EESTI PANK



FINANCIAL STABILITY REVIEW

2

2018

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Copies can be ordered by telephone on +372 668 0998,
or by fax on +372 668 0954
or by email from trykis@eestipank.ee.

Review by Eva Branten, Silver Karolin, Jana Kask, Raido Kraavik, Rain Nõmmik, Taavi Raudsaar, Indrek Saapar, Kirstin Saluveer, Mari Tamm, Ulla Tischler, Evelyn Tõld, Jaak Tõrs, Airi Uiboaid.

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ASSESSMENT OF FINANCIAL STABILITY AND MACROPRUDENTIAL MEASURES

There have been big changes in the Estonian banking market in recent years as DNB Pank and the Nordea Bank branch merged as Luminor, Danske Bank changed its strategy, Coop Pank was founded, and Versobank was closed. The banking sector is becoming more vulnerable to risks from developments in international financial markets and also to reputational risk, but those same changes offer opportunities for new development. In the coming years this will probably lead to changes in the funding and liquidity management of the banks. The role of the Nordic banking groups as parent banks in providing funding and liquidity management support will be reduced. The sources of funding for the banks are likely to become more varied and bonds could play a larger role in funding, which will expose the banks more to conditions in the market.

The resilience of the Estonian banking sector to risks is good. The level of capitalisation of the banking sector is high and liquidity reserves are large. The banks mainly fund themselves with the deposits of local companies and households. The share of non-resident deposits in total deposits has dropped sharply in recent years, from 21% in 2012 to 7% in September 2018. The banks have few non-performing loans and good profitability, allowing them to increase their capital and continue to provide financing for companies and households in Estonia.

The risks from the Nordic countries and their large banking groups continue to play a large part in the stability of the Estonian economy and banking. Vulnerabilities in the Nordic countries come from the high levels of household debt and the heavy dependence of the banks on market-based funding, which makes them sensitive to changes in market conditions. The risks from the Nordic countries have not declined, as household debt levels continue to rise. The accusations of money laundering that have recently emerged may also affect the funding conditions of the banks, though no such effect has yet been seen. The financial position of the large banking groups is still good though and the Swedish financial supervisory authority has decided to require the banks to hold additional capital.

With the Estonian economy growing strongly, the ability of companies and households in Estonia to service their loans was good in the first half of 2018. Sales revenues and profits have increased at companies because of strong demand and also because of inflation. The profitability of companies is quite low on average though. Wage growth is forecast to remain quite fast, which will support the ability of households to repay their loans, though at the same time it will put pressure on corporate profits. Risks from the external environment have increased however, and slower growth in the economy and sales revenues will make it harder for companies to cope with rising wage costs. Their ability to service their loans may consequently deteriorate.

It is estimated that the Estonian economy has for some time been growing faster than its long-term sustainable rate. The construction and real estate sector is growing particularly fast, and making an increasing contribution to economic growth. Increased orders make it harder for companies to find workers, and this may accelerate wage growth in the sector even further and increase wage pressures in other sectors. If the economy grows more slowly, the ability of construction companies and their employees to pay their loans will suffer, and reduced demand from this sector would transmit the impact further into the rest of the economy.

Income continuing to rise fast, high levels of confidence, and low interest rates have together pushed demand from households for loans quite high, and debt liabilities have grown at a quick rate. However, new bank loans and leases were taken out at a declining rate in 2018. Household deposits continue to grow faster than debt liabilities, and financial buffers increased. The factors that have supported the growth in borrowing will remain unchanged in the near future. Wages will continue to rise relatively quickly in the years ahead and financial markets estimate that loan interest rates will remain at their current low levels in the coming years. In consequence, the danger remains of households overestimating their ability to service their loans.

The number of transactions in the residential property market in the first half of 2018 was at a similar level to that of last year and the average price of apartments rose at a similar rate to that of recent years, but its rise did not outstrip the growth in incomes. Demand for new apartments has been strong in the last few years and more and more of them have come to the market.

This has helped restrain the rise in prices at a moderate rate, but real estate developers may yet overestimate demand and may overinvest. This risk should be reduced by the labour shortages in construction, which will limit supply in future.

Fewer building permits for residential properties were issued in the first half of 2018 than previously, which may indicate that supply will be reduced in the future. There were also fewer transactions in the apartment market in the third quarter than a year earlier and the growth in average prices slowed, which could be a sign of some decline in demand in the housing market.

Quite a lot of new office and retail space has been added to the commercial real estate market in recent years. Demand for new space has been high as the economy has grown rapidly, while rent prices have remained stable and occupancy rates for office buildings have been good. However as growth starts to slow in the economy, as forecast by Eesti Pank growth in demand will also slow. Loans to construction and real estate companies play quite a large role in the portfolio of the banks operating in Estonia, and so problems in the sector affect rather a large part of the portfolios. However, the banks have not increased the share of loans to real estate companies in their portfolios.

RISK ASSESSMENT

In the assessment of Eesti Pank, the risks to the functioning of the financial sector in autumn 2018 are generally small, though risks from the external environment and from the fast cyclical growth in the construction and real estate sector are greater than they were. Risks are being kept down above all by the improved financial position of companies and households, and by the large liquidity reserves and high equity level of the banking sector. The three main medium-level risks to financial stability are:

Risk 1

If financial markets assess that the risks to the Nordic economies or banking groups have increased, the liquidity risk of the banks operating in Estonia will increase and with it the risk to the financing of the economy. Reduced economic activity in the Nordic countries would have a negative effect on the income of Estonian exporters and their ability to service loans.

Risk 2

Strong demand means the real estate market will draw labour, investment and funding more than ever into the construction and real estate sector. If the business cycle were to turn or orders to decline, the ability of construction and real estate companies to service their loans would deteriorate as would the loan quality of the banks.

Risk 3

Consistently rapid growth in wages and strong confidence may increase demand further in the housing market and accelerate the rise in real estate prices. With interest rates low, this would increase the growth in housing loans and leave the banks more vulnerable to risks from the real estate sector.

The main risks to Estonian financial stability

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1 = minor risk and 6 = major risk. The arrow indicates changes in the risk level from the assessment of March 2018



Macroprudential measures

As the macroprudential authority, Eesti Pank sets measures to protect against the risks that the risk assessment finds may threaten the functioning of the financial system in the near future. The current measures are preventative in nature and are intended to strengthen the resilience of banks to changes that could threaten the financial sector and to limit any possible increase in the risks. Capital buffer requirements and requirements for housing loans currently apply in Estonia (see the table below). The systemic risk buffer and the additional buffer for systemically important institutions help make sure there is enough capital available to cover possible loan losses following an unexpected deterioration in the economic climate. The systemic risk buffer takes account of the large share of the loan portfolios of the banks operating in Estonia that is made up of loans to real estate and construction companies.

The rapid growth in housing loans led Eesti Pank to analyse the conditions of issue for housing loans in autumn 2018, and it was decided to leave the housing loan requirements unchanged. The housing loan requirements are designed to limit any increase in the vulnerability of lenders and borrowers and to contain excessively fast growth in credit. Despite the fairly fast growth in loans, the conditions for issuing housing loans have not particularly changed and the applicable requirements are appropriate for the current lending environment. The banks have not given any additional boost to the housing market, but have tended more to tighten their lending conditions, while borrowing has been supported by growth in incomes.

Eesti Pank has made an exception in its housing loan requirements for loans that have a guarantee from KredEx, the state guarantee fund, as their loan-to-value ratio (LTV) is allowed to be up to 90%, which is higher than the standard 85% LTV requirement. The target groups for guarantees are defined quite broadly, and so the share of new housing loans that have guarantees has climbed in recent years to around a quarter. Increased use of the guarantees makes the Eesti Pank requirements less effective at reducing the risks related to faster lending growth. If the share of loans with guarantees should continue to grow or if the conditions for issuing the guarantees should be loosened, Eesti Pank may consider changing the exception in the requirements for housing loans with a KredEx guarantee.

In the third quarter of 2018, Eesti Pank also assessed the cyclical risks from credit growth to the Estonian financial sector as a whole and decided to leave the countercyclical capital buffer rate at zero. Although the debt of non-financial companies and households grew at an increasing rate in the first half of 2018, debt as a ratio to GDP has not increased. However the growth of around 6% in debt has approached the long-term nominal rate of growth of the economy. Debt has increased faster than before because companies have increased their borrowing from outside the domestic banks. Weak investment suggests that no major increase in the growth rate of corporate debt is expected. If debt should grow faster in future though, Eesti Pank can raise the countercyclical capital buffer rate.

The macroprudential measures of Eesti Pank

Instrument	Rate	From
Systemic risk buffer	1%	1 August 2016
Other systemically important institutions buffer		
Swedbank AS, AS SEB Pank	2%	1 August 2016
Luminor Bank AS	2%	1 July 2018
AS LHV Pank*	1%	1 January 2019
Countercyclical capital buffer	0%	1 January 2016
Housing loan requirements**		
loan-to-value (LTV) limit	85%***	1 March 2015
debt service-to-income (DSTI) limit	50%	
maximum loan maturity	30 years	

* Until 31.12.2018 the O-SII buffer rate for AS LHV bank is at 0.5%
** The share of loans breaching the limits may not exceed 15% of the volume of housing loans issued each quarter
*** Up to 90% for housing loans guaranteed by KredEx

DEVELOPMENT TRENDS AND RISKS AFFECTING FINANCIAL STABILITY

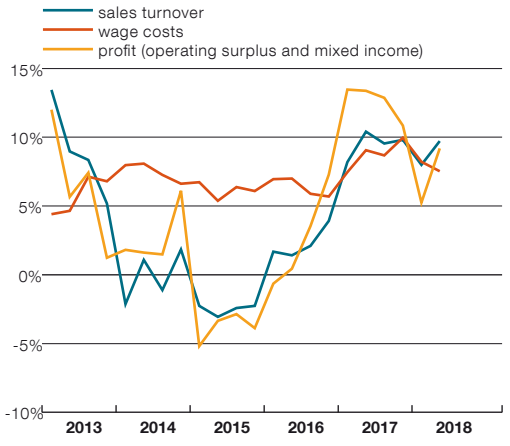
COMPANIES AND HOUSEHOLDS

Growth remains fast in the euro area economy, but there are several risks to the outlook for further growth. Quarterly growth in the economy was stable in the first half of 2018 at 0.4%, or a little slower than a year earlier. Yearly growth slowed in consequence to 2.2% in the second quarter. Indexes of economic activity in recent months give grounds to expect the same rate of quarterly growth in the third quarter. Falling unemployment and gradually increasing wage growth have not notably raised price levels, and so the monetary policy of the European Central Bank remains accommodative. Further growth in the euro area economy may be threatened by tensions in international trade, by uncertainty about the exit of the United Kingdom from the European Union and about the new Italian government, and by the persistence of large debt burdens in the public and private sectors in several euro area states.

Estonia's main trading partners are doing well economically, and so demand for the products and services of Estonian companies is strong, but it could be reduced in future by the risks already noted. The Nordic economies are again in a good position, and yearly growth in GDP was measured at around 3% in the second quarter in both Sweden and Finland. Growth in both economies is being driven by strong domestic demand and by exports. Yearly growth in the Latvian economy picked up to 5.3% in the second quarter, while the Lithuanian economy grew by 3.8%. Growth was modest in the Russian economy but it did pick up a little.

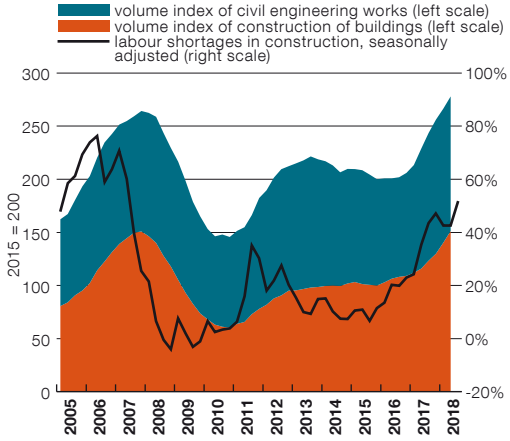
The Estonian economy remains in a good place and corporate sales revenues increased. Growth in the economy from the second quarter of 2017 to the second quarter of 2018 was 3.7%, and short-term statistics show that growth continued at about the same rate in the third quarter. Growth was again encouraged by accommodative monetary and fiscal policies, the use of Structural Funds from the European Union, and a strong external environment. Strong demand and high inflation allowed companies to increase their sales revenues. Although data on corporate profits point in different directions to some extent, there was probably some increase in profits (see Figure 1).

Figure 1. Corporate sales turnover, wage costs and profit



Source: Statistics Estonia

Figure 2. Construction volume index and labour shortages at construction firms



Source: Eesti Pank

The Estonian economy has probably been growing now for some time at above its sustainable capacity. This increases the danger of overheating and a consequent drop, especially in the construction sector. Companies are finding it hard to find employees, unemployment is low and there is less unused capacity than usually. Orders from both the private sector and the public sector indicate that the amount of construction work has increased rapidly since 2016 (see Figure 2). The biting labour shortages among construction companies could lead wages to rise even faster in that industry, and this would spill over into higher wage pressures in other sectors. When the cycle turns, both construction companies and their employees would find it harder to service their loans. Furthermore, problems in the construction sector would reduce demand for

products and services from other sectors, and so the negative impact would be passed on into those other sectors.

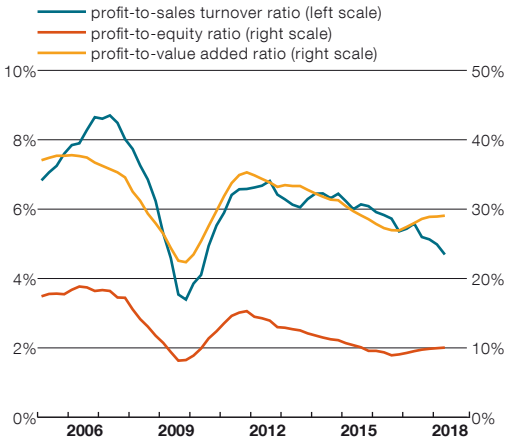
Although profits have increased in the past two years, the profitability of companies is lower than it was earlier (see Figure 3). Companies have shown that they are able to repay their liabilities even with lower profitability than at present. At the same time though, lower profitability means that if the current rapid growth in the economy and in sales revenues slows, companies will not easily be able to cover wage pressures from profits. On top of this, low profitability will discourage companies from investing and make it harder for them to do so, and this could harm their competitiveness and long-term growth in the economy. This in turn would start to eat into the ability of companies to service their loans.

The debt of companies started to increase in the first half of 2018, and yearly growth in it had reached 5% by the end of the second quarter. The growth was partly driven by increased borrowing from abroad by the energy sector. The debt liabilities of construction and real estate companies have grown by an average of around 6-7% a year in volume over the past two years, and did so again in the first half of 2018. No rapid growth in the debt liabilities of the business sector as a whole is noticeable though, as little is being invested (see Figure 4).

The corporate debt burden and financial leverage are lower than in the past decade and liquidity is good (see Figure 5). This is largely because of the low level of investment by companies. Increases in the ability of companies to pay and in their liquid assets are also supported by the very low base interest rates, which mean that companies are spending a lot less on interest payments.

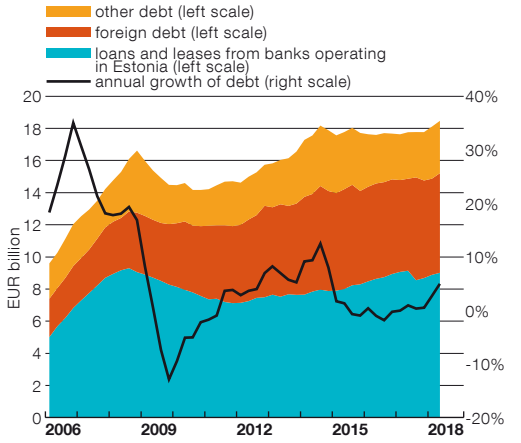
The payment behaviour of companies is good. The share of companies with payment difficulties, seen as overdue debts to suppliers, or with tax arrears was very low in the first half of 2018, as in the previous five years (see Figure 4). The number of bankruptcies and corporate liquidations is also low. Overdue loans to companies as a share of the total portfolio has fallen to below 1%.

Figure 3. Corporate profitability



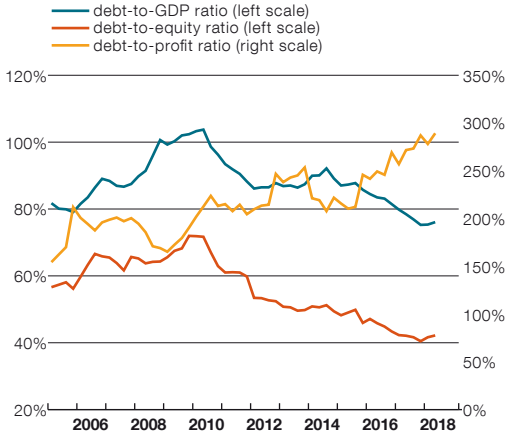
Sources: Eesti Pank, Statistics Estonia.

Figure 4. Corporate debt



Sources: Eesti Pank, Statistics Estonia

Figure 5. Corporate indebtedness and leverage



Sources: Eesti Pank, Statistics Estonia.

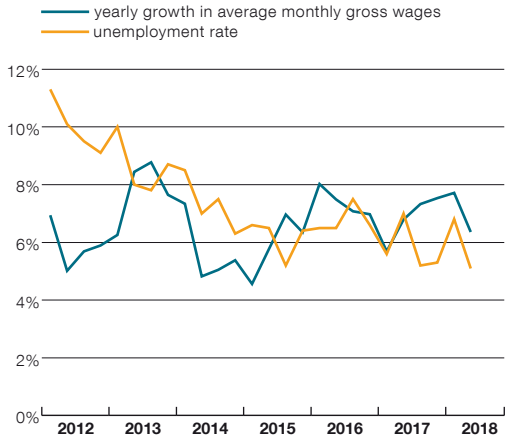
The main risk to financial stability in Estonia from the business sector stems from rapid cyclical growth, especially in construction and real estate. A very large concentration of real estate development in a short timeframe has increased the sales revenue of the construction industry, but has also led to serious labour shortages. High wage pressures threaten the profitability of companies, which was already low, both in construction and in other sectors. There is also the danger that when the cycle turns, both construction companies and their employees may find it harder to service their loans.

Growth in household incomes remained fast in the first half of 2018. The yearly growth in the average gross monthly wage was 6.4% in the second quarter (see Figure 6). The Eesti Pank June forecast expects growth in wages to remain at close to 6% in the years ahead. The labour market was very favourable for employees and the unemployment rate was at its lowest of the past decade, at 5.1% in the second quarter. Consumer confidence remains high, and expectations that unemployment will increase over the next 12 months are at their lowest level of recent years.

