Financial Stability Review

Eesti Pank
EUROSÜSTEEM

1/2025

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/financial-stability-review

Review by Gaili Grüning, Raol Kallas, Silver Karolin, Jana Kask, Timo Kosenko, Kristjan Mäe, Marit Priisalu, Taavi Raudsaar, Nicolas Reigl, Anita Suurlaht-Donaldson, Mari Tamm, Ulla Tischler, Airi Uiboaid.

Online ISSN 2382-9389

Layout and design Urmas Raidma

CONTENTS

EESTI PANK'S ASSESSMENT OF THE RISKS TO FINANCIAL STABILITY

Geopolitical risks pose a threat to the recovery of the economy and to the ability of companies and households to pay. The Estonian economy started to grow again in the second half of 2024 after a couple of years in recession, and the financial results of businesses started to improve. The good years before the recession, the buffers that had built up, and the relatively low level of unemployment have helped businesses and households maintain their ability to pay their loans. The economy is forecast to improve in the near term, but the increased global trade tensions have substantially deepened the uncertainty about the future outlook for the economy. Russia's ongoing aggression in Ukraine poses a further risk to Estonia and other countries in the region, and this has combined with the deterioration in transatlantic relations that has made the security situation worse throughout Europe. Barriers to trade and increased uncertainty may reduce economic activity, which would then make Estonian companies and households less able to meet their loan obligations.

Geopolitical tensions may make it harder for the banks to access funding and so may restrict lending. A large part of the liabilities of the banking sector are local deposits, but other sources of funding have notably increased as a share of the financing of the banks in recent years. Despite the heightened risk level in the region and the occasional bouts of volatility in international financial markets in recent years, the banks in Estonia have been successful in issuing their bonds. The negative trends in geopolitical developments could however make it harder to raise capital from international money and capital markets for the banks operating in Estonia and for their parent banks, and so may reduce the supply of lending for businesses and people in Estonia.

Cuts in interest rates and the recovery of growth in the economy have increased borrowing activity, and increased the exposure of the banking sector to the risks from the real estate sector. The growth in lending to companies and households started to accelerate in the second half of 2024, and it had reached 8% over the year by March 2025. Such a rate of growth in lending is among the fastest in the euro area. The growth in borrowing by businesses has been driven by real estate companies, and the share of the loan portfolios of the Estonian banks that has gone to those companies is quite large in international comparison. Quite a lot of development work has been done in recent years though, and so the amount of unoccupied office space has increased. The ability of real estate companies to cover their loans is considered to be good at the moment, but it could deteriorate substantially if growth in the economy were to be weaker than expected, and that could increase the loan losses of the banks.

Eesti Pank estimates that the measures taken so far to ensure stability in the financial sector are appropriate in the current environment. The growth in debt funding taken from the domestic financial sector and from abroad exceeded long-term nominal growth in GDP at the end of 2024, which indicates that cyclical risks have increased enough that it is justified to keep the countercyclical capital buffer rate at 1.5%. The share of problem loans at the banks remained small even though it has increased a little, but a deterioration in geopolitical circumstances could push the economy back into recession and cause a sharp increase in problem loans. Although the banks hold sufficient own funds to cover larger loan losses than expected, it would be wise for them to maintain their current large capital reserves.

Eesti Pank's assessment of the main risks to financial stability

DETERIORATION IN THE DEBT SERVICE CAPACITY OF COMPANIES AND HOUSEHOLDS	The economy is forecast to improve over the short term, and this will combine with falling interest rates to support the ability of companies and households to pay their loans. Geopolitical risks mean that the debt service capacity of companies and households could deteriorate and the loan losses of the banks could increase in Estonia and nearby markets that are important for the banks.	→
THE VULNERABILITY OF THE BANKING SECTOR TO THE RISKS FROM THE REAL ESTATE MARKET	Lending activity has increased and the share of the loans issued by banks that has gone to companies in real estate and construction is relatively large in international comparison. The amount of vacant commercial real estate has increased at the same time. If economic activity were to decline again, a larger number of real estate and construction companies than before could fall into difficulties in repaying their loans, and the loan losses of the banks could increase.	↗
RISKS TO THE FINANCING OF THE BANKING SECTOR	Funding from abroad has increased in importance in recent years within the funding of the banking sector. Negative geopolitical developments could however make it harder to raise capital from international money and capital markets for the Estonian banks and for the parents of the largest banks in Estonia. This could reduce the supply of lending to companies and households in Estonia.	↗

Scale: 1 = minor risk ja 6 = major risk. The arrow indicates changes in the risk level from the assessment of November 2024.

