FINANCIAL STABILITY REVIEW

1
2020

The Eesti Pank Financial Stability Review is released twice a year. The Financial Stability Review is Eesti Pank's main publication analysing financial stability, and it contains an assessment of the risks to the stability of the financial system, and an outline of the macroprudential measures taken by Eesti Pank.

Financial stability means the smooth functioning of financial intermediation under both normal and unexpectedly adverse circumstances. The aim of macroprudential policy is to increase the resilience of the financial system and to avoid systemic risks to financial stability building up. Macroprudential measures help reduce the damage caused by a financial crisis to the non-financial economy.

The Financial Stability Review covers the main areas of risk and identifies possible systemic risks. As the Estonian financial system is largely bank-based, the main focus of the analysis is on risks and vulnerabilities that could substantially harm the Estonian banking sector or affect its activities.

The Financial Stability Review is available at

https://www.eestipank.ee/en/publications/series/financial-stability-review

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EESTI PANK'S ASSESSMENT OF FINANCIAL STABILITY

Financial stability in Estonia has been affected in the first months of this year by the spread of the coronavirus. COVID-19 infections have increased rapidly and the illness has become a pandemic. Efforts have been made to prevent a healthcare crisis by limiting the spread of the virus with broad restrictions that have affected the operations of business and the consumption and incomes of households. The financial system has an important role to play in coping with these restrictions and adapting to the new circumstances. Although financial institutions are suffering notable losses because of the unfavourable economic events, it is extremely important that the financial sector manage to continue supporting the economy effectively to reduce the damage from the crisis.

Restrictions on economic activity have been painful for many companies and people. Companies have had to cope not only with the lockdown restrictions, but also with interruptions to supply chains and drops in demand and orders. These problems will remain in the coming months as confidence has fallen both in Estonia and in Estonia's export markets. How many companies and people get trapped by these problems will depend on how long the restrictions remain in place and how effective the economic policy measures taken to ease them prove. If the restrictions remain for a long time, the recovery of the economy may be more of a struggle and many branches of the economy beyond just travel, leisure or transport will suffer lasting harm. How far the ability of businesses and people to service their loans deteriorates will depend on the length of the crisis, and so the negative scenario of restrictions remaining in place until August could raise the share of non-performing loans in the loan portfolios of the banks to 13%, varying across banks depending on the risk level of their portfolios. The build-up of problem loans could be eased markedly by state support and by the banks being ready to give payment holidays for clients who are struggling with temporary problems.

The performance of the Estonian economy and financial sector depend to a large extent on how bad the problems are in neighbouring countries. Two large banks operating in Estonia are part of Swedish banking groups, and so financial stability in Estonia depends on the financial strength of those groups. The Estonian banks mainly fund themselves from local deposits, which makes them quite independent in supplying loans under normal circumstances. In a crisis though the activities and decisions of the groups may affect the subsidiaries in Estonia more by providing them the support they need or by limiting their lending. Financial markets have become extremely volatile and so one of the largest risks concerns the capacity of Swedish banking groups to access market-based funding. This risk is increased by the structural risks in the Swedish economy and by the money laundering suspicions surrounding banks. If those concerns deepen, the banks may become less willing to lend in Estonia even after the problems caused by the virus have faded. The Estonian banking sector is also exposed to risks in Latvia and Lithuania, mainly through the branches of Luminor. If financial problems were to pile up in those countries, the operation of financial intermediation in Estonia could also be harmed.

The construction and real estate sector plays an important role in the economy and real estate loans are a large part of the corporate loan portfolios of the banks. Experience from the previous crisis shows that large amounts of non-performing loans can build up in the real estate sector. Demand has fallen for

Table 1. The main risks to financial stability in Estonia

A deterioration in the ability of companies and households to service their loans	↑
Risks from Swedish banking groups	↑
Risks from the cross-border positions of banks	↑
A fall in demand in the commercial real estate market	↑

Scale: ≥1 = small risk and ≥6 = large risk. The direction shows the change in the risk since the previous assessment in October 2019.

residential and commercial real estate at least temporarily during the current crisis. The real estate market is in far better balance than it was before the financial crisis of 2009 though. Activity in real estate and construction is better aligned with the developments in the rest of the economy and companies in the sector are less leveraged than before while real estate prices have not risen excessively fast. A long-term fall in confidence could still make it harder for developers to complete projects and for owners to maintain their rental income. If this leads to problems with loan repayments it may affect how well the financial sector can fund the rest of the economy.

In the spring 2020 assessment of Eesti Pank, the risks to the functioning of the financial sector will be large throughout the next year because of the spread of the coronavirus. The resilience of the financial sector in coping with the crisis is relatively good and it is strengthened by the good capitalisation of the banks and their relatively strong liquidity positions. As the financial positions of companies and people had been improving for several years prior to the crisis, the stronger banks will be able to allow borrowers a payment holiday and in the longer term to maintain the quality of the loan portfolios. This will be helped by the additional support measures from KredEx. The current crisis may cause broader problems in other parts of the financial sector, such as some small banks, savings and loan associations, creditors and crowdfunders. This may happen where there was insufficient preparation for potentially difficult times or the principles applied to lending were not conservative enough.

MACROPRUDENTIAL MEASURES

Eesti Pank applies macroprudential measures when it considers it necessary to prevent risks to the functioning of the financial sector building up and to increase the resilience of the sector. It adjusts those measures regularly in response to how the financial sector and the economy are functioning.

Eesti Pank decided in March to cut the systemic risk buffer for the banks from 1% to 0%. This allows the banks to use the capital that is freed up to act more flexibly during the crisis. The systemic risk buffer is designed to raise the resilience of the financial sector so that the banks would have sufficient capital to protect against loan losses and carry on lending if unexpected risks hit the sector. It is not appropriate for the banks to pay out dividends during the crisis as this would weaken their ability to cope with possible loan losses. The European Central Bank has recommended that banks should postpone dividend payouts until October this year.

Eesti Pank has decided to maintain the countercyclical buffer, which is designed to guard against risks from the financial cycle, at 0% and it does not consider it likely that the rate will be raised during the next four quarters. Eesti Pank regularly assesses the need for the countercyclical buffer every quarter, looking mainly at the growth of debt in the non-financial sector and how well aligned it is with the growth in the economy.

Table 2. The macroprudential measures of Eesti Pank

Instrument	Requirement	From
Systemic risk buffer	0%	1 May 2020
Other systemically important institutions buffer		
Swedbank AS	2%	1 August 2016
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
Risk weight floor for mortgage loans*	15%	30 September 2019
Housing loan requirements**		
loan-to-value (LTV) limit	85%***	
debt service-to-income (DSTI) limit	50%	1 March 2015
maximum loan maturity	30 years	

* The floor is set for the average risk weight of the mortgage portfolio of credit institutions that use the IRB Approach.
** 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.

An additional buffer requirement applies for systemically important banks. It is set to reflect their size, their complexity and their interdependence with other participants in the financial system. Additional requirements for systemic importance apply at 2% to Swedbank AS, 2% to AS SEB Pank, 2% to Luminor Bank AS, and 1% to AS LHV Pank. These buffer rates remain unchanged but the banks are able to use those buffers during the crisis to cover loan losses.

The resilience of borrowers and lenders is increased by the restrictions on issuing housing loans. These require the banks to consider the loan-to-value ratio, the debt service-to-income ratio and the maximum maturity of loans when issuing housing loans. The precautionary limits that Eesti Pank has imposed have encouraged a conservative lending policy at the banks and have limited risky lending that could have made loan repayment problems even worse in the current difficult economic circumstances. Eesti Pank has also set an average risk weight floor of 15% for the mortgage portfolios of banks that use internal ratings in calculating capital requirements. The measure is designed to ensure the resilience of banks to risks from housing loans by helping prevent them failing to allow sufficient capital to cover the risks from housing loans.

THE CAPACITY OF COMPANIES AND HOUSEHOLDS TO SERVICE THEIR DEBTS MAY BE SERIOUSLY HARMED

The restrictions imposed because of the coronavirus COVID-19 pandemic have seriously worsened the state of the economy in Estonia and the capacity of companies and households to service their debts. The crisis has affected companies in different sectors differently, but while the restrictions remain in place more and more sectors will start to fall into difficulties. Increased liquidity, lower indebtedness and much lower interest rates that keep loan servicing costs down mean that companies and households are better able to cope with the current crisis then they were with the global financial crisis of 2008. The volume of non-performing loans at the banks will still increase substantially though. Although the current voluntary buffers of several banks are not necessarily large enough to cover the loan losses that may arise, the banks can also use the buffers they built up in earlier years because of micro and macroprudential requirements.

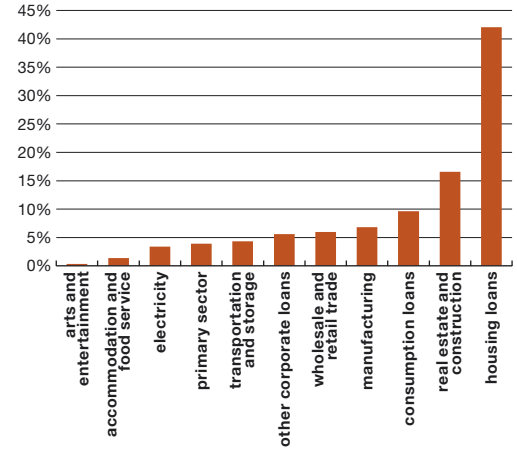
THE ECONOMIC RESTRICTIONS THAT HAVE BEEN INTRODUCED COULD CAUSE THE STOCK OF NON-PERFORMING LOANS AT THE BANKS TO INCREASE SUBSTANTIALLY

The restrictions imposed because of the pandemic have seriously worsened the state of the economy in Estonia. The economy will suffer the negative impact in various ways. As the number of people infected with the coronavirus has remained relatively low, the direct impact of those infected remaining at home has not been large. The stronger impact has been felt from the restrictions introduced to stop the spread of the virus, supply difficulties, sharp drops in export markets, and a loss of confidence.

The crisis has affected companies in different sectors differently, but while the emergency situation lasts more and more sectors will see difficulties. Various services businesses have been hit fastest and hardest, such as hotels, restaurants, and events and travel organisers. Limits on the movement of people and goods and the drop in export markets are affecting the transport sector and exporting companies more and more, while additional limits also caused difficulties for shopping centres. Those sectors were also the first to see major payment difficulties, though quite obviously other sectors have also been affected.