Household debt liabilities were up around 7% on a year earlier in the second quarter of 2018. The yearly growth in the stock of bank loans and leases was 7.2% at the end of August. The largest part of household debt liabilities is housing loans, and the yearly growth in the stock of those was 6.8% in August. Some 8% more was issued in new housing loans in the first eight months of 2018 than in the same months of the previous year. At the same time, the growth in the issue of housing loans has slowed in recent months (see Figure 7). Consumption loans to households, especially car leases, have seen rapid growth. At the end of August 2018 the stock of consumer loans including car leases was a little over 9% more than in August 2017.

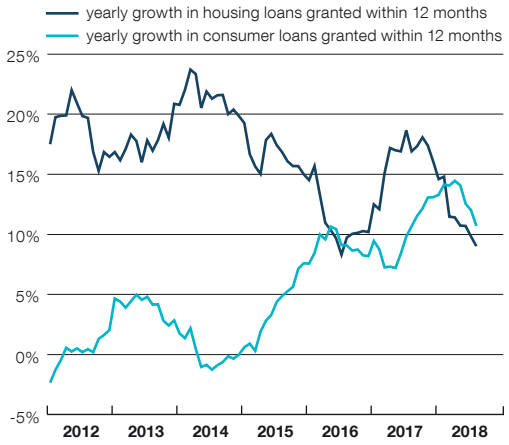
The total value of loans granted by the non-bank financial sector to households was some 4% more in the second quarter of 2018 than a year earlier. Non-bank financial intermediaries had lent around 345 million euros to households by the end of the second quarter, accounting for less than 4% of all loans to households.

Figure 6. Yearly growth in average monthly gross wages and the unemployment rate



Source: Statistics Estonia

Figure 7. Yearly growth in housing and consumer loans granted to households



Source: Eesti Pank

Despite the rapid growth in debt liabilities, there was no rise in household indebtedness in the first half of 2018. The rapid growth in incomes and GDP meant the ratio of household debt to disposable income remained at 71%, and the ratio of debt to GDP was close to 39% (see Figure 8).

The household interest burden, which is the annual interest cost of loans as a ratio to disposable income, has risen a little, though it is still low. The natural refreshing of the loan portfolio has seen the household interest burden rise, as the average interest margin has risen and the interest burden reached around 2% by the end of the second quarter.

Savings continue to grow faster than debt liabilities. The bank deposits of households

have been 10% larger in 2018 than a year earlier. The ratio of household deposits and cash to debt has risen a little and it was above 89% at the end of second quarter of 2018 (see Figure 9). The consumer sentiment survey of the Estonian Institute of Economic Research showed that 53% of families managed to save in September 2018[1], which is the highest figure since the sentiment survey started in Estonia in 1991.

The favourable financial position of households has been good for their ability to service their loans. The share of loans overdue by more than 60 days in the total household loan portfolio of the banks has fallen in recent years and it was below 0.6% at the end of August.

With wage growth remaining high for a long time and interest rates low, there is a danger of households overestimating their ability to service their loans. Although the saving rate of households has been quite high of late, the total amount of savings they have built up is small and many households would not have sufficient financial buffers to cover unexpected emergencies.

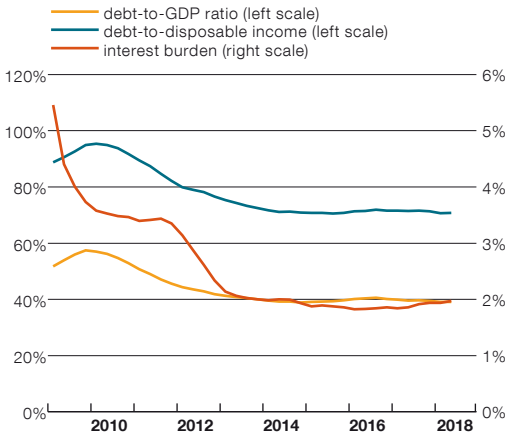
THE REAL ESTATE MARKET

The housing market

The housing market was active in the first half of 2018. The number of transactions with apartments was a little higher than a year earlier, while the number of transactions with houses dipped (see Figure 10). The number of transactions with new apartments being sold for the first time rose very rapidly, and was up over 40% on the same period a year earlier. The number of transactions in the housing market was lower in the third quarter than it was a year earlier.

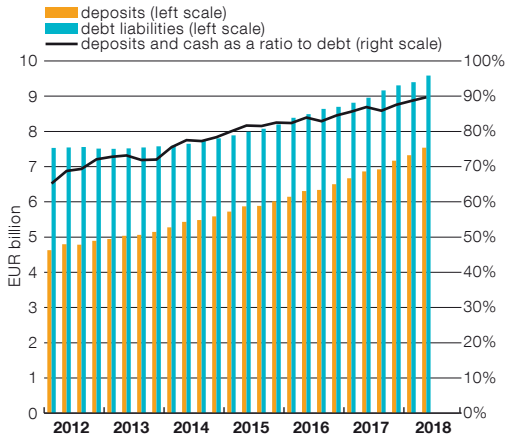
Prices rose in the apartment market at a similar rate to that of recent years. The yearly growth in the price index for houses slowed to 4.1% in the second quarter, while the yearly growth in the index for apartments increased to 8.7%, with prices for apartments in Tallinn rising by 9.9%. This was partly because of an increase in the share of transactions with apartments being sold for the first time (see Figure 11). If transactions for new apartments are excluded,

Figure 8. Household indebtedness



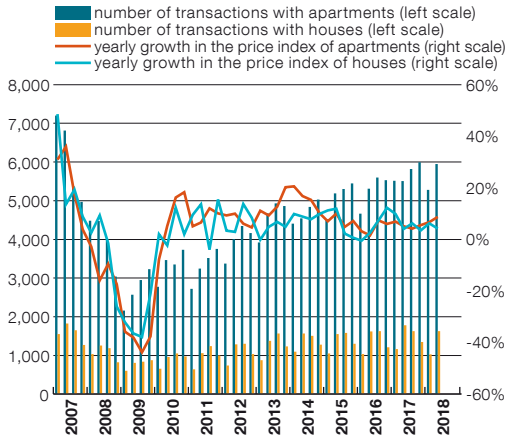
Sources: Eesti Pank, Statistics Estonia

Figure 9. Household deposits and debt liabilities



Source: Eesti Pank

Figure 10. Yearly growth in the price index of apartments and the price index of houses and the number of transactions



Sources: Statistics Estonia, Estonian Land Board

1 Konjunktuur no 206, September 2018.

the average square metre price for apartment transactions in Tallinn was up around 6% on a year earlier. Data from the Land Board show the rise over the year in the square metre price of apartment transactions was slower at around 3% in the third quarter.

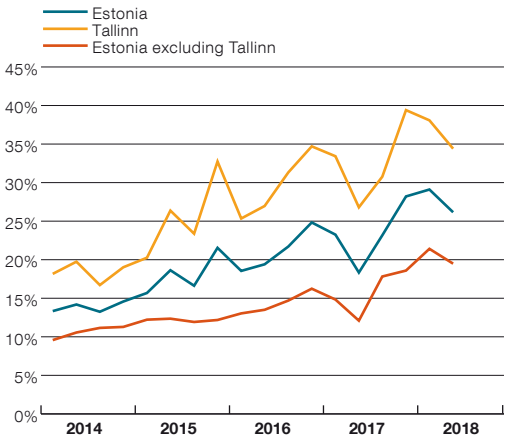
An increasing amount of new living space has come onto the market. A fifth more living space was granted permits for use in the first half of 2018 than in the first half of the previous year (see Figure 12). Building permits for new construction of living space were granted for 14% less floor area than a year earlier.

Demand and rising prices in the housing market have been built on the strong growth in household incomes. The square metre price of apartment transactions as a ratio to the average gross monthly wage was at a similar level in the first half of 2018 to that of recent years, and it has not gone beyond its long-term average for 2004-2017 (see Figure 13).

The role of banks in funding housing transactions and development projects has not increased. The turnover of housing loans as a ratio to the total value of residential property transactions has not changed significantly and lending conditions have rather become stricter. The average interest rate on new housing loans rose a little in the first half of 2018 and in August it reached 2.6%. About the same amount was issued in bank loans to fund development projects for residential property in the first half of 2018 as a year earlier.

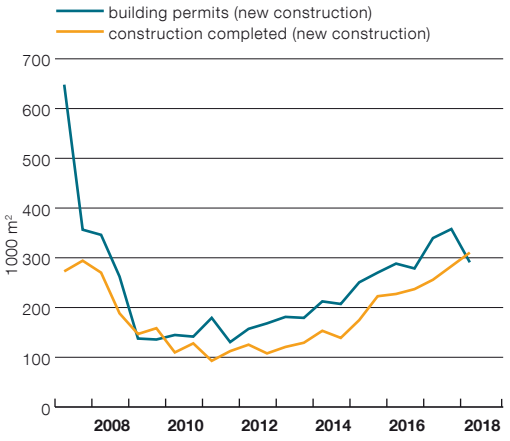
If wages continue to rise fast and loan interest rates remain low, price rises in the real estate market could accelerate, increasing the loan burden of households and the associated risks. The large supply of residential space has helped rein back rises in prices. There could be a risk of oversupply, which would be reduced by labour shortages in construction, but if demand for new living space remains high, reduced supply could push real estate prices to rise faster.

Figure 11. The share of transactions with new apartments sold for the first time, by floor area



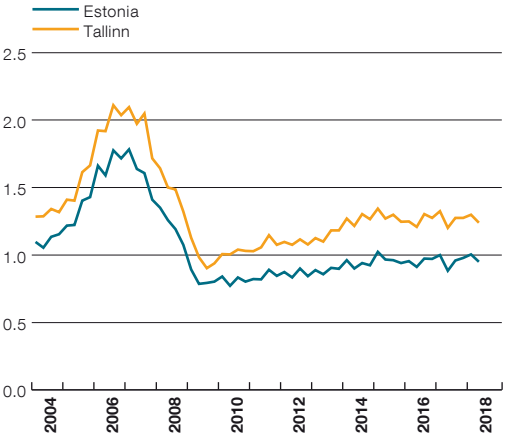
Source: Estonian Land Board

Figure 12. Building permits for residential property and construction completed



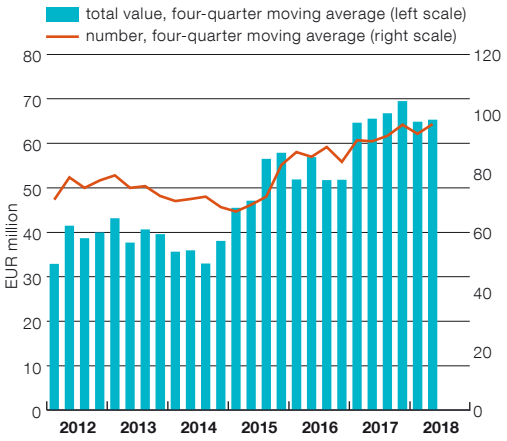
Source: Statistics Estonia

Figure 13. Ratio of the average price of a square metre in an apartment to average gross wages



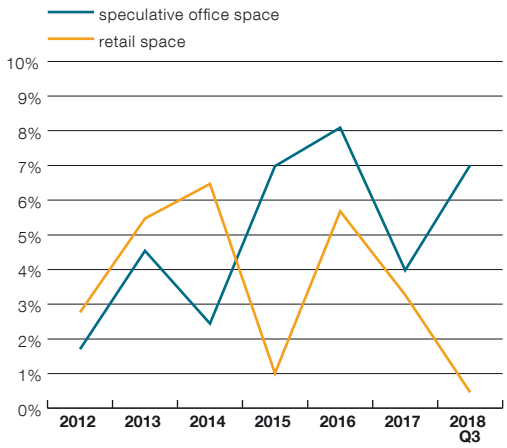
Sources: Estonian Land Board, Statistics Estonia

Figure 14. Total value and number of transactions with land with buildings for commercial purpose



Source: Estonian Land Board

Figure 15. Change in the office space and retail space in Tallinn from previous year



Sources: Colliers International, Eesti Pank calculations

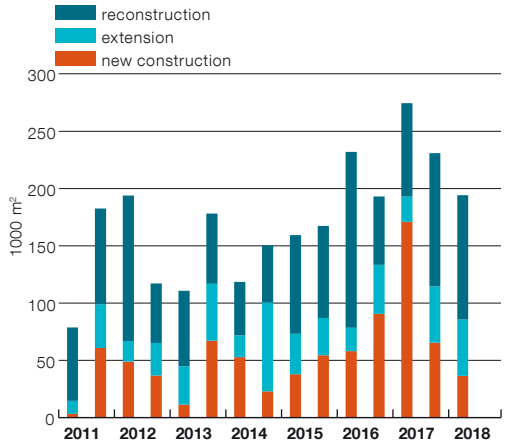
The commercial property market

About as many transactions were made in the first half of 2018 for commercial land with buildings as a year earlier (see Figure 14). The total value of transactions was around 10% less than a year earlier.

Quite a lot of new property has been added to the commercial real estate market in recent years. The amount of speculative office space[2] in Tallinn has increased by around 40% since 2011, and the floor space of shopping centres has increased by around 30%. In the first three quarters of 2018 the amount of speculative office property increased by around 7% from the end of 2017 (see Figure 15). It is expected that quite a large amount of office and retail space will be added in the near future[3].

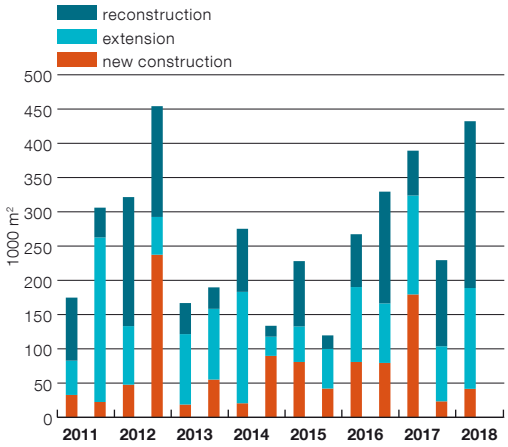
Building permits for new commercial buildings were issued to a lesser extent in the first half of 2018. Building permits were issued for some 80% less floor area for construction of new office buildings in Estonia and some 75% less for commercial properties than in the first half of 2017 (see Figures 16 and 17). At the same time, a lot more building permits were issued for expanding office buildings than a year earlier, and for reconstructing commercial properties, which may indicate some desire to adapt existing business properties to meet demand.

Figure 16. Building permits for office premises



Source: Statistics Estonia

Figure 17. Building permits for commercial premises



Source: Statistics Estonia

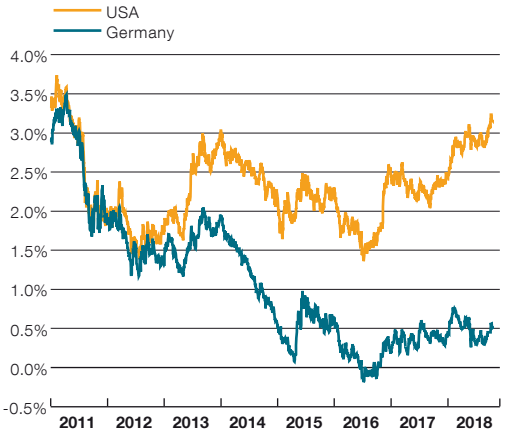
2 Development or construction with no formal commitment from the end users of the finished product.

3 Data from Colliers International.

The vacancy rate for office space rose a little in the first three quarters of 2018, as first-class property, which is of higher quality and very well located, came to the market. Rental prices were around the same as they were in 2017. The vacancy rate for shopping centres in Tallinn remains low at under 1% and rents have remained more or less the same for a couple of years. The capital value of office and commercial real estate in Tallinn, which takes account of rental prices, vacancy, operational costs and yields, has risen in recent years. The capital value per square metre for the highest quality and best located office buildings has risen by around 60% since 2011[4].

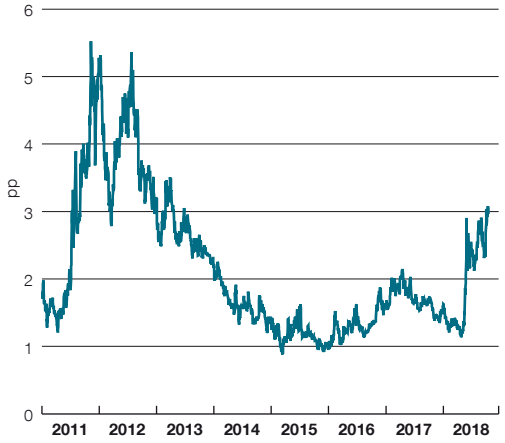
The risk remains in the commercial property market that there may not be sufficient demand for the increasing amount of commercial buildings available. This risk has so far been eased by the growth in economic activity, which has increased demand in the commercial real estate market. Growth in the economy will slow in future however, and demand in the commercial real estate market will probably do the same. Furthermore, the commercial real estate sector usually reacts with greater sensitivity to the economic cycle than many other sectors do.

Figure 18. Interest rates on ten-year government bonds of the USA and Germany



Last observation 16.10.2018
Source: Bloomberg

Figure 19. Interest spread of ten-year government bonds of Italy over German bonds



Last observation 16.10.2018
Source: Bloomberg

THE FINANCIAL ENVIRONMENT

International financial markets

The tone was set in international financial markets in the first half of 2018 both by the strong global macroeconomic environment and at the same time by political uncertainty and problems in some emerging markets. Growth in the global economy was led by the United States of America, while growth slowed in the euro area, the United Kingdom and Japan. Financial markets suffered the negative impacts of the widening trade war between the US and China and of the uncertainty about the exit of the United Kingdom from the European Union and about the new government in Italy. Problems also appeared in emerging markets, as currencies came under strong pressure in some countries with large external imbalances.

The large economic regions have not been marching in step in monetary policy. The US Federal Reserve raised its monetary policy interest rates in March, June and September 2018, and interest rates are expected to rise once more this year. Central banks also raised interest rates in the first half of 2018 in Canada and the United Kingdom. The European Central Bank in contrast has indicated that it plans to keep monetary policy interest rates at their current level at least until summer 2019 and then for as long as is necessary to ensure the continued sustained convergence of inflation to its target level. Asset purchases will be stopped at the end of 2018, but the income received as securities bought earlier reach maturity will continue to be reinvested.

4 Data from Colliers International.

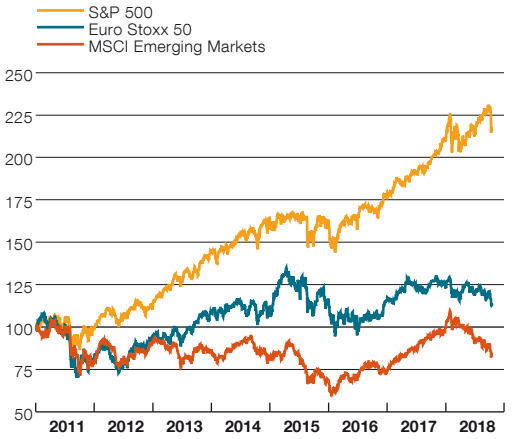
Interest rates on sovereign bonds in Europe have been affected by tensions in Italy from the formation of the new government and from its planned budget. Interest rates on long-term Italian sovereign bonds rose sharply at the end of May. At the same time there was a steep rise in demand for risk-free German sovereign bonds (see Figure 18), meaning the spread between interest rates on Italian and German bonds widened substantially to its highest level since the euro area debt crisis (see Figure 19).

