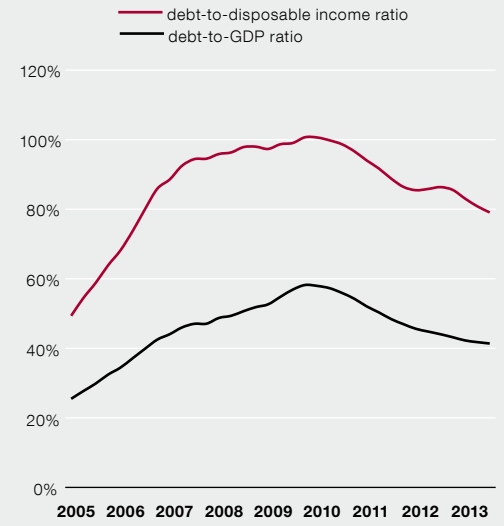


Figure 2.3.5. Financial position of households

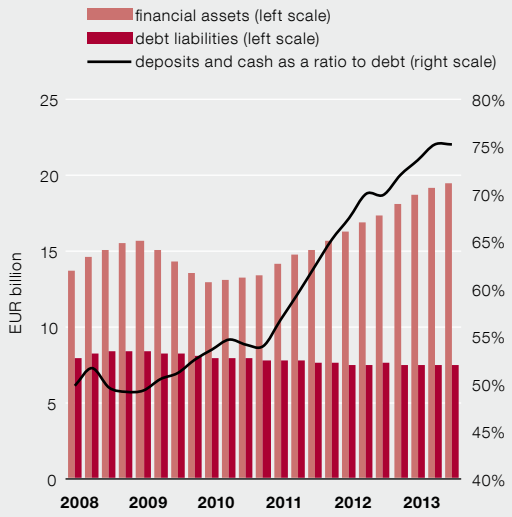
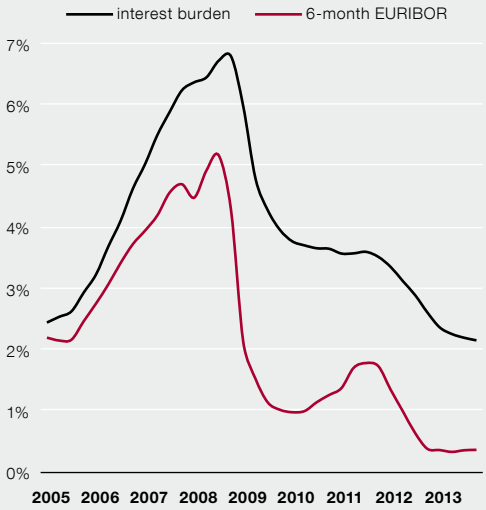


Figure 2.3.6. Household interest burden



The interest burden of households, which is the ratio between the annual interest payments of their loans and disposable income, was 2.2% at the end of 2013, which is 0.5 percentage points less than a year earlier (see Figure 2.3.6). The household interest burden at the end of last year was less than one third of what it was at its peak in 2008.

The December forecast published by Eesti Pank predicted that the household loan stock will continue to grow modestly in 2014 but the growth in disposable income will slow. As markets expect the money market interest rates to remain low for the near future, no significant increase in the household interest burden should be expected, and the risks to the loan repayment ability of households are more likely to remain low in the near future.

Box 3: The possible impact on financial stability of the payday loan market

The annual reports of companies issuing consumer loans show that the **loan stock of the payday loan** sector outside the banking sector[16] was around 118 million euros at the end of 2012 and had increased in 2010-2012 by almost 30% a year[17]. The payday loan market probably grew again in 2013, but this cannot yet be estimated accurately as some annual reports are missing. The stock of consumer loans issued by the commercial banks has declined since the end of 2008 in contrast, and this trend only stopped in the second half of

16 The analysis does not cover instalment payments to retail companies.

17 Report on the payday loan market – analysis and proposals, Ministry of Economic Affairs and Communications, February 2014. This is a rough estimate that probably underestimates the actual loan stock a little as not all companies had submitted an annual report.

2013. The loan stock of the payday loan companies made up around 15% of all consumer loans at the end of 2012 (see Figure 3B.1). Analysis by the Ministry of Economic Affairs and Communications shows that the number of people who have taken payday loans is between 100,000 and 190,000 and around one third of payday loans are problem loans[18]. Data from the Credit Register show that there were around 34,700 people in Estonia at the end of 2013 who had had payment defaults on payday loans or loans taken from companies that focus on supplying consumer credit. Some 57% of these people had one current default and 43% had two or more.

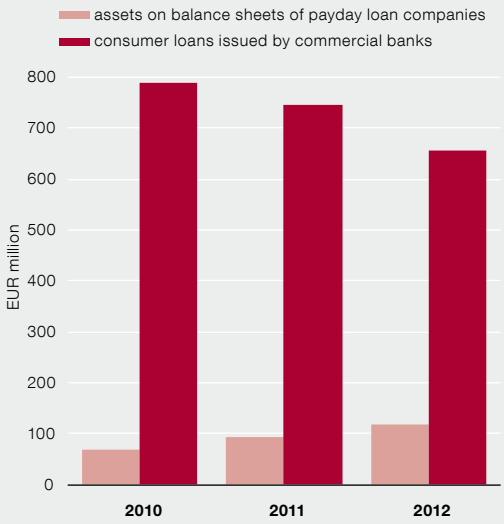
Another feature of the payday loan market beside the large numbers of problem loans is that the amounts demanded from borrowers by debt collection agencies and the courts are well in excess of the original amount borrowed from the payday loan company. **Debt collection agencies** were handling **claims** at the end of 2013 of at least 24 million euros from around 38,000 people. At the same time payday loan bureaus had passed 23,275 claims directly **to the courts** without reference to debt collectors, affecting around 20,500 people and having a total value of 66 million euros (see Figure 3B.2)[19].

As the payday loan market is relatively small in volume, there is probably no particular risk to financial stability from individual payday loans becoming problematic. Risks to financial stability are further reduced because there is no risk to

18 Report on the payday loan market – analysis and proposals, Ministry of Economic Affairs and Communications, February 2014.

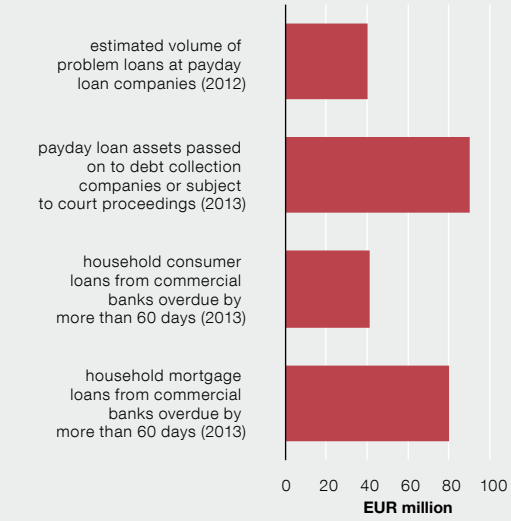
19 Report on the payday loan market – analysis and proposals, Ministry of Economic Affairs and Communications, February 2014.

Figure 3B.1. Consumer loans granted by payday loan companies and commercial banks



Sources: Eesti Pank, commercial register, Ministry of Economic Affairs and Communications

Figure 3B.2. Problem loans



Sources: Eesti Pank, commercial register, Ministry of Economic Affairs and Communications

the assets of depositors if an payday loan company gets into financial difficulties, in contrast to the case for commercial banks. This suggests that problems at payday loan companies would not lead to a general loss of faith in financial companies or to other related problems.

The loan quality of banks and financial stability could be affected in that people taking payday loans often already have debts to banks. If they fall into default with payday loans, they will not be able to meet their other financial obligations. This is exacerbated by the sums required by debt collectors and the courts, which are usually many multiples of the amount originally borrowed. Another problem for debtors is that banks will generally not restructure loans for borrowers who have debts to payday loan companies. If someone takes out an payday loan, it may affect whether banks will agree to lend to them in future. Problems in paying payday loans may also have an indirect impact on the labour market. Debt counsellors say that people facing payment difficulties and frozen bank accounts are significantly less motivated to go to work. They often agree to work without declaring their wages or attempt to escape their debts in Estonia by leaving them unpaid and going to work abroad.

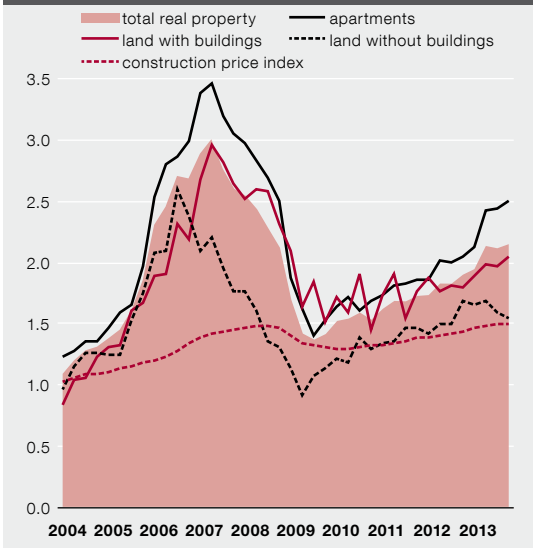
2.4. THE REAL ESTATE MARKET

The housing market

The Estonian residential real estate market remained active at the beginning of 2014. Price rises have mainly been driven by apartments, but land with buildings has also contributed (see Figure 2.4.1). The **median price** of apartments rose in the first months of this year by an average of 18% over the year, and the average price rose by 15%, while the number of transactions was up 8%. The median apartment price is still one quarter below the peak reached in early 2007 during the real estate boom, but it is more than 70% higher than the lowest point it reached in the middle of 2009 during the crisis.

Activity in the real estate market is not even across geographical regions. The sharp rises and falls in prices during the boom and the subsequent crisis were quite similar in the real estate markets of different towns, but those markets have not recovered equally after the crisis.

Figure 2.4.1. Real property price indices, 2003 Q2=1



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

The rapid price rises have mainly come from increased activity in the market in large towns, while real estate prices in smaller towns have risen more slowly. The causes of this are a lack of

jobs, smaller incomes and emigration, and also the outdated infrastructure and higher heating costs of small towns and villages.

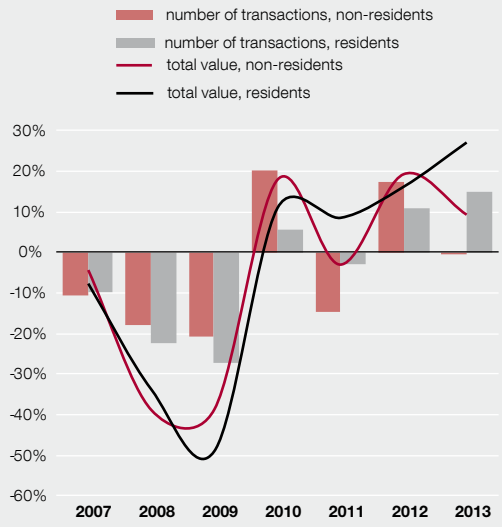
Increased migration to Tallinn leads to higher demand especially in the secondary market, while at the same time demand for real estate is modest in the areas migrants are leaving from.

The largest share in the **structure of real estate transactions** in Estonia is taken by purchase and sale transactions by resident private people, which accounted for nearly 60% of all the real estate transactions in 2013. Transactions with legal entities under private law accounted for 27% of the total[20] and transactions with foreigners for 9%. Transactions with other parties, which cover those with the Estonian state and local government authorities, and with multiple parties, accounted for only 5% of the total.

Foreigners made the same number of real estate transactions in Estonia in the second half of last year as they did a year earlier but the total value of the real estate they bought was 9% higher (see Figure 2.4.2). This means that foreigners were buying more expensive property than before. The number of transactions made by foreigners was 15% of the total number of real estate transactions made by Estonian residents in the second half of 2013, which was two percentage points less than in 2012. The main interest among foreign buyers again came from Russia and the Nordic countries[21].

An idea of the amount of new residential housing is given by the **number of building and use permits issued**. The new building permits issued in the second half of 2013 were for an area

Figure 2.4.2. Annual growth in number of real estate transactions and total value, by buyer



Source: Estonian Land Board

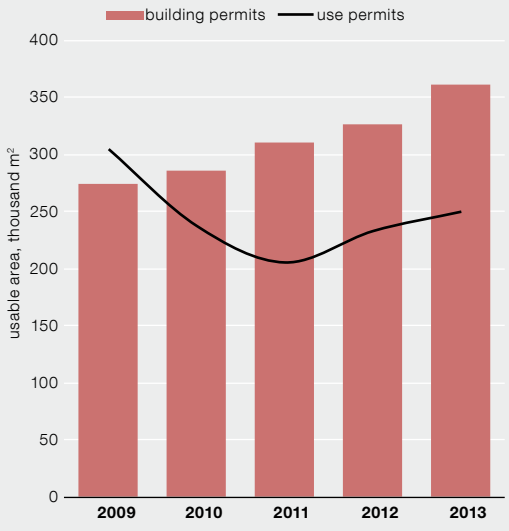
6% larger than a year earlier (see Figure 2.4.3). The use permits issued at the same time covered 27% more residential spaces, meaning that the number of residential spaces completed in the past year was at its highest for three years. Most of the residential spaces that were built were in single family or two-family buildings or in apartment terraces, and so their average size was larger than usual. The new residential spaces were mostly built in and around Tallinn.