The banks operating in Estonia have lent most to the transport sector and the export-dependent manufacturing sector among those that have been hit first by the crisis. The stock of loans issued to companies in leisure and entertainment, accommodation and catering is quite small in the total loan portfolio of the banks. However, payment problems at rental tenants could cause a second wave of difficulties in the real estate sector, to which the banks have issued a large share of their loans (see Figure 1).

Figure 1. The distribution of the loan and lease portfolio of the banks

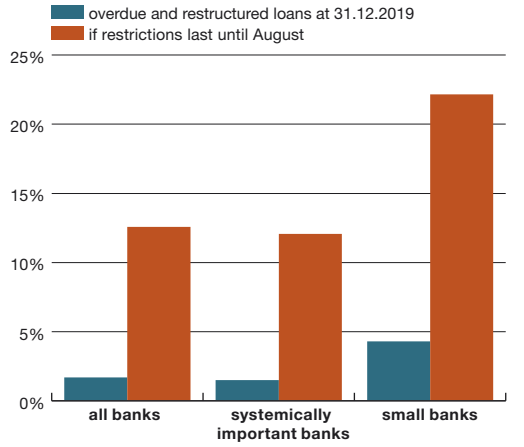


Source: Eesti Pank

How much the economy shrinks by and the capacity of companies and households to service their loans will depend primarily on when the restrictions imposed because of the pandemic end and a normal operating environment returns, and how well companies are able to survive the crisis. If the restrictions are in place for a shorter time, the economy may recover very quickly, but if they remain in place for a longer time there will be many more companies that are not able to survive the crisis and the recovery will be much more of a struggle. In this case the loan repayment difficulties of companies and households will be substantially more serious.

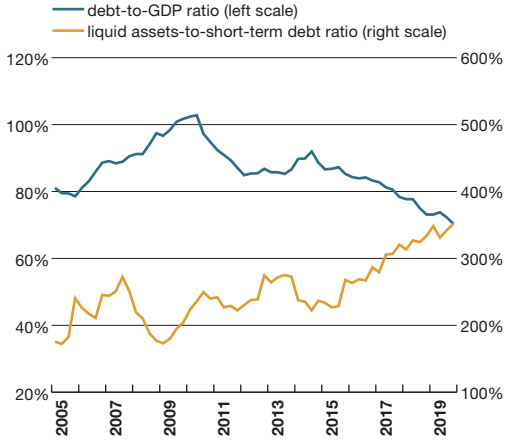
This means that the amount of non-performing loans in the loan portfolios of the banks will depend on the structure of the loan portfolio and on how long the restrictions last. The possible share of non-performing loans at banks can be calculated by taking the possible negative scenario published by Eesti Pank at the end of March, in which economic restrictions last

Figure 2. Potential share of non-performing loans in assets



Source: Eesti Pank

Figure 3. Indebtedness and liquidity of companies



Sources: Statistics Estonia, Eesti Pank

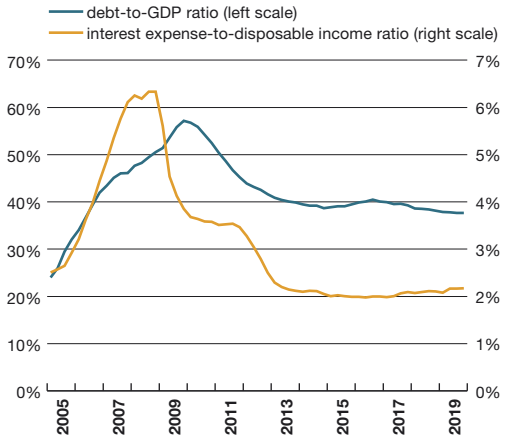
until August, the value added of sectors falls and unemployment rises. The average volume of problem loans in this scenario is 13%, ranging from 11% to 27% at different banks (see Figure 2)[1].

The actual volume of such loans will probably be smaller, as the debt burdens of companies and households have fallen and they have built up buffers in recent years. Corporate indebtedness and financial leverage are considerably lower than before the global financial crisis that started in 2008 (see Figure 3). The household debt burden has also shrunk (see Figure 4). Alongside smaller indebtedness, the costs of debt servicing are much lower because interest rates are lower too, while both companies and households hold a lot more in interest expense-to-disposable income ratiot everybody has sufficient financial buffers, as deposits and other savings are unevenly distributed between companies and households.

The banks are able to help in overcoming several temporary payment difficulties, and they have already accepted a number of applications for payment holidays. The loan losses of the banks are also reduced by loan guarantees, and loan-to-value ratios are notably lower today than during the previous global financial crisis.

The recession and the deterioration in the capacity of companies and households to pay will also be eased by the measures taken by the Estonian and European central banks[2]. The capacity of companies to repay their loans is supported by trade credit issued by the state and by guarantees for loans issued earlier. Wage support and compensation for sick days after the first day will help slow the decline in the capacity of households to pay. The European Central Bank has announced an emergency asset purchase programme of 750 billion euros to offset the economic impact of the pandemic (see Box 1).

Figure 4. Debt burden of households



Sources: Statistics Estonia, Eesti Pank

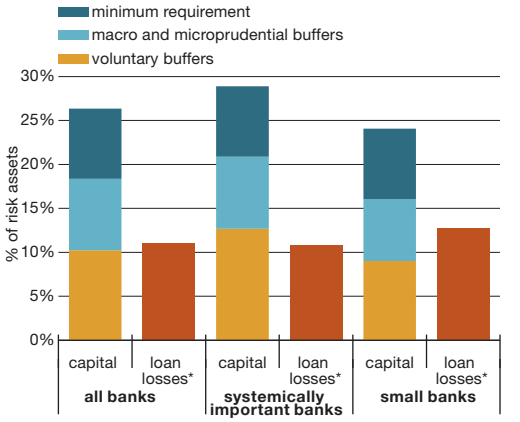
1 The calculation uses the impact of the restrictions and the drop in foreign demand in different sectors, from which the fall in value added of sectors in 2020 is found. It is assumed that non-performing loans will be added in the sector to the same extent that value added falls by. The calculation basis for housing loans and consumer loans is the rise in unemployment and comparison with the levels of unemployment and overdue loans following the crisis of 2008.

2 These state measures are not included in the calculations here.

THE RESILIENCE OF THE BANKS IS SUPPORTED BY THEIR GOOD PROFITABILITY AND CAPITALISATION

The banks operating in Estonia are highly profitable and well capitalised and can cope with very large loan losses. Profitability and strong capitalisation will help banks cover possible loan losses and continue to fund the economy even in difficult economic circumstances. The loan losses at several banks could exceed their current voluntary buffers, but they can also use the buffers imposed by supervisory institutions (see Figure 5[3])[4].

Figure 5. The capitalisation of the banking sector and potential loan losses



* if restrictions last until August
Source: Eesti Pank

To support the resilience of the banks in the difficult economic circumstances, Eesti Pank has set a systemic risk buffer for the banks operating in Estonia and additional own funds requirements for systemically important credit institutions. A 1% systemic risk buffer requirement has applied to banks operating in Estonia since 2016, and Eesti Pank decided in March to release this to allow the banks to act more flexibly given the difficult circumstances. The additional requirement set for systemically important banks derives from their size, their complexity and their interdependence with other participants in the financial system. The requirements apply at 2% to Swedbank AS, 2% to AS SEB Pank, 2% to Luminor Bank AS, and 1% to AS LHV Pank. The banks can also use these buffers to cover their loan losses in difficult times. The supervisory institutions are also allowing more flexibility in the current crisis than previously in calculating write-downs on loans (see Box 2).

3 The loan losses in the figure are based on the calculations described above for non-performing loans. It is further assumed that write-downs of loans will cover 60% of the volume of non-performing loans.
4 The Eesti Pank credit risk model shows that loan losses would be smaller than calculated here. It shows that restrictions remaining in place until August and a contraction of 14% in the economy would cause loan losses of 6% of the risk exposures of the banks.

BOX 1. SUPPORT MEASURES TAKEN BY THE STATE AND THE CENTRAL BANK WILL HELP TO REDUCE THE THREATS TO FINANCIAL STABILITY

Various support measures have been introduced in Estonia that aim to help the economy and businesses survive the difficulties of the emergency situation. The first package of measures, which had an estimated economic impact of at least 2 billion euros or 7% of GDP, was announced by the government on 19 March, one week after the emergency situation was declared. The Riigikogu passed several amendments to laws on 15 April to permit the measures and approved a supplementary budget. The main measures to improve the financial position of companies are loan guarantees, additional credit, and support and compensation paid to companies in the sectors that have suffered most from the introduction of emergency restrictions. The state will provide additional emergency guarantees for existing and new loans through KredEx and the Rural Development Foundation. State guarantees not only support the ability of companies to borrow, but also give the banks greater confidence when they review the repayment schedules for current loan contracts or issue new loans. Additionally businesses can get loans through the state credit line. As a labour market measure, businesses are being given support in paying wages in order to reduce redundancies. This will also reduce the impact on the capacity of households to service their loans and will reduce the threat to financial stability.

Decisions taken by the European Union supplement the measures taken by member states. The European Commission has set aside 1 billion euros in collateral for the European Investment Fund. This will allow the fund to give financial intermediaries 2.2 billion euros of collateral that can be used to help businesses, including those in Estonia, access funding of 8 billion euros. Temporary Support to mitigate Unemployment Risks in an Emergency (SURE) funding was also set up that will give member states loans of up to 100 billion euros to shore up the incomes of workers and help businesses keep employment up.

The Governing Council of the European Central Bank decided in March to add liquidity to the financial system by launching the Pandemic Emergency Purchase Programme (PEPP) of asset purchases worth 750 billion euros. The earlier asset purchase programmes continue as was decided in September 2019 and they were extended further in the middle of March by purchases of 120 billion euros a month until the end of 2020. Monetary policy stimulus supports the liquidity and funding conditions of households, companies and banks, and helps maintain the uninterrupted supply of credit to the non-financial economy. The Pandemic Emergency Purchase Programme added the commercial securities of non-financial companies to the list of eligible assets in the Corporate Sector Purchase Programme, allowing all eligible commercial securities of sufficient credit quality to be purchased. The pandemic asset purchases will end when the Governing Council of the European Central Bank considers that the COVID-19 crisis phase is over, but in any case not before the end of 2020.