Major stock markets moved in different directions in the first three quarters of 2018. The financial results of US companies were better than expected in the first half of 2018, and so US stock indexes reached new record levels by the end of September (see Figure 20). The S&P 500 index climbed by almost 9% in the first nine months of 2018. In Europe, the strength of the euro and increasing trade tensions caused stock markets to fall however. European stock markets were also pushed down in September by increased uncertainty surrounding the Italian budget discussions. At the start of October the share prices of US companies also started to fall because of monetary policy tightening and the possible negative impact of a trade war between the US and China.

The main risk for international financial markets is that the price level of financial assets is high, and this increases the chance of a sharp fall. Expectations for the financial results of companies have now reached such high levels that any unexpected fiscal or monetary policy decisions could start to reduce confidence. Monetary policy interest rates have started to rise in several places, but interest rates generally remain quite low. Low interest rates make it hard for the financial sector to earn income, and profits are low. Interest rates could rise quite quickly though, and this could lead to increased volatility in securities markets, which would increase uncertainty and price volatility further. A rise in bond yields would make it harder for heavily indebted states to service their debt.

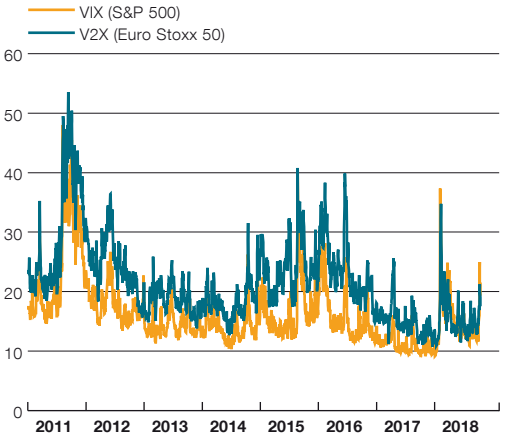
Volatility is low in securities markets, and this increases the chances of it rising sharply (see Figure 21). Financial markets are sensitive to political risks, and those risks have increased in recent months. Volatility in markets could also be increased by the Federal Reserve or the European Central Bank taking unexpected monetary policy decisions. Problems in developing markets have also come to the fore, and the danger is that such problems could have a domino effect and pass into other markets.

Figure 20. Main stock indexes (1 January 2011 = 100)



Last observation 16.10.2018
Source: Bloomberg

Figure 21. Volatility indexes of main stock and bond markets



Last observation 16.10.2018
Source: Bloomberg

European banking

The state of the European banking sector continued to improve, though the problems hanging over from the last crisis leave banks still vulnerable to risks. Low interest rates have restricted the ability of banks to earn income and their cost efficiency is low. Stronger economic growth has increased profitability, but it remains weak. Higher service fee income and a decline in non-performing loans have helped

profitability to improve. In the past two years the banks have reduced their volumes of problem loans by around a third to 779 billion euros. This was equal to 3% of the loan portfolio in the first quarter of 2018, though it varies quite a lot between countries.

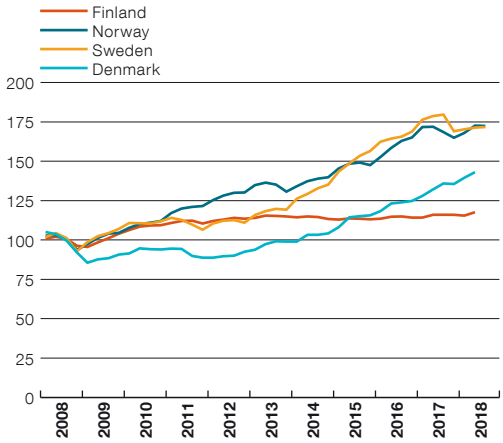
The capitalisation of banks is a little lower than it was a year ago, though it is nevertheless relatively quite high. The tier one ratio of a sample of large European Union banks covered 14.4% of risk-weighted assets. As the rise in profitability was partly due to unrealised gains from rises in prices of financial assets, the rise in risk premiums noted earlier could lead profits and equity to fall.

The favourable macroeconomic environment has helped growth to recover in the loan portfolios of the banks. The yearly growth in the stock of both corporate loans and housing loans has been above 3% since autumn 2017, and lending to companies has grown fastest. Faster growth was also noted in consumer loans in several countries in the first half of 2018. Although consumer loans are quite a small share of the loans issued to households at a little over 10%, faster growth in them indicates that banks are ready to take larger risks in order to increase their profits.

The Nordic banking sector

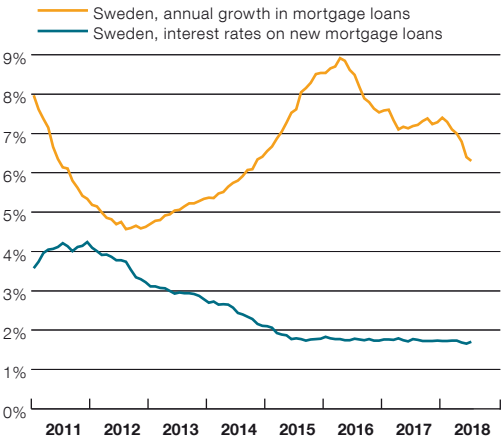
The operating climate in the Nordic countries, where the biggest banking groups operating in Estonia are based, has remained favourable and the financial results of the banks have been good, though the vulnerabilities have not substantially decreased. The Swedish economy has grown faster than expected, and although the second quarter results may have been affected by one-off factors, the central bank raised its forecast for yearly growth to close to 3%. Inflation remains close to its target of 2%. In September the central bank kept its repo rate unchanged at -0.5%, though forward guidance in its public communication has indicated that the repo rate may be raised during the winter.

Figure 22. Price indexes of residential real estate in the Nordic countries (2008 = 100)



Sources: statistical agencies, Eesti Pank calculations

Figure 23. Annual growth and interest rates on new mortgage loans



Sources: European Central Bank, Statistics Sweden

Real estate prices had started to fall in Sweden at the end of 2017, but in the first half of 2018 they started to recover again (see Figure 22). A possible cause of the temporary fall in prices may have been increased amounts of new construction. Tighter lending policies in Sweden[5] may also have played some role in slowing the rise in prices, as may changes in expectations for future rises in prices.

The growth in housing loans has slowed a little, but it still remains fast (see Figure 23). It remains faster than the growth in disposable income, and so the debt burdens of private individuals are increasing.

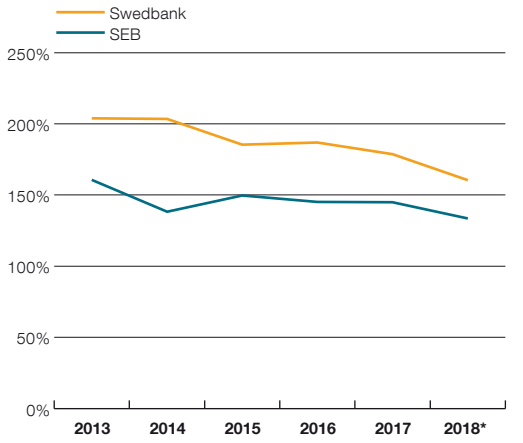
5 Since June 2016, Swedish borrowers whose loan principal exceeds 70% of the value of the collateral have to pay at least 2% of the principal back each year on top of interest payments, while borrowers whose loan is for 50–70% of the value of the collateral must pay at least 1%. Since March 2018, new borrowers taking loans that are 4.5 times their pre-tax income or more should pay off a further 1% of their loan.

It is expected that real estate prices and private debt burdens will continue to grow in Sweden, though at a gentler rate than earlier. The repayment requirement for loan principal raises the cost of loan servicing for heavily indebted clients, but low base interest rates and continuing confidence among households have supported demand for loans.

The Swedish central bank has also highlighted the increase in activity by lenders from outside the banking sector. The share of such lenders in the Swedish market is still small, but as the limits set for banks on issuing loans and macroprudential capital requirements do not apply to non-bank lenders, that share may grow.

The loan-to-deposit ratios of the Swedish financial groups operating in Estonia have fallen in recent years (see Figure 24). The fall in the ratio has been due to growth in deposits, which surpasses the growth in loans. The ratio for Swedbank at the end of the first half of 2018 was 161%, and for SEB it was 133%. Despite the rapid growth in deposits, the banking groups continue to get a large part of their funding from financial markets, making them sensitive to risks from financial and real estate markets. The banking sector in Sweden is relatively large and concentrated, and the largest banks hold a large share of each other's securities in their portfolios[6]. This poses the risk that if one bank gets into trouble it could threaten the other banks as well.

Figure 24. Loan-to-deposits ratio of banking groups



*June 2018
Source: Bloomberg

Figure 25. Average covered bond yields of banking groups*



*Swedbank, SEB
Sources: Bloomberg, Eesti Pank calculations

The cost of market-based funding has remained relatively cheap. The market interest rates on covered bonds with a maturity of less than one year have been negative for three years now, and have not changed particularly in the past 12 months (see Figure 25). The interest rate on long-term covered bonds has been more variable over the past three years however. At the end of September 2018 the market interest rate on long-term covered bonds was almost the same as at the start of the year.

The liquidity of the banking groups has generally remained good. The liquidity coverage ratio[7] for the banks as a whole passed the 100% mark with a large margin at the end of June 2018. The liquidity coverage ratio for the Swedish krona was still on average below 100% though. The liquidity of the Swedish krona is managed using currency swaps, but the swap market may not necessarily function so well if there is a market shock and so banks could face liquidity management problems. The Swedish central bank has also pointed this out.

The profitability of the Swedish financial groups operating in Estonia has remained strong (see Figure 26). The return on equity of the SEB and Swedbank groups of 11-16% has remained almost twice the average for the largest

6 The Swedish central bank finds that the volume of the risk positions makes up almost one third of the equity of the banks; Financial Stability 1/2016. Riksbank.

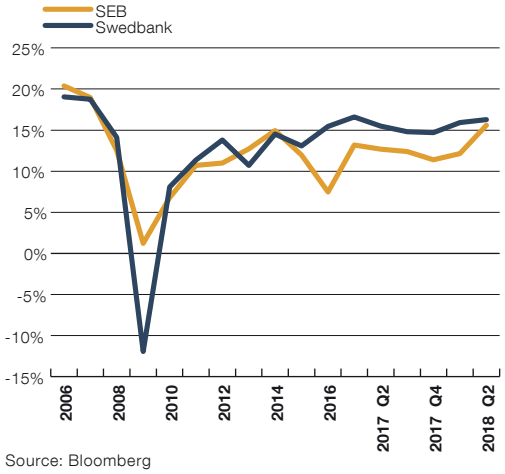
7 The liquidity coverage ratio shows the proportion of net outflows of cash during a 30-day stress period that is covered by liquid assets.

groups in the euro area, which was 6% in 2017[8]. Loan quality has remained good while interest and fee income have increased.

The capitalisation of the SEB and Swedbank groups has also remained good (see Figure 27). At the end of June 2018 the total own funds of the Swedbank group were 30% of risk-weighted assets and Core Equity Tier 1 capital (CET1) was 24%, while the figures for SEB group were 25% and 19%. The financial leverage indicators for the groups were down a little in the first half of 2018, but they remain above 4.5%. This means the unweighted capitalisation of the SEB and Swedbank groups was above the minimum rate of 3% recommended by the Basel committee, but below the European Union average of 5.3%[9]. In September this year the Swedish financial supervisors decided to increase the countercyclical buffer rate applicable to loans issued in Sweden by 0.5 percentage point to 2.5%. The requirement will apply from September 2019[10].

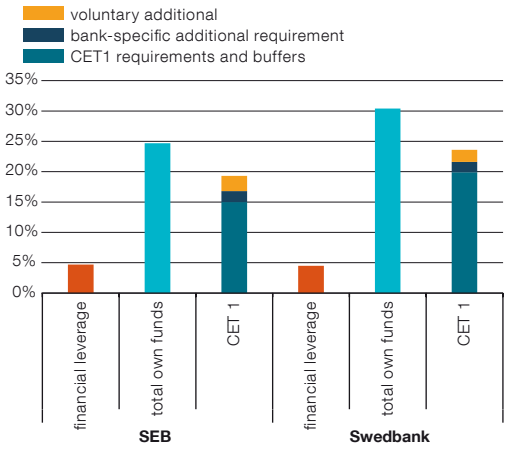
The Swedish central bank suggests that additional measures should be considered to mitigate the risks. To reduce the risks building up in the household sector it is suggested that further measures within housing policy and tax policy should be considered. A leverage ratio requirement for the major Swedish banks of 5% has been proposed, and it has been suggested that a nationwide comprehensive credit information service be set up and, depending on

Figure 26. Return on Equity (ROE)



Source: Bloomberg

Figure 27: The CET 1 capital ratios and requirements for the major Swedish banks in Q2 2016



Sources: Swedish financial supervision authority, public reports

Background information. Change of domicile of the Nordea Group

In August this year the Swedish financial supervisory authority granted the Nordea Group permission to relocate its domicile from Sweden to Finland. This means that Nordea moves under the supervision of the European Central Bank and the Finnish authorities and the Single Resolution Board takes responsibility for crisis resolution for the group. Borrower-based requirements will remain applicable as set under national legislations, such as the amortisation rules set in Sweden. The countercyclical buffer requirements will continue to apply according to the locations of the loans issued. The risk-weight floors set on mortgage loans in Sweden and Norway will continue to apply if the European Central Bank and the Finnish supervision authority decide to reciprocate the measures. The Finnish financial supervision authority announced in July that it would apply a systemic risk buffer requirement of 3% to the Nordea Group effective from 1 July 2019. The 3%+2% systemic risk buffer requirement set by the Swedish supervisory authority ceased to apply following the change of the domicile of the head office.

8 European Central Bank, Financial Stability Review, May 2018.

9 EBA Risk Dashboard – Q2 2018.

10 In Sweden the biggest banking groups have to hold an additional 5% of core equity against systemic risk, on top of the usual requirements. In calculating the own funds requirement to cover the risks in Swedish housing loans a 25% risk weighting is used for the portfolio.

the impact of other measures in the future, the introduction of a limit on the debt-to-income ratio could be considered. Riksbank would also like to see bank liquidity requirements applied in all significant currencies.

Overall the vulnerability of the largest banking groups operating in Estonia has changed little. Although the primary risk to the banks comes from the danger of a change in the general economic climate, the heavy debt burden of households would amplify the impact of any unfavourable changes. The temporary decrease in real estate prices slowed the build-up of risks in Sweden, but household debt levels continue to rise. There also remain dangers from the market based funding of the banks and from the high level of interconnectedness of the banks.

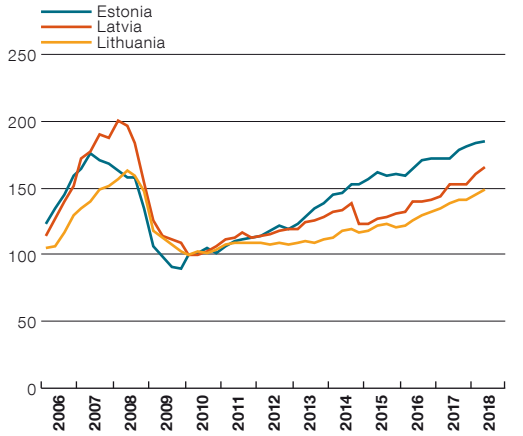
Latvia and Lithuania

Developments in the Latvian and Lithuanian economies and financial environments are becoming ever more important for financial stability in Estonia. Luminor Bank, which was established last year as a credit institution in all three Baltic states, plans to change its Latvian and Lithuanian entities into branches of the Estonian credit institution from 2019. This means that events in those markets will start to affect directly the financial results of Luminor Bank AS, the Estonian credit institution. The bank is currently listed as systemically important in all three markets and turning the Latvian and Lithuanian entities into branches will substantially increase the consolidated total assets of the Estonian banking sector.

The economic climates in the three Baltic states are affected by similar factors. The economies have generally been doing well in recent years, and growth in the Latvian economy has been faster than it was a year ago at 5.3% while the Lithuanian economy has grown by 3.8%. Growth has been pushed up by strong foreign demand and by the use of European Union Structural Funds, while rapid growth in wages and lower unemployment have increased consumption.

The risks are also quite similar. All three countries are vulnerable to a deterioration in the external environment, as all three economies are small and open. If the risks to the Nordic parent banks should be realised, it would have a negative

Figure 28. House price index in the Baltics (2010 Q1 = 100)



Sources: statistical agencies, Eesti Pank calculations

impact on the financial sectors of all three Baltic states. The capacity of the economy to grow further is limited by shortages of qualified labour and of investment that could raise productivity. In the medium term, corporate profits will come under pressure and competitiveness could take a hit.

All three Baltic real estate markets are active and housing prices are rising fairly fast. Prices were up by some 9% over the year in the second quarter in Latvia this year and by 7% in Lithuania (see Figure 28). The rising prices should be restrained in future by increased supply. Increasing demand is being driven by the improved confidence and financial situation of households. The Latvian and Lithuanian central banks have not however observed any indications of overheating in the real estate market.

The cyclical risks remain low in Latvia. Borrowing by companies and households has increased a bit but growth in loans remains slow. Non-bank financial intermediation is increasing rapidly, but this has little impact on the dynamics of credit growth. Household debt is low and rising incomes have improved the ability to borrow. The Latvian central bank believes that the financial cycle is starting its upswing and there are no signs of imbalances in the credit market.

The credit and housing markets in Lithuania have grown rapidly in recent years. The growth has been pushed by rapid wage rises and falling unemployment. Credit growth in the non-financial private sector reached 9% over the year at the end of June, with the housing loan portfolio

and real estate prices rising fast. Although indebtedness has increased a little in recent years (see Figure 29), the Lithuanian central bank has not observed any indication of imbalances. A decision to set a countercyclical buffer rate of 1% has been announced, though this does not reflect excessive cyclical imbalance, but rather the rate has been raised in an environment of moderate risks so that it can be lowered if necessary should there be any unexpected events in the financial system.

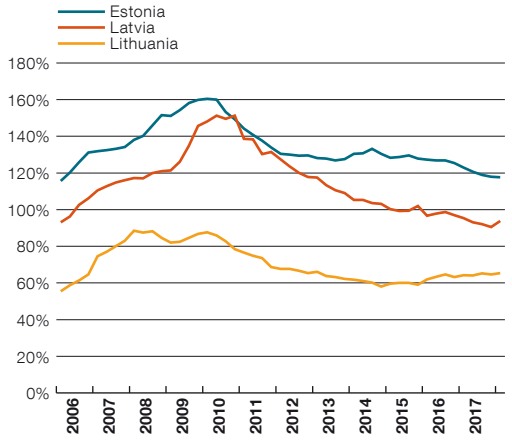
The banking sector remains mainly strong in Latvia and Lithuania. The capitalisation of the banks is high at 20% on average and liquidity requirements are met with a large margin. Activities are generally profitable, with the return on equity averaging 10%, which is higher than the average for the European Union. The quality of the loan portfolio has gradually improved in both countries, as the share of overdue loans in Latvia is around 4% and in Lithuania it is 3%. There has been a substantial fall in the share of credit institutions in Latvia whose business model is mainly aimed at serving non-residents. The risks from these changes are mitigated by the lack of connections between those banks and the local economy or other Latvian banks.