Statistics for building permits issued and for new residential space where construction has already started indicate that some increase in supply may be expected in the future. This should help to stabilise prices of residential property. Real estate developers are also feeling less uncertain about sales prices for new developments and the time it takes to sell them, because the demand for new, good quality, well-sited residential space remains relatively high.

20 This share may be somewhat overestimated, as some transactions with other parties may be done through legal entities.

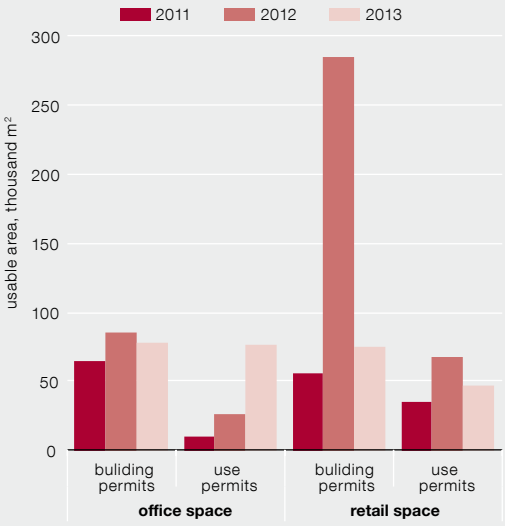
21 Data from Ober-Haus Real Estate Advisors.

Figure 2.4.3. Building and use permits issued for residential real estate



Sources: Statistics Estonia, register of construction works

Figure 2.4.4. Building and use permits issued for commercial real estate



Source: Statistics Estonia

Data from the kv.ee website show that the **number of apartments for sale** in Tallinn has fallen steadily in recent years, and the total number of adverts for apartments for sale in the capital fell by 18% in 2013. Prices for such properties have risen since 2010, accelerating last year in particular.

The commercial property market

In the second half of 2013, 2% fewer building permits for non-residential property were issued than a year earlier, while 15% more use permits were issued. The amount of usable non-residential space for which building and use permits were issued grew more slowly than the number of permits issued did, indicating that the trend in the market for new buildings is more broadly based than before, meaning more individual sites are being developed.

The recovery is most noticeable in the market for **office space**, where several new buildings came into use in the second half of last year. The number of permits for use issued for office space was 58% higher than in the first half of the year and around three times as high as a year before (see Figure 2.4.4). The general optimism around the market for office space has encouraged developers to start several large, new projects.

As supply generally recovers more slowly than demand in the market for office space and tenants are always looking for ways to save on costs, the main risks with new developments are in achieving occupancy, as most such office buildings are outside the city centre and have higher rental prices.

The market for retail space has calmed down somewhat. The number of building permits for retail properties was substantially lower last year

than a year earlier because of the high base level at the end of 2012. Construction started however on relatively large new retail properties in the fourth quarter. Fewer permits for use were issued last year than a year earlier, though several new and extended retail spaces were taken into use.

2.5. QUALITY OF ASSETS

The improvement in the quality of the loan portfolio has continued. **The value of loans overdue for more than 60 days** stood at 253 million euros at the end of 2013 and was 173 million euros, or more than 40%, smaller than a year earlier. Overdue loans made up 1.9% of the total loan portfolio, which was 1.3 percentage points less than a year before (see Figure 2.5.1). The share of overdue loans has remained around the same in the first few months of 2014.

More than half of the decline in overdue loans was caused by write-offs of uncollectible debt, but the finances of borrowers have also improved further and this allowed some overdue loans to become performing again and meant that fewer new overdue loans were added.

Loan quality improved significantly in all sectors in 2013 (see Figure 2.5.2). The biggest fall in the value of overdue loans came in loans to the real estate and construction sectors and in mortgages, and together they provided 70% of the reduction in the value of overdue loans. Despite this, these sectors still accounted for more than 60% of all overdue loans (see Figure 2.5.3).

The improvement in the quality of the loan portfolio is also reflected by a reduction in the number of **loans restructured** because of repayment problems. By the end of 2013, 2.3% of the portfolio consisted of restructured loans, which was 1.1 percentage points less than a year

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

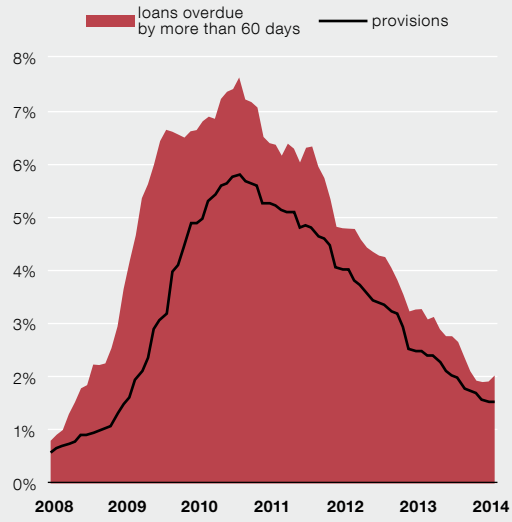
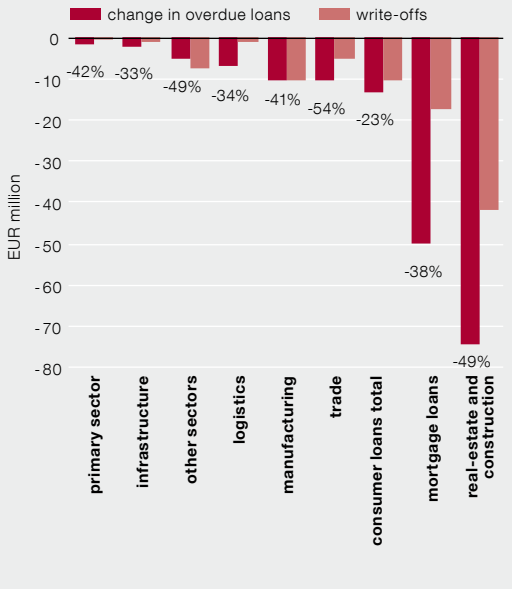


Figure 2.5.2. Change in loans overdue by more than 60 days and write-offs in 2013



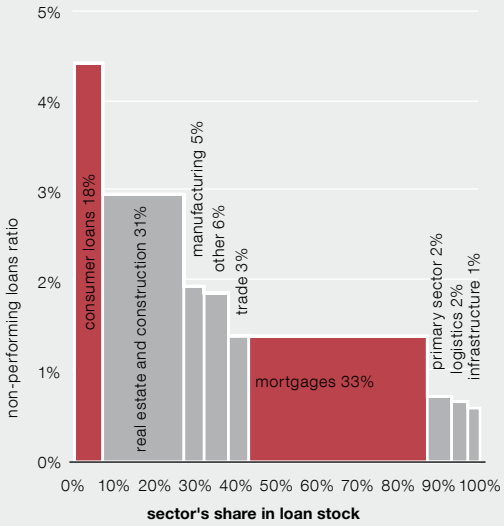
before. Close to 29% of restructured loans were more than 60 days overdue. Last year, 3.2% of the loans in the portfolio were restructured or long overdue, which was 2.3 percentage points fewer than a year earlier (see Figure 2.5.4).

Provisions shrank at almost the same speed as overdue loans, also decreasing by around 40% over the year. Provisions covered 1.5% of the portfolio at the end of the year, and around 81% of overdue loans.

The **securities portfolios** of the banks operating in Estonia almost doubled in value over the year and accounted for 6.6% of assets at the end of 2013. The increase in the value of the securities portfolio came mainly from purchases in the second half of the year of French government bonds and bonds of financial institutions from Luxembourg. A majority of the securities in the portfolio are sovereign bonds, at 35% of the total, and bonds of financial institutions with 31%. Bonds of other credit institutions shrank as a share of the securities portfolio of the banks to 18% by the end of the year, which was 14 percentage points less than a year before.

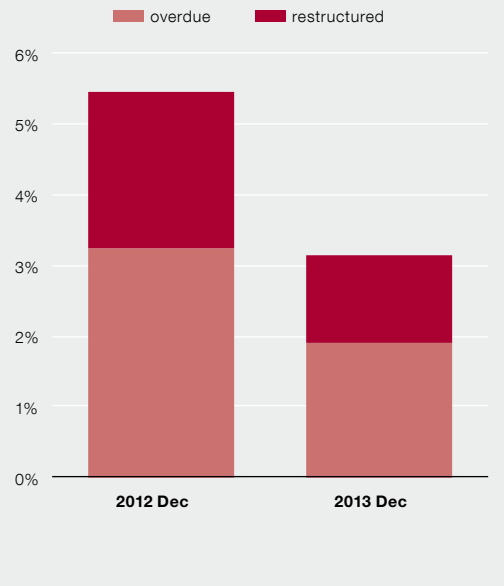
The countries that supplied a majority of the securities were again Luxembourg, Estonia, Germany and France, which between them issued over 88% of the securities portfolio of the banks. Securities from the private and public sectors of the countries caught in the euro area crisis made up around 2.3% of the securities portfolio of the Estonian banking sector, a number that has fallen steadily. Less than 0.5% of the portfolio was in Russian securities and the banks operating in Estonia did not have any investments in Ukrainian securities. There were no major changes in the securities portfolios of the banks in the first months of the year.

Figure 2.5.3. Structure of the loans overdue by more than 60 days as at 31/12/2013*



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

Figure 2.5.4. Share of restructured and overdue loans in loan stock



3. THE STRENGTH OF FINANCIAL INSTITUTIONS

3.1. BANKS

Liquidity and funding

There was a slight decline in the level of liquidity in the banking sector in 2013, but in the fourth quarter the **amount of liquid assets** started to grow rapidly, and by the end of February 2014 it had reached 4.9 billion euros or 24% of total assets (see Figure 3.1.1). Liquid assets grew because one larger bank raised its liquidity level and the liquidity buffers related to non-resident deposits increased in some smaller banks.

The **structure of liquid assets** has also changed. The larger banks have started to increase their bond positions, with the result that securities included in liquid assets doubled as a share of liquid assets to 10% between the third quarter of 2013 and the end of February 2014. Intra-group liquidity management transactions in the bigger banks affected the claims of the banking sector against the central bank and other banks. The claims of the banks on other banks had increased to 72% of total assets by the end of February 2014, and assets at the central bank had fallen to 18%.

The funding of the banks has been supported by the continued inflow of deposits, particularly demand deposits. Funds from other banks have continually declined as a share of **banking sector liabilities** over the past four years. One of the bigger banks brought in large amounts of funds from abroad in the second half of 2013 and the start of 2014 to increase its liquidity level. This meant that the share of funds from other banks increased by the end of February to the 18% reached in the middle of 2013, while deposits fell as a share of liabilities to 81% (see Figure 3.1.2).

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

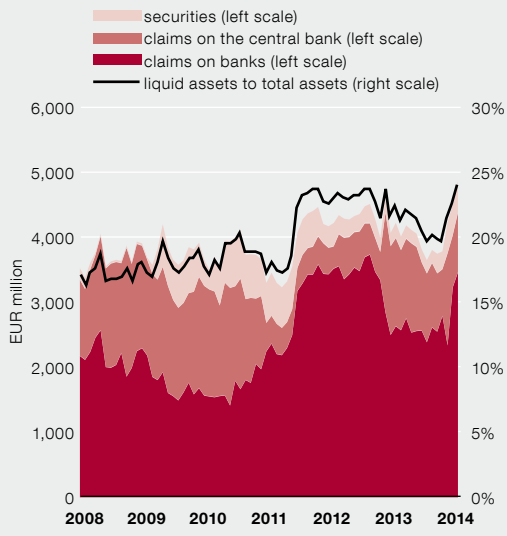
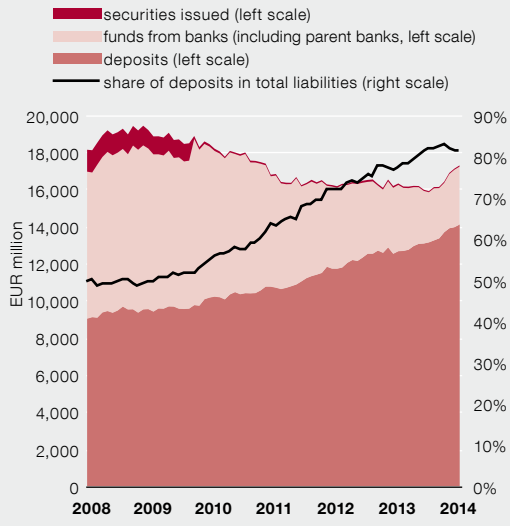


Figure 3.1.2. Structure of banks' liabilities



At the end of 2012 and in the first half of 2013, there was a fall in **non-resident deposits** from their earlier high levels, but in the second half of 2013 non-resident deposits picked up again (see Figure 3.1.3). Non-resident deposits totalled 2.3 billion euros at the end of February 2014, though this was still one tenth below their record peak reached in October 2012. As resident deposits also grew fast at the same time, non-resident deposits did not increase as a share of non-financial sector deposits and accounted for 20% of them at the end of February. The inflow of non-resident deposits was particularly noticeable at the smaller banks, which also hold significantly larger liquidity buffers than the average.

Demand resources have strongly increased as a share in the **maturity structure of the liabilities** of the banks in the last two years due to the growth in deposits, accounting for 54% of liabilities at the end of February. The share of long-term liabilities with a residual maturity of over one year has fallen consistently, and was at 7% of liabilities at the end of February 2014.