1	2	3	4	5	6

Macroprudential measures of Eesti Pank

Measure		Requirement
Countercyclical capital buffer		1.5%
Other systemically important institutions buffer	Swedbank AS	2%
	AS SEB Pank	
	Luminor Bank AS	
	AS LHV Pank	
	Bigbank AS	0.5%
	Coop Pank AS	
Risk weight floor for mortgage loans*		15%
Requirements for issuing housing loans**	Loan-to-value (LTV) limit	85%***
	Debt service-to-income (DSTI) limit	50%****
	Maximum maturity	30 years

* The floor is set for the average risk weight of the mortgage loan portfolio of credit institutions that use the IRB Approach.
** The limits may be breached by 15% of the volume of mortgages issued each quarter.
*** The limit is 90% for loans guaranteed by the Estonian Business and Innovation Agency.
**** The calculation of payment must use the interest rate set in the contract or 6%, whichever is higher.

GEOPOLITICAL RISKS THREATEN THE SOLVENCY OF COMPANIES AND HOUSEHOLDS AND INCREASE THE RISKS AROUND THE FINANCING OF BANKS

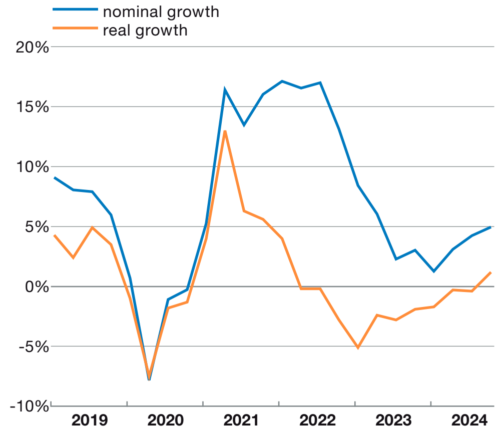
The Estonian economy has returned to growth after two years of recession, and the financial results of companies have started to improve. The good years before the recession, the buffers that had built up, and the relatively low level of unemployment helped businesses and households maintain their ability to pay their loans. A moderate improvement in the economic climate is forecast for the coming years, but geopolitical tensions and risks have increased in the past half year. The most significant geopolitical risks for Estonia are Russia's ongoing war against Ukraine and the deepening trade tensions between the USA and the rest of the world. These tensions may reduce activity in the economy and that could then make Estonian companies and households less able to pay their loans, while increasing the funding risks for the banks. A negative turn in geopolitical events could make it harder to raise funds from abroad. The banks in Estonia have so far succeeded well with their issues of bonds despite some moments of strain in international markets in recent years. If they were to lose access to funding from abroad though, it would restrain their lending and in the worst case could cause them problems with liquidity.

GEOPOLITICAL RISKS THREATEN THE RECOVERY IN THE ECONOMY

The recession in the Estonian economy that lasted for some two years has ended, but no rapid growth is to be expected in the coming years. Estonian GDP in the fourth quarter of 2024 was 1.2% larger than a year earlier at constant prices, and 5% larger at current prices (see Figure 1). Growth should be supported by the revival of foreign demand, lower interest expenses, and an improvement in purchasing power from next year. It remains uncertain though how much less competitive the high inflation of recent years has made Estonian companies in international markets. The March forecast from Eesti Pank expects that if geopolitical risks do not escalate, the economy will grow by around 1.5% this year and 2.5% in 2026.

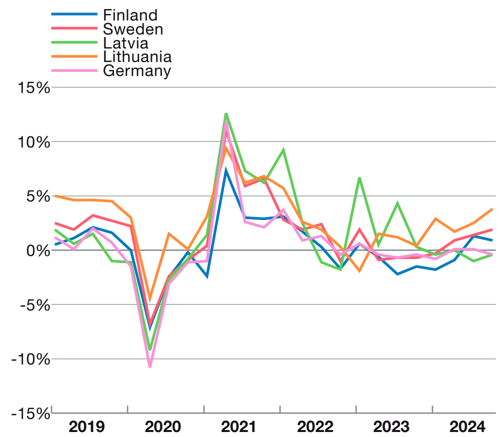
Estonia's main export markets are forecast to grow slowly. Increased opportunities for exports will support the Estonian economy and the sales results of businesses. The economy in the euro area grew by less than expected in the fourth quarter of last year, but purchasing managers indexes (PMI) indicate an improvement in early 2025. The most recent forecast by the European Central Bank expects that the economy in the euro area will remain fragile this year and that growth will be below 1%, but that it will rise to a little above 1% in the coming years. Economic growth and indicators for activity in Latvia, Lithuania, Sweden and Finland, Estonia's main trading partners, have improved since the end of last year, though from a

Figure 1. Yearly growth in GDP



Source: Statistics Estonia

Figure 2. Yearly growth rates of the GDP of trading partners



Source: Eurostat

low level. Lithuania and Sweden are doing a little better, while Finland and Latvia are doing less well (see Figure 2). Floating interest rates predominate in all of Estonia's main trading partners, and so demand there will grow quite fast as those rates fall. Consumer confidence in Estonia's neighbours and the desire of consumers to make purchases remains quite modest though because of the global risks and because unemployment remains at a relatively high level in Sweden and Finland.