BANKS

Active lending from the banks operating in Estonia has continued. The yearly growth in the loan portfolio of the banks[11] was slowed sharply by the partial transfer of the corporate loans of one bank to the portfolio of its foreign parent bank in autumn last year during the reorganisation of the bank, but without the impact of that, the yearly growth in the loan portfolio of the banks would have been around 6-7% in recent months (see Figure 30). The take-up of new loans from banks by both businesses and households has been quite strong, but the one-off reduction in the corporate loan stock means the loan portfolio has grown primarily through households of late.

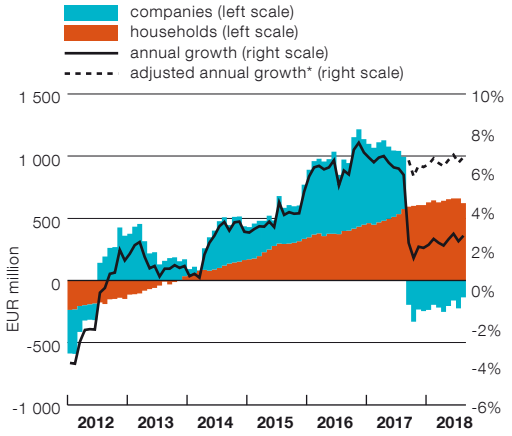
It is typical of good times that demand from households for loans is strong. More new loan clients have been added over the year for both housing loans and car leases, and the size of the average loan and lease has increased. The growth in consumption loans was driven primarily by larger numbers of loan contracts being signed than earlier. The yearly growth in household loans of a little over 7% in August, which was similar to what it was a year earlier, reflects the increased desire and ability to borrow that stemmed from the rapid growth in household incomes and increased confidence.

Figure 29. Non-financial private sector indebtedness



Source: central banks

Figure 30. Annual changes in the volume of the loan porfolio of the banks by customer groups



*not counting a one-off transaction in autumn 2017
Source: Eesti Pank

Particularly fast growth among loans to households came in car leases in 2018. Car leases have been posting double digit growth for more than three years, and in August 2018 it was as high as 21% (see Figure 31). This means growth is four percentage points higher than it was at the start of the year, while the average interest mar-

11 The loan portfolio in this section covers loans to businesses and households, including non-residents, and also leases and factoring issued by leasing companies owned by the banks. As loans to the general government are only a small part of the loan portfolio of the banks at below 3% and the majority of loans to financial institutions are to leasing companies and are used to fund leases to households and companies, those sectors are not covered under the loan portfolio in this section.

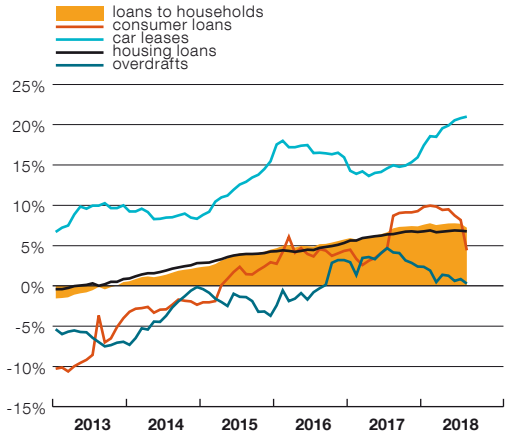
gin on car leases remained at 2.2%. The stable interest margin indicates that the growth in car leases has not been accelerated by changes in pricing conditions for leases. However, the very strong growth in car leases has not significantly increased the share of such loans in the loan portfolio of the banks. Car leases are still only 3% of the total of loans and leases issued to households and companies, while housing loans provide as much as 40%.

The risk appetite of the banks has not increased in issuing housing loans, probably because demand is strong and competition pressure modest, as few banks offer housing loans. The growth in housing loans remains quite strong and the yearly growth has been close to 6.8% since the end of last year. The banks have not loosened their lending conditions though. Lending conditions are an important component in defining the general risk environment, as a greater danger of possible loan losses would be posed to the banking sector if they were loosened, but they do not indicate any rise in the risk level (for more see the section on Eesti Pank's housing loan requirements and bank lending conditions).

The supply of consumer loans by banks may become more active, as this segment offers potentially higher returns given the favourable economic climate. Although the credit risk of the banks currently comes mainly from the ability of households to service their housing loans, a sharp deterioration in economic circumstances might mean the exposures of the banks to other loans could lead loan losses to build up faster. The yearly growth in other household loans, including car leases, was a little slower than a year ago, though still 9%, as growth in overdrafts fell to 0.3% and in consumer loans to 4.4%[12]. While it is true that the growth in consumer loans was moderate in August, it is still important for financial stability that increased supply and tougher competition in this segment not lead to excessive risk-taking, through major changes in pricing policy or elsewhere.

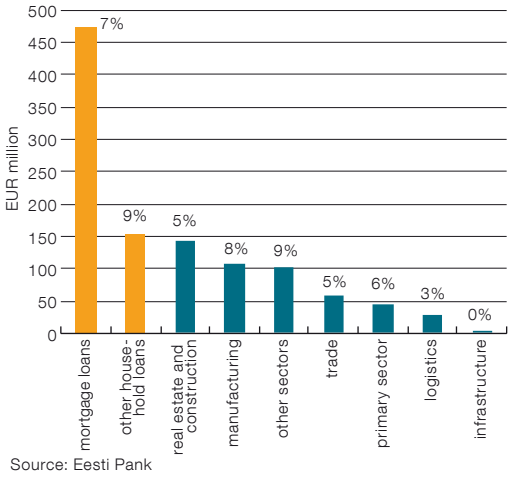
The rapid growth in loans to households has so far been driven by demand-side factors, and the banks have not added to this growth through their own behaviour. However, in circumstances where economic tensions have built up in the labour market though and there is no evidence of a stable foundation for growth, continuing growth in household loans at a similar rate could mean larger risks to the banking system in the longer term even without any easing of lending conditions.

Figure 31. Annual growth rates of banking sector loans and leases to households



Source: Eesti Pank

Figure 32. Yearly growth in loans and leases as at 30/09/2018

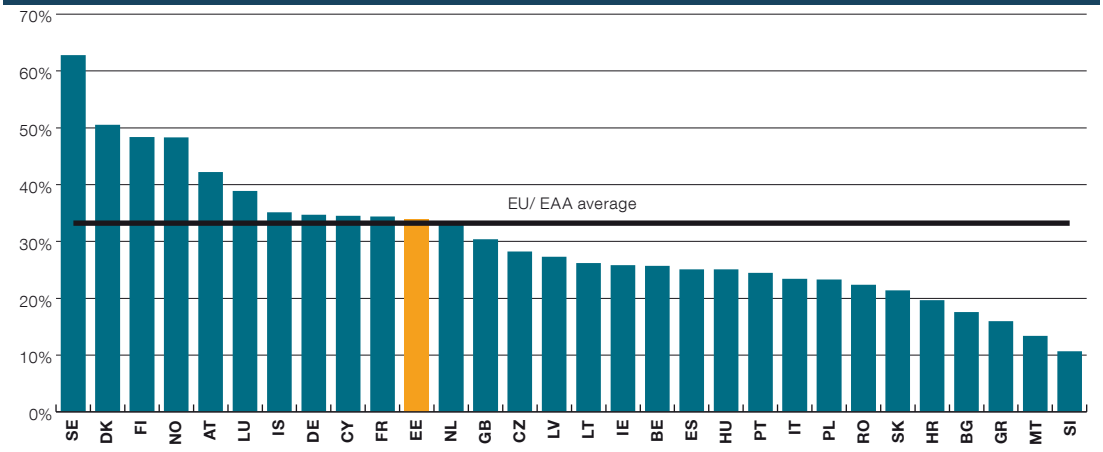


Source: Eesti Pank

Demand for loans from companies has been more modest than that from households. Even so, companies in almost all sectors took more in long-term loans in the first nine months of this year than they did a year earlier. Companies took more than 10% more in long-term bank loans in this period than a year earlier, though this also covers the refinancing of existing loans, which was done more than previously. The fast-

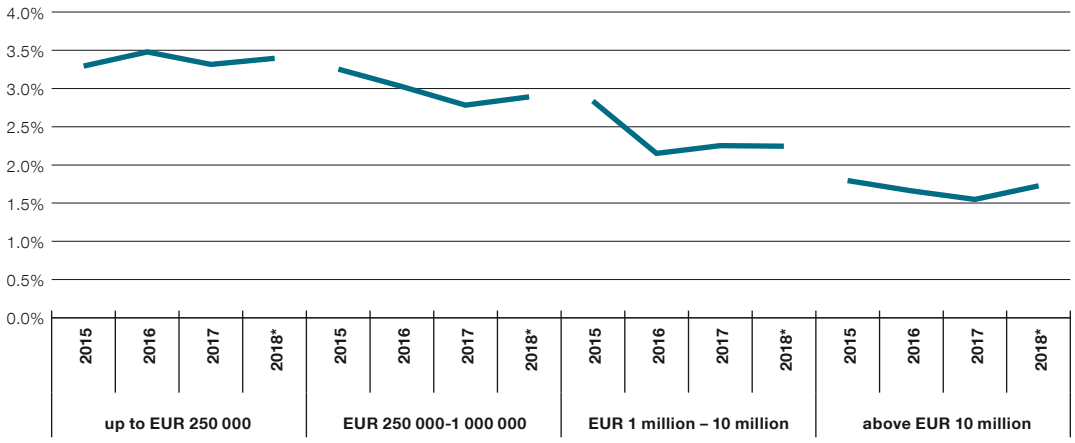
12 In August 2017, the branch of one credit institution was added to the list of credit institutions. This affected the yearly growth figures for consumer loans throughout the year, but the effect disappeared in August this year.

Figure 33. Exposure to real estate activities and construction as a share of total exposure to non-financial corporations as at 31.03.2018



Source: EBA Risk Dashboard

Figure 34. Average interest rate margins on loans given to real estate and construction companies to fund commercial real estate projects



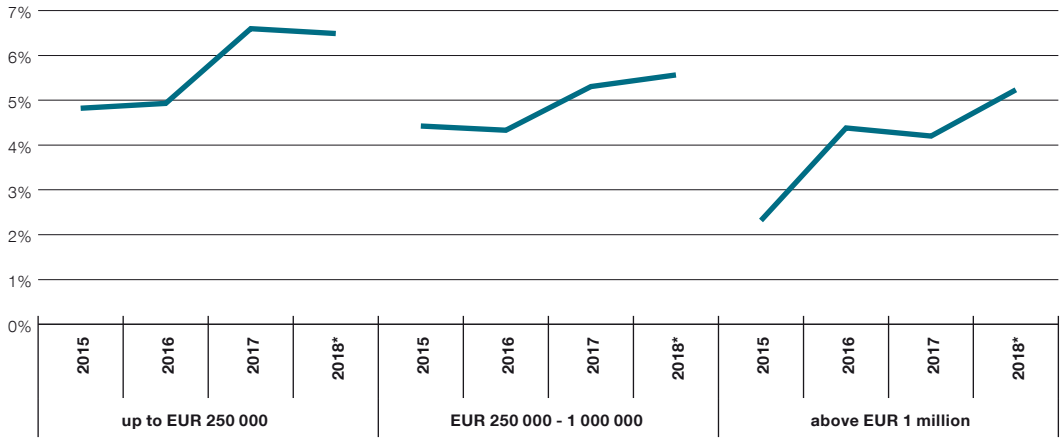
*first eight months of 2018
Source: Eesti Pank

est annual growth in loans was of 9% for companies in administration and support activities and of 8% for industrial companies (see Figure 32). At the same time loans to real estate and construction grew at a similar pace to that of the total corporate portfolio.

Although the amount lent to the real estate sector has increased moderately, the banks remain very exposed to risks from the real estate market. The exposure to risks from real estate and construction as a share of the total exposure of the banking sector is similar to the average share for the European Union and the European Economic Area, and it has even fallen a little of late, though it remains very high at 34% (see Figure 33). The banks are particularly sensitive to changes in the commercial real estate market. One of the most significant risks is that there may be insufficient demand in the market for projects aimed at flows of rental income, as supply has increased in the market. Excess supply may push rent prices down and the vacancy rate up, reducing the ability of real estate companies to service their loans and so hurting the quality of the loan portfolio.

The banks are generally conservative about funding housing development, and so the average price of loans for such projects has also risen. The average interest margin on loans issued for housing development projects has changed by more than the average interest margin on loans issued to fund commercial real estate (see Figure 34). Strong demand and the higher risks that accompany increased housing development have meant that margins on those loans have been notably higher in the past two

Figure 35. Average interest rate margins on loans given to real estate and construction companies to fund residential real estate projects



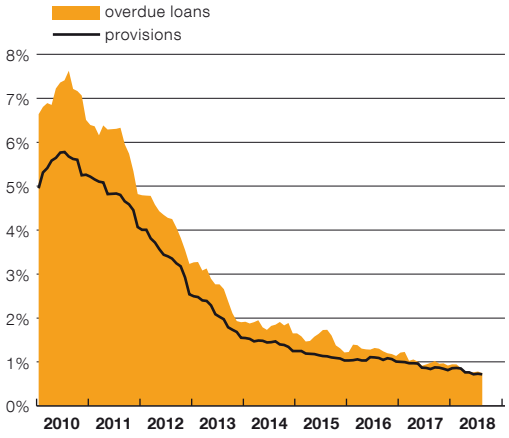
*first eight months of 2018
Source: Eesti Pank

years than in the previous two years (see Figure 35). The larger banks have generally tended not to fund housing development, and the smaller banks ask higher prices for the higher risk. The rate of growth indicates there is strong demand for loans for housing development, as the stock of such loans was up 11% in August over a year earlier. Despite the strong growth, the share of loans issued for housing development projects in the total corporate loan portfolio remains marginal at a little below 2%. That the share is so small can partly be explained by the maturities of loans issued for housing development, which as a rule are shorter than those issued for developing commercial real estate. The short maturities mean that the structure of loans for housing development in the portfolio of the banks changes relatively quickly, and this to some extent restricts any increase in their share in the portfolio.

In a favourable economic environment the quality of loans remains good. There were fewer overdue loans than a year earlier in almost all sectors in August 2018. Such loans made up less than 1% of the total portfolio, which is 0.2 percentage point less than a year earlier (see Figure 36).

The sources of funding for the banking sector in Estonia are largely stable as the deposits of residential companies and households dominate in the deposits of the non-financial sector. Although the financing structures of the banks differ to some extent, deposits remain one of the main sources of funds (see Figure 37). The deposits of Estonian residents

Figure 36. Share of overdue loans and provisions in the loan stock



Source: Eesti Pank

provided some 73% of funds at the end of July 2018 and that share was four percentage points more than a year earlier. At the same time the share of funds that came from parent banks was reduced from 21% to 18%.

Non-resident client deposits, which may carry a large risk, have been steadily reduced in the Estonian banking sector in recent years. At the peak in 2012, deposits by companies registered outside the European Union accounted for 14.7% of the non-financial private sector bank deposits, but by July 2018 this was only 1% (see Figure 38). This sharp decline is partly a consequence of the work of Estonian supervision institutions to combat money laundering and terrorist financing (see also Box 5 of the Financial Stability Review 1/2018 on money laundering). Non-resident deposits provided 8%

of the sources of funds of the banks in July 2018 and they were down almost 9% in volume on a year earlier.

The rapid growth in deposits has reduced the needs of the banks for other sources of funds, and the loan-to-deposit ratio fell in the 12 months to July 2018 from 110% to 105% (see Figure 37). The rapid growth in non-financial private sector deposits left the volume of Estonian resident non-financial private sector deposits 8% larger in July 2018 than a year earlier though the loan portfolio to the non-financial private sector increased by 1.2% over the same period. The partial transfer by one bank of its loan portfolio to its foreign parent bank also played a role in reducing the size of the loan portfolio, though even without that the yearly growth in the loan portfolio would have been slower than that in deposits for almost two years. The yearly growth rates in the deposits and loan portfolio of non-residential non-financial companies have been more volatile, and that of the loan portfolio was 4.8% at the end of July while that of the deposits was -9.4%.

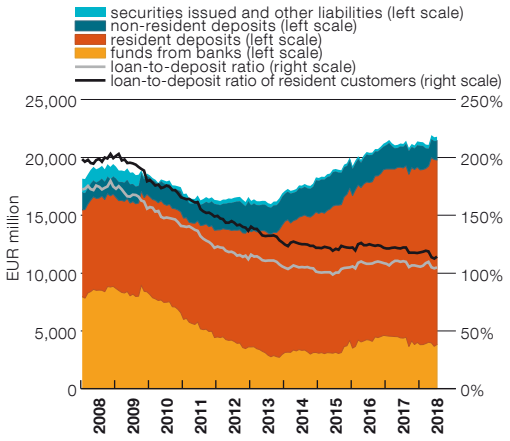
The resilience of the banks operating in Estonia to short-term liquidity shocks remains good. Liquid assets made up around a quarter of the total assets of the banking sector at the end of July 2018 (see Figure 39), and that share has been the same for almost two years if monthly variability is left out. The liquidity coverage ratio of the banks has not significantly changed since the start of the year in general, and at the end of July 2018 all the banks licensed in Estonia had enough liquid assets to cover possible outflows of funds during a 30-day stress period with a large margin on top.

The profitability of the banks remained good in the first half of 2018. The banks earned a total of 384 million euros in net profit before tax in the past four quarters. The average return on assets remains at close to 1.3%, which is twice the average for the European Union[13].

The volatility in the net profit of the banks in recent years has mainly been caused by dividends taken from subsidiaries and the income tax paid (see Figure 40). Without these impacts, the four-quarter consolidated

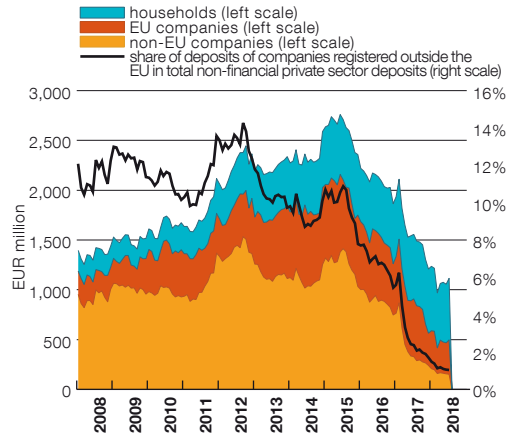
13 0.48%, EBA Risk Dashboard – Q2 2018.