Modest loan growth and faster growth in deposits mean that the **loan-to-deposit ratio** of the banking sector has fallen further and at the end of February 2014 it stood at 104% (see Figure 3.1.4). The fall in the aggregate figure was mainly caused by a decline in the loan-to-deposit ratio at the smaller banks. The ratio for the bigger banks has mainly remained stationary.

Although market-based funding of the banking sector has increased, the exposure to the risks from it has been reduced because of the overall increase in liquid assets. This is shown in the fall in the **market funding risk ratio**[22] to -8% by the

Figure 3.1.3. Volume and share of non-resident deposits in total deposits

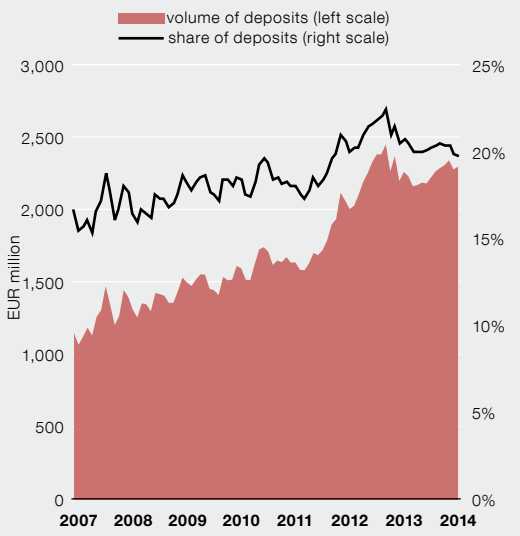
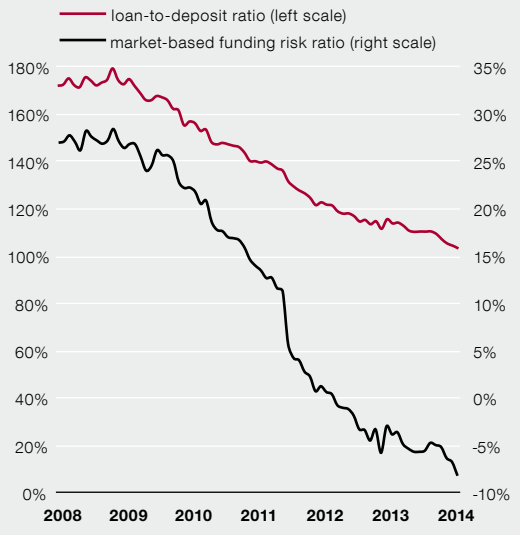


Figure 3.1.4. Loan-to-deposit ratio and marked based funding risk ratio

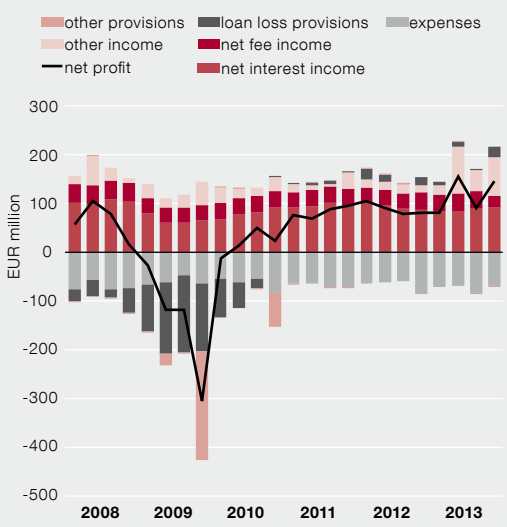


22 Market funding risk ratio = (market-based funding - liquid assets) / total assets. Market-based funding means funds from other banks, including parent banks, and bonds that have been issued.

end of February 2014. However, as liquid assets grew partly because buffers from non-resident deposits increased, it may be concluded that exposure to market funding risk has not changed significantly from autumn 2013.

At the start of 2014 the European Union Capital Requirements Regulation (CRR) and Directive (CRD IV) came into force, and they introduced new **liquidity requirements** for banks, the Liquidity Coverage Ratio (LCR)[23] and the Net Stable Funding Ratio (NSFR)[24]. Changes have been prepared for the Credit Institutions Act to allow for these liquidity requirements, and they should come into force on 1 January 2015. Data from the Financial Supervision Authority show that the banks operating in Estonia generally meet these liquidity requirements.

Figure 3.1.5. Components of banks' profits



Profitability

The profitability of banks remained strong in 2013 despite low base interest rates and modest demand for loans from clients. Profitability has been supported by a fall in the cost of funds as deposits increased and by an improvement in the quality of the loan portfolio (see Figure 3.1.5).

Without the one-off dividend income from subsidiaries, the banks earned **net income** of 320 million euros in 2013, down from 340 million in 2012. The return on assets of banks reached 1.7%. Including one-off incomes, net profit reached 444 million euros, which is over one quarter more than in 2012.

The average return on assets of Estonian banks is generally larger than the average for the European Union. The return on assets of the banks operating in Estonia that are part of the Nordic banking groups is again exceeding the average group levels after a period of losses.

The operating profit of the banks was supported to a great extent in 2013 by a reduction in the cost of funds as banks paid some 40% less for funds in 2013 than they did in 2012 (see Figure 3.1.6). The fall in the cost of funds was mainly due to an increase in the share of deposits in the liabilities of the banks. At the same time, the low base interest rates continued to reduce interest income, bringing it down to 18%. The banks together earned **net interest income** of 345 million euros, which is 6% less than in 2012.

Although some banks have changed their price lists for services in the difficult economic environment, the **income from service fees** of the banks remained on aggregate about the same in 2013 as it was in 2012. A total of 3% less was

23 The Liquidity Coverage Ratio requires that the liquid assets of a bank cover at least 100% of the net outflow (outflow-inflow) of liquid assets for thirty days in times of problems.

24 The Net Stable Funding Ratio requires that the stable sources of funding of a bank cover at least 100% of long-term assets requiring stable funding.

Figure 3.1.6. Average interest on banks' liabilities and receivables (end-month) and 6-month EURIBOR

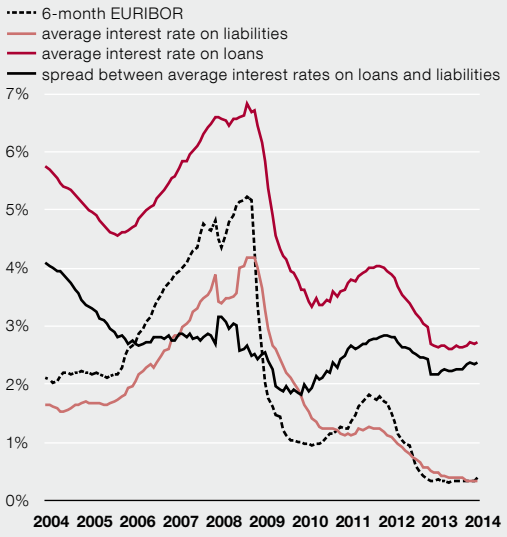
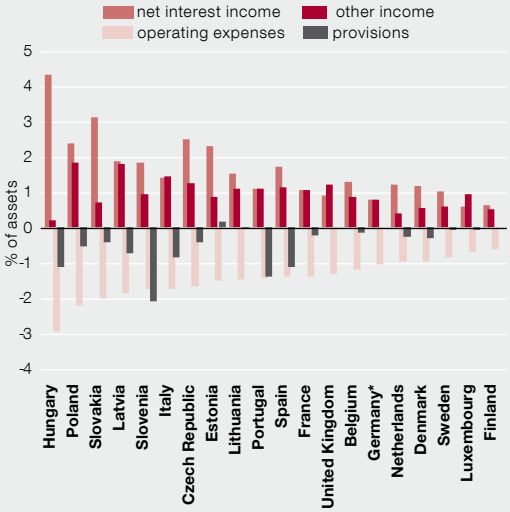


Figure 3.1.7. Components of banking sector profitability (% of assets 2013 Q2)



* large banks
Source: European Central Bank

earned from service fees in 2013 than in the previous year, but the difference was due to the costs of a one-off restructuring in the Nordea group.

The structure of income from service fees depends greatly on the core activities of each bank. A large part of the service fees of banks that have a wide client base and are focused on providing retail banking services comes from issuing loans and from transferring payments. Fees for asset management and insurance services provide a larger share of the income of banks that are focused more on asset management.

In Estonia the largest banks earn nearly 60% of their income from service fees from payment transfers. The change in the structure of fee income in recent years has been due mainly to a decline in the service fees earned from issuing loans. The sporadic rise in prices for payment transfer services has not entirely offset the fall in incomes from loan issuance.

Alongside the structure of income, factors of scale have also played an important role in deciding the profitability of banks. There are costs involved in building and maintaining the infrastructure needed for the provision of services. When assets under management increase, the general and staff costs usually do not increase to the same extent. In consequence, the operating costs of the banks as a ratio to assets are generally around 1.5% in Estonia, while in Sweden it is more like 1% or less (see Figure 3.1.7). This is partly because the assets under management at the Estonian banks are smaller.

The **operating costs** of the banks in Estonia increased in ratio to their assets by 3% in 2013. The banks continued to shrink their network of branches, and the number of branches fell by 20 to 140 as clients were increasingly encouraged towards self-service banking channels. However, general and wage costs increased at the same time. Not all operating costs are di-

vided by geographical region for cross-border banking groups, and costs that have been incurred for the benefit of multiple regions are sometimes marked down as central group costs or attributed to just one part of the group.

Write-downs again supported the profitability of the banks in 2013. Few new problem loans were added and the re-emergence of some earlier write-downs as performing loans increased the total profitability of the banks by 43 million euros or 9%.

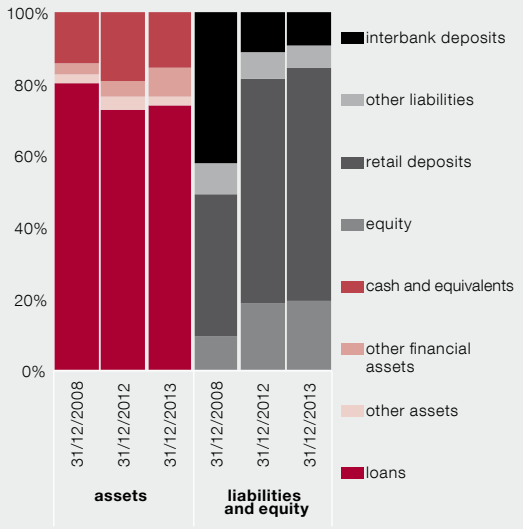
In future the impact of continuously low base interest rates is expected to be favourable for the profitability of banks. The impact of the change in reference interest rates in Estonia generally becomes applicable for loans with a lag of six months, and the decrease in reference interest rates is by now already evident in banks' interest income, while the growth in demand deposits will help to keep the cost of funds down. The banks are still looking for ways to improve their cost efficiency, and a strong base of deposits allows them to meet higher demand for loans than there is at present.

Capitalisation

The aggregate total assets of the banking groups[25] grew by 3% in 2013. The share of the securities portfolio in the asset **structure** of banks increased. Slow loan growth meant that the loan portfolio remained almost unchanged as a share of assets. On the liabilities and equity side there was a continuation of the trend led by deposit growth for funds taken from parent banks to be returned and client deposits to be used more as a source of funding. The share of equity increased by the end of the year to 19.2%

25 For this chapter, 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



and grew by 0.5 percentage point over the year due to undistributed profits from previous periods (see Figure 3.1.8).

In international comparison, the Estonian banking sector remains very well capitalised and easily passed the 10% minimum capital requirement that was in force at the end of the year. The average **capital adequacy level** of the banking sector increased by the end of 2013 to 24.4%, which was 0.9 percentage point more than a year earlier. Capitalisation mainly increased because own funds increased, which was due to growth in profits in the first half of the year (see Figure 3.1.9).

The share of tier one own funds in all own funds has remained stable at 99% since the second quarter of 2012. The reason banks chose to keep such high levels of own funds in Estonia lies primarily in the favourable income tax system, as it makes no difference to the group where the capital is located.

Figure 3.1.9. Quarterly change in capital adequacy ratio by components

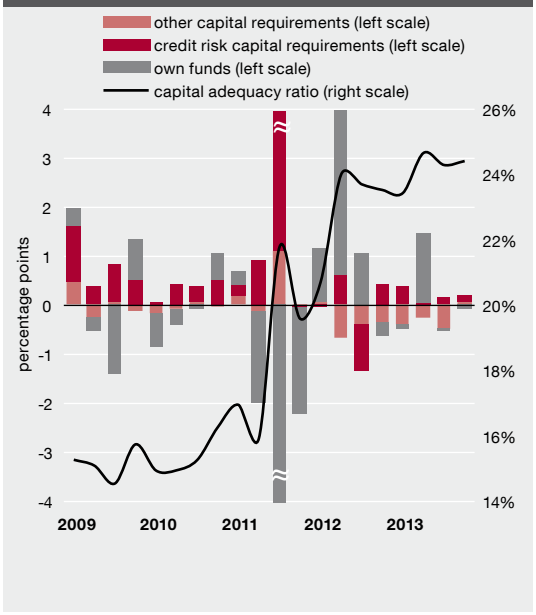
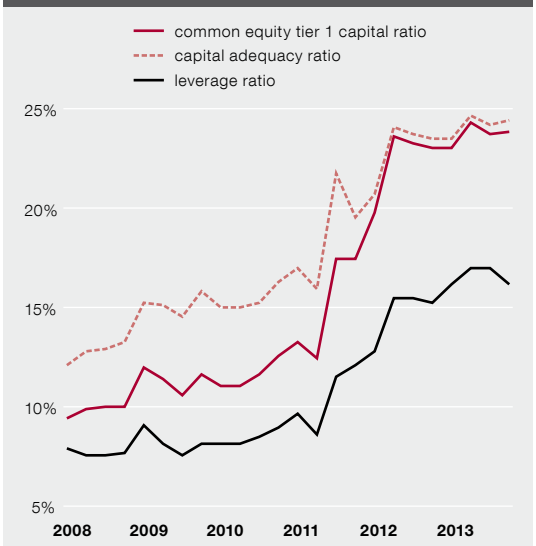


Figure 3.1.10. Capital and leverage ratios



The **financial leverage**[26] of the bank groups was 16% at the end of 2013, which was about the same as a year earlier. Both the risk-adjusted capital adequacy ratio and the financial leverage ratio are high and confirm that the Estonian banking sector is well capitalised (see Figure 3.1.10).