The requirements for collateral for monetary policy operations were also eased temporarily. The Governing Council of the European Central Bank decided to raise its own risk tolerance level temporarily for credit operations and reduce the fixed multiplier on valuation haircuts by around 20%. The minimum threshold for credit claims was also reduced.

To provide immediate liquidity support for the financial system of the euro area, refinancing operations will continue under favourable conditions. Eesti Pank continues to provide the commercial banks with liquidity through main refinancing operations and monthly long-term refinancing operations with three-month maturity in the usual manner. All the refinancing operations will be fixed-rate tender procedures with full allotment for as long as necessary and at least until the end of the April 2021 deposit period. It was decided in March to start providing temporarily an additional long-term refinancing operation (LTRO) to give immediate liquidity support until the targeted long-term refinancing operation in June 2020 (TLTRO-III). The interest rate on this LTRO will equal the average interest rate on the deposit facility. The conditions on targeted long-term refinancing operations from June 2020 to June 2021 (TLTRO–III) will be notably more favourable. These operations will broaden the funding options of the banks, supporting lending by banks to the non-financial economy and so easing the credit conditions for the private sector.

BOX 2: FLEXIBILITY IN HANDLING OVERDUE LOANS GIVES BANKS SOME RELIEF

International Financial Reporting Standard IFRS 9 requires banks to set aside a loan loss provision when they make a loan and to increase that provision if the credit quality of the borrower deteriorates. Potential losses on loans are assessed using expected credit loss (ECL). If the credit risk of a borrower increases significantly or if loan repayments are past due 30 days, the loan is moved into a higher risk class, called Stage 2. If the loan is overdue more than 90 days or if the net present value of the loan falls by more than 1%, it is classed as unlikely to perform, or Stage 3. Moving loans into higher risk classes requires the loan loss provisions to be increased. This process can be procyclical, as it pushes banks to reduce their supply of loans during times of crisis.

The framework for overdue loans can be applied flexibly though. The European Banking Authority (EBA) and the European Central Bank have allowed such flexibility in the current circumstances to

limit how temporary losses from overdue loans affect the capital of the banks. Finantsinspektsioon in Estonia highlighted this in a memo sent on 26 March to credit institutions. This flexibility primarily concerns temporary payment holidays or grace periods and the use of state guarantees, and also the use of the IFRS transition period.

The IFRS framework allows some flexibility in assessing the increased credit risk of a borrower. This flexibility can be applied to state support measures, or to temporary payment holidays introduced at the initiative of the bank or the state where the aim is to overcome the temporary widespread liquidity difficulties faced by borrowers because of the coronavirus pandemic. As a significant increase in credit risk needs to be considered over the whole lifetime of the loan, a long-term view of the economic cycle can be used in assessing loan losses and provisions, taking in the recovery of the economy. Temporary delays in payment should in consequence not cause a substantial increase in the probability of insolvency over the whole lifetime of the loan and the loan should not necessarily be automatically moved to the next risk class.

Restructuring of loans using additional state guarantees where the current value of the loan is not reduced allows a flexible interpretation of whether the loan has become unlikely to perform. The European Central Bank and the European Banking Authority do not consider that such reclassification should happen automatically under the current circumstances, and they have also adopted a flexible approach to supervision. Because of the current virus outbreak, the European Central Bank has permitted state guaranteed loans to be given preferential treatment of the sort intended for guarantees given by export credit agencies. This allows banks to apply a provision of 0% for the first seven years for overdue loans with such guarantees.

The Capital Requirements Regulation (CRR) contains a transition period to mitigate the impact of implementing the expected loss principle in the IFRS by allowing banks to add a part of the expected loss in their accounting back to capital[5]. The transition period lasts three years, so the impact on CET1 capital can be reduced by 70% in 2020, 50% in 2021 and 25% in 2022. The European Central Bank recommends that all of the banks it supervises apply the transition period to reduce the impact on capital of the temporary increase in loan losses caused by the virus.

The European Central Bank and the European Banking Authority also recommend that banks do not distribute dividends, so as to maintain their capacity to cover loan losses. Finantsinspektsioon has made the same point as well.

5 The European Commission in its 28 April communication proposed further adjustments to the IFRS 9 transition period, as well as other measures in order to support further the capacity of credit institutions to lend and to absorb losses related to the COVID-19 pandemic.

THE ACCESS TO MARKET-BASED FUNDING FOR BANKS HAS DETERIORATED

The spread of the coronavirus has caused a lot of uncertainty in the outlook for the global economy. Banks have to cope not only with credit risk but also with maintaining sufficient liquidity. This may restrict their capacity to lend and accept applications for payment holidays, though they have so far held a lot of liquid assets. The banks in Estonia largely fund themselves through local deposits, which is quite a stable source of funding under current circumstances. Although people may choose to hold larger amounts of cash themselves during the crisis than they did previously, the deposit guarantee system will ensure confidence in bank deposits. An additional source of funds for several of the larger banks in Estonia is funding from parent banks, which depends not only on the behaviour of depositors but also on financial markets. The other larger banks have set a goal of increasing their share of market-based funding, but it may be difficult for them to do this under current circumstances.

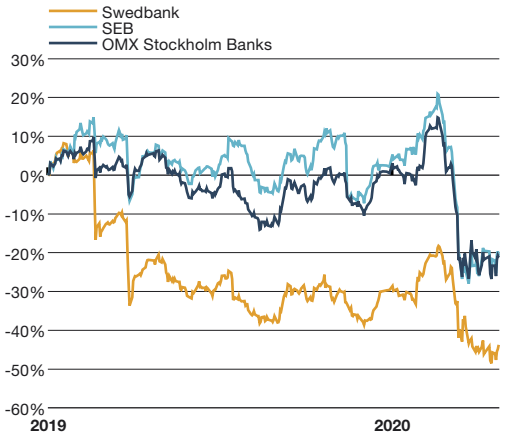
FINANCIAL MARKETS HAVE RAISED THEIR ASSESSMENT OF THE RISKS OF BANKS BECAUSE OF THE MACROECONOMIC UNCERTAINTY

The rapid spread of the coronavirus has made international financial markets extremely volatile. The market interest rates on several safer assets have been volatile since the COVID-19 pandemic was declared, despite the monetary policy stimulus provided by central banks. The sharp rise in uncertainty is even more evident for riskier assets.

In these circumstances the market-based funding conditions of the banks have also deteriorated significantly. No bank in the euro area issued bonds for two weeks after the pandemic was declared in March, and so the total amount issued was 27% lower in the first quarter than a year earlier. Market sentiment has improved a little since the end of March and a few euro area banks issued covered bonds successfully, and in the middle of April the first unsecured bonds were issued. Markets have been volatile even so, and there is a serious danger of market conditions again becoming sharply worse. The interest rate spread on the unsecured bonds of banks over sovereign bonds rose at first to 150 basis points and the spread on bail-in bonds rose to as much as 2000 basis points. The interest spread on covered bonds, which are considered a suitable funding instrument in a crisis, rose moderately to 20-30 basis points.

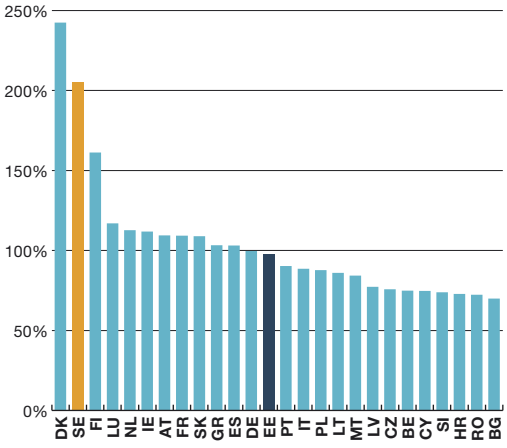
Such volatility in financial markets is a notable risk to financial stability in Estonia even though the banks in Estonia have so far made little use of financial markets for their funding. This is because the funding structure of the Swedish banks that own systemically important subsidiaries in Estonia is market-based to a large extent. The more negative sentiment in the markets about the Swedish banks is shown by the sharp falls in their share prices (see Figure 6). The risk is made worse because the strategy of the Estonian banks is to increase the share of market-based funding.

Figure 6. Change in the share price of banking groups since the start of 2019



Sources: Market data, Eesti Pank calculations

Figure 7. Loan-to-deposit ratio in the European Union as at 31 December 2019



Source: European Central Bank

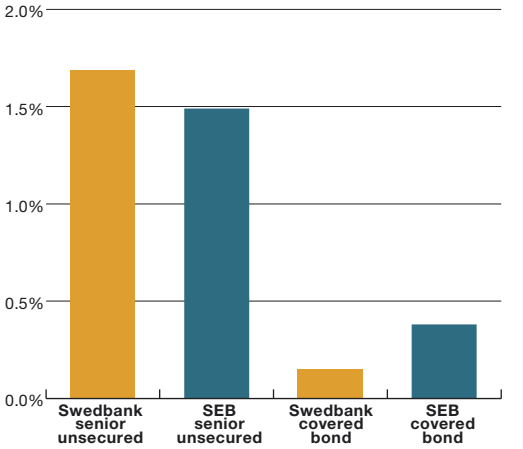
The loan-to-deposit ratio of the Swedish banking sector was 205% at the end of 2019, which means that the banks have taken in less than half as much in deposits as they have issued in loans (see Figure 7). Deposits in the Swedish banks are small partly because households choose to invest their savings in investment and pension funds. At the same time, the debt level in Sweden is high and businesses and households rely quite heavily on bank loans to meet their financing needs. For the banks to be able to meet the demand for loans, they need to access the funds that are not supplied by deposits from financial markets.

Like banks in the euro area, Swedish banks have found that funding conditions have been tightened sharply by the global spread of the coronavirus. Market interest rates on unsecured bonds have risen to the same extent as those of euro area banks to around 150 basis points (see Figure 8). As several large-scale bond programmes mature this year, the banks may face refinancing risk.