Figure 37. Structure of funding and the loan-to-deposit ratio



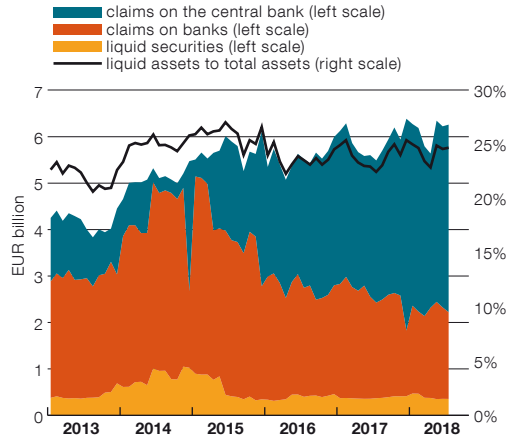
Source: Eesti Pank

Figure 38. Non-financial private sector non-resident deposits



Source: Eesti Pank

Figure 39. The liquid assets of banks and their share in total assets



Source: Eesti Pank

figure for the banks at the end of the first half of 2018 fell by only 1% from the same period of the previous year.

The four-quarter net interest income and fee income of the banks grew by 3.6% and 3.4%, which is quite at the same pace as assets. Taken together the changes in these sources of income against assets have been small (see Figure 41). Changes in the banking market are reflected in fluctuations in staffing and administration costs being larger than usual. As these are one-off changes, it can be expected that in future the growth in costs will stabilise.

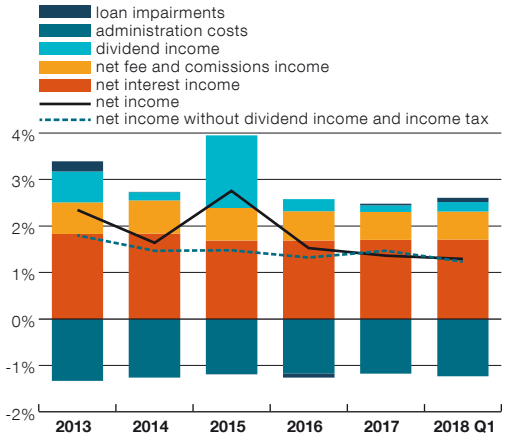
The loan quality of the banks remains good. The changeover to IFRS 9 and the forward-looking provisioning of loans has not significantly affected the profitability of the banks. In recent months more provisions have been reversed in total than have been added as new write-downs.

The profitability of the banking sector from its core activities in Estonia is likely to remain stable in the near future. Growth in the loan portfolio and in margins will help maintain profitability. A rise in base interest rates would support net interest income. As a large share of the loans in Estonia are issued with floating interest rates, a rise in base interest rates would be passed on to borrowers faster than to depositors. A moderate rise in base interest rates should not in itself lead to any notable increase in loan losses. The net profits of the banks will in future be affected by the payouts of income tax following the changes in tax policy. If the economic climate remains the same, the upwards pressure on overall operating costs will also remain.

The capitalisation of the banks operating in Estonia has remained strong in total. The ratio of total own funds of the banks to risk-weighted assets averaged 31% at the end of the first half of 2018 (see Figure 42). The lowest figure for capitalisation at the end of the half year was 17%, and the lowest figure for core equity tier 1 (CET 1) was 14%.

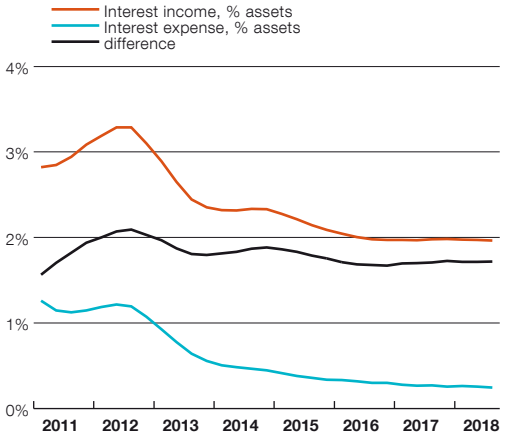
The own funds of the banks have mainly grown from where they were at the end of 2017. A temporary fall in the capitalisation figures for smaller banks that are expanding their activ-

Figure 40. Banking sector profitability in relation to total assets, four-quarter moving average



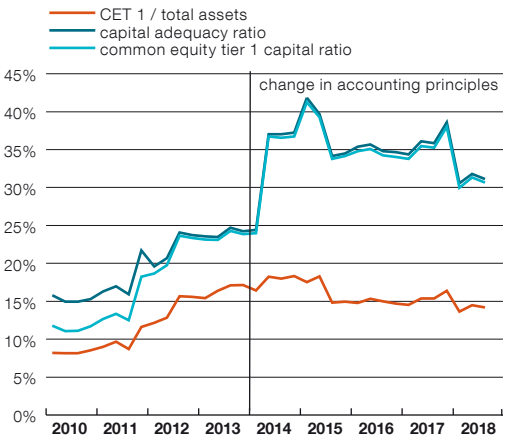
Source: Eesti Pank

Figure 41. Banks' interest income and expence as % of total assets, four quarters



Source: Eesti Pank

Figure 42. Capital and leverage ratios



Source: Finantsinspektsioon

ities came mainly from rapid growth in assets. At the end of last year the average indicator was brought down by the addition of Luminor Bank.

All banks in Estonia have to hold CET1 capital of at least 8% of risk-weighted assets. On top of this, the whole banking sector is subject to a 1% systemic risk buffer requirement and the three largest banks in the market, Swedbank, SEB Pank and Luminor Bank, have an additional 2% buffer requirement (O-SII) because of their systemic importance. The buffer rate for LHV Pank for systemic importance will rise from 1 January 2019 from 0.5% to 1% (see also the section on macroprudential policy).

The consolidated figure for tier one own funds as a ratio to total assets for the banks was 14% at the end of the second quarter. The lowest figure for financial leverage of the banks was 6.3% at the end of July.

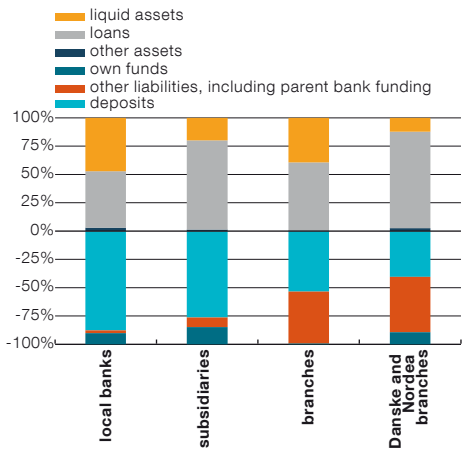
Box 1. How structural changes in the banking market affect financial stability

There have been major changes in the banking market in Estonia in the past year as a new domestic bank, Luminor Bank AS, was established by the merger of the Estonian units of two foreign banks; a foreign bank that was a major market participant, Danske Bank A/S, decided to stop serving local households and companies through its Estonian branch; and one bank that was previously majority-owned by a foreign owner gained local owners and a new name as Coop Bank AS. On top of this, one small local bank ceased its activities. It is the first time in some years there have been such substantial changes in banking, and this box analyses how these changes affect competition and financial stability.

The banks are using a wider range of sources of funding, but the newer sources of funding may be more risky than the older ones. The banks have so far mostly funded their activities from local deposits and loans from their parent banks. In future though, additional sources of funds will be sought, and it is particularly in the interests of banks to issue bonds and to take in retail deposits from other European Union countries. This affects banks where the share of local deposits is small or which cannot access funding from a parent bank. This probably increases the risks to financial stability, as financing based on local deposits is considered one of the most stable sources of funding. The volatility of market-based financing may be illustrated by the first issue of bonds on a foreign market by Luminor at the start of October, where the interest of international investors in the bonds of Estonian banks was quite limited because of the question of money laundering at Danske bank several years earlier. If banks issue more bonds in future, they will be more vulnerable to bond markets and also to the reputational risk of Estonia and of the region. Bond-financing is subject to refinancing risk, which sets additional requirements for volumes and management of liquid assets.

The share of liquid assets and independent liquidity management are increasing, while the liquidity support from parent banks, which has so far been strong, is being reduced. On the asset side, the shares of liquid assets are tending to converge, as these shares have varied quite widely from bank to bank from 10% to 70% (see Figure B1.1), depending largely on the business model of the bank and how its liquidity is managed. The smallest share of liquid assets is to be found at former large branches, and the largest share is

Figure B1.1. The structure of the assets and liabilities of the banks



Source: Finantsinspektsioon

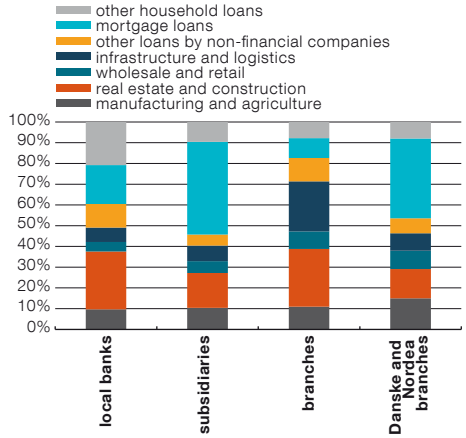
at local banks. The banks with a small share of liquid assets are increasing the volume of such assets, as the liquidity support from parent banks is being withdrawn. Those banks that have a very large share of liquid assets are reducing that share, as changes in some of their business models are moving them away from serving non-residents and towards lending. As the market share of banks with growing liquid assets is larger, they have a larger impact on the banking sector as a whole. On top of this, Luminor will probably consolidate its group's liquid assets and management of them in Estonia. Independent liquidity management by Luminor will increase the risks to financial stability, as it will lose financial and operating support from a stronger parent bank. At the same time, the direct risk from Nordic real estate markets will be reduced.

Competition is weakening in the market for housing loans, but it is increasing in the higher risk segment of consumer loans. The changes that are happening in the structure of loans depend primarily on the amount of competition in the different market segments. The market for housing loans has for years been dominated by subsidiaries of foreign banks and two former systemically important branches. Competition is in decline in the housing loan market, as one of the four main market participants has stopped providing this service and a second is reducing it. This is reflected in a slow rise in the interest margins on housing loans. Although there are some signs that local banks are being more active in the housing loan market, they prefer to provide consumer loans, which have higher returns. Small branches also prefer to issue consumer loans to private clients. Consumer loans are one of the riskier segments of lending though, and an increase in the share of such loans increases the risks to financial stability.

In contrast to housing loans, corporate loans are showing no decline in competition. The margins on loans to businesses depend more on the risk level of the project being financed than on changes in the state of competition. The local banks and larger branches are notable for their higher margin levels on such loans, indicating they are more ready to take risks (see below for the structure of revenues). In some segments competition probably is in decline. This allows the banks to choose projects more carefully or to ask a higher price for funding riskier projects.

The preferences of the banks for which economic sector to finance vary, and rapid growth in smaller market participants is reducing the diversity in portfolios (see Figure B1.2). In future it will continue to be essentially the case that banks fund viable projects in all business sectors. The larger balance sheets of subsidiaries allow them to diversify their loan portfolio better over different branches of the economy. At the consolidated level, the share of loans linked to real estate development may increase over time, as they dominate in the loan portfolios of the local banks and small branches where loan growth is rapid. A narrower distribution of the loan portfolios of the banks across different sectors of the economy generally increases the risk to financial stability.

Figure B1.2. The structure of the loan portfolio of the banks in Q1 2018



Source: Eesti Pank

The revenues earned by the banks are affected not only by changes in the structure of the loan portfolio but also by increased competition in the supply of various financial services, including payment services. Serving non-resident clients less means that banks

have to concentrate above all on lending. The best placed to provide other services is the new bank Luminor, as its wide client base and operations across all three Baltic states give it sizeable economy of scale effects and allow it to increase its share of service fee income. Greater variety in revenues helps reduce the risks to financial stability, but the changes can probably only be relatively small and occur over a long time, and so they may not have an immediate impact.

An increase in the share of liquid assets reduces the interest income of the banks as a ratio to assets. Interest expenses are reduced by the banks using independent funding, as in many cases the parent bank has to bear liquidity risk and finances this by charging higher interest. This means that using bonds to replace funds from parent banks should reduce interest expenses, but the bonds come with requirements for liquid assets and management of them, which then reduce interest income as a ratio to assets and raise administration costs.

The main source for earning income in Estonia at present is lending and the trends and the competition coming from financial innovation indicate that this will continue to be the case. Alongside the structural changes, competition pressures bringing financial innovation in payment services and client asset management are affecting the operations of banks. This should not necessarily affect the ability of the banks operating in Estonia to earn profit, as the share of service fee income is relatively low at Estonian banks compared to the share at their parent banks. This means the main source of income for the banks will continue to be lending and their ability to offer maturity transformation for long-term loans.

Box 2: How fixing interest rates for housing loans affects lenders and borrowers

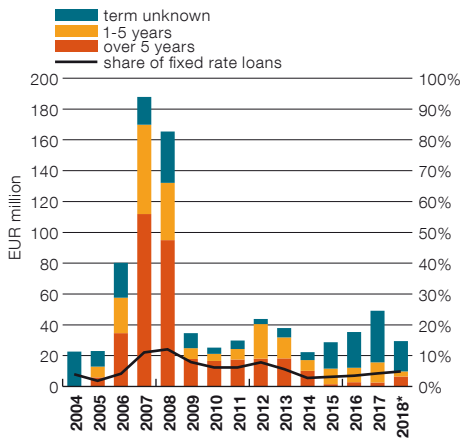
Since the last economic crisis, the European Central Bank has tried to revive the economy using monetary policy. This has meant base interest rates have fallen into negative territory, and so interest rates for loans are unprecedentedly low. If the economic cycle in Europe strengthens sufficiently and inflation targets are met, the European Central Bank may start to normalise its monetary policy. This makes it important to assess how a rise in interest rates would affect lenders and borrowers, and how much that would depend on whether the interest rates in loan contracts is fixed or floating.

The share of fixed interest rates differs widely between countries

Interest rates are rarely fixed in a loan contract for the whole length of the loan. The contract mainly fixes how often the interest rate is reviewed, which might be every six months, or the rate might be fixed for several years. Fixed rate loans are generally taken to mean those where the interest rate is fixed for more than one year.

Most housing loans in Estonia have floating interest rates, and in recent years less than 5% of the total volume of new loans have been issued with initially fixed interest rates (see Figure B2.1). Only 1% of the loans in the housing loan portfolio of the banks have a fixed interest rate. This is no surprise,

Figure B2.1. New housing loans issued with a fixed interest rate



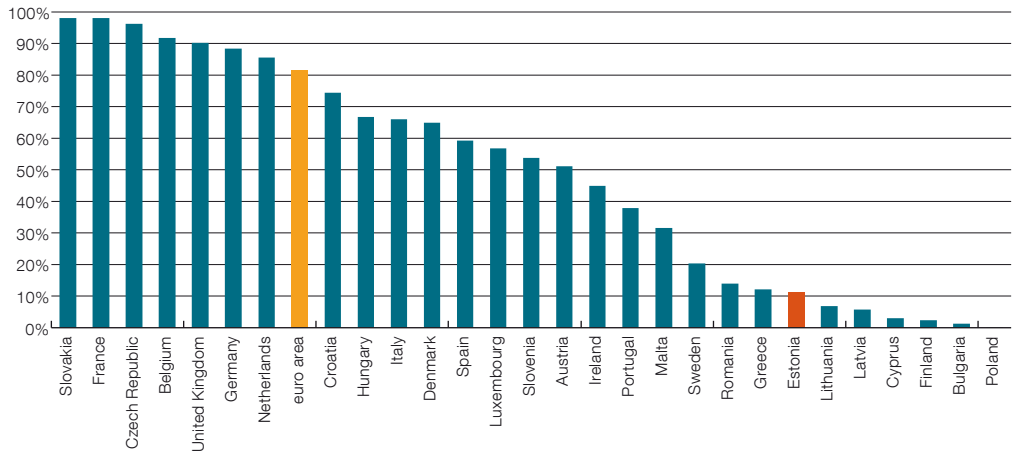
*Q1 and Q2 data only
Source: Eesti Pank

given that interest rates fell ever further in the years after the economic crisis to reach historically low levels. In consequence demand for fixed interest rates may be low, given that no rapid rise in rates is expected. It may also be though because banks do not particularly offer fixed rate loans.

Among the largest issuers of housing loans in Estonia, only SEB Pank offers fixing, and that is for up to five years. The interest rate is fixed at the rate quoted by Thomson Reuters for loans issued on international financial markets in euros on the day the contract is signed. If the client does not express any wish to refix the interest rate at the end of the fixation period, it will turn into a floating rate and will depend on Euribor. Neither Swedbank nor Luminor offer any fixed interest rates.

Housing loans with floating interest rates are also more common in Estonia's neighbours and in several other countries in the European Union. However, a clear majority of loans issued in the euro area as a whole are fixed at least for an initial period (see Figure B2.2). Around half of these loans have their interest rate fixed for longer than 10 years. The interest rate on such loans has averaged 1.9% in the past two years in euro area countries.

Figure B2.2. The share of new loans for house purchase with a fixed interest rate (2017-2018)



Note. Share of the number of loans
Source: European Central Bank

Fixing can reduce interest rate risk

Although it is hard to predict changes in interest rates, it is beneficial for the borrower to fix the rate for a long period at a time when rates are rising. In this case the risk of a rise in rates is removed from the borrower until after the end of the fixing period. In general, using floating interest rates over a long period means the borrower will face a lower interest rate on average throughout the period, as short-term interest rates are generally lower than long-term rates in financial markets. This means that the longer the loan is for, the higher the interest rate. Developments in financial markets are unforeseeable though, and so allowing interest rates to float and fixing them may both prove beneficial.

It should not be necessary to fix interest rates on loans if there are sufficient financial buffers, but it does give confidence that there will not be any change in the loan repayment instalments during the fixing period. It is possible however in this case that there will be a larger change in the repayment amounts at the end of the fixing period. A fixed interest rate can climb much more sharply at the end of a fixing period than would a floating interest rate, where loan repayments increase gradually as the interest rate rises.

Fixed interest rates pose an additional risk to banks compared to more flexible loan products. As the banks usually use funding with short-term maturities, the funding costs of the banks can increase faster than they can earn interest income from fixed rate loans at times when interest rates are rising. To reduce interest risk, banks can access funds from financial markets with longer maturities so that the maturities of their assets and liabilities are better aligned. If the banks mainly fund themselves with short-term liabilities such as demand deposits, the risk can be mitigated in the interest rate swap market

If the banks mainly issue loans with floating interest rates, this may increase their credit risk. Higher interest rates will increase the loan servicing costs of borrowers. Larger loan payments will need to be funded from financial buffers or from cuts in other consumption, which in turn will reduce economic activity. If the loan cannot be serviced and payment difficulties arise, the quality of the bank's loans will decline.