New single capital requirements started to apply to banks in the European Union from the start of 2014. As a result, the 10% capital adequacy requirement that had applied in Estonia since 1997 was temporarily lowered to 8%. A separate requirement applies to Common Equity Tier 1, which banks have to maintain at 4.5% of risk-weighted assets. The new European legal framework for capital requirements allows additional buffer requirements to be placed on the Common Equity Tier 1 of banks in order to minimise risks to financial stability.

When changes to the Credit Institutions Act come into force in Estonia transposing the EU law, banks will have to hold a capital conservation buffer of Common Equity Tier 1 of 2.5% of risk-weighted assets. Eesti Pank plans to add a further 2% systemic risk buffer requirement, which will help to ensure the resilience of the banking sector against risks arising from the structure of the economy and the financial sector. The specific structural characteristics of the Estonian economy mean that the rapid accumulation of loan repayment problems in the private sector and a deterioration of the finances of the banks would pose a systemic risk if there is an economic downturn. Counter-cyclical buffers can also be set for the banks if it is necessary to counter risks caused by excessively fast loan growth. As Eesti Pank does not consider it necessary to set a counter-cyclical buffer at present, the requirement for Common Equity Tier 1 for the banks that enters into force in 2014 is 9%.

26 Tier one own funds as a ratio to assets.

Box 4: Assessing the need for a countercyclical capital buffer

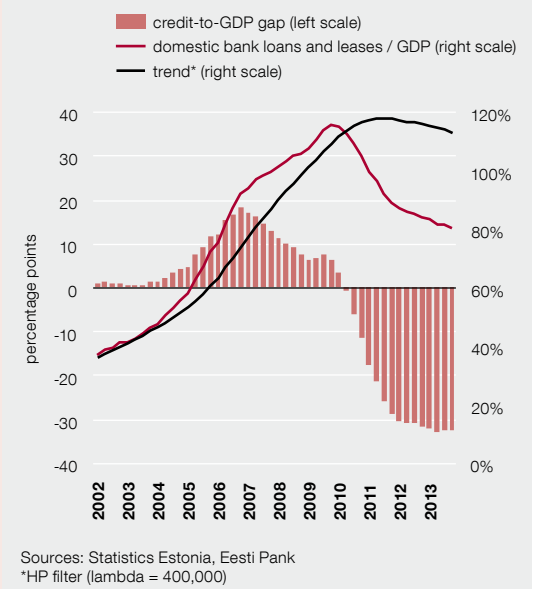
A countercyclical capital buffer is a macroprudential measure that requires banks to hold larger amounts of Common Equity Tier 1, CET1, if credit risks are building up. Capital buffers are collected when the systemic risk grows, and used when the risk falls.

Eesti Pank has been given the responsibility for setting the rate for countercyclical capital buffers in Estonia[27]. Eesti Pank bases its assessments of the capital buffers and enforcement of its rate on the principles agreed by the European Union[28] and also considers the specific features of the local economy and credit cycle. The bank plans to publish a framework for assessing countercyclical capital buffers in the second half of 2014.

Key indicators for assessing the need for a countercyclical capital buffer

Under the European Union agreement the method proposed by the Basel Committee on Banking Supervision is used in assessing the need for a countercyclical capital buffer and in setting the rate for it. In this method the starting point for calculating the countercyclical capital buffer guide is the credit-to-GDP gap defined as the deviation of the credit-to-GDP ratio from its long-term trend. If the ratio is significantly above its long-term trend, it might be a reflection of excessive growth in credit and indebtedness.

Figure 4B.1. 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)

The calculation based on the Basel method as applied to Estonia shows a large negative **credit-to-GDP gap** (see Figure 4B.1). In 2012-2013 the credit-to-GDP gap averaged -32 percentage points. The credit-to-GDP gap calculated using this method is estimated to remain negative for at least five more years. Even so, it is not impossible that growth in credit and in indebtedness could start to pose systemic risks to Estonia in the coming years. For this reason Eesti Pank plans to start using other indicators of the credit cycle as well in assessing the need for countercyclical capital buffers.

It is most important to observe changes in the **rate of credit growth** and how it differs from the speed of economic growth. Although the improvement in household confidence and purchasing power has lead to more housing

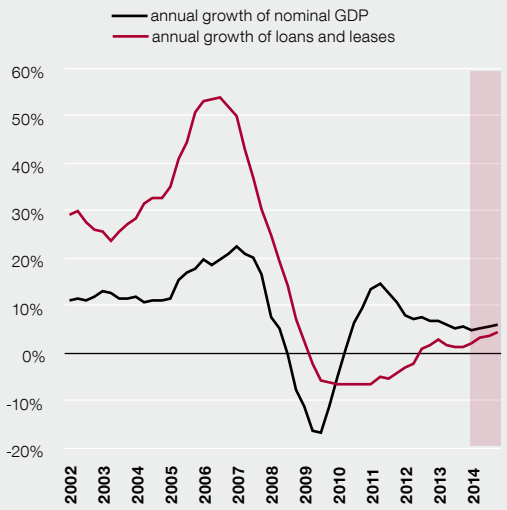
27 Credit Institutions Act § 86[46] (2).

28 Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013.

loans being issued over the past year, corporate lending has been inhibited by low levels of demand and of investment in fixed assets. In consequence the growth in the loan and lease portfolio of the whole non-financial sector has been moderate, with the volume of loans and leases to Estonian companies and households increasing by 1.3% in 2013, and it has remained below nominal GDP growth (see Figure 4B.2).

Given Estonia's earlier experience of the build-up of excessive credit risk, it is wise to consider at least three processes in the macro-financial environment and the indicators for them when assessing credit growth, the three being changes in leverage, growth in real estate prices and the availability and conditions of credit.

Figure 4B.2. Annual growth of loan and lease portfolio of banks and nominal GDP



Sources: Statistics Estonia, Eesti Pank

The financial leverage of the Estonian banking sector is now only a fraction of what it was when loan growth was rapid, and the loan-to-deposit ratio had fallen from its peak of 175% in 2008 to 104% by the end of 2013 as the loan portfolio shrank. Although prices for housing in Estonia have risen significantly under the influence of both demand and supply factors (see section 2.4 and the appendix), the role of the credit market in financing housing transactions has so far been noticeably more modest than the last time real estate prices were rising fast, and a large proportion of transactions are being financed from the purchaser's own funds. Furthermore, the average interest margin has not changed much since 2012 and does not give any indication of risky behaviour.

Assessment of the need for a countercyclical capital buffer

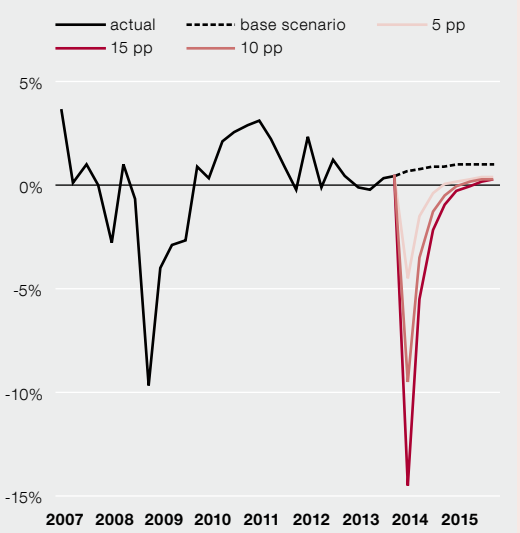
Having looked at the calculations based on the Basel method, the development of credit growth and the forecast for it, and other indicators including the risk assessment in this Financial Stability Review, Eesti Pank does not consider it necessary to set a countercyclical capital buffer for the banks in the second or third quarters of this year.

Box 5: Forecast and stress test of overdue loans in the banking sector

Macroeconomic assumptions

The forecast for overdue loans[29] is based on the baseline scenario of the Eesti Pank forecast published in December 2013. This expects Estonian economic growth to accelerate as the economies of Estonia's main trading partners recover, reaching 2.6% in 2014 and 3.9% in 2015. As the economy grows, so will the loan stock of the non-financial sector, though it will do so somewhat more slowly than nominal GDP. In the baseline scenario the loan stock will increase by 4.1% in 2014 and by 5.8% in 2015 on the back of more active borrowing by both companies and households.

Figure 5B.1. Quarterly real GDP growth assumptions for base and risk scenarios



Three risk scenarios were modelled alongside the baseline scenario. If growth is given a one-off negative shock of 15, 10 or 5 percentage points compared to the baseline scenario, all the other indicators in the model also change and three consistent risk scenarios with different levels of severity result. The most negative of them is similar to the impact on GDP growth of the recession of 2008 (see Figure 5B.1).

Forecast for overdue loans

In the baseline scenario the shares of overdue corporate and household loans both continue to decline. The improvement in the quality of the corporate loan portfolio is primarily driven by an acceleration in economic growth and that in household loans is driven by a fall in unemployment and fairly rapid wage rises throughout the forecast horizon. Interest rates will remain comparatively low throughout the forecast period and will not have any effect on the further improvement in the ability to pay. As the share of overdue housing loans is already quite small, the quality of such loans will improve only slowly in future, but the share of overdue loans in other household loans is expected to continue to decline fairly quickly. In the baseline scenario the share of loans overdue by more than 60 days falls to 1.6% by the end of 2014 and to 1.3% by the end of 2015 (see Figure 5B.2). 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 different from the forecast.

The risk scenarios consider highly unfavourable developments for the real economy with a noticeable effect on the ability of clients to pay

29 Loans overdue for more than 60 days.

Figure 5B.2. Loans overdue by more than 60 days as a ratio of the loan portfolio

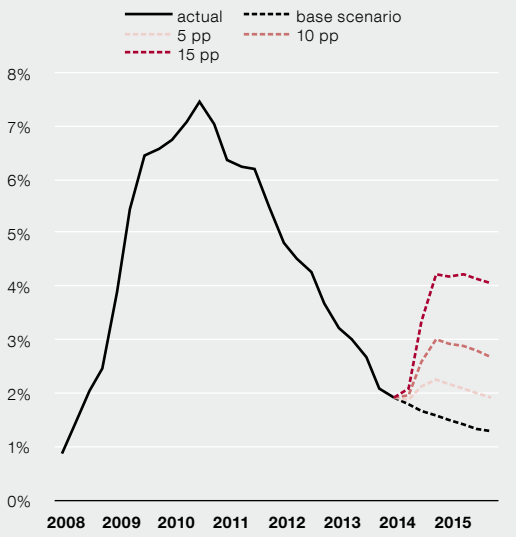
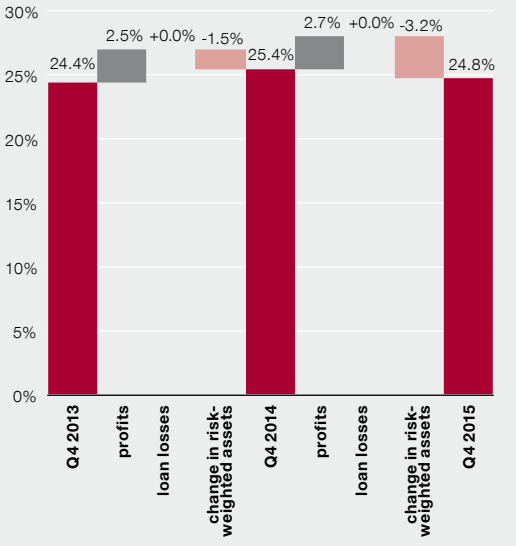


Figure 5B.3. Projected change in capital adequacy ratio by components



and thus on the banking sector. Depending on the risk scenario used, the average share of overdue loans increases to 2.2-4.2% by the end of 2014, then starts to fall gradually.

The effect of the risk scenarios is slightly smaller for the largest banks and the share of overdue loans reaches 1.8-3.4% by the end of 2014 for them, depending on the size of the shock. The share of loans overdue then starts to shrink and is about 0.4 percentage point below the peak by the end of the forecast horizon in all the risk scenarios. Small banks are somewhat more vulnerable to the risk scenarios and the share of overdue loans for them only peaks at the end of the forecast period when the quality of the loan portfolio of the bigger banks has already started to improve.