Geopolitical risks may hinder growth in the global economy, raise inflation and provoke bursts of volatility in financial markets, and all this may increase solvency risks and liquidity risks in Estonia too. The risk that has the biggest impact on Estonia remains Russia's war against Ukraine and the future progress of it. The decline in economic activity because of the war could make Estonian companies and households less able to pay their loans while increasing the funding risks for the banks. Geopolitical tensions may cause the prices of commodities to rise, and that may then cause inflation and interest rates to come down more slowly. This would affect the ability of borrowers to pay in Estonia and elsewhere. Increased protectionist policy measures would increase trade tensions, make markets less efficient and increase alarm about supply chains, and this would particularly affect small and open economies like Estonia's. Calculations by Eesti Pank show that the tariff proposed by the USA of 25% on exports from the European Union and the possible equivalent countermeasure taken by the European Union would slow growth in the Estonian economy by 0.5 percentage point, but would not push the economy into recession. The US tariffs would have a small direct impact on Estonia because only 3% of the value added in the Estonian economy comes from exports to the US market, but the indirect impact could be larger because the trade war would weaken the main export markets for Estonia.

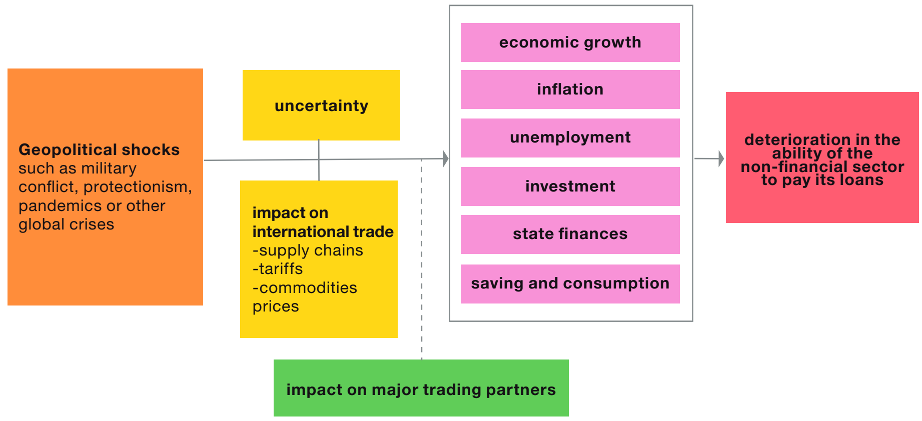
Box 1: The impact channels for geopolitical risks

Geopolitical risks have become increasingly significant in recent years alongside the more usual risks to financial stability. The security situation or political stability have deteriorated in several parts of the world, while the scope of various sanctions has increased and international cooperation and trade connections have weakened. Geopolitical risks are generally seen as the dangers that arise from conflicts, political decisions or instability, and that may affect global security, international relations and trade, and consequently also the economic position of countries and regions. Normal economic development can generally be forecast from the connections between different economic indicators, but geopolitical shocks are often unexpected, and it can be hard to estimate their impact. This then increases general uncertainty and can make the economy or the financial sector more fragile. Examples of this are the interruptions to supply chains caused by the pandemic, Russia's full-scale war in Ukraine and the sanctions that it provoked, and changes in global trade policy, and all of these have had a noticeable impact on the Estonian economic environment.

There are various channels through which geopolitical risks can impact the financial sector and financial stability, and those channels can be roughly classed as direct and indirect. Direct impacts are those that hit the financial sector immediately. Financial markets often react very quickly to geopolitical shocks and bad news, and this makes markets more volatile. If the risks are realised, their impact might be expressed as a wave of sell-offs of financial assets, putting pressure on the balance sheets of market participants and increasing their liquidity risks. Investors become more cautious than usual in the presence of geopolitical uncertainty, and this may be reflected in a fall in demand or in a rise in the risk premiums demanded from issuers, even if the risks have not yet actually realised. This can make it harder and more expensive for banks and other businesses to access funding.