The Swedish banking groups get a large part of their market-based funding from covered bonds, for which the conditions have not particularly worsened. As the economic restrictions imposed to stop the spread of the virus have a broad macroeconomic impact though, the conditions for issuing covered bonds may tighten if increased vulnerability appears in the Swedish housing loan market. The banks also get a large part of their funding from unsecured bonds though, and the conditions for issuing those are notably worse already.

The conditions for each individual issue are affected by the general sentiment in the financial markets and by their assessment of the position of the Swedish economy and banking groups. So far the financial markets have backed the Swedish banks. This has been helped by the fairly strong profitability and capitalisation of the banking groups in international comparison. The return on equity of the Swedbank and SEB banking groups has remained at 13-14%, while the average level in the euro area has stayed below 7%. The capital ratio of the Swedish banks is also very good at more than 20%. The capital ratio has been maintained partly because risk weights have been low given the high quality of assets, but the capitalisation of Swedbank and SEB in ratio to total assets is more modest next to that of other banks

Figure 8. Change in the market interest rates of bonds issued



Sources: Market data, Eesti Pank calculations

in Europe. This means that a rise in non-performing loans could make financial markets substantially reduce their assessments of the strength of the banks.

How the crisis caused by the COVID-19 pandemic affects the Swedish economy will impact Swedish banking groups in the near future. In February the Swedish economy was still expected to grow this year and indicators for employment were the highest of the past decade, but at the end of March the Swedish Ministry of Finance was forecasting a downturn comparable to that in the financial crisis in 2009.

The damage caused by the changes in the economic environment may be amplified by structural vulnerabilities that had already built up in the Swedish economy. One of these is the high debt levels of Swedish households, which may make the economy less able to adjust. A fall in the incomes and confidence of households would first of all reduce their consumption of products and services. The problems would then be passed on to the banks as both companies and individuals become less able to service their loans.

To reduce the economic damage caused by the complicated circumstances, the Swedish central bank and financial supervisor have taken measures to support the supply of credit and the financial strength of the banks. The central bank has increased its capacity to provide liquidity support to the banks in US dollars. It has also expanded the list of transaction partners and the list of bonds eligible as collateral. The interest rate on the standing lending facility has been cut to 0.2%, and companies can take loans

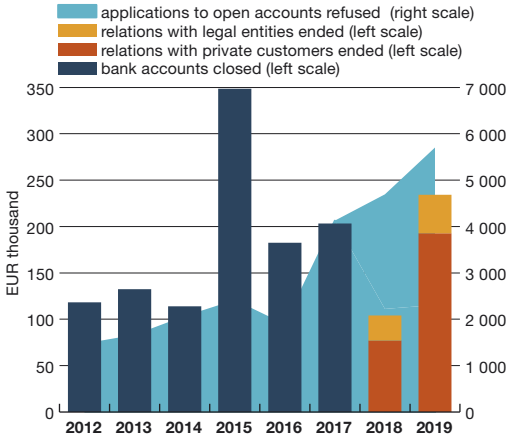
of up to 500 billion Swedish krona with maturity of up to two years at the 0% repo rate through the banks. The purchase programme for bonds was expanded by 300 billion Swedish krona.

The Swedish financial supervisor released its countercyclical capital buffer requirement in March. The banks are still subject to additional requirements derived from their systemic importance and systemic risks. The banks for now do not have to meet the liquidity coverage ratio (LCR) requirement and those that have lost income because of the crisis do not have to meet the amortisation requirements for loans during the year.

Confidence in the Swedish banking groups may be eroded not only by the changes in the economic environment but also by problems in their selection of clients and in risk management. The Swedish financial supervisor started an investigation last year into Swedbank AB and SEB AB because of shortcomings in their anti-money laundering measures. The supervisory decisions published concerning Swedbank in March and the internal report by the bank concluded that risk management at the parent bank and at subsidiaries did not correspond to the risk profiles of some client groups. The investigation helped identify the occurrence of violations, their monetary value, the division of responsibility within the group and between supervisory authorities, and the moves that must be made to prevent such mistakes being made again in future. The Swedish financial supervision authority will publish its investigation into SEB in June. The US supervision authority is also investigating suspicions of money laundering.

The risks to the banks are increased by additional costs from possible fines and requirements to invest in stronger anti-money laundering measures. On top of the financial loss, the banks have also suffered a loss of reputation. Recovering this will depend on how the supervisory requirements and precepts are complied with. Preventing money laundering is now taken seriously and the banks in Estonia have cleaned up their client bases by closing the current accounts of their riskiest clients and becoming more careful about opening accounts for new clients (see Figure 9).

Figure 9. Closures of bank accounts and refusals to open them

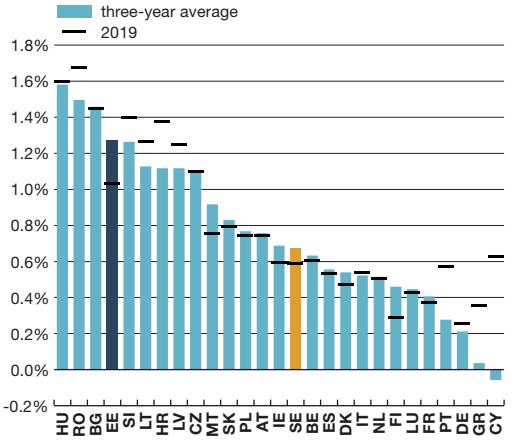


Source: Eesti Pank

THE GOOD LIQUIDITY OF THE ESTONIAN BANKS REDUCES THE RISKS TO THE SUPPLY OF LOANS

Banks in Estonia mainly fund themselves through domestic deposits. The Estonian banks that are part of international banking groups are quite independent, but their liquidity and capital positions are affected by group-level decisions. Being part of a larger banking group helps to minimise country-specific risks, but also means that the funds in Estonia may if necessary be moved to a different part of the group, with the consequence that the supply of credit in Estonia may be reduced or financing the economy may become more expensive.

Figure 10. Return on assets of banks in the European Union



Source: European Central Bank

The banking groups base their management of resources on the broader operating environment of the group, and so the danger remains that if Swedish banking groups become less able to access funds from financial markets on favourable terms, the activities of their Estonian units may be affected. The return on total assets of the Estonian banking sector has so far remained above 1%. This is a relatively high figure next to the Swedish average, which has been between 0.6% and 0.8% in recent years (see Figure 10). It will be important in future how the different parts of a group cope with the difficult economic conditions and what decisions are taken in the local units of groups and at the level of the whole group.

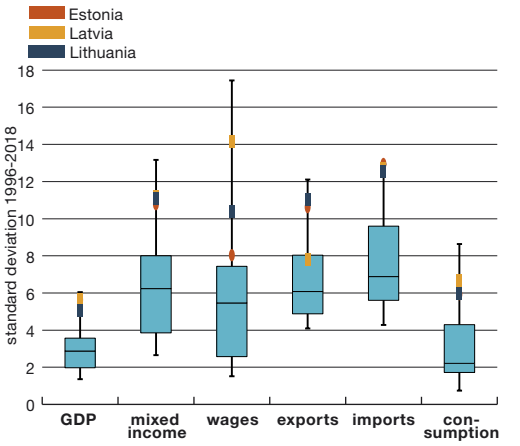
THE RISKS IN LATVIA AND LITHUANIA INCREASE THE DANGERS TO FINANCIAL STABILITY IN ESTONIA

Financial stability in Estonia is affected by the risks in the Latvian and Lithuanian economies and banking sectors. The structural changes to the Luminor group at the start of 2019 increased the total assets of the Estonian banking sector 1.4 times, while the share of the total consolidated assets of the Estonian banking sector that were in the Latvian branches of Estonian banks increased to 14% and the share in the Lithuanian branches increased to 21%. Dividing the Luminor loan portfolio between the three Baltic states reduces the concentration of the banking group towards vulnerabilities in only one country, but the factors that affect the economic climates of the three countries are generally the same. This means that events in the Latvian and Lithuanian economies will now affect the Estonian banking sector more than they did before. Loans issued by the banks in Estonia made up around a quarter of the total loans in the Latvian and Lithuanian markets.

THE SPREAD OF THE VIRUS HAS CAUSED SIMILAR ECONOMIC CONCERNS IN ESTONIA, LATVIA AND LITHUANIA

Earlier economic shocks have hit Estonia, Latvia and Lithuania in similar ways and at the same time. As small and open economies, all three of the Baltic states have economic figures that are much more volatile than the average in the European Union (see Figure 11). A substantial contraction of the economy is expected in all three countries in the near future as a consequence of the outbreak of the coronavirus, and this means the risks to the national financial sectors are at elevated levels.

Figure 11. Volatility of the Baltic economies and those of the rest of the European Union



Sources: Eurostat, Eesti Pank calculations

The Latvian and Lithuanian economies were performing well before the current uncertainty arrived. The first signs of slowing growth had been seen in the Latvian economy at the end of 2019, but the Lithuanian economy maintained its strong momentum. The Latvian economy grew by 2.2% last year, though the growth was down to only 1% in the final quarter of the year. Increasing uncertainty at home and in trading partners reined back domestic consumption and exports in Latvia. The profitability of the financial sector was also notably lower than in earlier years. The high employment rate, strong wage growth, low inflation and tax changes in Lithuania all helped domestic consumption stay strong. Despite forecasts indicating a softening of international trade, the Lithuanian exporting sector continued to perform well and the Lithuanian economy grew by 3.9% in 2019.

The banking sectors in both Latvia and Lithuania were well capitalised at the end of 2019. The average capital adequacy of the banks in Latvia was around 20% in the third quarter of 2019 and in Lithuania it was 19%, while the loan-to-deposit ratios of 85% in Latvia and 88% in Lithuania were well below 100%. The share of loans that were overdue continued to decline, to 5% in Latvia in 2019 and 2% in Lithuania. Of most note was the rapid growth of 8% in loans issued to private individuals in Lithuania.

The main focus of the Luminor group last year was on restructuring and it entered 2020 in a fairly strong financial position. The largest operating unit of Luminor is in Lithuania and the Latvian branch is also systemically important, meaning that interruptions to the operation of either would be very significant for the financial system and non-financial economy of the countries they operate in. Although there are small differences, the loan-to-deposit ratios of the Luminor units are quite similar. The bank was most active at taking in client deposits in Lithuania in 2019, while the loan portfolio shrank in size in all three Baltic states. The total loan-to-deposit ratio of the bank fell over the year from 127% to 100% and the capital adequacy of the group was 19.7% in the final quarter of 2019[6].