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 remarkably more modest, as in both cases overdue loans stay some 3.3 percentage points below their highest levels. The smaller reaction to a similar shock indicates that in the current economic climate, loan clients and the banking sector are somewhat less vulnerable.

Effect on capitalisation

In the baseline scenario the own funds of the banking sector are increased through profits in 2014. Growth in the loan portfolio means that capital requirements also increase and the capital adequacy ratio rises to 25.4% by the end of 2014. The loan portfolio grows faster in 2015 and although bank profits are larger than in 2014, capital requirements in-

crease faster than equity. As a result the capital adequacy ratio falls to 24.8% by the end of 2015 and stays at around the level of 2013 (see Figure 5B.3).

In the risk scenarios the profitability of the banks declines and additional provisions need to be made to cover possible loan losses. In the worst case the equity of banks might shrink. The fall in profits will partly be offset by the decline in the loan portfolio and the resulting reduction in risk-weighted assets. Overall the capitalisation of the banking sector will remain fairly high even in the risk scenarios.

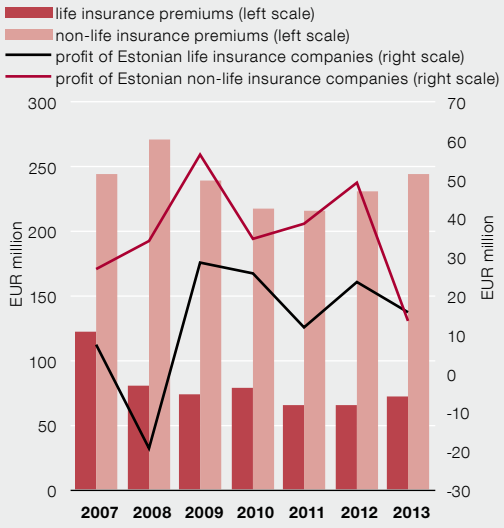
3.2. INSURANCE COMPANIES

Risks to the financial stability of the **European insurance sector** did not change noticeably in the second half of 2013[30]. The profitability and solvency of insurance companies are threatened most by low interest rates, which are still kept down by the loose monetary policy of central banks. The low interest rates mean that the long-term liabilities of the insurance companies are more expensive while the income from assets has fallen and investment risk has increased. The credit risk from the large positions in bonds fell somewhat from spring 2013, but the weak economic environment still hindered strong growth in demand in the insurance market.

The biggest challenge for the **Estonian insurance sector** this year is maintaining profitability. The risk from low interest rates has already eroded the investment income of the insurance companies and through that their profitability. In 2013 the Estonian life and non-life insurances sectors together earned 29 million euros in profit, which was the lowest for the past few years (see Figure 3.2.1). Despite this, the solvency of the insurers has so far remained good and as the local insurance market accounts for less than 2% of GDP, the insurance sector does not pose any systemic risk to the economy.

30 EIOPA Second Half-Year Financial Stability Report 2013.

Figure 3.2.1. Profit of insurance companies and premiums from residents



Sources: Statistics Estonia, Eesti Pank

Life insurance

The Estonian life insurance market continued to grow in the second half of 2013, but as the market is sensitive to changes in economic activity, it grew more slowly than in the first half of the year. During the year, 9% more **life insurance premiums** were collected than in 2012.

The fastest growth was in sales of pension insurance, which grew at an annual rate of more

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

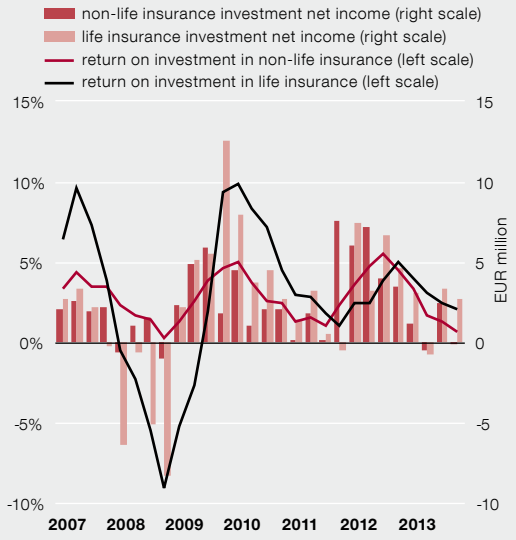
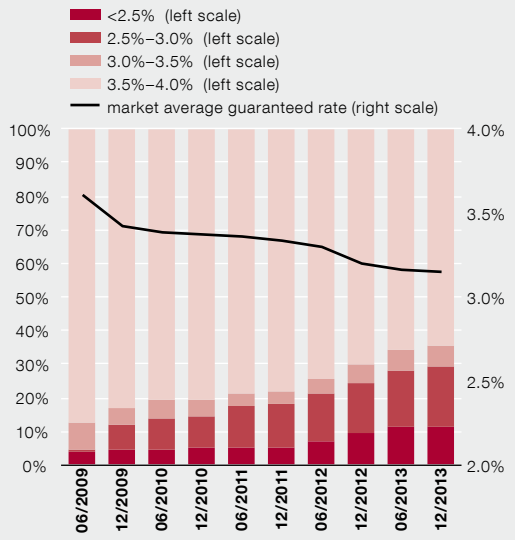


Figure 3.2.3. Distribution of guaranteed rate contracts by interest rates and the market average guaranteed rate



than 30%. Low rates of return mean that guaranteed rate insurance is no longer so popular and just over half as much was taken in premiums in 2013 as before the global financial crisis. It is hard for insurance companies to offer their clients guaranteed rate insurance products with good returns at a profitable price at current interest rates, so they have tried to retreat from this kind of insurance. Last year unit-linked life insurance was the biggest contributor to the sales income of insurance companies, supplying 40%, and it also accounted for the largest share of claims with 47% of all payouts. A total of 42 million euros was paid out in insurance claims in 2013, which was almost the same amount as in the previous year.

Despite favourable developments in insurance activity, the technical result of insurance companies was reduced in 2013 by growth in operating costs and an increase in life insurance provisions. On top of this **net investment income** was a third less than in 2012 because of a fall in net interest income and reassessment of assets (see Figure 3.2.2).

The average yield of the investment portfolio fell in full year comparison to 2% by the end of 2013 from 5% in 2012, which is less than the average guaranteed rate of return for insurance clients of 3.2% (see Figure 3.2.3). European swap rates have recently risen slightly, which could ease conditions for investment income.

Bonds and other fixed-income securities make up more than half of the **financial investment portfolios** of Estonian insurers, which is similar to the average of the largest European insurance companies of 56% (see Figure 3.2.4). More than 70% of the bond portfolio is central government bonds and the investments are relatively well balanced between European Union member

Figure 3.2.4. Investments of insurance companies

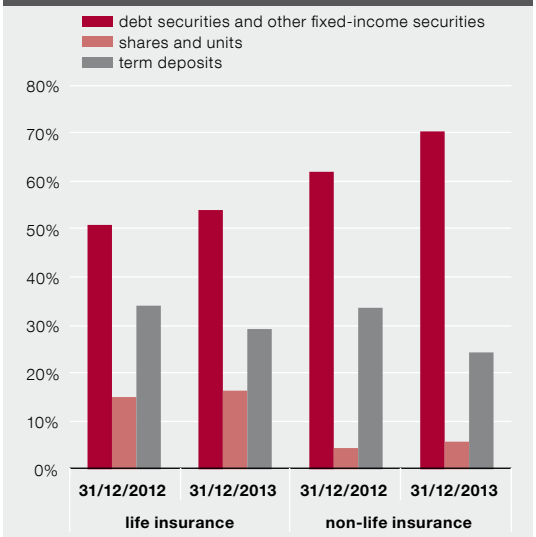
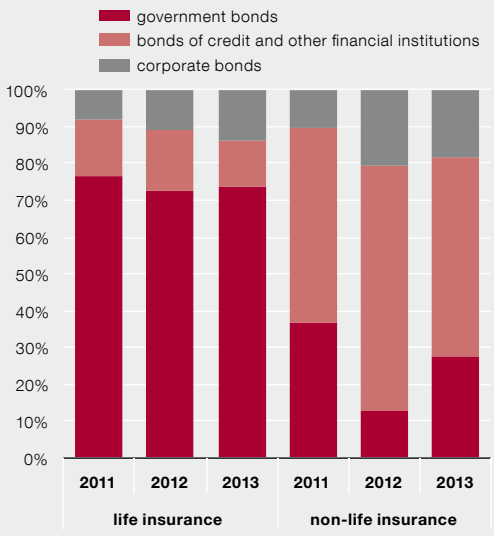


Figure 3.2.5. Debt security investment of insurance companies by issuer



states (see Figure 3.2.5). Around a quarter of the portfolio of sovereign bonds consists of bonds issued by the central governments of the other Baltic states.

Rising stock markets have lifted the value of investments in shares and thus their share in the investment portfolio of the insurance companies. Term deposits were reduced so that somewhat greater income could be earned, and their share of investments stood below 30% at the end of 2013. As the investment portfolio is relatively well distributed and contains high-quality assets, the liquidity risk of the insurers is small.

Non-life insurance

The increased purchasing power of the public and higher domestic consumption in 2013 made it easier to sign new contracts in the non-life insurance market and collect premiums. The non-life insurance market grew by 6% during the year, which is the same as nominal GDP growth. The largest share of **insurance premiums** was the 61% that came from motor vehicle insurance including compulsory motor insurance.

Claims paid out in Estonia were 9% more than in 2012. The net loss ratio[31], which reflects the profitability of insurance operations, rose in consequence to 62%, which is a little more than the average of under 60% expected in the non-life insurance market (see Figure 3.2.6).

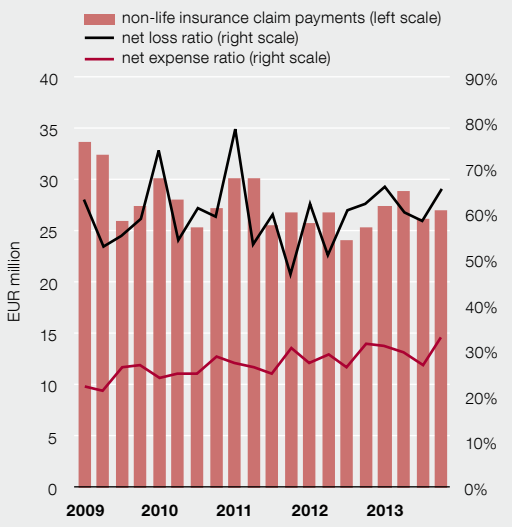
Active sales work and a larger number of claims to handle increased the **operating costs** for all types of cost, and the net expense ratio[32] rose to 30%. Insurance operations were still profitable, as shown by the combined net ratio[33], which re-

31 Claims submitted net of reinsurance / premiums earned net of reinsurance

32 Net operating costs (not including financial expenses and other business expenses) / premiums earned net of reinsurance

33 Net loss ratio + net expense ratio.

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



Sources: Statistics Estonia, Eesti Pank

mained below 100%. Larger payouts for claims and higher operating costs meant that the technical result for last year was 18% smaller than in 2012 at 26 million euros.

Net investment income also remained relatively weak. Net income earned from interest was down 15% on the year and a reassessment of assets also led to falls in income. The return on the financial investment portfolio fell in full year comparison to below 1% by the end of 2013.

The **operating profit** of non-life insurance companies, which depends on both the technical result and the profitability of investment assets, reached 29 million euros in 2013, which is about half of what it was a year before. Net profit was even more modest at 14 million euros, as one company paid out dividends from undistributed earnings of previous periods in December 2013 and the income tax on the dividends. The payout of dividends reduced the total assets of the sector, meaning liquidity reserves also shrank. Despite this, total financial investment is almost twice as large as the liabilities arising from the insurance contracts of the companies.

Bonds and other fixed-income securities make up 70% of the **financial investment portfolio**. More than half of the securities are issued by credit institutions or other financial institutions and two thirds of those are bonds issued by Nordic banks. At the start of 2012 the insurers cut the share of central government bonds in their portfolios significantly, but by the end of 2013 they had restored them to around 30% of the total. These were mainly sovereign bonds from the Netherlands, Germany and Lithuania and the counter-party credit risk can be considered small. The share of term deposits in the total investment portfolio was 24% at the end of 2013. The rise in stock markets meant that shares increased their presence somewhat, but they remain a marginal share of the total portfolio at around 6%.

4. SYSTEMICALLY IMPORTANT PAYMENT AND SETTLEMENT SYSTEMS

4.1 PAYMENT SYSTEMS OF EESTI PANK

In 2013 Eesti Pank managed two inter-bank payment systems: ESTA, the domestic retail payment system and the large-value payment system TARGET2-Eesti, which is part of TARGET2, the Trans-European Automated Real-time Gross Settlement Express Transfer System. Eesti Pank closed ESTA on 1 February 2014 because it did not meet the requirements of the Single Euro Payments Area, SEPA.

The value of payments settled in **ESTA** in its final year was three times as large as when the system started ten years ago, while the number of payments increased 1.6 times during the same period. The growth in the value of payments settled in ESTA was similar to GDP growth (see Figures 4.1.1 and 4.1.2).

In the second half of 2013, ESTA was used for 99.6% of the payments made through the payment systems run by Eesti Pank while 87% of the value was in payments started in TARGET2-Eesti (see Figure 4.1.3).