Risks to financial stability may also be realised as a result of negative economic developments. Geopolitical risks can hamper international trade and supply chains or drive energy prices sharply

Figure B1.1. Transmission of geopolitical risks through the economy



Source: Eesti Pank

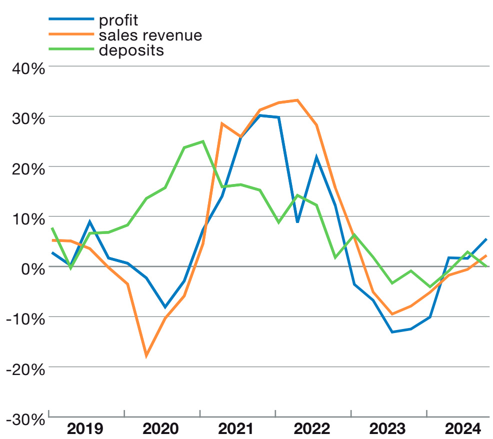
higher, and this can reduce international trade and push inflation up. General uncertainty may also increase, causing investment and consumption decisions to be postponed. This can then restrain growth in the economy and leave borrowers less able to pay their loans, consequently harming the quality of the loan portfolios of the banks and increasing their credit risk (see Figure B1.1).

The impact of geopolitical risks can be very different in different countries. The impact of an armed conflict for example depends directly on the location of the country affected, while obstacles to trade depend on who the main trading partners are. The impact of risks being realised depends on how resilient the economy and financial sector are to unexpected shocks, and how quickly they can adapt to the new circumstances. Macroprudential measures can help strengthen the resilience of the financial sector, especially through capital buffers that have been accumulated in advance and that can be released in a crisis to cover possible losses and maintain funding for the economy. These buffer measures include the base requirement of the countercyclical capital buffer for example, and the systemic risk buffer.

THE CAPACITY OF COMPANIES AND HOUSEHOLDS TO SERVICE THEIR DEBTS HAS REMAINED GOOD

As the economy has grown, so the financial indicators for businesses have also improved (see Figure 3). The growth has not been fast and will not become fast, but it is quite broadly based, and even sectors that have not seen sales revenues increase in the past half year have not performed very poorly in the past five years in total (see Figure 4). An exception is logistics, where sales revenues remain below where they were before the pandemic, and profits are less than a third of what they were. One encouraging sign is that sales revenues and profits started to grow again in the fourth quarter in manufacturing, which has been in difficulties in recent years. This coincided with

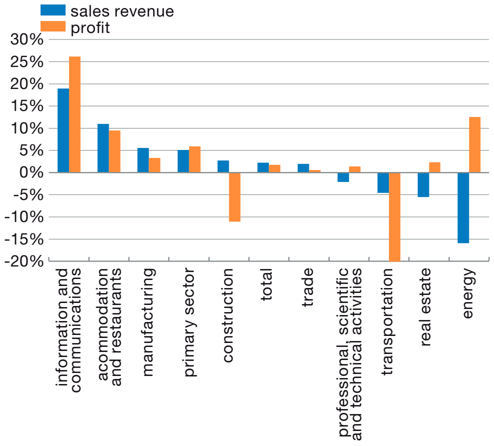
Figure 3. Yearly growth of the sales turnover, profit and deposits of the corporate sector



Sources: Eesti Pank, Statistics Estonia

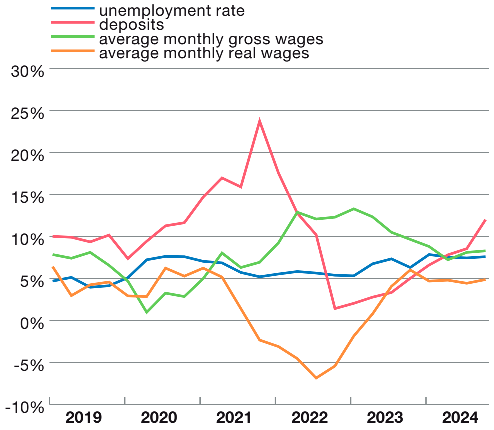
growth in exports, which is continuing. It is however the exporting manufacturing sector that would be

Figure 4. Growth of sales revenues and profit in Q4 2024



Source: Statistics Estonia

Figure 5. Annual growth in nominal and real wages and household deposits



Sources: Eesti Pank, Statistics Estonia

affected most by customs tariffs, interruptions to supply chains, and general uncertainty. Falling interest rates and the widespread use of loan contracts with floating rates have meant that the interest expenses of businesses are around 200 million euros, or 3.5% of operating profit, lower this year than they were last year.