6 Luminor Bank AS, interim report Q4 2019.

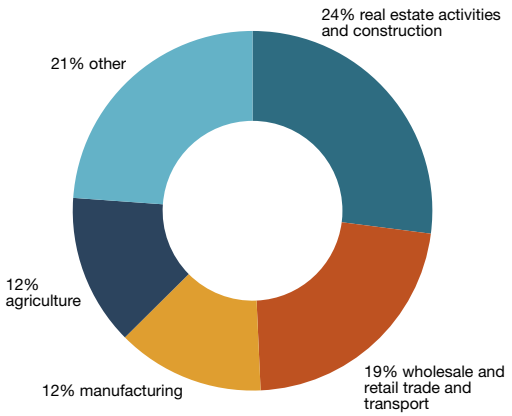
How the shock provoked by the spread of the coronavirus affects the Luminor portfolio will depend on how long it lasts and how broadly it spreads across sectors. The sectors that were hit first were tourism, transport, accommodation and food service, and culture and entertainment, which make up a fairly small part of Luminor's portfolio of loans to corporate clients. The closure of shopping centres and increasing uncertainty have put pressure on retail trade, and loans to that sector make up 19% of the corporate client portfolio of the Luminor group. As the shock spreads it is affecting the manufacturing sector, which accounts for 12% of the Luminor portfolio. The largest share of loans in the portfolio are related to real estate, as some 24% are to companies in real estate activities and 4% to construction companies (see Figure 12).

If unemployment rises and incomes fall, the small financial buffers that households have will not provide much relief. The liquid assets of households in Latvia and Lithuania are quite modest as a ratio to GDP, at below 40% in 2018. Loans to private individuals are a little over half of the total Luminor portfolio, accounting for 49% in Estonia, 55% in Latvia and 58% in Lithuania. The Lithuanian Seimas passed a law to ease the emergency that allowed creditors to grant payment holidays of three to six months to people who have lost more than one third of their income through no fault of their own. The government there has also promised to support companies by guaranteeing the income of furloughed employees to the value of the minimum wage.

Luminor continues to fund itself mainly from deposits, though it has steadily increased its independence from its parent banks and turned to other sources of funding (see Figure 13). Quite a large part comes from bonds from the earlier activities of its parent banks. In March 2020, Luminor issued a covered bond for 500 million euros backed by Estonian mortgages. The first issue took in funds with a negative interest rate. Given the circumstances, any further issues may prove more difficult and more expensive. If it needs to, Luminor can turn to the credit lines of its parent banks and to the liquidity support provided by Eesti Pank.

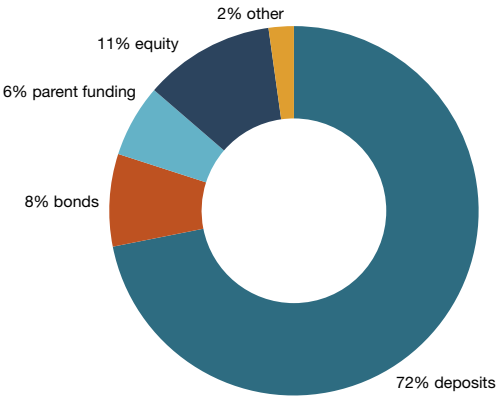
The Lithuanian central bank released the 1% countercyclical capital buffer to ease the impact of the economic shock. Stress tests by the Lithuanian central bank show that the capital adequacy of the banks there would fall to 11.3% in a crisis similar to that of 2009, though this would still leave them above the minimum required level. The governments of Latvia and Lithuania, like the Estonian government, have announced wide-ranging packages of economic assistance, which should reduce the risks to the financial sector.

Figure 12. Business loans of the Luminor group



Source: public reports

Figure 13. Funding of the Luminor group



Sources: public reports, Eesti Pank calculations

THE LUMINOR GROUP IS A SYSTEMICALLY IMPORTANT BANK

The structural changes at the Luminor group expanded the risks from the Latvian and Lithuanian economies to financial stability in Estonia, partly by increasing the amount of deposits and investments that the Estonian Guarantee Fund must cover. Before the current economic crisis, the Latvian and Lithuanian economies and the Luminor group were

all in strong positions. The actual final impact of the crisis will depend on how long it lasts (see The capacity of companies and households to service their debts may be seriously harmed). Eesti Pank has classed Luminor as a systemically important bank and has applied a systemically important institution buffer rate to it, which applies at the consolidated level in other Baltic states too. On top of the macroprudential responsibility that the location of Luminor's head office in Estonia brings, if the bank were to need any liquidity assistance, it would fall to Eesti Pank to provide it.

The risks added by the establishment of the Luminor head office are reduced by Estonia's participation in the European Banking Union. The size of Luminor means that it comes under the direct supervision of the European Central Bank and the Single Resolution Mechanism.

IMBALANCES MAY ARISE IN THE REAL ESTATE MARKET

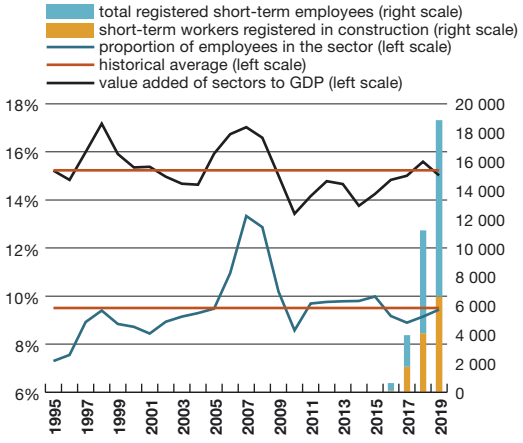
The drop in economic activity caused by the restrictions put in place for the coronavirus threaten to reduce demand for real estate substantially. This situation is alleviated by the real estate market being in a much better position than it was before the previous crisis. Prices were rising in the residential property market until March this year in line with the growth in wages and so the debt burden of households was not increasing. Demand for commercial property from the business sector remained, and so there was little commercial real estate available. With the economy cooling sharply and confidence dropping, households are no longer ready to buy or rent housing at the earlier rate. The restrictions have reduced or stopped activity in several parts of the business sector creating problems in rent payments and in servicing loans for commercial real estate.

THE CONSTRUCTION AND REAL ESTATE SECTORS WERE ACTIVE BEFORE THE CRISIS, BUT IN LINE WITH OTHER ECONOMIC DEVELOPMENTS

The trends in the construction and real estate sector have generally been aligned with the development of the rest of the economy in recent years. The cycle and the development of the construction and real estate sector are reflected by the value added of the sector (see Figure 14). The value added of the sector as a ratio to GDP has been close to its historical average in recent years. Other indicators also suggest that the level of value added in construction and real estate has been close to balance. The value added to GDP of the construction sector in Estonia has been a little higher than the average for the euro area, but at the same level as in the other two Baltic states. This may be because new and eye-catching commercial real estate and other infrastructure continues to be developed.

Employment in construction and real estate has been largely in line with developments in the economy. Employment in real estate has always been very stable, but it has been quite volatile in construction (see Figure 14). However, the growth in employment in construction has not been particularly different from the growth in employment throughout the business sector and has followed the same general direction. A relatively larger part of the working population are employed in construction and real estate in Estonia than on average in the European Union. Employment in construction has been affected in recent years by short-term employees who have come from foreign countries and who officially numbered more than 6600 at the end of 2019, or some 13% of the employees in the construction sector (see Figure 14). As some short-term workers want to leave Estonia because of the coronavirus, there may be difficulties in finding workers, and this could be made worse by restrictions or illness keeping workers at home.

Figure 14. Annual growth rates of banking sector loans and leases to businesses and households

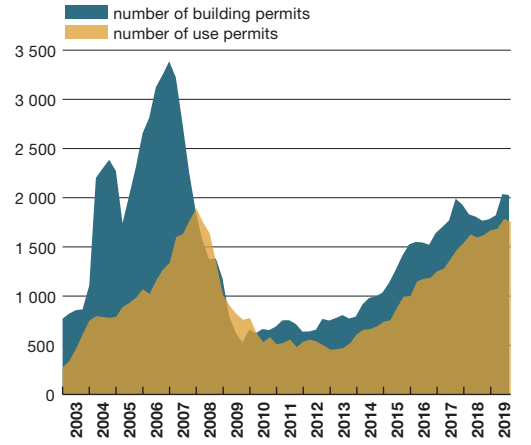


Sources: Statistics Estonia, Eesti Pank, Police and Border Guard Board

The housing market

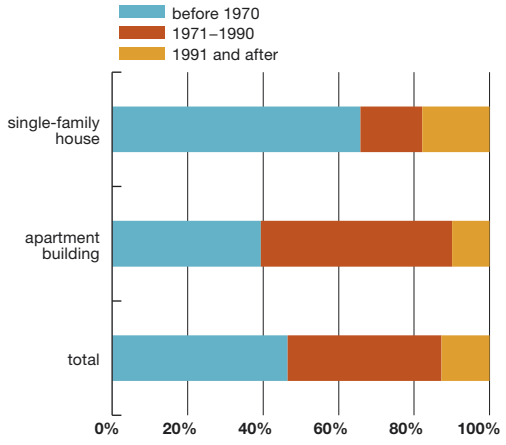
There was a lot of activity in the housing market before the expected drop in demand, though developers were still being more cautious than before the previous crisis. The number of transactions rose in 2019 and was high given the small size of the market. More and more building and use permits were issued for building residential property, indicating clearly that housing development was progressing strongly and showing no signs of slowing down (see Figure 15). The number of permits for use was comparable to what it was before the previous crisis. This can be explained by the general rise in living standards that has allowed an increasing share of households to buy their own home. Investment in housing has increased as a share of GDP in recent years, but it has not reached the level it was at prior to the previous crisis. As the extension of the emergency is likely to reduce consumer confidence, the growth in the number of transactions and in housing loans may lose the strong momentum it had gained. This may happen after some delay as activity should be

Figure 15. Four-quarter moving average of building and use permits for dwellings



Source: Statistics Estonia

Figure 16. Proportion of dwellings by age from the 2011 census data



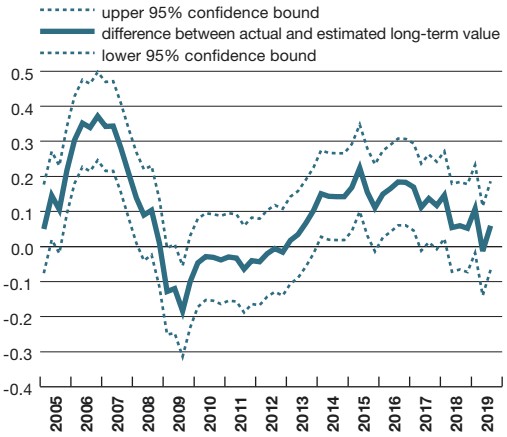
Source: Statistics Estonia

maintained by new developments for which binding contracts have already been signed.