An average of 438 payments per day were made through **TARGET2-Eesti** in the second half of 2013, with a total value of one billion euros. This means that 86 more payments were made per day than in the same period of the previous year, while the total value was 9% larger. The turnover of TARGET2-Eesti is volatile mainly because of payments related to Eurosystem monetary policy operations. The number of payments has increased because several banks have started to use TARGET2-Eesti more for customer payments.

In the second half of 2013, 54% of the total value of TARGET2-Eesti consisted of cross-border bank-to-bank payments, with domestic bank-

Figure 4.1.1. Growth in the number and value of payments settled in ESTA and GDP growth

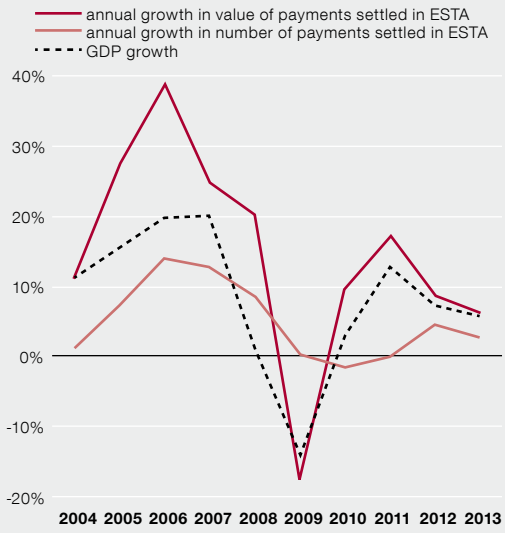


Figure 4.1.2. Average size of payments in ESTA in euros

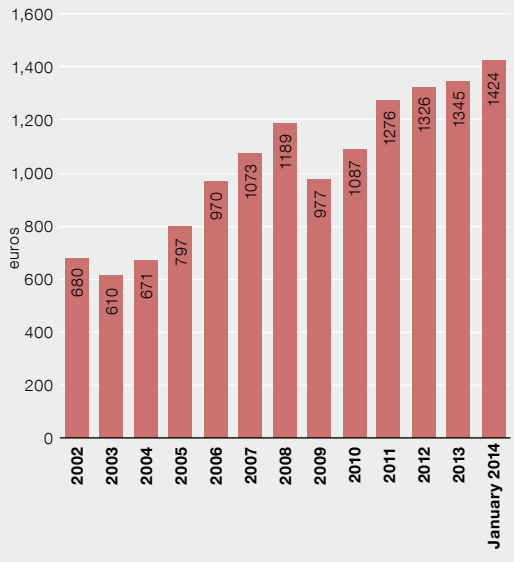


Figure 4.1.3. Payments made in Eesti Pank settlement systems (daily averages)

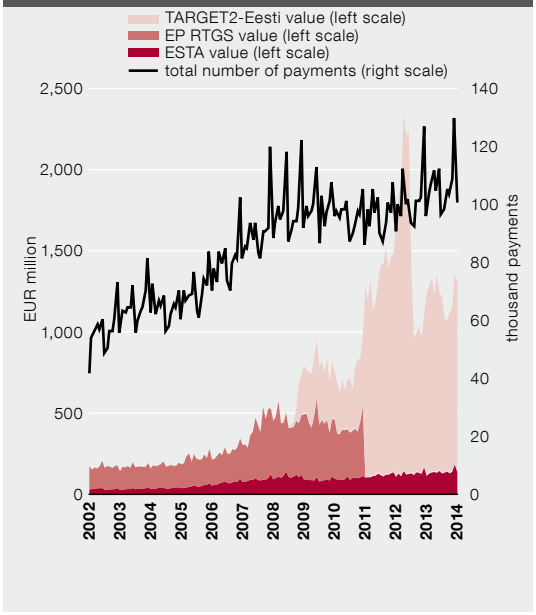
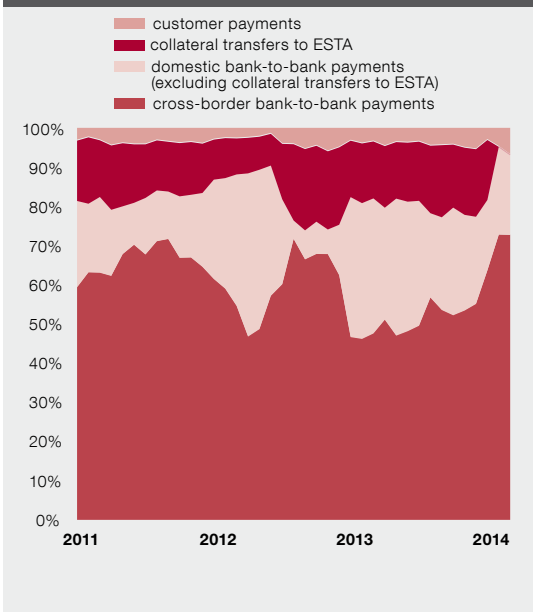


Figure 4.1.4. Structure of the value of TARGET2-Eesti

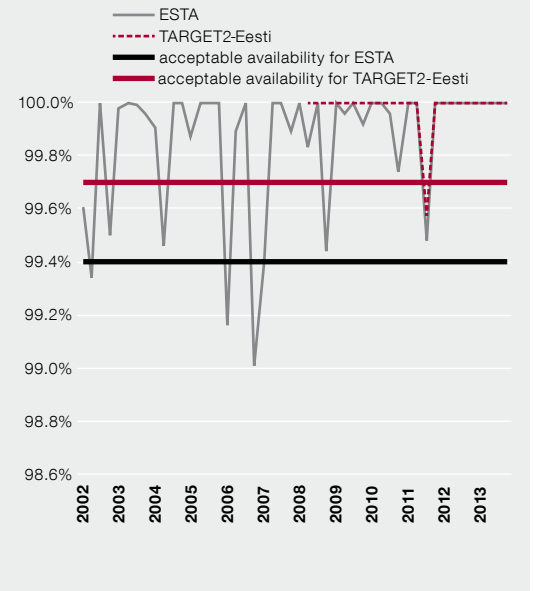


to-bank payments accounting for 42%. A majority of domestic bank-to-bank payments were related to the deposit tenders of the European Central Bank and collateral transfers to the retail payment system ESTA (see Figure 4.1.4). When collateral transfers to ESTA ceased in February 2014, the share of cross-border bank-to-bank payments in the total turnover of TARGET2-Eesti rose to 71%.

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

The payment systems of Eesti Pank operated without any significant incidents[34] in the second half of 2013, and both TARGET2-Eesti and ESTA had **availability rates** of 100% (see Figure 4.2.1).

Figure 4.2.1. Availability of interbank payment systems



34 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 business continuity or to a loss of availability.

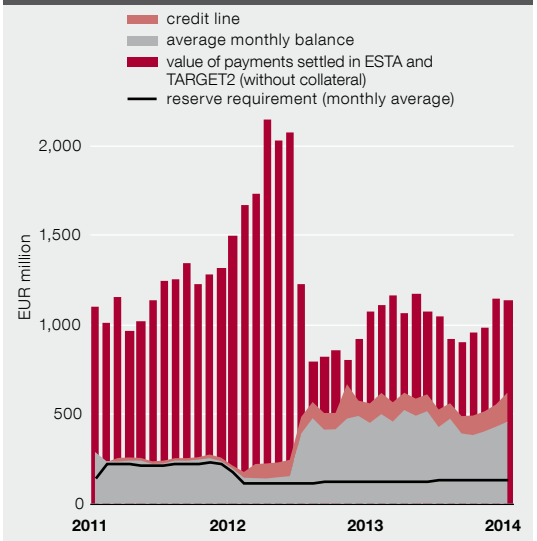
On one occasion a software error in the TARGET2 single shared platform interrupted message exchange and extended the working time of the system by two hours. The incident did not affect the participants of TARGET2-Eesti.

There were some disruptions in the IT systems of ESTA participants. The start of the ESTA settlement day was delayed for three system participants on ten occasions in total, in all cases because of operational problems within the banks, and in most cases they were ready to work with ESTA by 10.00 at the latest. In only one case was the start of the day delayed for one system participant until 12.00.

The liquidity buffers of the banks are sufficient for settlements and the liquidity risks are minimal (see Figure 4.2.2). The average balance held by the banks at Eesti Pank in the second half of 2013 was 431 million euros. The liquidity buffers were sufficient that no settlement problems arose and the Eesti Pank intra-day lending facility was used minimally, as the credit line opened against a collateral pool was used by only a few banks. Although some payments were held in a queue, their number was small and payments were only held waiting for additional liquidity for a very short time. The banks did not require overnight credit. Banks managed liquidity by using the deposit facility at the central bank and by participating in the European Central Bank's deposit tenders.

The availability rate of the securities settlement system managed by the Estonian Central Securities Depository (ECSD) was 99.9%. There was one incident where the service level was affected when the delivery versus payment transactions were delayed two and a half hours because the network connection was interrupted. Account operators were informed,

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



the cause of the incident was detected and further technical checks were put in place to identify similar interruptions more quickly in future.

In the second half of 2013, Eesti Pank initiated an oversight assessment of the securities settlement system against the new international oversight standards. The assessment continues in 2014. The moves of the Baltic central depositories to change from their current securities settlement and registry system to the new X-stream CSD technical solution were also monitored. Estonia is planning to replace the technical platform of its system with a new one in 2017, at the same time that it joins the pan-European securities settlement platform TARGET2-Securities.

Oversight assessment of risks in STEP2

After the retail payments system ESTA was closed, domestic interbank retail payments have been settled since February 2014 using the Pan-European

SEPA-compliant Automated Clearing House STEP2. These payments account for a fifth of all the domestic credit transfers in Estonia and so it is important for the stability of the financial system and smooth circulation of money that STEP2 function without disruption. Below is a comparison of the main operating principles of STEP2 and ESTA and the assessment of the overseer.

The systems use different operating principles. For financial risks to be minimised it is important that settlement take place in both ESTA and STEP2 only when the system participant has sufficient funds for the settlement. In both systems the settlement is made using central bank money and the moments of finality and irrevocability are defined.

Comparison of the operating principles of ESTA and STEP2

	ESTA	STEP2
Functionality	Hybrid system – a system with features of both a real time system and a net settlement system (continuous processing and settlement of payments, a fixed time schedule for information transmission on settled payments)	Net settlement system – a system which runs to a fixed schedule and uses multilateral net settlement
Participation	Direct participation – system participants have full rights to use the system without any intermediaries	Tiered participation – a bank can be a direct or an indirect participant in the system. An indirect participant uses the system through a direct participant.
Cash collateral	A system participant's collateral payment to an ESTA account opened in TARGET2	A direct participant's cash account opened in TARGET2
Acceptance of payment orders	On settlement days from 8.00-18.00	24 hours a day and 7 days a week 3 settlement days before the value date Option of choosing the settlement cycle
Settlement cycles	10 settlement cycles on the hour from 9.00-18.00	5 daytime and 2 optional night-time cycles (marked with an asterisk) for transmitting payment instructions with cut-off times at 22.00*, 02.00*, 03.00, 10.00, 12.30, 15.00 and 17.00
Technical and financial validation	The technical and financial validation of the batches of payment instructions received by the system is immediate	After technical validation, payment instructions received by the system are warehoused. Financial validation is done at fixed times in each settlement cycle.
Finality and irrevocability	A payment instruction becomes irrevocable from the moment an ESTA participant sends a batch of payment instructions to ESTA. The payment instruction is final from the moment it has passed financial validation.	A payment instruction sent to the system is irrevocable from the moment STEP2 starts processing payment instructions for the settlement cycle. Payment instructions are final from the moment the direct participant receiving the payment is sent an information file on the settlement after it has been made in TARGET2.
Monitoring of the need for liquidity	System participants can enquire about the status of their collateral levels throughout the day	Direct participants can observe their liquidity position in real time using a dedicated interface. Information on the need for liquidity is sent to direct participants as a result of the processing of payment instructions.
Settlement	Once the batch of payment instructions sent to the system has passed technical and financial validation, the existing amount of collateral of the bank in ESTA is immediately updated, meaning the settlement is immediate (the collateral of the payer bank is reduced and the collateral of the payee bank is increased). Banks are informed of the results of settlement on the hour from 9.00-18.00.	Payment instructions that have been sent to the system and passed technical validation are collated and sorted. Multilateral net positions are calculated in STEP2 and sent to TARGET2 for settlement. Settlement only takes place if there are sufficient funds in the TARGET2 account of the direct participant. TARGET2 settlements are made at 22.40*, 03.00*, 8.30, 10.45, 13.15, 15.45 and 17.20. Direct participants are informed of the results of settlement after settlement.

Liquidity management in STEP2 is different because of the operating principles of the system. If a direct participant does not have sufficient funds to cover its liabilities and cannot obtain additional liquidity within a short time, set as 15 minutes, the payment instructions sent by that participant are removed and a new multilateral net calculation is made in STEP2. The payment instructions of the direct participant with difficulties are processed in the next settlement cycle. If this is the last settlement cycle of the day, it can be exceptionally extended. If the direct participant with liquidity difficulties still cannot cover its liabilities, the settlement of its payment instructions is postponed to the next day. In this way the exclusion of the direct participant with difficulties can provoke a need for additional liquidity among other direct participants and so be a higher liquidity risk.