Analysis by the European Central Bank[14] shows that although systemically important euro area banks reduce interest rate risk through the derivatives market, they also keep part of the risk in their own portfolios. The banks act in very different ways in this matter. On average the interest rate risk position is small, but some banks have not hedged a large part of that risk. Were interest rates to rise by two percentage points, the capital of the banks would be reduced on average by relatively little, by around 2.5%. There are some banks though where capital would be reduced substantially more, and some where capital would be increased.

As the majority of loans in Estonia have floating interest rates, the largest part of interest rate risk is borne by households. The banks bear the loan losses if the ability of households to repay their loans suffers because of higher loan servicing costs[15]. Offsetting the possible negative side for the banks is that rising interest rates would increase their interest income fairly quickly, and increase their profits. The majority of the liabilities of Estonian banks are demand deposits, and the price of them would probably not rise as fast as interest rates, meaning interest income would rise faster and by more than interest expenses, were rates to rise. To prevent households taking on excessive loan burdens, Eesti Pank has introduced requirements for the commercial banks that limit the amount borrowers must pay to service their housing loan to below 50% of their income. The possibility of interest rates rising is covered in the calculation of loan servicing costs by using an interest rate of at least 6%, which is much higher than the current market interest rate. This requirement helps ensure that borrowers are able to service their loans even if interest rates rise.

14 Financial Stability Review, May 2018, https://www.ecb.europa.eu/pub/fsr/html/ecb.fsr201805.en.html#toc1

15 For more on how a rise in interest rates affects household spending and bank losses, see the Eesti Pank working paper https://www.eestipank.ee/en/publication/working-papers/2017/42017-jaanika-merikull-tairi-room-financial-fragility-estonian-households-evidence-stress-tests-hfcs

Box 3: Crowdfunding

Like elsewhere in Europe and around the world, crowdfunding is becoming ever more popular in Estonia as internet platforms allow small sums to be invested and projects to gain funding. Both the number of crowdfunding platforms and the amounts of funding intermediated by individuals and companies have increased. Estonia was in second place in Europe behind the United Kingdom for the amount of crowdfunding per resident in 2016[16]. At the end of 2017 there were around 20 companies registered in Estonia that managed crowdfunding platforms. The stock of funding intermediated through those platforms was between 100 and 120 million euros at the

16 The 3rd European Alternative Finance Industry Report. https://www.jbs.cam.ac.uk/fileadmin/user_upload/research/centres/alternative-finance/downloads/2018-ccaf-exp-horizons.pdf

end of the year, or 0.5% of GDP[17]. The total value of transactions in the past five years is around 400 million euros, the largest part of which has come in transactions in the past two years[18]. The total value of transactions divides roughly equally between individuals and companies, but the longer maturities mean that companies dominate in the stock of finance from crowdfunding.

The amount raised through crowdfunding is generally still very small compared to funding from banks, but it already plays a relatively significant role in funding development of residential real estate. The total value of funds intermediated through such platforms in the past year is around 1% of the value of new loans and leases issued to the non-financial private sector by banks. The share of crowdfunding in development of residential real estate is estimated to be 10 times as large though. The banks have been relatively conservative in funding housing development and in the past decade other sources of funds, including crowdfunding, have increased in importance.

Crowdfunding is not only growing in volume but also in the new opportunities that are being constantly added to the platforms. Some now offer guarantees to individuals investing through the platform that the loan principal, or a part of it, will certainly be repaid. This at least appears to reduce the risks for investors and move the credit risk onto the platform, though this business model is not particularly different from that of credit institutions. Several platforms also allow loans intermediated through them, and shares in those loans, to be traded in the secondary market. This reduces the liquidity risk for investors, but providing this trading option may mean the company needs an operating licence as an investment firm.

A lot of crowdfunding companies and investors operate across borders. Although it is primarily companies and people operating in Estonia who fund themselves through Estonian platforms, several platforms also operate in Latvia, Lithuania, the United Kingdom, Finland and other countries. Equally, Estonian residents also have access to funding from platforms registered in other countries. The geographical distribution of investors is even wider, and there are tens of thousands of investors from as many as 50 countries on the largest Estonian platforms. The most popular foreign platforms for investors from Estonia are the Latvian platforms Mintos and Twino[19].

There are several reasons for the rapid growth in crowdfunding. Bank lending conditions have tightened since the global financial crisis and those accessing alternative financing appreciate the greater speed and flexibility than is offered by bank loans[20]. With interest rates very low, investors are looking for higher return on their investments and are prepared to take on more risk in order to get it. Developments in technology allow lenders and borrowers to come together more easily than before and crowdfunding makes it possible to start investing with very small sums. As crowdfunding is still a relatively new and rapidly developing area of finance which is not yet fully legally regulated or subject to state supervision, crowdfunding platforms probably have some regulatory advantage over strictly regulated and supervised financial intermediaries.

There is no separate law regulating crowdfunding in Estonia and there is no state supervision over crowdfunding platforms[21]. Finance Estonia and the law firm Deloitte Legal Estonia have jointly produced best practice guidelines for crowdfunding that aim to make the operations of the platforms more comprehensible and transparent for clients[22]. These guidelines are only advi-

17 Data compiled by Eesti Pank from the websites of crowdfunding platforms and the annual reports of companies managing them.

18 Only primary transactions are considered, though several crowdfunding platforms also allow loans and loan shares to be bought and sold in the secondary market.

19 From an internet survey of small investors.

20 The 3rd European Alternative Finance Industry Report.

21 Laws regulating the operations of crowdfunding platform have already been passed in countries like the United Kingdom, Spain, France, Italy, Finland and Lithuania.

22 http://www.financeestonia.eu/wp-content/uploads/2016/02/%C3%9Chisrahastuse-Hea-Tava.pdf

sory and the number of crowdfunding platforms that carried the best practice mark of approval fell in 2018. Finantsinspektsioon and the European Commission have both made proposals for regulating the activities of crowdfunding companies and bringing them under supervision.

Eesti Pank considers it particularly important that the organisation of crowdfunding provide sufficient protection for investors. Crowdfunding will not pose any major danger to the general stability of the financial system in the next few years. The amounts involved in crowd funding have increased rapidly, but still remain small compared to the total size of the financial sector and the economy.

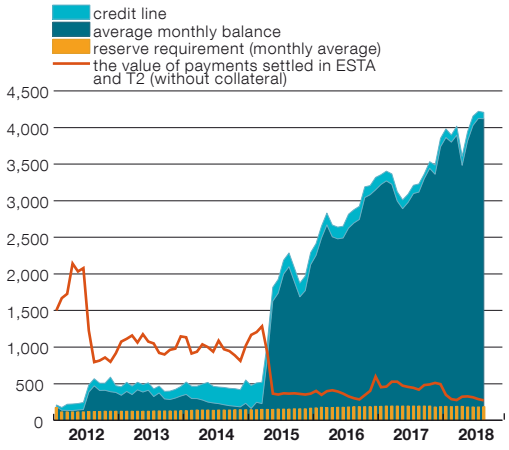
Crowdfunding offers a new opportunity for Estonia in funding the economy. Small and new companies in Estonia find funding particularly hard to access, and so it is important for the Estonian business environment that the range of sources of funding be expanded. Transparency and investor protection have been problems in the crowdfunding market so far, as have regulatory limits restricting the cross-border movement of capital. The sector could probably provide sustainable financing for small and new companies, which would help to reduce the possible risks to financial stability in the longer term. In consequence, Eesti Pank is in favour of clearer regulation of crowdfunding in Estonia and in the European Union.

PAYMENT AND SETTLEMENT SYSTEMS

Eesti Pank oversees the real-time gross settlement system TARGET2-Eesti, the securities settlement system and the card payment system. It is also a participant in the oversight for the pan-European settlement system for retail payments STEP2 and the securities settlement platform TARGET2-Securities.

There was one incident in the first eight months of 2018 in TARGET2, but it did not have any effect on the Estonian component system TARGET2-Eesti or on the banks in Estonia. The availability of TARGET2-Eesti was 100%. The liquidity risks in the system are well mitigated and the banks had sufficient liquidity buffers for making settlements without any disruptions. The banks did not need overnight credit, and the intra-day lending facility, which is a credit line opened against pooled collateral, was used only a few times. The commercial banks hold substantially more in funds at the central bank than is required (see Figure 43).

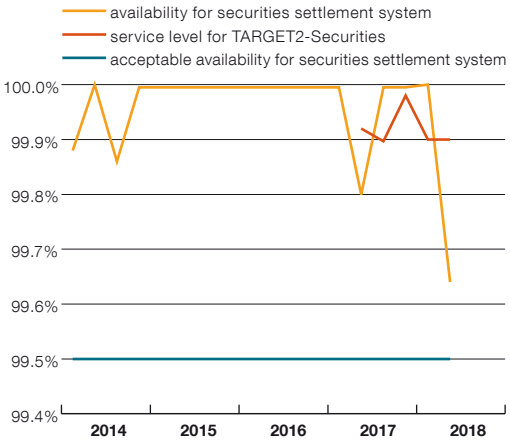
Figure 43. Value of interbank payments, reserve requirements, and balances held at the central bank



Source: Eesti Pank

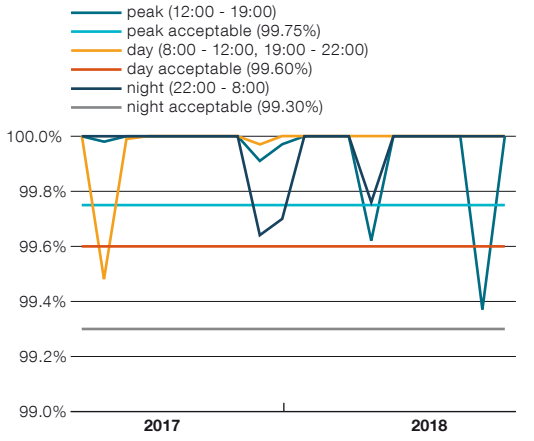
Operating risks to the Estonian securities settlement system operated by Nasdaq CSD were realised, with the result that securities settlements were interrupted for a total of six hours and 28 minutes. Critical information systems at the main Nasdaq CSD data centre suffered gas damage in April following a false fire alarm, and access to the Estonian, Latvian and Lithuanian securities settlement systems was also interrupted. Banks were not able to submit securities transfer orders to the depository and communication was lost with the European securities settlement platform T2S. As a result of the incident, the settlement of some transactions was delayed until the next day. The incident was resolved by switching over to the backup centre. Following the incident the depository is analysing its procedures for ensuring continuity and the sufficiency of its tests, and ways of switching over to the backup centre more smoothly. Given the seriousness of the incident and the failure of Nasdaq CSD to recover its critical information systems within the two hours set in the Central

Figure 44. Availability of interbank payment systems



Source: Eesti Pank

Figure 45. Availability of the card payment system



Source: Eesti Pank

Securities Depositories Regulation (CSDR), the Latvian financial supervisory authority issued an injunction to the depository for this failure and the Estonian, Latvian and Lithuanian central banks are monitoring possible measures.

The other incident that interrupted securities settlements occurred on 16 May. It did not cause any transactions to be left unsettled on that value day, but for one hour and 50 minutes communication with the depository was lost because of the interruption to the SWIFT connection. The incident was caused by a bug in the software granting the component access to SWIFT, which has been fixed with technical help from SWIFT.

The problems in Target2-Securities (T2S), which is used for securities settlements, did not have any impact on the fulfilment of securities orders initiated by account holders at Estonian banks. There were 16 smaller incidents in T2S in the first half of 2018 (see Figure 44). They were caused by software bugs and human error, though all the incidents were resolved before the start of the next settlement day and had no significant impact on Estonian securities settlements.

Operating risks to the card payment system managed by Nets Estonia occurred on three occasions in the first eight months of 2018, causing interruptions in card payments for a total of two hours and 44 minutes (see Figure 45). The most serious incident, which caused the availability of the system to fall below its target level and caused interruptions at payment terminals and ATM services, occurred on 22 July. The fault was caused by a technical error in the monitoring system of the database. The incident had a major impact as some 74,000 card transactions remained unprocessed at the peak time. To avoid such incidents in the future, Nets Estonia has made improvements to the monitoring system of its database. Such operating risks can be more effectively minimised if the database operating in the backup centre can function independently if there is a fault in the main database. Nets Estonia and the banks are currently analysing whether this can be done and how effective it would be. The other two incidents occurred in February, when a software error lasting for 40 minutes left some 5000 card transactions unprocessed, and a hardware fault in the network lasted 44 minutes and left around 42,000 transactions uncompleted. These two incidents caused the peak availability to fall below its target level, but Nets Estonia has by now fixed the causes of the incidents.

Nets Estonia has complied with the Eesti Pank recommendations for minimising risks, and in consequence the risks arising from participant default, business risks and legal risks have been better minimised (see Table 1). Eesti Pank assessed the risks to the card payment system in 2016 and made eight recommendations for minimising risk to Nets Estonia, and three recommendations to the banks participating in the system, as the nature of the system means the banks are responsible

for three risk categories, cash settlement, settlement finality, and insolvency of system members. The Eesti Pank recommendations have been met and in consequence the system minimised better the legal, business and management risks, while access to the system is fair and effective, and the risks coming from participant default and settlement risk have been minimised significantly.

Table 1. Oversight assessment of the card payment system, including of the liabilities of the banks

CPMI-IOSCO principle (risk category)	Assessment in 2016	Assessment in 2018 after the implementation of the recommendations
Framework for the comprehensive management of risks Operational risks Communication procedures and standards Disclosure of system rules and key procedures	Meets the requirements	Meets the requirements
Governance Business risks Access and participation requirements Efficiency and effectiveness	Largely meets the requirements	Meets the requirements
Legal basis Money settlements	Partly meets the requirements	Largely meets the requirements
Settlement finality	Does not meet the requirements	Meets the requirements
Participant-default rules and procedures		Largely meets the requirements

MACROPRUDENTIAL POLICY

CURRENT MACROPRUDENTIAL MEASURES

The macroprudential measures that apply for credit institutions operating in Estonia are the capital buffer requirements and the requirements for housing loans (see Table 2). The current measures are mainly preventative and are intended to strengthen the resilience of credit institutions to threats to the financial sector and to limit any possible increase in the risks. Eesti Pank assesses how appropriate the measures are in each case to a regularly planned schedule, with the countercyclical capital buffer requirement assessed once a quarter, the systemically important institution buffer requirement assessed once a year, and the systemic risk buffer requirement assessed once every two years. If there are significant changes in the risk assessment, the requirements may be adjusted more frequently.

Capital buffer requirements

The systemic risk buffer and the additional buffer for systemically important institutions provide protection against risks that could cause unexpected deterioration in the economic or financial climate. Eesti Pank last assessed the relevance and sufficiency of these buffer requirements in spring 2018[23]. Following the assessment, Eesti Pank decided to maintain the applicable systemic risk buffer requirement at 1% of the exposures in Estonia for all banks. There are four credit institutions operating in Estonia that are systemically important for the Estonian financial system, and Eesti Pank has applied the maximum buffer rate of 2% of total risk exposures to three of them, Swedbank, SEB Pank and Luminor. The buffer rate for LHV Pank will rise from 1 January 2019 from 0.5% to 1%.

The countercyclical capital buffer rate, which is derived from the credit cycle, remains at zero. The growth in the debt of Estonian companies and households as a whole accelerated in the first half of 2018, though it remained slower than the growth in nominal GDP. If the growth in debt continues to speed up, Eesti Pank can set a countercyclical capital buffer requirement for the banks at above 0% (see the section on assessing the need for the countercyclical capital buffer).

Overall the banks have to hold additional own funds of 1-3% of risk assets for macroprudential purposes. Adding the current minimum capital requirements of the European Union to the buffer requirements introduced in Estonia means that banks in Estonia have to have own funds of at least 11.5% of risk exposures, of which eight percentage points must be common equity tier one capital (see Table 3). The requirements for systemically important banks are higher by the amount of the additional buffer requirements.

Housing loan requirements

The aim of housing loan requirements is to protect both borrowers and lenders from excessive risk-taking and to contain excessively fast growth in credit. Lending requirements, which are limits on the loan-to-value ratio (LTV), the debt service-to-income ratio (DSTI)

Table 2. The macroprudential measures of Eesti Pank

Instrument	Rate	From
Systemic risk buffer	1%	1 August 2016
Other systemically important institutions buffer		
Swedbank AS, AS SEB Pank	2%	1 August 2016
Luminor Bank AS	2%	1 July 2018
AS LHV Pank*	1%	1 January 2019
Countercyclical capital buffer	0%	1 January 2016
Housing loan requirements**		
loan-to-value (LTV) limit	85%***	1 March 2015
debt service-to-income (DSTI) limit	50%	
maximum loan maturity	30 years	

* Until 31.12.2018 the O-SII buffer rate for AS LHV bank is at 0.5%
** The share of loans breaching the limits may not exceed 15% of the volume of housing loans issued each quarter
*** Up to 90% for housing loans guaranteed by KredEx

23 See the Financial Stability Review No 1/2018.

Table 3. Capital and buffer requirements in Estonia (as at 30/09/2018)

		Systemically important credit institutions	Other banks
Macroprudential buffers	countercyclical capital buffer (Estonian exposures)	0%	0%
	systemic risk buffer (Estonian exposures)	1%	1%
	other systemically important institutions buffer	0.5-2%	-
Capital conservation buffer		2.5%	2.5%
Minimum own funds requirement		8%	8%
Total capital and buffer requirements		**12-13.5%**	**11.5%**
of which, Common Equity Tier 1 (CET 1) requirement		**8.5-10%**	**8.0%**

Table 4. The EEA countries with a countercyclical capital buffer rate above 0%

Country	current rate (as at 30/09/2018)	from (month/year)	rate applicable in future	from (month/year)
Sweden	2.00%	03/2017	2.50%	09/2019
Norway	2.00%	12/2017		
Iceland	1.25%	11/2017	1.75%	06/2019
Slovakia	1.25%	08/2018	1.50%	08/2019
Czech Republic	1.00%	07/2018	1.25%	01/2019
			1.50%	07/2019
United Kingdom	0.50%	06/2018	1.00%	11/2018
Lithuania	0.00%	06/2015	0.50%	12/2018
			1.00%	06/2019
Denmark	0.00%	01/2016	0.50%	03/2019
			1.00%	09/2019
Ireland	0.00%	01/2016	1.00%	07/2019
France	0.00%	12/2015	0.25%	07/2019

Source: ESRB

and the maximum maturity of loans, stabilise the credit market over the long term and generally help to keep growth in credit under control. During a phase of rapid growth in the economic and credit cycle, Eesti Pank can step sharply on the brakes by tightening the requirements, by lowering the LTV or DSTI limits or cutting back on the allowed use of exemptions.

Eesti Pank decided to leave the housing loan requirements unchanged in the second half of 2018, though it is not impossible that they will be tightened in future were credit to start growing faster. Eesti Pank analysed the developments in the Estonian housing loan market and changes in the lending conditions of the banks and found that despite the relatively rapid growth in household borrowing, the current requirements are sufficient for the state of the lending environment (see the section on Eesti Pank requirements for housing loans and the lending conditions of banks). However, Eesti Pank may consider reviewing the exception permitted for housing loans with KredEx guarantees if the increased use of those guarantees starts to make the Eesti Pank requirements less effective in reducing the risks of excessive borrowing by households (see Box 4 on housing loans with the KredEx guarantee).