Residential property in Estonia is generally quite old and outdated and this has encouraged housing development. Data from the census of 2011 show that only a little over 12% of all residential space had been built after 1991. Most of it was built in 1971-1980 and in the decades immediately before and after that (see Figure 16). The age of the housing stock also affects the statistics on transactions, which show the number of transactions with residential property built after 1991 increasing but still accounting for a little below a third of all transactions. This may be the reason why housing investments have increased as a share of GDP in Estonia in the past decade to reach the European Union average in 2019. In total 5.4% of residential space was added in the years 2012-2019.

Housing prices were in general in line with the development of the economy. The Eesti Pank model for overvaluation of real estate shows that housing prices were close to equilibrium at the end of last year (see Figure 17). The square metre price for housing did rise, but so did household incomes and the ratio of gross wages to the square metre price has held quite stable since 2009. Before the previous crisis the square metre price exceeded gross wages substantially. This meant households then were in a much worse position than now as the ratio of the amount borrowed to incomes was higher and a relatively larger part of incomes were used for servicing the loan. As demand for housing has fallen in the current

Figure 17. Over or undervaluation of residential real estate in the Eesti Pank model

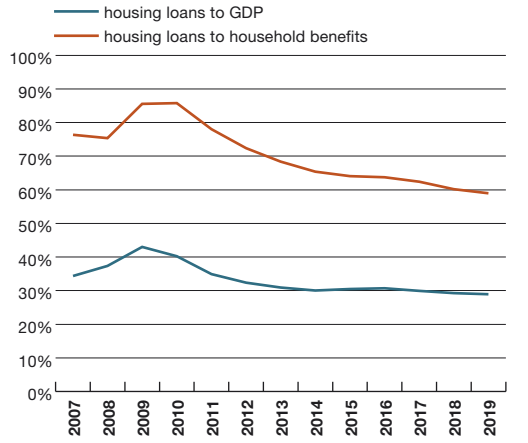


Note. A value of 0.1 denotes overvaluation of 10%
Sources: Statistics Estonia, Eesti Pank

economic climate, it may be that real estate prices will decline to some extent.

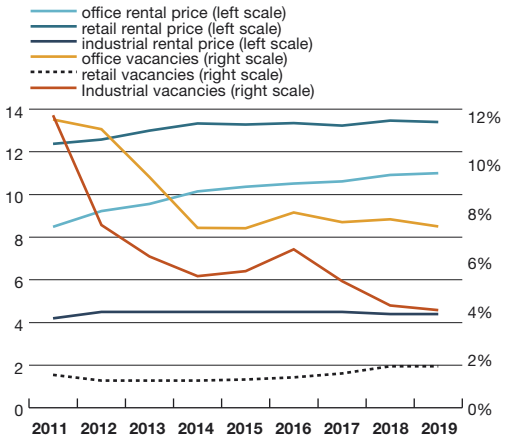
Strong economic growth has helped the debt burden of Estonian households to fall in recent years. The relatively fast growth in housing loans has not been faster than the growth in the economy (see Figure 18). This shows that housing development has not been substantially driven by borrowed capital. The resilience of households has been increased by higher incomes, which mean that people are much better placed to take a new loan or to service their existing loans than they were before the previous crisis. The liquid financial assets of households are also now larger than they were before the previous crisis. It is still expected though that employees working in sectors that have been hit hardest by the crisis will have

Figure 18. Household debt



Sources: Statistics Estonia, Eesti Pank

Figure 19. Average vacancy rate and rental price in Tallinn by type of commercial real estate



Source: Colliers International Estonia

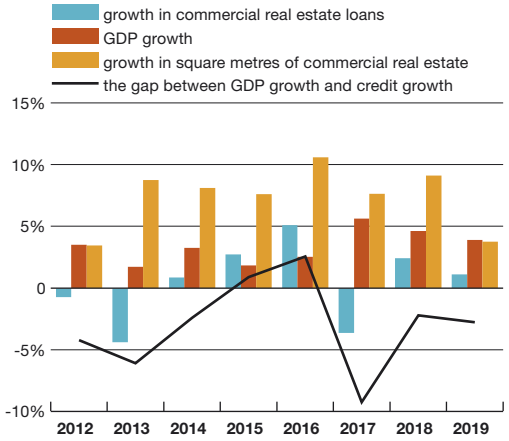
difficulties in servicing their loans and the share of non-performing housing loans will increase.

The commercial property market

Demand for new commercial property held up until the end of last year and vacancy rates were low, but in the new economic circumstances real estate owners have to be ready for rapid changes. Although quite a lot of new commercial property was added to the market in recent years and the number of square metres of commercial real estate was growing at a noticeably faster rate than the economy, rental prices did not fall and vacancies did not increase (see Figures 19 and 20). The average return on commercial property has also remained the same for all types of property in recent years. The economic environment drove the need in the business sector for larger and better-appointed properties, but the deterioration in the environment means that property owners will have to expect an increase in vacancies and will probably have to cut rental prices at least in the short term or grant payment holidays.

The real estate and construction sector loans made up a relatively small share of the loan portfolio of the banks in historical terms. Loans, leases and factoring for the sector made up a little less than 17% of the portfolio of the banks, which is quite small given what it has been in previous years. Although the real estate and construction sector takes a large share of loans to the business sector, that share was its smallest of recent years in 2019 at below 35%. The growth in loans, leases and factoring to real estate and construction was also moderate and did not indicate that a large supply of credit had led to excessive development in the real estate market or pushed prices to rise at an unreasonably fast rate.

Figure 20. Growth in commercial real estate loans, square metres and GDP



Sources: Statistics Estonia, Colliers International Estonia, Eesti Pank

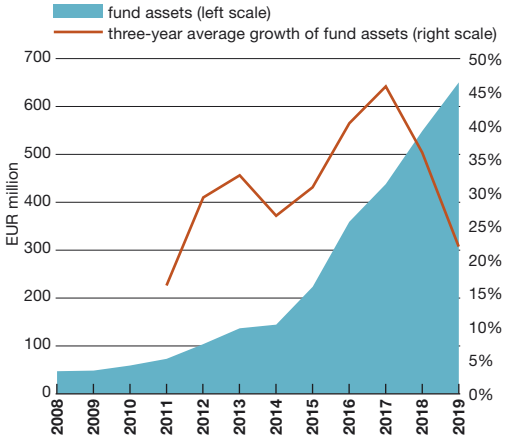
Although there was a lot of new development of commercial real estate, it was not particularly leveraged through loans. The growth of commercial real estate loans has generally been slower in recent years than economic growth (see Figure 20). This meant the development of commercial real estate using own funds increased, and so construction and real estate companies took on a larger part of the development risks themselves. This meant the leverage of companies in construction and real estate was reduced and the level of equity raised. This has improved the resilience of the sector, though it may

mean that riskier sites have started to be developed. During the previous economic downturn, it was companies in construction and real estate that especially fell into difficulties, and non-performing loans to them grew fastest and to the highest level. It must be remembered in consequence that despite the stronger position of companies in the sector, those with smaller buffers and more leverage have problems when tenants are not able to pay or when buyers or tenants cannot be found for development projects.

The operation and management of the commercial real estate market has become concentrated in the past decade in the hands of the larger and more experienced companies, which should reduce risks. This can be illustrated by the substantial increase in the assets of real estate funds in the commercial property market, which shows that the companies in the market have become larger (see Figure 21). Alongside the real estate funds have been companies that have acquired a significant market share and increased their role in the commercial property market. This means that a larger part of the activity in the market has become concentrated in the hands of specialists who have more knowledge and experience of assessing the risks in the market. There are now fewer inexperienced companies in the market than there were before the previous crisis and the companies now in the market should be better able to cope with difficulties.

Tenants renting commercial real estate have in recent years been moving ever more towards exclusive properties that better suit their needs. There has been ever more development of high quality office properties in the town centre or other prestigious locations. This is partly because there was previously not much office space in town centres and prestigious locations in Estonia, and partly because the economy was doing quite well, which allowed companies to move to better appointed and more expensive properties. As the crisis unfolds it may be expected that it will be the owners of the more expensive properties that will see most difficulty in holding on to their tenants.

Figure 21. Growth of real estate funds



Source: Eesti Pank

BANKS ARE BETTER PREPARED FOR THE RISKS IN THE REAL ESTATE SECTOR

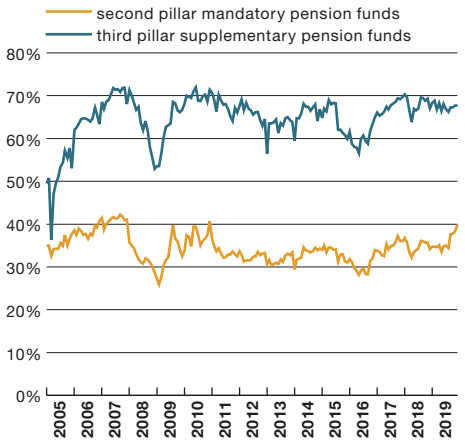
The resilience of the banks to problems stemming from real estate is better than it was in the previous crisis. There has not been the sort of real estate loan boom that preceded the last crisis and so the banks are less exposed to risks from real estate. Neither has the crisis been caused from within the banking sector and the banks are in a better position to cope with the crisis.