The tiered participation arrangements in STEP2, with a large proportion of the banks participating in the system indirectly through a direct member, is also a source of risks. The responsibility for reducing the risks that come from the system lies primarily with the system operator. Among the banks, direct participants who forward payment instructions, manage liquidity and participate in incident management have additional responsibility. Whereas all the banks operating in Estonia participated in ESTA as direct participants, it is only SEB AS that participates directly in STEP2 and all the other banks operating in Estonia are indirect participants in STEP2 through their parent banks or some other direct participant. While incidents in ESTA had to be handled at the local level, the wider geographic spread of STEP2 means that handling incidents may be more complicated. Indirect participants are also affected by incidents involving direct participants and the tiered participation arrangements means it can take longer to resolve issues. This also affects operational risk, as the more dependence there is, the more any possible operational incident may affect other participants.

The initial assessment is that the transfer of the Estonian domestic retail payments to the cross-border STEP2 system has not led to increased risks to financial stability. However, as STEP2 is an important payment system, Eesti Pank is ready to contribute to the oversight of the system in an appropriate way and as much as is necessary. The overseer of STEP2 is the European Central Bank, which assessed the system in 2005 and found it met the oversight requirements of the time. From 2013, new international standards apply to financial market infrastructures. As the Eurosystem has classified STEP2 as a systemically important payment system, the new oversight standards applied to it are much stricter than the earlier ones. The European Central Bank and the central banks concerned plan to assess how STEP2 meets the new standards in 2015.

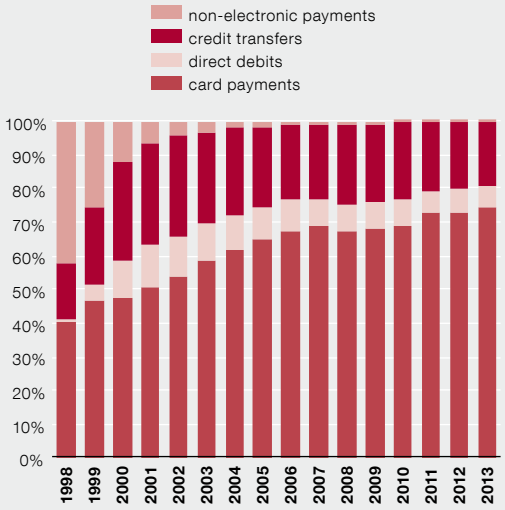
4.3 THE PAYMENT ENVIRONMENT

The **structure of household payments** has not changed much since 2011. Card payments continue to account for nearly 75% of all payments and credit transfers for almost 20%. Non-electronic domestic payments made through banks have been below 1% of all payments since 2009 (see Figure 4.3.1).

The EMOR survey of the financial behaviour of Estonian households[35] shows that only 4% of Estonian residents receive their income, including benefits and other income, wholly or partly in cash. This indicates that the majority of incomes go through bank accounts.

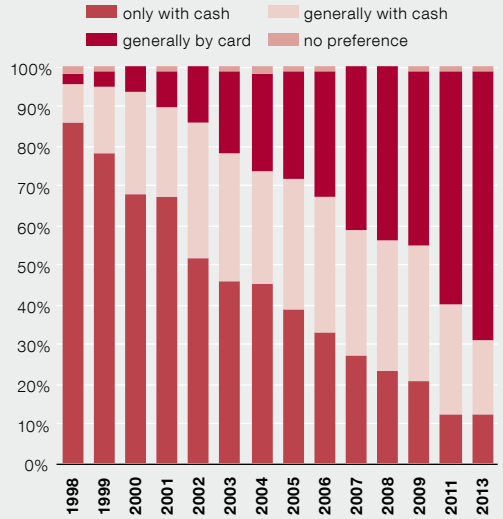
35 EMOR's survey "F-monitor: Financial Behaviour of Estonian Households. Payment habits and preferences", 2013, ordered by Eesti Pank.

Figure 4.3.1. Structure of household payments



Source: Eesti Pank

Figure 4.3.2. Everyday purchases



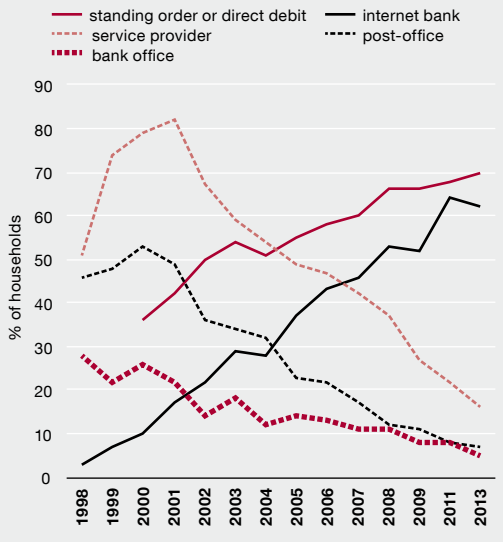
Source: EMOR

The payment habits of people who only **use cash** has not changed in the past three years as 12% of people use cash for everyday purchases and 18% for larger purchases. In this, the survey suggests that cash is used comparatively little to pay for large and small everyday purchases. In contrast the share of payments that are made by card has increased by a tenth. Nearly 70% of people mainly use cards for everyday purchases, and 19% use a combination of cash and payment cards (see Figure 4.3.2).

The EMOR survey shows that most Estonian residents use **electronic banking channels** for paying bills, with 70% using standing orders or direct debits and 62% using internet bank payments, while 16% pay cash at the service provider's office and less than 10% pay in a bank office or post office (see Figure 4.3.3).

The amount of purchases made over the internet is increasing constantly. The EMOR survey

Figure 4.3.3. Use of different payment solutions



Source: EMOR

shows that the number of buyers buying from foreign retailers over the internet is twice what it was in 2011 and now accounts for almost one quarter of the population of Estonia. Even larger growth in internet purchases is expected next year as at least 35% of Estonian residents plan to buy over the internet.

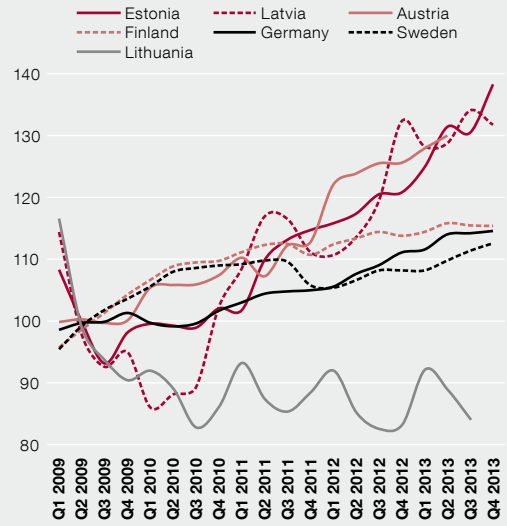
Eesti Pank statistics confirm the growth in cross-border and domestic internet purchases. They show that 227.6 million euros worth of purchases were made over the internet with bank cards in 2013. Payments for domestic purchases over the internet are mainly made directly by bank transfers and payments are initiated through a bank link. The value of purchases made in 2013 over the internet by bank transfer is estimated at around 283.5 million euros.

APPENDIX. FACTORS AFFECTING RISES IN PRICES FOR ESTONIAN REAL ESTATE AND THE RELATED RISKS TO FINANCIAL STABILITY

Interest rates throughout Europe have been very low since the second half of 2012. Even though banks have raised customer risk premiums and loan margins during this period because of the weak economic environment, the interest rate environment has still managed to encourage growth in mortgage loans and real estate prices in several countries.

Estonian housing prices have risen faster than in any other European Union member state in past three years (see Figure A.1). Growth in housing prices accelerated to 16% by the fourth quarter of 2013, with apartment prices rising by 20%. At the same time the stock of mortgage loans has grown less than nominal GDP or disposable income, meaning that the debt burden on Estonian households has steadily fallen. Although loan growth has been quite moderate until now and the rapid rise in prices has been partly due to the low base, the developments in the real estate market could indicate a change in the financial behaviour of households and a build-up of risk.

Figure A.1. Housing price indices of selected European countries (2009=100)



Source: European Central bank

Factors affecting real estate prices

- Supply and demand for real estate are driven by several long-term processes like **demographic changes** and factors affecting **house building**.

Data from the 2011 census indicate that the Estonian population declined by 5% over the preceding ten years due to natural decreases and emigration. At the same time the number of households, which affects demand in the real estate market, increased by around 3%. The reason for this is the increasing proportion of households with only one member, a trend that can be observed in many developed countries. The average size of the Estonian household declined from 2.3 members to 2.1 during this period, and in Tallinn it fell to 2. The housing market is affected a great deal by increasing migration to the cities and the relocation of households within the country. This increases demand for housing in the larger towns and cities and in nearby small towns and villages.

Demand for housing is set to increase in the coming years as the generation born at the time of the singing revolution enters the labour market (see Figure A.2). Demand is also

being boosted by purchases of housing that were postponed because of the earlier economic crisis and uncertainty. It has, however, been reduced in the past decade by the rise in emigration.

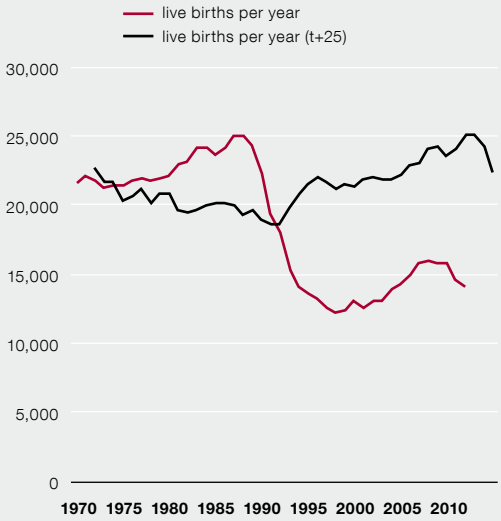
Another factor alongside demography that affects the real estate market and also activity and price growth in the construction market is the stock of housing available in Estonia. The largest share of the current housing stock was built between 1960 and 1980 (see Figure A.3) and does not necessarily satisfy modern demands for size, quality and equipment. Higher incomes and demographic changes could lead to a sharp rise in demand, and if supply is unable to react quickly enough, the consequence is a rise in prices.

The need to adjust the structure of the housing stock will impact demand and prices for years to come. The useful floor area per person of Estonian residential space is 30 m^2, while in the older member states of the European Union it is between 35 and 66 m^2 and in the Nordic countries it is 39–51 m^2.[36]

In assessing the supply-side risks it is important to consider that the supply of real estate is non-elastic in the short term. This means that real estate supply cannot readily be increased when demand increases, with the result that prices rise. Furthermore, increases in supply may be restricted in the short-term by high building costs in relation to real estate transaction prices, discouraging real estate developers from taking risks in the market. Although a rise in transaction prices means that profit margins and real estate development

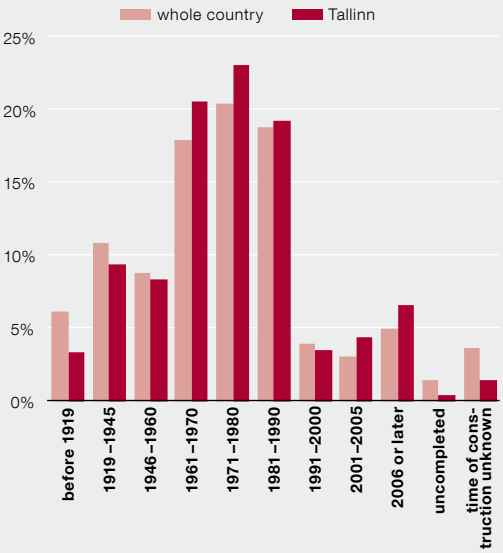
36 Housing Statistics in the European Union 2010, OTB Research Institute

Figure A.2. Live births in Estonia



Source: Statistics Estonia

Figure A.3. Distribution of conventional dwellings by time of construction at the end of 2011



Sources: Statistics Estonia, Population and Housing Census 2011

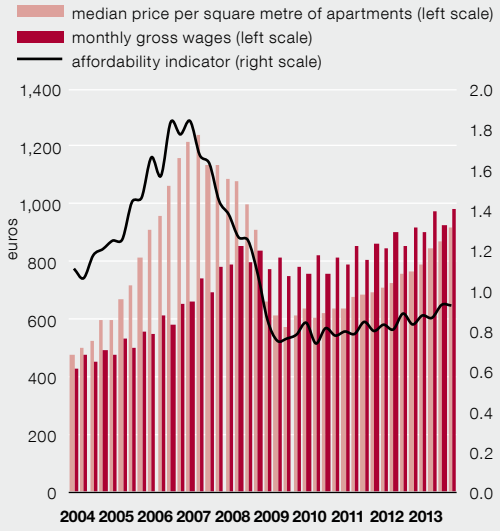
volumes can be increased, the danger might arise that the solvency of potential buyers is overestimated and a period of over-investment occurs. This risk has remained small in recent years, partly because banks have not increased the amount lent out to real estate and construction companies since the crisis.

- A large part of the growth in real estate prices can be explained by changes in the fundamental indicators of the economy, especially household **income and income growth** and confidence.

In 2005–2007 housing prices rose significantly faster than household incomes, but it is not possible for a large difference in growth rates of prices and incomes to be sustainable. The result was that prices began to fall in the middle of 2007, and in 2008 they dropped under the impact of the global crisis by more than 50% from their peak, with apartment prices falling by more than 60%.