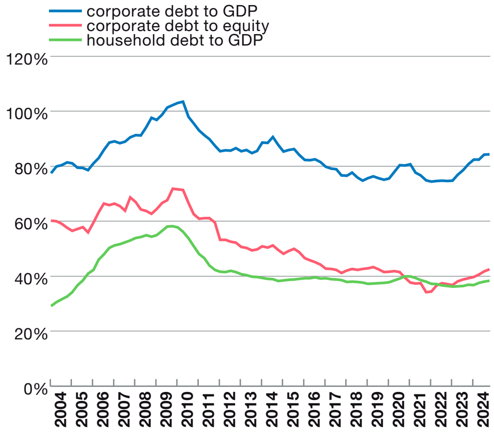
Nominal wages growing, unemployment remaining moderate, and interest rates falling have so far underpinned the ability of households to pay their loans. Growth in the average gross wage was more than 8% in the fourth quarter of 2024, and this caused a notable increase in real wages (see Figure 5). Wages should rise more slowly moving forwards, as companies want to restore the profitability that they have lost. Income tax rose at the start of this year and inflation is forecast to increase to 6%, and so real net wages may fall a little this year. This will probably not cause any major difficulties in repaying housing loans, as the incomes of borrowers are generally above the average. There may however be difficulties with repayments of consumer loans, as those loans are spread more evenly across income groups, and are commonly encountered at households with lower incomes. Falling interest rates will make it easier to cope with repayments of housing loans, as almost all such loans have floating interest rates. Consumer loans by contrast frequently have fixed interest rates.

The ability of households to repay their loans depends above all on the path of unemployment. The labour market has reacted to the recession in recent years more modestly than in earlier episodes, as employment fell relatively little and the main adjustment came through workloads. As there were no large-scale redundancies, the recovery of economic activity will not immediately lead to a wave of hiring, as output can initially be increased using the existing labour force. Eesti Pank forecasts that unemployment in 2025 will remain at around the same level of 7.6% that it posted last year, and will gradually fall afterwards. If the economy performs less well than forecast though, perhaps for geopolitical reasons, unemployment may rise and households become less able to pay.

The resilience of companies and households to risks has declined in the past three years, but it is still generally good. Companies have slightly increased their financial leverage over the past couple of years, but it remains low in historical and international comparison (see Figure 6). The same can be said of liquidity, which improved in almost all sectors from 2009 onwards to peak in 2021, since when it has declined a little but still remains good. The financial buffers of households were reduced by the very high inflation a couple of years ago, but deposits grew rapidly again last year, gaining about 10%. The data indicate though that it is the deposits of the wealthiest households that have increased fastest, while the financial position of other households has probably not improved.

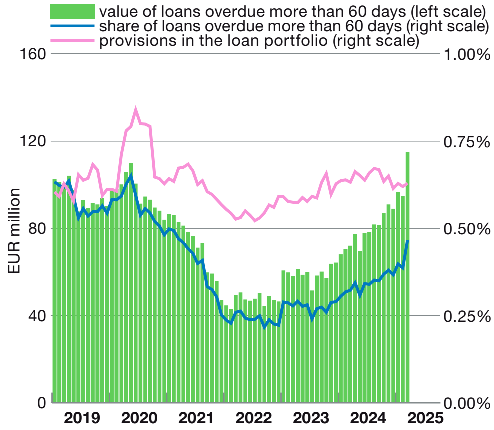
Companies and households have mainly coped well with paying their loans. There has been some increase over the past half year in the volume and share of problem loans at the

Figure 6. Corporate and household indebtedness and leverage



Sources: Eesti Pank, Statistics Estonia

Figure 7. Loans overdue and non-performing and provisions

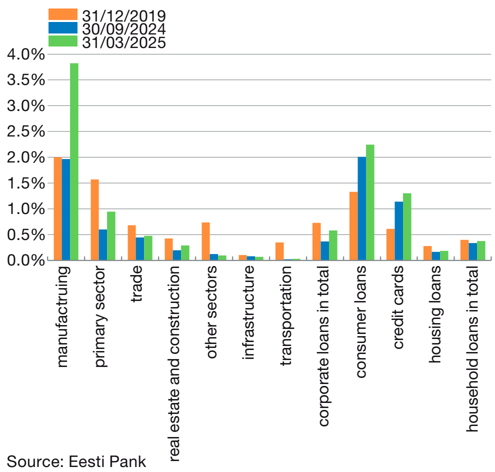


Source: Eesti Pank

banks (see Figure 7). The share of corporate and household loans that are overdue has remained very low in historical terms in the past couple of years, and it is low in international comparison. Loans overdue more than 60 days exceeded 155 million euros at the end of March 2025, which was 0.5% of the total loan portfolio or 0.12 percentage point more than half a year earlier. The banks have however reduced their provisions in the past half year, and have particularly reduced the write-downs they had made of housing loans. This is understandable given that the recession and the high interest rates did not lead to the loan losses that were feared and coverage of overdue loans by provisions continues to exceed the average of the past 10 years. Equally though it arises from the very small volume of overdue loans, and the current ratio of provisions to the loan portfolio is already quite close to its lowest level ever.