Unlike before the previous crisis, several measures have now been taken to increase resilience. Requirements have applied since 2015 to issuing housing loans and they have helped make households more resilient and reined in any excessively fast growth in housing loans. A risk weight floor of 15% for mortgages was introduced last autumn for banks that use the internal ratings method, and that has helped stop those banks underestimating the risks from mortgages.

APPENDIX 1. INVESTMENT IN THIRD PILLAR FUNDS GIVES AN UNDERSTANDING OF VOLUNTARY PENSION SAVING

Saving in the third pillar is voluntary under the current pension system and is much more flexible than the mandatory second pillar. The conditions for those joining mandatory pension funds and how much they must invest are clearly defined, but with third pillar funds, every pension saver can freely choose whether, how, and how much money to save. Income tax relief is available for third pillar investments of up to 15% of gross annual income with a ceiling of 6000 euros in order to encourage investment in third pillar pensions. As the government coalition plans to reform the second pension pillar, analysing the third pillar gives an idea of how long-term pension saving would look in a fully voluntary system.

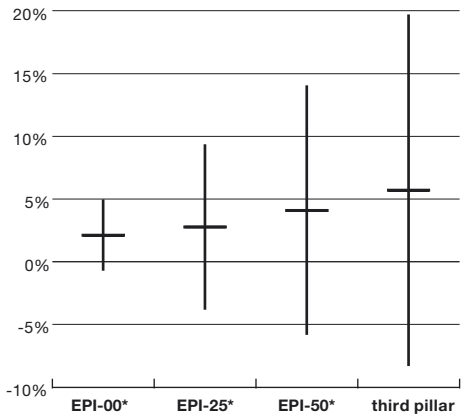
Figure A1.1. Share of equity investment exposures in pension funds



Source: Eesti Pank

So far, many fewer people have contributed voluntarily to the third pillar than have done so to the mandatory second pillar. As at the end of 2018, around one eighth as many people were saving money in the third pillar as in the second, since 10% of the working age population were doing so, meaning that the take-up of voluntary pensions has historically been relatively meagre.

Figure A1.2. Average annual return and standard deviation of pension funds, 2003-2019



*Second pillar indexes
Sources: Pensionikeskus, Eesti Pank calculations

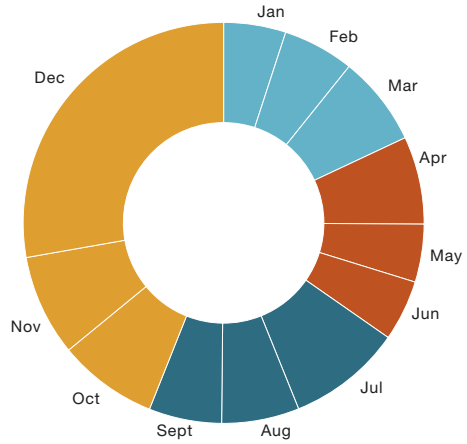
Investors in the third pillar are wealthier than the average. Contributors to the third pillar in 2018 had a gross average monthly income of 1833 euros[7], which was almost a third higher than the average wage. The investment profile of third pillar savers is also different. Although third pillar savers can choose between funds with different risk levels like second pillar savers can, they have had higher risk appetites and put more money into funds exposed to shares. At the end of 2019, 40% of second pillar funds and 68% of third pillar funds were invested in shares (see Figure A1.1). The higher level of risk has meant that the returns on third pillar funds have varied more than the average, but over a longer period their return has also been higher than the average (see Figure A1.2).

Payments into third pillar funds have been very seasonal. The amount of money invested in third pillar pension funds has been very uneven across the year in the past 16 years. A large share of payments into third pillar funds are made in the fourth quarter, especially in December. Over 40% of the total net contributions in each year were made in the fourth quarter in 2003-2019, and 28% of them were made in December (see Figure A1.3). The concentration of payments at the

7 Pension statistics review by the Ministry of Finance, 2019.

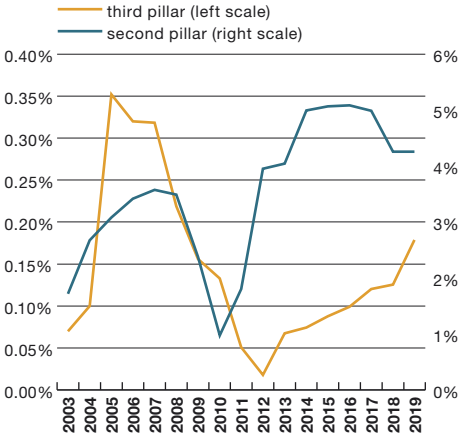
end of the year may reflect the desire of pension savers to claim their tax rebate on third pillar contributions quickly. This makes third pillar investment significantly different from mandatory pension fund investment, as saving in those funds happens evenly across the year. Concentrating a relatively large part of the saving in one quarter does not necessarily have a significant impact on the total value of the assets over the long term, as it is estimated that if the investments made in 2003-2019 had been equal in each month, the total value would be different from the current amount by only 1%, but this habit does show a clear difference from mandatory savings behaviour. Voluntary saving requires much stronger self-discipline from the saver, and the irregularity of contributions may indicate the danger that savers facing difficulties in the fourth quarter may decide to save less for their pension, and so the total volume saved over the year would be reduced.

Figure A1.3. Distribution of net inflow of third pillar funds across months, 2003-2019



Sources: Pensionikeskus, Eesti Pank calculations

Figure A1.4. Ratio of net pension fund contributions to household wages



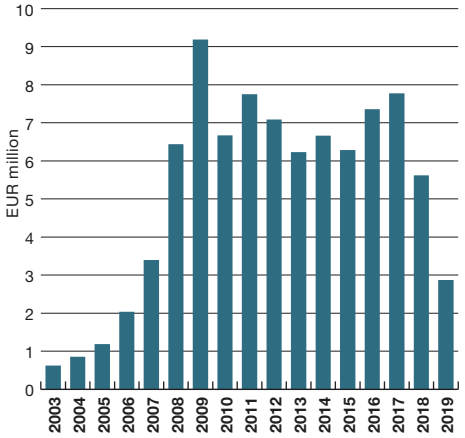
Sources: Statistics Estonia, Pensionikeskus, Eesti Pank calculations

After the previous recession, the net contributions to third pillar funds recovered later, more slowly and by less than contributions to mandatory pension funds did. Contributions to mandatory pension funds depend directly on incomes, but third pillar payments also depend on how ready and willing an investor is to put money aside at a given moment in time. Net payments to the second and third pillars fell as a ratio to wages at almost the same time in the previous economic crisis, but net payments to the second pillar started to grow again notably earlier than those to the third pillar (see Figure A1.4). If the government had not stopped payments to the mandatory pension fund during the crisis, mandatory pension savings would have remained stable and the difference from third pillar savings would have been even greater. Something similar may happen now, as the government has decided it will suspend payments by the state to the second pillar because of the economic difficulties caused by the coronavirus. Such a decision taken when asset prices are cheaper as markets fall could have a negative impact on the future pensions of savers, especially if they take money out from the third pillar at the same time.

Early withdrawals from third pillar pension funds increased during the previous global financial crisis just as securities prices dropped sharply (see Figure A1.5). It was not possible to withdraw money from mandatory pension funds in advance of retirement, but it was possible to do so from third pillar funds. This meant though that when the prices of financial assets dropped sharply in the financial crisis, some pension investors may have sold their pension fund units early and at a loss because of psychological pressure as well as for other reasons. This was not the best decision in the long term though given that third pillar investments are generally made for long-term saving for retirement.

The aim of the Estonian pension system is to help retired people maintain their earlier living standards. The government wants to make saving in the second pension pillar voluntary, which means that people will need to take greater personal responsibility for saving for their pension. The experience of the third pension pillar so far shows that only a few people save voluntarily in the pension system and so if the second pillar becomes voluntary, even more people will be reliant only on the state pension. If they do save voluntarily, people are not always consistent and when facing economic difficulties they often stop saving. The outcome of this is a much smaller pension. These behavioural factors show the advantage that mandatory saving has over voluntary saving in helping the Estonian pension system to achieve its aim much more successfully.

Figure A1.5. Disbursements from the third pillar funds for people aged under 55



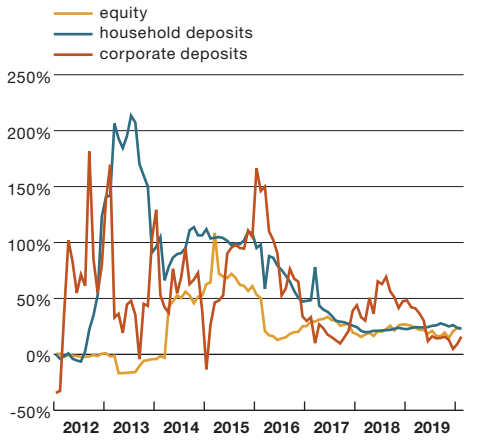
Source: Ministry of Finance

APPENDIX 2. NON-BANKING FINANCIAL INTERMEDIATION HAS GROWN RAPIDLY

The risks from savings and loan associations are increased in difficult economic circumstances.

Savings and loan associations were growing rapidly before the restrictions relating to the coronavirus pandemic were introduced. Deposits taken in and loans issued were up some 20-25% on a year earlier in early 2020 (see Figure A2.1). The rate of growth was notably slower than four or five years ago though. Deposits come mainly from individuals, but loans are mainly issued to businesses. Savings and loan associations are not systemically important for the Estonian financial system as their assets are less than 1% of those of the Estonian banking sector and around 0.5% of the total economy. In early 2020 they had around 15,000 members.

Figure A2.1. Yearly growth in the deposits and equity of savings and loan associations



Source: Eesti Pank

Savings and loan associations are less regulated than other parts of the financial sector, the requirements that apply to them are less strict, and there is no state supervision over them. By law the members of the association and depositors in it must supervise it. The interest rates for depositors in associations are often higher than those of credit institutions, but the higher interest rate reflects the higher risk of some or all of the deposit being lost. There is no state guarantee for deposits in savings and loan associations and so the depositors have much greater responsibility for assessing risks.