As the labour market improved and incomes rose in 2011–2013, household confidence also picked up. This supported a recovery in the real estate market and a rise in real estate prices. Prices have generally risen at the same rate as incomes in recent years, and the median price per square metre of apartments has remained lower than average gross monthly wages for Estonia as a whole throughout the past five years (see Figure A.4). Prices have risen somewhat faster in Tallinn in the past six months, and as a result the median square metre price of apartments at the end of 2013 was around one tenth more than the average gross monthly wage in Tallinn.

Figure A.4. Housing prices and gross wages



Sources: Estonian Land Board, Statistics Estonia

The affordability index, reflecting the dynamics of real estate prices and income in relation to each other, does not yet show real estate prices to be unsustainable, but it should be remembered that the average wage growth of almost 8% last year will not necessarily be maintained. A slowing of wage growth will probably restrict real estate price rises too. However, if this does not happen and the expectation were to remain that housing prices would continue to rise rapidly even as incomes started to grow more slowly, then the risk of a price bubble emerging in the real estate market would arise.

- **Expectations** play a major part in setting real estate prices and transaction turnover rates, as companies and households may look at earlier price rises and expect similar rises in the future.

The impact of expectations on real estate prices is even stronger when interest rates are low. Although households primarily own housing with the aim of consumption they may also consider it as an investment. This means that the conditions in the financial markets may support growth in speculative investment in housing, which can be assessed using the practice for assessing normal investments.

The share of real estate in the structure of household assets has increased in many parts of the world since 2000. This is partly a reflection of rising real estate prices, but perhaps also partly of a change in the investment preferences of households. People could have various reasons for a preference for real estate, such as a bad experience of falling stock markets, low interest rates for bank deposits because of the monetary policy of central banks, or disappointment with the pension system.

On top of this, the real estate market in Estonia is very owner-centred, with the census showing that 9% of households rent their living space and a survey for EMOR in 2012 showing that 12% did. Rent prices have risen faster than sales prices since 2011, with the consequence that the preference for owning property rather than renting it has increased.

- As a large share of housing transactions are financed through loans, **access to credit and credit conditions** has a significant impact on real estate prices. As the credit supply increases and lending conditions become more favourable, so real estate becomes more accessible to a larger share of households, and this in turn has a short-term impact on demand and puts pressure on real estate prices.

The previous period of rapid growth in real estate prices in Estonia started when the banks transferred to foreign ownership. The favourable conditions of the international liquidity environment allowed banks to loosen their credit conditions ever further for Estonian clients too, lowering interest margins, extending loan lengths and easing their requirements for down payments. The credit supply was also boosted to a large extent by tough competition. When the credit cycle turned, lending conditions tightened again, with interest margins rising and the average length of loans shortening.

The average interest margin on housing loans has risen to the level of 2009, following a slight fall in the middle of 2011. The total average loan interest rate is still at its lowest level of the past decade, thanks to the low base interest rates (see Figure A.5). The average maturity of loans has been quite volatile in recent years because the number of transactions has been lower. These changes have still been smaller than those during the previous period of rapid credit growth, when the extension of loan maturities by the banks made mortgage loans more accessible to households (see Figure A.6).

The amount issued in mortgage loans by the banks in the past couple of years has been noticeably below the total number of transactions in the housing market (see Figure A.7). This means the role of banks in financing housing transactions has been significantly smaller than the last time the real estate

Figure A.5. Interest rate on new housing loans by components

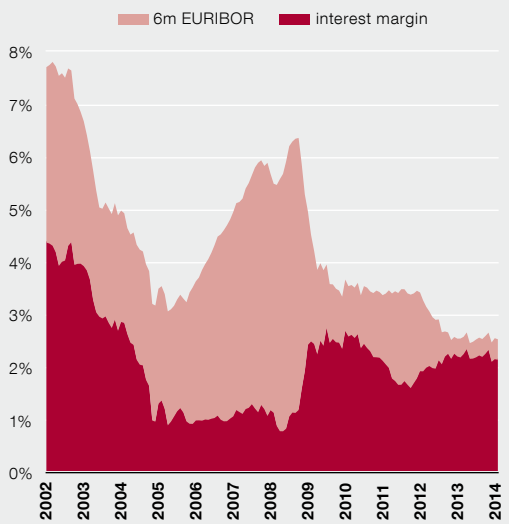
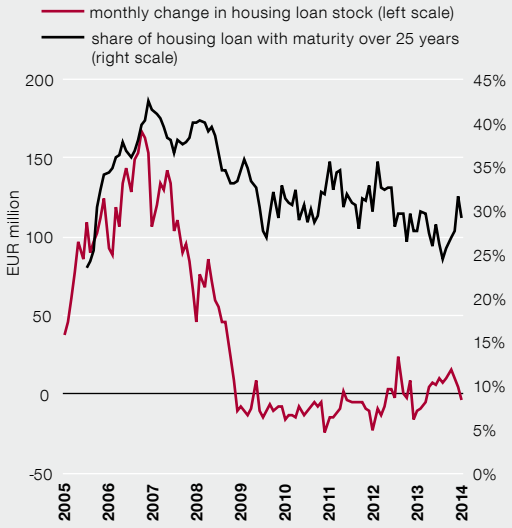


Figure A.6. Share of new housing loans with maturity over 25 years and monthly change in housing loan stock

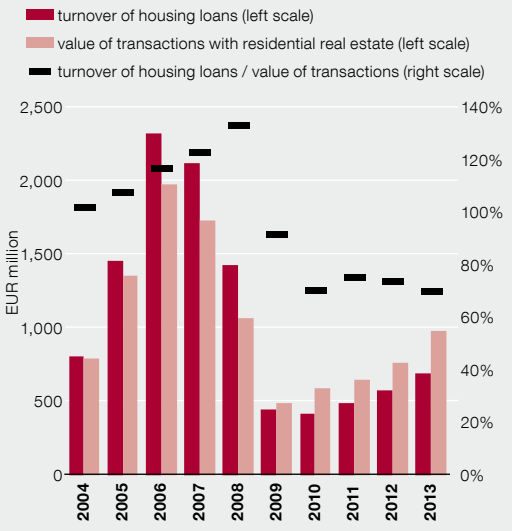


market was growing fast. Although households have started to invest more in real estate again in the past two years, transactions are being financed to a relatively large extent by the purchaser's own funds.

However, the rise in real estate prices means that purchasers need to borrow more than ever. If banks ask clients to contribute too little in down payments, the credit market could start to grow strongly in volume under the financial accelerator effect. The banks currently require 20-30% as a down payment in general, but this requirement can be met for most banks in part or in full with extra collateral and guarantees, including guarantees from KredEx.

The role of KredEx in the housing loan market increased when the credit cycle turned in 2008–2009. Since the market recovered, the

Figure A.7. New housing loans issued and value of transactions with residential real estate



Source: Land Board

value of mortgages guaranteed by KredEx and their share in the total turnover of mortgages has increased further. In 2007 KredEx issued guarantees for 4% of mortgages, but in 2013 this had risen to 14% (see Figure A.8).

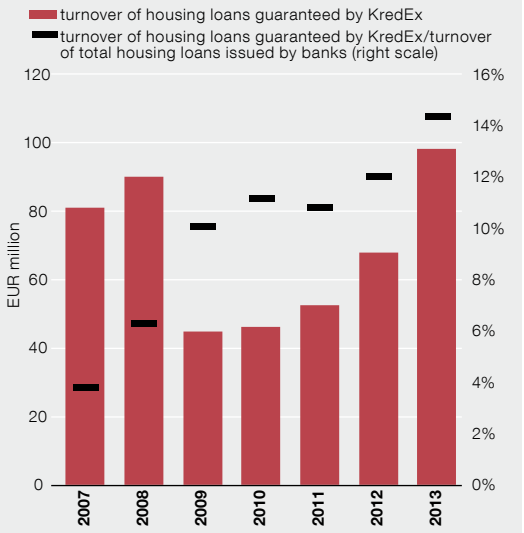
- Activity in the real estate market is affected by **households' earlier real estate purchases financed with loans**.

The total value of mortgages grew very rapidly in 2005-2008, and the loans taken in those years are estimated to account for more than two thirds of the current loan stock.

The median price of apartments in Estonia slid by a total of 53% from the middle of 2007 to the middle of 2009, with the consequence that a large share of the mortgages taken during the years of rapid growth had a larger outstanding value than the value of their collateral[37]. This negative equity made matters harder for borrowers who were facing difficulties in repaying their loans following the crisis. The negative equity also combined with other factors to restrict liquidity in the real estate market for several years.

The steady rise in housing prices has made a return to the real estate market possible for those households that bought property during the real estate boom with bank loans. The average developments in the market show that in general the value of the collateral exceeded the outstanding loan value at the end of 2013 even for the households that had taken mortgages to buy apartments when prices were at their peak in 2007. The fall in the average loan-to-value (LTV) ratio can also be observed in the mortgage portfolio, where the share of loans with LTV of over 100% fell to 12% (see Figure A.9)[38].

Figure A.8. Turnover of housing loans guaranteed by KredEx and its share of turnover of total housing loans issued by banks



Source: Fund KredEx

The rise in the value of collateral has made it possible for people to change their property, and this partly helps explain the developments in the credit market in recent years, where growth in the total value of mortgages has remained modest and the loan burden of households has fallen further even though the backdrop is one of relatively rapid growth rates for real estate transactions and prices and increased activity in the mortgage market.

37 Depending on when the transaction was signed, the weighted average value of collateral for mortgage contracts signed in 2005-2008 had fallen by 42% by the middle of 2009. Given the down payment requirements of the time, the mortgage portfolio may have exceeded the value of real estate used as collateral by almost one third at the point when real estate prices were at their lowest.

38 The majority of loans with LTV of over 100% did not have a problem with servicing, and a constant 5-6% of such loans have been overdue for more than 60 days throughout the last few years.

Figure A.9. Housing loans by loan-to-value ratio (LTV)

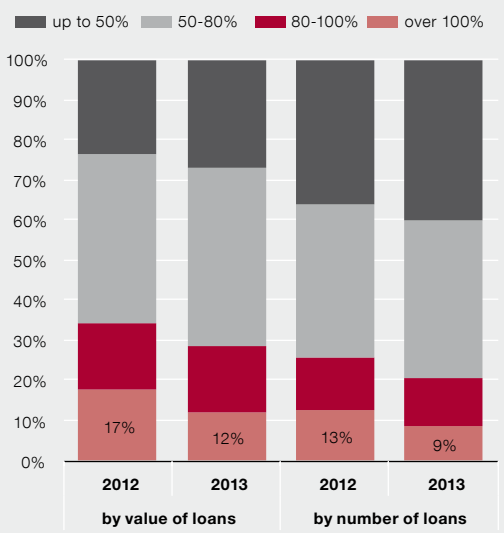
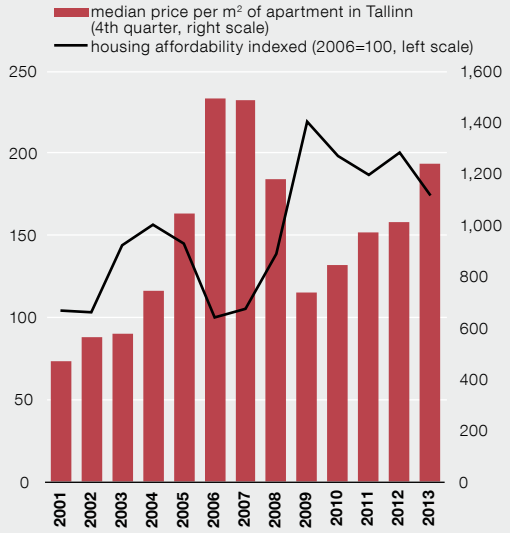


Figure A.10. Accessibility of housing loans for average-income households in Tallinn



Source: Land Board, calculations by Eesti Pank

Although wages grew relatively rapidly in 2005-2008 and credit conditions became significantly looser, the strong growth in real estate prices meant that the ability of households earning average wages to buy property actually declined. However, during the subsequent economic downturn, the fall in prices and interest rates made property much more affordable than before (see Figure A.10). With support from greater confidence and higher incomes and a favourable interest rate environment, households have started to improve their living standards quite as expected.

Risks to financial stability from the rise in real estate prices

The rise in prices in Estonia's biggest towns in the second half of 2013 accelerated and growth rates have remained high in the first months of this year. The growth has been supported by a lot of factors that affect the supply and demand of real estate in the long term and cyclically. As the supply of real estate is non-elastic in the short term, it is important to avoid behaviour that would amplify demand in order to prevent risks building up, as such behaviour could lead to bubbles appearing in the real estate market.

Constant rapid growth in real estate prices could lead households to expect that prices will continue to rise at the same speed. If expectations for wage rises are too high at the same time, there is a danger of risks related to real estate investment and the use of credit to fund it being underestimated, especially when interest rates are low.

The rapid rise in real estate prices has not yet been accompanied by significant increases in mortgage lending. Households have purchased property using more of their own funds than was the case during the real estate boom. This means that the exposure of the banks to the risks related to the real estate market has not increased. The experience of both banks and the non-financial sector in the crash in the real estate market in 2008-2009 is still fresh, and this helps mitigate the risks related to expectations. If credit for housing purchases increases, it will be important for banks to assess responsibly the ability of borrowers to repay their loans and not to amplify growth in the real estate market by setting excessively low requirements for down payments. Banks also need to consider the possibility of interest rates rising when looking at the ability of clients to service their loans.