Sectors where overdue loans have increased in the past half year are manufacturing, real estate, and agriculture and forestry. For households the increase in non-performing loans has been particularly notable in consumer loans (see Figure 8). The share of loans overdue in other sectors has remained the same as it was half a year ago. There has been some decline since last autumn in loans overdue in manufacturing, which has been in difficulties for some time, but non-performing loans increased again in March because of problems with some individual loans.

Figure 8. Share of loans overdue for more than 60 days



Source: Eesti Pank

The banks in Estonia have lent relatively little to producers of electronics, which are affected most by the tariffs imposed by the USA, as only 1.2% of all the loans to manufacturing or 0.1% of all corporate loans are to such companies. It should be noted that although there has been some growth in overdue loans to real estate, they remain at a very low level. Households have managed to cope well with paying their housing loans, and the share of such loans overdue more than 60 days is below 0.2%. The share of consumer loans that are non-performing has continued to increase though, and higher inflation could increase that share even further.

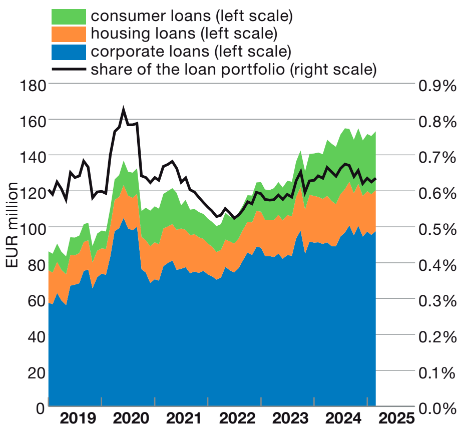
Box 2: The write-downs of the banks indicate that risk assessments have not increased in the past half year

Credit claims are primarily written down because credit risks have changed. Write-downs can consequently be used for drawing conclusions about the credit quality of loans. The total volume of write-downs made by the banks did not increase over the past half year, and at the end of March 2025 it stood at 154 million euros. The loan portfolio grew at the same time though and so the share of write-downs within the loan portfolio shrank a little, and it was 0.6% of the total loan portfolio at the end of March (see Figure B2.1). Write-downs for housing loans shrank particularly, and they averaged only 0.2% of the stock of the portfolio. This shows that the banks consider that households remain able to cope with their housing loan obligations, and will remain so in future.

The volume of write-downs for consumer loans, and their share in the loan portfolio, increased gradually in contrast, and they were 2.8% of the portfolio at the end of March 2025. Write-downs for overdrafts and credit cards and for other consumer loans increased as a share of the portfolio, indicating that the growth in write-downs of such loans was faster than that in the portfolios of them. This indicates that the banks consider the ability of households with consumer loans to service those loans has not improved, and has even deteriorated.

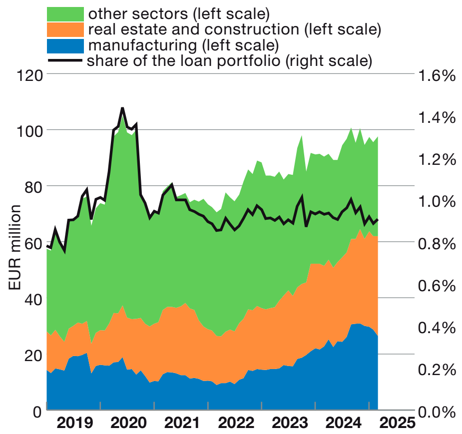
The volume of write-downs on corporate loans has increased in recent years as the loan portfolio has grown, and so the share of write-downs within the portfolio has remained relatively stable. The industrial and real estate sectors are the main contributors to the write-downs of corporate loans (see Figure B2.2). These sectors each account for a third of all of the write-downs of corporate bank loans. The share of write-downs within the corporate loans portfolio is larger than that within the housing loan portfolio but smaller than that within consumer loans at an average of around 0.9% in total.

Figure B2.1. Provisions made by the banks and their share of the total loan portfolio



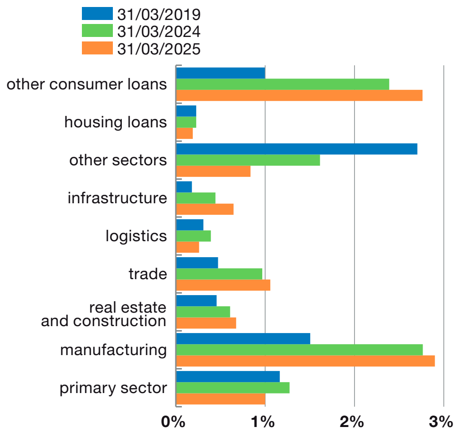
Source: Eesti Pank

Figure B2.2. Provisions for corporate loans and their share in the loan portfolio