Application of macroprudential measures taken by other countries

Banks in Estonia have to comply with the countercyclical capital buffer requirements of the macroprudential authorities in other countries. If a bank operating in Estonia has credit risk exposures in a country that has set a countercyclical capital buffer requirement above 0%, the bank has to hold additional own funds against those positions. Ten countries in the European Economic Area had decided as at 30 September 2018 to apply rates above zero, and among those countries, Ireland, Iceland, Lithuania, France, Sweden, Slovakia, Denmark and the Czech Republic have raised their rates in the past six months (see Table 4).

Exposures in Estonia accounted for the vast majority of the total risk exposures of the Estonian banks at 94% at the end of June 2018, with 6% of exposures in other European economic area

countries and less than 0.5% in other countries. The credit risk exposures of Estonian banks in the countries that have a buffer rate above zero, either applicable now or to be introduced in future, totalled 257 million euros, or 3% of the total credit risk exposures.

On top of the countercyclical capital buffer, the banks in Estonia have to meet the macroprudential measures of other countries if Eesti Pank or the European Central Bank has decided to reciprocate those measures and has introduced a similar or equivalent requirement. Macroprudential authorities in the European Union base their reciprocity frameworks on the requirements of European Union law and the recommendation issued by the European Systemic Risk Board (ESRB). Eesti Pank assesses the need for reciprocity for each measure individually. The assessment considers the size of the exposures concerned and the legal ability to introduce the corresponding measure in Estonia. At the end of September 2018 there were no requirements in force in Estonia that follow the reciprocity of macroprudential measures taken by other European Union member states.

EESTI PANK'S REQUIREMENTS FOR HOUSING LOANS AND BANK LENDING CONDITIONS

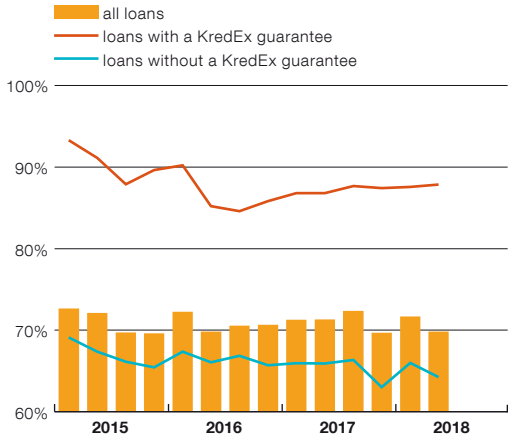
Since 1 March 2015 all the banks operating in Estonia have had to follow Eesti Pank's requirements when issuing housing loans. The requirements set a limit of 85% on the loan-to-value (LTV) ratio at the moment the loan is granted, or 90% if there is a guarantee from KredEx; a limit of 50% on the debt service-to-income (DSTI) ratio; and a limit of 30 years as the maximum maturity for housing loans. The banks are permitted some flexibility in meeting the requirements, as 15% of the loans issued in a quarter by volume may have terms that breach the limits.

The housing loan requirements help prevent banks from loosening their lending conditions. Housing loan requirements set limits on bank lending conditions and so help avoid excessively fast loan growth that could prove too much for borrowers and the economy as a whole were the economic and financial environment to change. This is a set of structural measures that does not usually change very often. Should the risk of excessively fast loan growth increase, it may become necessary to tighten the limits. The requirements may also be changed if the borrowing or lending behaviour changes. Assessing whether the requirements are appropriate requires analysis not just of the overall dynamics of growth in the economy and in credit, but also of changes in the lending conditions of banks and in factors that affect them.

The loan-to-value (LTV) limit

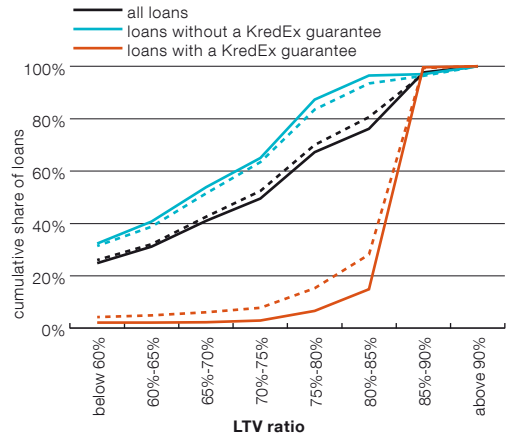
The weighted average value of the LTV ratio for new housing loans has not particularly changed in recent years. Although the average LTV started to rise a little from the middle of 2016, it has remained close to 70% for new housing loans as a whole (see Figure 46). The small

Figure 46. Weighted average LTV ratio



Sources: Finantsinspektsioon, Eesti Pank

Figure 47. Cumulative distribution of loans by LTV ratio, Q1-2 2018



*The dotted line shows the distribution for Q2 2016
Sources: Finantsinspektsioon, Eesti Pank

rise that was seen until autumn 2017 was due to more active use of KredEx guarantees. The share of loans guaranteed by KredEx increased in the first half of 2018 to around one quarter of all loans issued (see Box 4 on housing loans with KredEx guarantees).

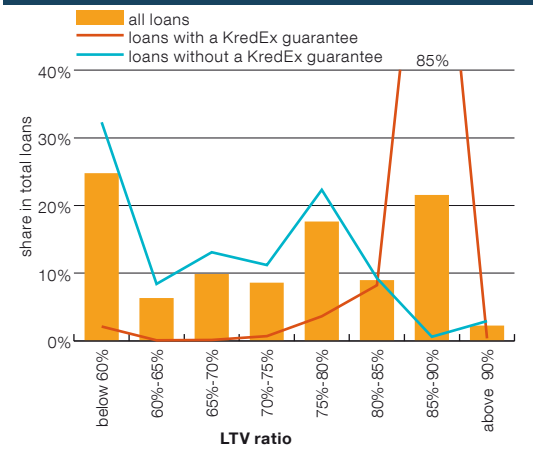
The distribution of loans by LTV ratio has shifted slightly towards those with a higher LTV. In the second quarter of 2016, around 19% of loans had an LTV of over 85%, but in the first half of 2018 this had increased to 24%. At the same time that the share of loans with KredEx guarantees has increased, a larger share of those loans were issued with higher LTV ratios than previously. The LTV ratio for loans issued without KredEx guarantees has moved in the opposite direction, and the LTV in over 87% of loan contracts was at 80% or below (see Figures 47 and 48).

The average amount of own funding provided by the borrower has increased. Borrowers using a KredEx guarantee are required to contribute at least 10% of the financing and the average figure for such loans has remained close to that, but the use of own funds for loans without KredEx guarantees has increased. In the past two years the weighted average share of own funding for such loans has risen from 17% to 21% (see Figure 49).

The share of loans with non-existent or low own funding remains large. In the second quarter of 2018, 22% of all loans were issued without any down payment and 3% of loans had own funding of up to 5% (see Figure 50). The supply of loans with zero or low down payment has decreased in recent years. This has been affected notably by the increased use of KredEx guarantees, which require the borrower to make a down payment of 10%. The use of own funding has started to increase even for loans with KredEx guarantees. The largest growth has been in the share of loans with an own funding rate of between 15% and 25%.

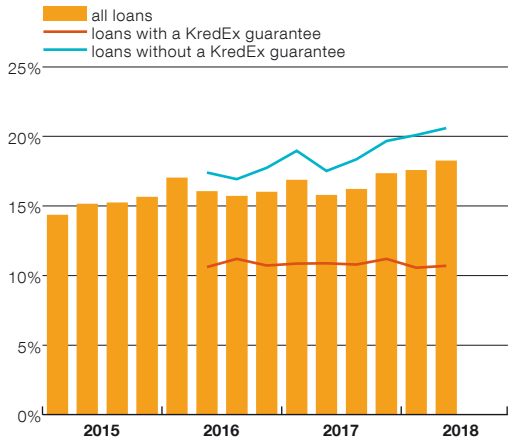
A low level of own funding is compensated for by the use of additional collateral. Additional collateral in the form of a mortgage is used to fund housing purchases for around 26% of loans (see Figure 51). The use of additional collateral has declined in the past couple of years, which reflects the increased use of KredEx guar-

Figure 48. Distribution of loans by LTV ratio, Q1-2 2018



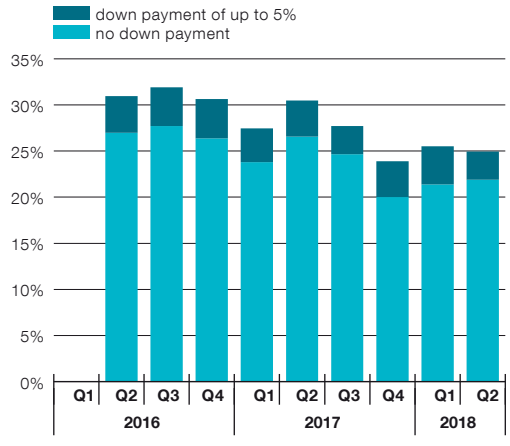
Sources: Finantsinspektsioon, Eesti Pank

Figure 49. Weighted average share of own financing



Sources: Finantsinspektsioon, Eesti Pank

Figure 50. Share of loans with low or no down payment



Sources: Finantsinspektsioon, Eesti Pank

antees or a preference for using savings rather than additional collateral. It may also make a difference that a relatively large share of transactions are made for newer properties, where there is less need for additional collateral.

However the share of loans with additional collateral has increased among loans with higher own funding rates of over 20%. This could indicate that there are now more borrowers who are purchasing additional real estate on top of what they already own, from whom the banks require additional collateral or higher own funding contributions when they issue loans.

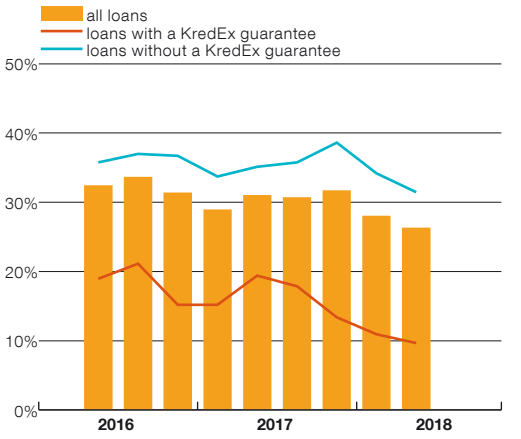
The DSTI limit and maximum maturity of loans

The income of those individuals taking housing loans is for the most part above the Estonian average. In the first half of 2018, more than half of borrowers had a net monthly income of more than 1200 euros (see Figure 52), which is around a fifth higher than the average net monthly wage in Estonia and above the average wage in Tallinn[24]. Over 40% of the loans were taken jointly with a co-applicant.

The share of income going on loan repayments has increased a little over the past two years. The distributions of the stressed DSTI ratio[25] and the actual ratio from the repayment schedule have both shifted towards higher values than a couple of years ago (see Figures 53 and 54). Two years ago the monthly scheduled principal and interest payments for loans were over 30% of the net monthly income of the borrower for 33% of housing loans, but this share had risen to 39% in the second quarter of 2018.

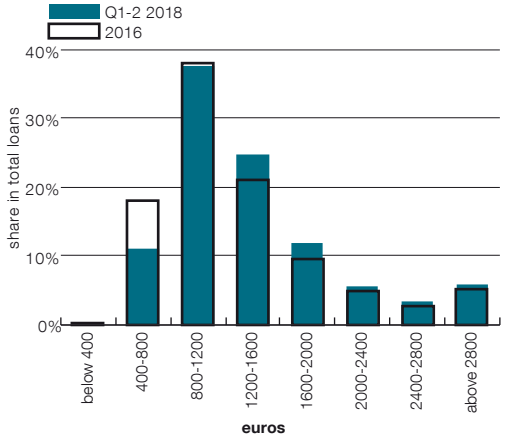
With base interest rates remaining low, the loan burden on borrowers is not very large. The weighted average schedule DSTI value has risen very slightly from 27% to 28% over the past two years. However, loans with floating interest rates need to take account of possible rises in interest rates, which the DSTI requirement used by Eesti Pank also does.

Figure 51. Share of loans with additional mortgage collateral



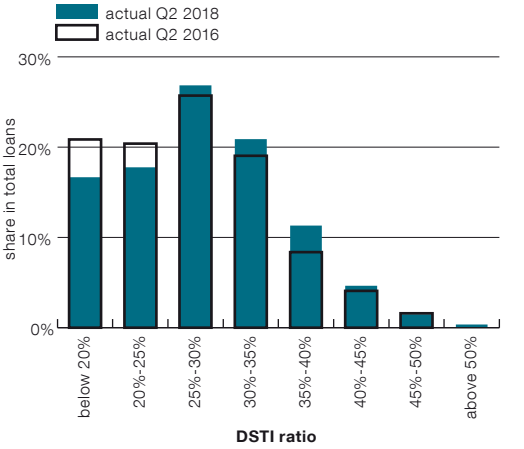
Sources: Finantsinspektsioon, Eesti Pank

Figure 52. Distribution of loans by net income of the borrower



Sources: Finantsinspektsioon, Eesti Pank

Figure 53. Distribution of loans by the DSTI ratio (actual)

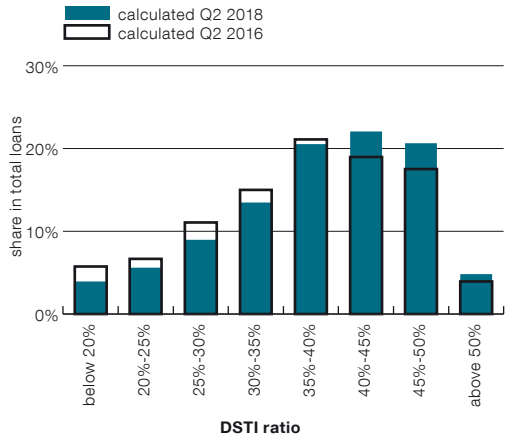


Sources: Finantsinspektsioon, Eesti Pank

24 Data from Statistics Estonia put the average net monthly wage in 2017 at 986 euros in Estonia and 1111 euros in Tallinn.

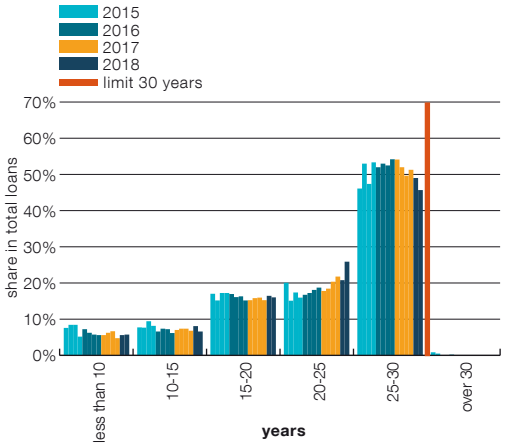
25 To find the DSTI ratio for the Eesti Pank limit, the loan payment is calculated with either an annual interest rate of 6% or the interest rate given in the loan contract plus two percentage points. The calculation uses whichever of these is higher.

Figure 54. Distribution of loans by the DSTI ratio (calculated with a higher interest rate)



Sources: Finantsinspektsioon, Eesti Pank

Figure 55. Distribution of loans by maturity



Sources: Finantsinspektsioon, Eesti Pank

The DSTI ratio calculated with a rise in interest rates was close to or above the limit, meaning the DSTI ratio was between 45% and 50%, for around one quarter of loans and it was above 40% for around half of housing loans. This share was seven percentage points lower in 2016. The 6% interest rate used in calculating the stressed DSTI ratio may be considered quite conservative, but a continued rise in the DSTI ratio in the longer perspective could increase the risks from the loan burden. In assessing the dynamics of the DSTI, the imbalances in the labour market must also be considered, as a deterioration in the economic climate could worsen the ability to service loans.

High loan servicing ratios can be found among households with both higher and lower incomes. The weighted average maturities and average income of borrowers for housing loans with a DSTI ratio above 45% were similar in the first half of 2018 to those for other loans (see Table 5). This means there is no indication that those taking housing loans with higher DSTI are more flexible than the average or have buffers that would protect them against unfavourable economic developments if they do not wish to make adjustments in their consumption patterns.

Housing loans have started to be issued this year with slightly shorter maturities. At the same time that the distribution of the DSTI ratio has moved towards higher values in the past two years, the distribution of loans by maturity has moved in the opposite direction since 2017. Loans are still mostly issued with a maturity of 25-30 years, but the share of such loans has decreased (see Figure 55). The average maturity of housing loans has not particularly changed in the past two years, and in the second quarter of 2018 it was 24 years.

The use of exemptions

More than 90% of the loans issued in the first half of 2018 were within the limits set by Eesti Pank. Exemptions were used to breach one or more of the limits for over 6% of loans, which is less than the amount permitted in the regulation, which is 15% of the loans issued within a quarter by value (see Figure 56). There was however a slight rise in the use of exemptions this year following a small decline last year.

The majority of the exemptions were for breaches of the DSTI limit, and more than 70% of those loans breached the limit by

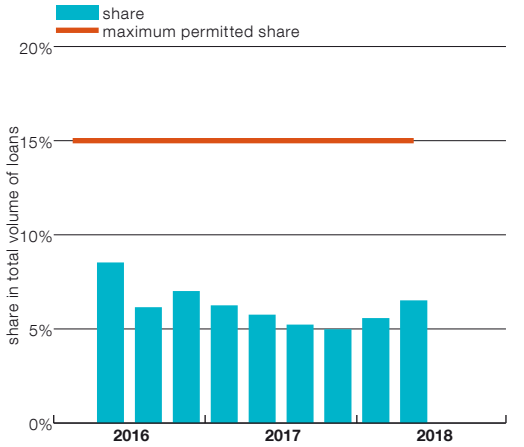
Table 5. Average net income of borrowers and average loan maturity of housing loans at different levels of the DSTI ratio (Q1-2 2018)

	DSTI above 45%	DSTI below 45%
Average net income for housing loans, including the income of co-applicants, in euros	2,418	2,405
Average maturity of housing loans in years	23.8	24.2

Note: Data at the 1 and 99 percentiles are left out
Sources: Finantsinspektsioon, Eesti Pank

up to ten percentage points, meaning their DSTI ratio was between 50% and 60%. The banks have mainly used the exemptions for borrowers with higher incomes purchasing more expensive and better quality properties. Exemptions have been used less to finance housing purchases by risky loan clients. The LTV limit has been breached to a lesser extent in the past two years, which may be partly because of the increased use of the KredEx guarantees. The share of loans that breached both the DSTI and LTV limits was 0.5% of all loans in the first quarter of 2018. The banks have not issued any loans that breach the maturity limit in the past three quarters. The smaller banks use the exemptions very little, as exceptional conditions for just a few individual housing loans could lead them to exceed the limit for exemptions.