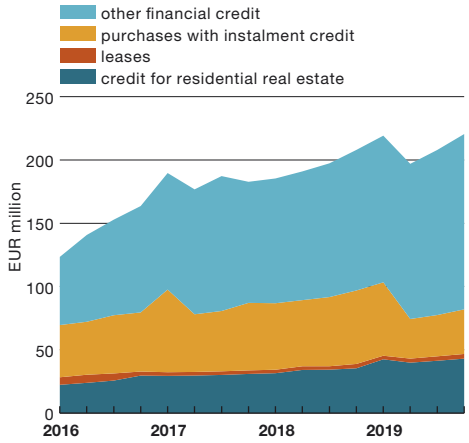
A sharp deterioration in the economic environment can substantially worsen the quality of the assets of savings and loan associations. Depositors may also want to withdraw their deposits at the same time. The associations have generally been profitable in the past decade, but they have not built up large buffers. The stock of cash and bank deposits in total assets was around 14% on aggregate at the start of 2020 and equity was 19%, but these were distributed unevenly across associations. The savings and loan association is a cooperative form where the association is owned by its depositors and members and they share responsibility for the ability of the association to manage financially. Like banks, associations should refrain from withdrawing capital during a crisis.

Creditors that are not connected to banks provide riskier loans to households

The Creditors and Credit Intermediaries Act that was passed in 2015 requires all creditors and credit intermediaries to apply for authorisation from Finantsinspektsioon as of 21 March 2016. The act covers loans to private individuals, including instant loans with high interest rates and short repayment deadlines, instalment loans and leases. Leases are mainly offered in Estonia by leasing companies that are in the same consolidation groups as banks, while other financial products are offered by creditors that are not connected to the banks. The act was designed to clean up the market for financing for private individuals, harmonise the rules for companies providing financing, and prevent irresponsible lending.

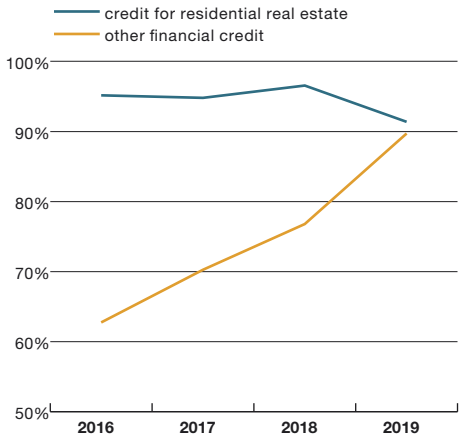
The Creditors and Credit Intermediaries Act reduced risks in the consumer credit market. At the end of 2014 the loan stock of instant loan companies was estimated at around 190 million euros, but this had shrunk to 85 million euros by the end of 2016 after the act had come into

Figure A2.2. Balance of consumer credit issued by non-bank creditors



Source: Finantsinspektsioon

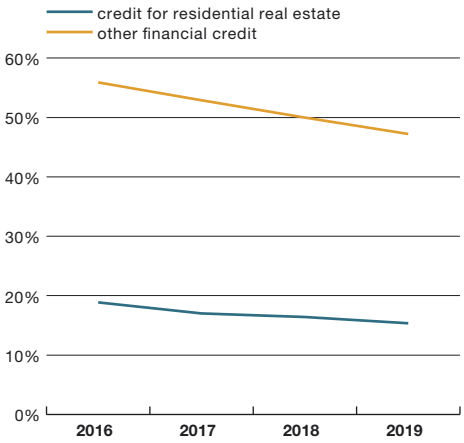
Figure A2.3. Share of loans with a maturity of more than one year in loan turnover



Source: Finantsinspektsioon

force. The total stock of consumer credit issued by creditors not connected to the banks has still continued to grow strongly in recent years, and by the end of 2019 it was 220 million euros[8]. As the stock of loans and leases issued by the banks exceeds 10 billion euros, the amount lent to private individuals by creditors not connected to the banks remains small despite its rapid growth.

Figure A2.4. Average cost of credit



Source: Finantsinspektsioon

It is still important for financial stability purposes to monitor the activities of creditors not connected with the banks as the loans that they issue to private individuals may be among the riskiest of all loans. Although the act reduced irresponsible lending by the instant loan companies and the risk of borrowers falling into a spiral of debt, creditors are still used most commonly when bank loans are no longer available. The consequence of this could be borrowers taking on more financial liabilities than they can manage. If there are problems, both the creditors and the banks could suffer losses.

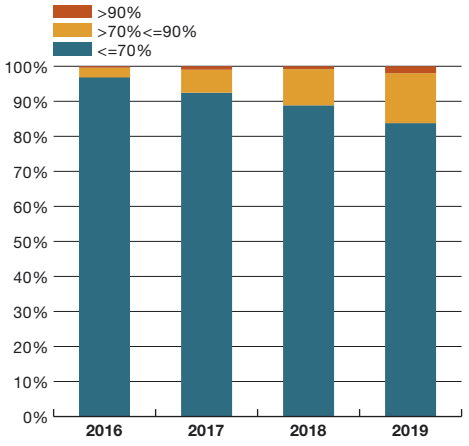
Over 60% of the stock of loans issued by creditors not connected to the banks is in the form of other monetary credit, which means unsecured small loans. Around a fifth is in instalment credit and leases and the rest is credit connected to residential real estate assets (see Figure A2.2).

The conditions on loans issued by creditors have been eased in recent years, posing additional risks. There has been notable growth in the share of loans issued with a maturity of more than one year (see Figure A2.3), while the annual percentage rate on the loans has fallen (see Figure A2.4). Loans issued by creditors are still much more costly to borrowers than bank loans are as the credit risk of those loans is also higher. The share of loans with a high loan-to-value ratio has increased among loans connected to residential real estate assets (see Figure A2.5).

8 The loan stock contracted at the start of 2019 as Koduliising AS received an authorisation to operate as a credit institution and became Holm Bank AS.

That loans issued by creditors are riskier is also indicated by the larger share of non-performing loans. This share is much larger for loans issued by creditors than it is for bank loans. By the end of 2019, 2.8% of loans connected to residential property were more than 60 days overdue, and 5.2% of other loans were. The same figures for loans issued by banks were 0.3% and 1.2%. If the coming recession should leave people in a worse financial position, the quality of loans issued by creditors may deteriorate markedly more quickly than the quality of bank loans.

Figure A2.5. The share of loans with different collateral ratios in the turnover of credit related to residential real estate



Source: Finantsinspektsioon

There are risks in lightly regulated crowdfunding

The barriers to entry for investment in crowdfunding are low and the profile of the average investor has become quite diverse. Relatively low service fees mean that small amounts of money can be invested at a time in loans to both private individuals and businesses and in both corporate equity and trade credit. Promised returns range between 10% and 15%, but in some cases they exceed 25%. Crowdfunding is often described as a suitable platform for beginners in investing. This means there may be more investors who have little experience among the investors in crowdfunding. It is good to note that groups bringing together small investors have appeared in Estonia to give investment advice and highlight the importance of maintaining personal financial buffers.

A Best Practice has been created for the Crowdfunding industry in Estonia[9] but crowdfunding is still little regulated, and so the rules can be confusing, there is a lack of investor protection, and those seeking funds are not obliged to report regularly on their financial position. The majority of crowdfunding companies operating in Estonia allow legal entities to access funds but do not provide financing in their own name, rather by helping parties to come together. In consequence crowdfunding companies do not have to have an authorisation from Finantsinspektsioon to operate as a credit intermediary and nor are their activities covered by the Creditors and Credit Intermediaries Act. Misunderstandings may arise if the user conditions allow the terms of funding and the maturities to be changed during a project.

International research into crowdfunding has identified several weak spots. The information crowdfunding investors have on the solvency of borrowers and their previous payment record and on the actual goals of projects is much more limited than that which credit institutions have. Companies applying for equity funding are often in the start-up phase and so they do not have a long enough history to let an investor take a thoroughly considered decision. The platforms mainly show information on how much investors have already put into the project. In an environment of such asymmetric information, investors look alongside the limited financial information at softer indicators and consider the behaviour of other investors when making investment decisions[10]. The lack of information can also make it harder to identify the actual risk levels of borrowers. The average interest rate may turn out to be higher and push the best borrowers out of the platform, leaving borrowers with higher risk on the platform[11]. Although it is recommended to spread investments widely in order to minimise risks, this may not offer sufficient protection if all the investments end up concentrated in similar types of project. It may equally be that crowdfunding

9 http://www.financeestonia.eu/wp-content/uploads/2016/02/Crowdfunding-Best-Practice.pdf.
10 Zhang, J., Liu, P. (2012). Rational herding in microloan markets. Management Science, 58(5), 892-912.
11 Käfer, B. (2016). Peer-to-Peer Lending – A Financial Stability Risk Perspective.

is favoured by projects that for some reason have been unable to get financing from the banks or from other traditional sources.

It is necessary in an economic crisis to consider the additional risks on top of the credit risks that are similar to those of traditional investment. There are often liquidity restrictions in crowdfunding as it may not be possible to terminate loan contracts or to sell participation in a secondary market without substantial losses. If a large number of transactions appear in the secondary market all at once, the platform may become overloaded and may not be able to cope technically. Several crowdfunding platforms have promised that client assets will be protected even if the borrower or the platform falls into difficulties or ceases trading. It is hard to forecast whether such promises will be kept in a deep recession.

Different platforms have reacted differently to the economic problems that have started in 2020. Although prices have fallen a little, there has been no great wave of selling of equity investments. Investors rather believe that companies intend to continue operations in the longer term. Meanwhile, platforms lending to private individuals have seen more rapid selling.

Crowdfunding is an innovative form of finance and it is hard to forecast how the crisis will affect its functioning. If the crisis deepens, both companies and private individuals who have sought funding from platforms may fall into difficulties, as may the platforms themselves. The biggest of the crowdfunding platforms in Estonia are involved in the real estate sector, which is very dependent on the business cycle, and where the loan portfolio of a little under 1 million euros is small at below 1% of the credit exposures of the banks secured by real estate. The value of the projects funded is 800,000 euros, which has been provided collectively, often by around 2000 investors. If the risks related to crowdfunding were to be realised, the small size of the sector means that its impact on financial stability as a whole would be limited. If the investors were to lose money though, it may reduce the financial buffers that they were counting on for repaying their bank loans.