Source: Eesti Pank

Figure B2.3. Share of provisions by economic sector and loan type



Source: Eesti Pank

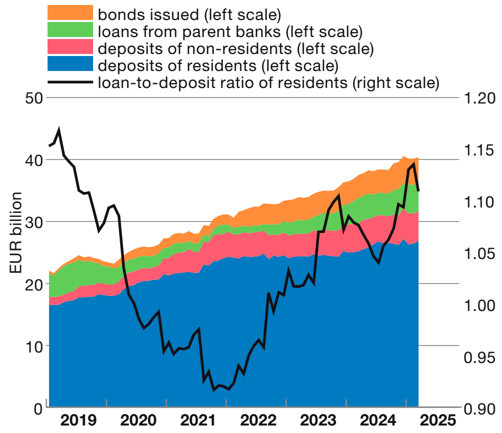
The sectors where the share of write-downs has been notably above the average in recent years have been logistics and manufacturing (see Figure B2.3). The share of write-downs in logistics has come back down again a long way, while the share of write-downs in manufacturing has increased notably in recent years. It was 3.7% in October 2024, which is four times the average for corporate loans of 0.9%. The main reason for writing down loans to manufacturing companies was that Russia's full-scale attack on Ukraine made the business environment much more uncertain than it did for other sectors because of the rise in energy prices and the loss of export markets. The share of loans to manufacturing written down has showed signs of declining gradually since the end of last year, which is a first indication that the performance of manufacturing companies is improving.

Although the write-downs of loans to companies in real estate are a substantial part all of the write-downs of corporate loans, the amount of lending to the sector is so large that the share of the portfolio that is written down is smaller than the average. It has increased by 0.2 percentage point over the past couple of years, but at the end of March 2025 it was still smaller than the average for corporate loans at 0.7%.

GEOPOLITICAL RISKS INCREASE THE RISKS AROUND FUNDING FOR THE BANKS

Financing for loans increasingly depends on other sources of funding. While the loan portfolio has grown fast, the growth in local deposits has been slower. The loan-to-deposits ratio for residents has risen for three years in a row and is approaching the level it was at before the pandemic, as the average value for the whole banking sector is now above one (see Figure 9). This means it is increasingly necessary to access other sources of funds beyond deposits in order to finance local lending. The deposits of local households and businesses grew exceptionally fast in 2021-2022 and other sources of funding provided 22% at the start of 2022, but by the end of March this year the other funding had increased to 33% of the total, alongside the deposits of local households and businesses.

Figure 9. Liabilities of banks and loan-to-deposit ratio of residents

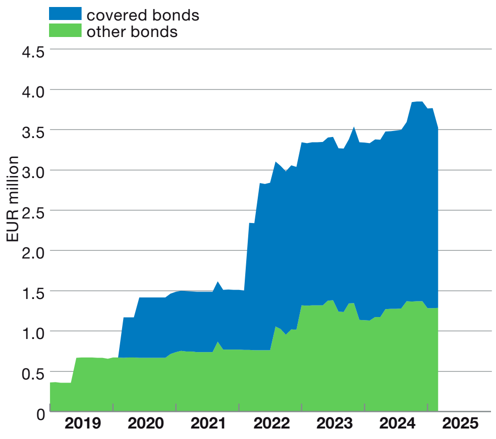


Source: Eesti Pank

The need for other funding varies across the banks, and most banks use one or two sources of other funds. The median value for the loan-to-deposits ratio for residents was 1.9 in March 2025. The ratio was below one for only two of the nine credit institutions in Estonia, meaning that the local lending of those two banks was entirely covered by local deposits. The other banks need to find some amount of additional funding, and the number of banks needing to do that has increased in recent years. The range of sources of funding available is now wider than it was, say, ten years ago. The main source of funds a decade ago was the parent bank, but intra-group financing is now the main source of funding for only a couple of banks, while the others issue bonds or take in deposits from other European Union countries. Finding alternative sources of funding is expensive though, and so banks generally prefer to favour a single source of funds and to stick with it. If access to other sources of funding was interrupted, it would put a brake on lending, and in the worst case it could also cause liquidity problems.

The local securities market in Estonia is relatively small, and so large bond issues are made outside Estonia. The majority of the stock of bonds issued by banks in Estonia are mortgage-backed covered bonds (see Figure 10).

Figure 10. Bonds issued by banks



Source: Eesti Pank

The interest rate on such bonds is generally lower than those on other bonds and other sources of funding, and so they combine with demand deposits to keep the costs of funding relatively low. Having such bonds also strengthens the liquidity of a bank, as they can also be used as collateral for the monetary policy operations of the central bank. The banks in Estonia have issued not only covered bonds, but also other bonds, mainly unsecured ones, in international financial markets. Such bonds are generally issued at the group level, and they have so far succeeded and have been oversubscribed several times.