Figure 56. Share of loans breaching the limits



Sources: Finantsinspektsioon, Eesti Pank

Conclusions and assessment

There has been no particular change in recent years in the lending conditions of the banks, neither in the LTV and DSTI ratios nor in loan maturities. The slight rise in the LTV ratio has been due to increased use of KredEx guarantees, which is a consequence of demographic developments as a larger young generation has entered the housing market, and of changes in the policies of banks towards accepting KredEx guarantees. As the average amount borrowed has increased, so the DSTI ratio has shifted a little towards higher values, while at the same time the average repayment period has shortened. The banks continue to make only partial use of the flexibility permitted in meeting the requirements.

The rapid growth in housing loans has been affected by the rise in incomes, and the banks have not boosted this any further by loosening their lending conditions. The yearly growth rate for housing loans has risen from 3% when the housing loan requirements were introduced in spring 2015, to 7% now. Demand for loans has been based above all on rapidly rising wages, which has supported the growth in the stock of housing loans. The rise in real estate prices has generally been in line with the rise in wages. At the same time, strong demand for loans and the weak competition has allowed the banks to raise their interest margins. Given that the LTV and DSTI ratios and the loan maturities are generally around where they were three years ago, there is no sign that the current lending conditions of the banks are encouraging excess borrowing. Borrowing has been supported more by rapid growth in wages, which follows from the cyclical conditions in the economy.

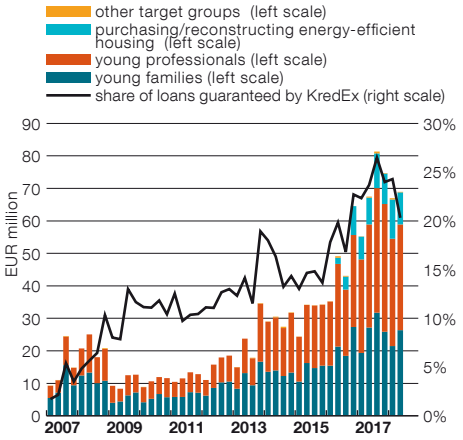
If credit starts to grow faster, it may be necessary to tighten the requirements. If credit starts to grow too fast for the development of the economy and the growth in wages, it could increase the vulnerability of borrowers to negative developments in the economy and make it harder for them to repay their loans in future. Eesti Pank monitors developments in credit growth and if signs of excessive growth in household indebtedness appear, it is ready to tighten the requirements on the LTV and DSTI ratios or on loan maturities. A sign of increased risk is that the loan burden of borrowers has increased a little in recent years, as the average DSTI has risen a little even as incomes have grown.

The requirements may also need adjusting if there are substantial changes in lending or borrowing behaviour. The biggest change in recent years has been the increased use of KredEx guarantees. As Eesti Pank has allowed an exemption in calculating the LTV ratio for loans covered by KredEx guarantees, a notable increase in the supply of such loans could start to reduce the effectiveness of the LTV limit. As the target groups for KredEx guarantees are quite broadly defined, the share of loans issued with exceptional circumstances of LTV of up to 90% could potentially be large. Eesti Pank is monitoring the growth in loans guaranteed by KredEx and if necessary can review the exemption permitted for such loans.

Box 4: Loans guaranteed by KredEx in the housing loan market

A large share of new housing loans are issued with a guarantee from KredEx. The housing loan guarantees provided by the state guarantee fund KredEx allow borrowers in the target groups to reduce the share of own funds to 10%. The target groups who can access the guarantees are defined quite broadly[26], and so a large share of potential loan clients qualify for them. The volume taken in loans with KredEx guarantees started to grow rapidly in 2016, when the share of new housing loans covered by such guarantees increased markedly (see Figure B4.1). There has been no increase in the volume of loans covered by guarantees since the fourth quarter of 2017, but they nevertheless account for a large share of housing loans at around one quarter of the total.

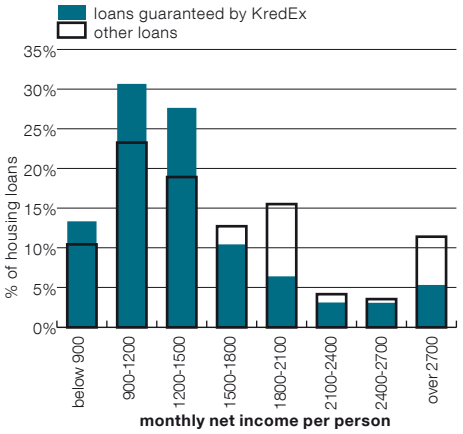
Figure B4.1. Loans guaranteed by KredEx and their share in new housing loans



Sources: KredEx, Eesti Pank

There are several reasons why KredEx guarantees are being used more often. Swedbank, which has the largest market share of the housing loan market, joined the group of guarantee intermediators from November 2016, and without that the volume of loans with KredEx guarantees would not have increased in 2017. At the same time there has been an increase in the size of the age cohorts most likely to take a housing loan. There is also a greater preference for new and more expensive living space, which requires a larger amount of own funds as a down payment.

Figure B4.2. The distribution of housing loans in Q2 2018 by monthly net income of the borrower



Source: Eesti Pank

The average value of loans taken out with KredEx guarantees is more or less the same as that of loans without guarantees. Equally though, the share of large loans among the loans with guarantees has grown faster in the past two years than it has among other loans. In the second quarter of 2016, 12% of loans with KredEx guarantees were for more than 150,000 euros, but in the second quarter of 2018 17% were, which is no longer much less than the 20% share of such loans among loans without guarantees

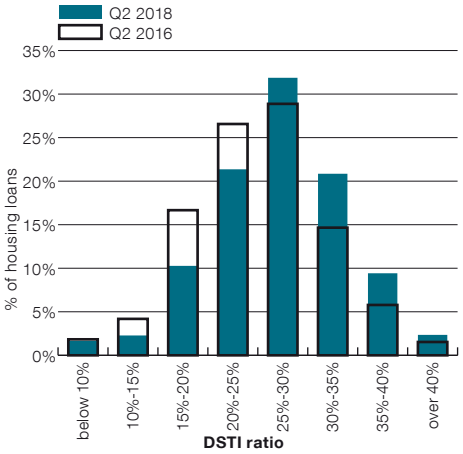
At the same time, the average income of borrowers with KredEx guarantees is one fifth lower than that of other borrowers. The average income of borrowers with or without KredEx guarantees has risen in the past two years as the average wage has grown relatively fast. The largest share of loans with KredEx guarantees are taken by borrowers with a net monthly income of 900-1500 euros, but there are also loans to borrowers with very high incomes who have used the guarantees. People with a net monthly income of over 2700 euros took out some 5% of the loans with KredEx guarantees in the second quarter of 2018 (see Figure B4.2), and

26 Those who can apply for a guarantee are: a) people aged up to 35 in work with at least vocational higher education; b) a parent or parents with at least one child aged up to 15; c) a person buying or building energy efficient living space or converting living space to be energy efficient; d) a tenant living in returned residential property; and e) veterans of the defence forces or defence league. Energy efficient living space is in at least class C for energy efficiency.

12% of the loans were taken by those with an income of over 2100 euros.

As the amount borrowed is on average the same as for other loans but the average income of the borrower is lower, borrowers with KredEx guarantees are on average borrowing relatively more as a ratio to their incomes than are other borrowers. The amount borrowed with KredEx loans is on average equal to 6.4 years of income for the borrower, which is around 10% more than the ratio for other housing loans. Over the past two years, the share of loans with a high ratio of loan to annual net income has increased the most among the loans with KredEx guarantees, meaning borrowers with KredEx guarantees have started to borrow significantly more in ratio to their incomes than was the case two years ago.

Figure B4.3. The distribution of loans guaranteed by KredEx by the DSTI ratio



Source: Eesti Pank

The loan service burden for borrowers with KredEx guarantees has increased. Although the monthly loan service costs of loans with KredEx guarantees as a ratio to income is on average smaller than for other housing loans because maturities are on average longer, the average debt service-to-income (DSTI) ratio for guaranteed loans rose in the second half of 2017. The same could also be observed for other housing loans, though to a lesser extent. The distribution of loans also reveals an increase in loans with higher DSTI of over 30% (see Figure B4.3), while the share of other housing loans with higher DSTI has increased more slowly. The increase in the loan service burden is also partly due to some shortening of loan maturities.

Overall it appears that the use of KredEx guarantees for housing loans has increased substantially in the housing market in recent years and the share of new housing loans that come with guarantees is large at around a quarter. The target group for KredEx is defined so broadly that large shares of potential borrowers and of loans qualify for the guarantees. Borrowers using KredEx guarantees borrow more in relation to their incomes than do others taking housing loans, and over time the share of guaranteed loans that leave the borrower a large loan burden has increased more strongly than has the same share in other housing loans. This is also reflected in higher loan servicing costs as a ratio to income. Borrowers with a higher loan servicing burden are more vulnerable to any reduction in their incomes.

Eesti Pank has made an exception in its housing loan requirements for loans that have a KredEx guarantee, as their loan-to-value ratio (LTV) is allowed to be higher than 85% at up to 90%. A very broad definition of the target group for guarantees and the increased use of them make the limit set by Eesti Pank on the loan-to-value ratio of housing loans to collateral less effective. A further increase in the share of loans with KredEx guarantees could lead Eesti Pank to change the requirements for issuing housing loans.

ASSESSMENT OF THE NEED FOR A COUNTERCYCLICAL CAPITAL BUFFER

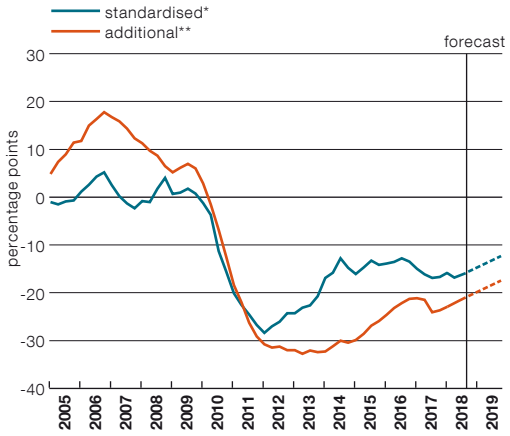
A countercyclical buffer has to be created for the banks at a time when the financial cycle is on the upswing and the systemic risk from rapid loan growth is increasing. Banks can use the additional capital buffers they have built up during the growth phase of the financial cycle to cover losses that may arise when the cycle turns down and to continue supplying credit to the real economy. The larger the systemic risk accumulation in the credit market and the greater the imbalance that it creates, the larger the capital buffer should be.

Growth in credit volumes could be a danger to the stability of the financial system if it is faster than growth in the economy, meaning that indebtedness increases. A moderate increase in indebtedness could reflect the normal process of financial deepening, where borrowing is used to create greater value added that can be used in the future for servicing the loans. However, rapid credit growth could cause the economy to overheat and the banks to suffer loan losses in future. For this reason the development of debt and the factors affecting it need to be assessed and forecast when judging the need to increase the capital buffer requirement.

The standardised credit-to-GDP gap calculated using the methodology of the Basel Committee on Banking Supervision was -15 percentage points at the end of the second quarter of 2018 and the additional gap, which is also used by Eesti Pank, was -23 percentage points at the end of the second quarter (see Figure 57), so the buffer guide was 0%. As the Basel committee methodology is not appropriate for use with the Estonian time series, additional indicators for the development of indebtedness are important for analysing the need for the countercyclical buffer.

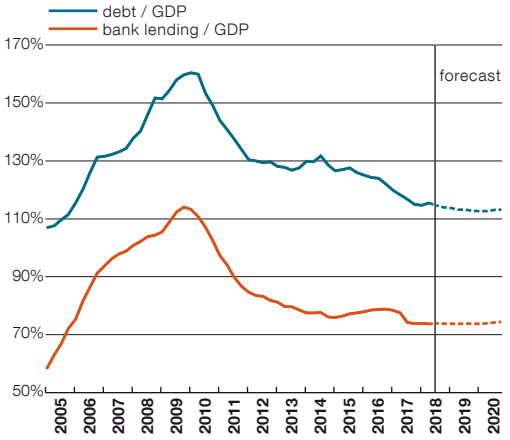
The decline in indebtedness in the non-financial sector ended in the first half of 2018. The credit-to-GDP ratio fell to 115% at the end of 2017, which is its lowest level of the past 12 years (see Figure 58). The fall in recent years has been caused by a lack of borrowing by companies, but this year such borrowing started to increase again. As growth in the economy has remained relatively strong at the same time, the level of indebtedness has not increased substantially. The Eesti Pank June forecast 2018 does not expect any significant rise in non-financial private sector indebtedness in the next two years.

Figure 57. Credit-to-GDP gap



* based on total debt data
** based on data for domestic bank loans and leases
Sources: Statistics Estonia, Eesti Pank

Figure 58. Non-financial sector indebtedness



Sources: Statistics Estonia, Eesti Pank

The yearly rate of growth in the debt of the non-financial private sector increased to 5.7% by the end of the second quarter of 2018. In the past two years the growth in non-financial private sector debt was led mainly by households, but from the second quarter of this year, companies started to have more of an impact (see Figure 59).

- Overall demand for loans from companies has so far been modest given the rapid growth in the economy. Levels of investment have remained low and the ability of companies to finance their activities and

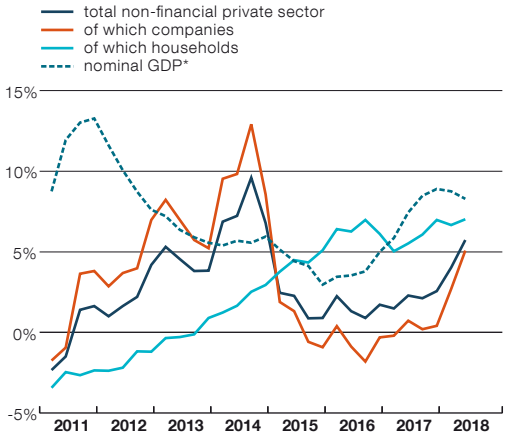
investments from own funds has improved. In consequence the level of corporate debt has remained fairly unchanged for the past three years, and yearly growth picked up in it only this year to 5.1%. The Eesti Pank June forecast expects that companies will start to invest more in the years ahead, but as investment as a share of the economy is low by the levels of previous decades, this will not lead to any significant growth in corporate debt.

- Demand from households for loans remains strong. It is supported by the continuing rapid growth in incomes and improved confidence, relatively favourable interest rates, low unemployment, and an active housing market (see the sections on companies and households and real estate). Growth has been fast for housing loans and for consumption loans and car leases. The growth in household debt as a whole has not accelerated in recent quarters but has remained at close to 7%.

Borrowing by companies and households from banks operating in Estonia has grown faster than total debt. The yearly growth in loans and leases from banks was estimated at around 7% at the end of the second quarter of 2018[27], which is close to where loan growth has held steady for more than two years (see Figure 60). The main source of funding for households is bank loans, and the growth in loans varies very little from the growth in the total debt of households. Companies have more sources of funds and the growth in bank loans taken in Estonia was faster than the growth in total debt. This is because access to domestic bank loans has been relatively good and the main borrowers have been companies from economic sectors that traditionally fund themselves primarily from banks operating in Estonia.

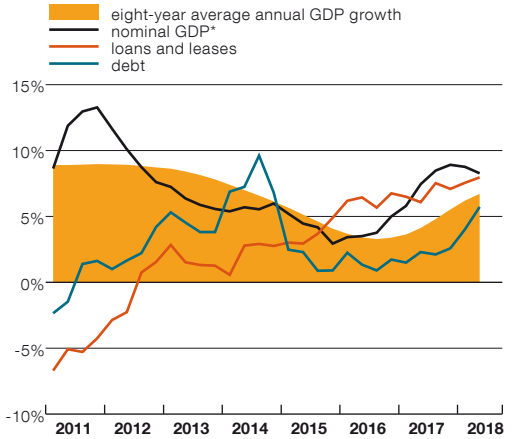
The rate of growth of debt in the non-financial sector is comparable to the rate of long-term growth in the economy. With the economy growing fast, there is a danger of the speed of growth in debt levels being underestimated. To reduce the effect of the economic cycle in the estimate, the growth in debt is compared to the long-term average growth in the economy. The debt of the Estonian non-financial

Figure 59. Annual growth of non-financial private sector debt and nominal GDP



* four-quarter moving average GDP annual growth
Sources: Eesti Pank, Statistics Estonia

Figure 60. Annual growth of loans and leases, debt and nominal GDP



* four-quarter moving average GDP annual growth
Sources: Statistics Estonia, Eesti Pank

private sector has grown more slowly in recent years than the eight year average for nominal GDP, though by the end of the second quarter of 2018 its rate of growth had approached that of GDP (see Figure 6). The growth in bank loans and leases has for some time exceeded the long-term rate of GDP growth and in the second quarter it caught up to the nominal GDP growth rate.

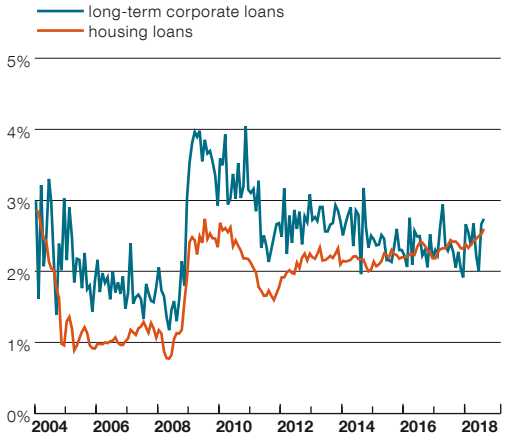
The lending standards of the banks and their lending conditions have not been loosened. The average interest rate on new housing loans has risen a little since the start of 2018 as the margin has risen, and in July it reached 2.6% (see Figure 61). This is its highest rate of the past four years, but it still looks low in a longer perspective. The quarterly Bank Lending Survey also shows

27 The estimate includes the partial transfer of the loan portfolio of one bank to its parent bank in autumn 2017.

that the banks have not loosened their lending standards or conditions for companies or households in the past year.

In consequence, Eesti Pank does not currently consider it necessary to change the countercyclical buffer rate, though if debt grows faster in future it could consider raising the rate above 0%. This conclusion is reached because although the yearly growth in non-financial private sector debt has accelerated to close to the level of long-term nominal economic growth, this has not led to any substantial increase in indebtedness. Total debt has increased because companies have borrowed more in recent quarters. With investment levels low however, no major increase in the growth in corporate debt is expected. With support from demand-side factors, bank loans have grown at almost the same rate as nominal GDP. The banks have not loosened their lending standards and conditions and have not increased their leverage. There still remains the risk that increasing demand for loans could drive increased borrowing and so increase the related cyclical risks. For this reason Eesti Pank monitors the growth in debt and indicators that affect it, and can if necessary raise the countercyclical capital buffer rate above 0%.

Figure 61. Interest margin on new housing loans against 6-month EURIBOR*



*Negative Euribor rates are replaced by 0%
Sources: Eesti Pank, European Central Bank