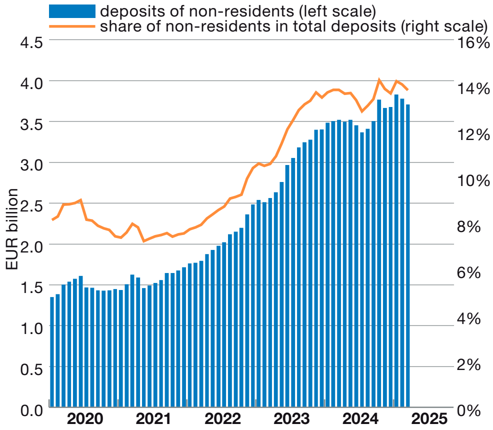
Access to international bond markets is important for some of the larger banks not only for funding purposes, but also for meeting their Minimum Requirement for Own Funds and Eligible Liabilities (MREL), which was introduced as part of the European Union's single rules for crisis prevention and resolution. The requirement is generally stricter for larger banks but it is hard for them to access the amounts needed from the local market, and so those banks issue the unsecured bonds that they need to meet the requirement in international markets. These issues have generally succeeded, and all the banks were able to meet the MREL at the start of the year. If stresses in the financial markets were to cause substantial obstacles to issuing unsecured bonds, some banks may face difficulties in meeting their regulatory requirements.

Negative geopolitical events could affect access to market-based funding and the price of funds, and stresses in financial markets affect different types of bonds to different degrees. A serious crisis could quickly make investors much more risk averse, making it harder and substantially more expensive for the banks to issue bonds. Stresses in financial markets hit unsecured bonds harder as a rule as they are relatively riskier, but the bond market is generally resilient and recovers quickly. International capital and financial markets became a great deal quieter immediately after Russia launched its full-scale invasion of Ukraine in February 2022, and there was a lot of uncertainty about the recovery of financial markets, but there was still a relatively quick recovery from the initial shock. The launch of the tariffs and trade war this spring also reduced activity in the market for unsecured bonds, and the spreads of those bonds widened sharply, but investors still maintain a high level of interest in covered bonds. The banks in Estonia generally do not issue bonds very often, giving them some space to time their issues and generally avoid short-term market tensions. Geopolitical instability still affects the market interest rates of the bonds of the banks though, as volatility and risk margins can increase because of the opinions of investors. This could potentially mean the costs of funding become higher. The market for the unsecured bonds needed to meet the MREL is more vulnerable, and it may be slower to recover.

The Swedish parent banks are in a strong position, but any deterioration in their financial position would probably affect lending in Estonia. They are well capitalised, and their liquidity indicators remain very good. The banks operating in Estonia are much less dependent on Swedish parent banks for financing than they were at the time of the financial crisis, but intra-group claims have increased substantially for both Swedbank and SEB in the past couple of years. The parent banks have had to finance their activities using funds from international money and capital markets, and so they may be affected by possible tensions in financial markets. More serious problems could cause a sharp deterioration in the financial position of the parent banks to affect the supply of lending through their subsidiaries in Estonia.

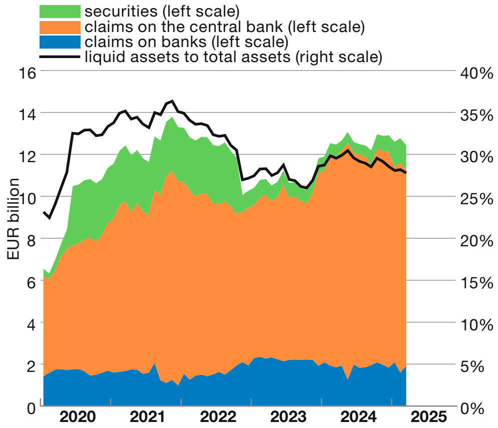
Some banks take in large amounts of deposits from other countries in the European Union, while others support their growth by taking deposits through international platforms. Some small and medium-sized banks get a large

Figure 11. Deposits of non-resident non-financial companies and households



Source: Eesti Pank

Figure 12. Liquid assets of the banking sector and their share in total assets

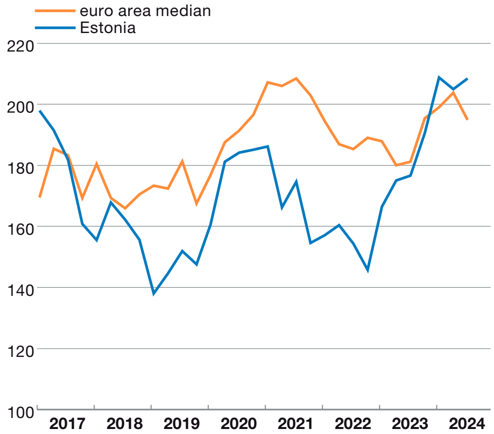


Source: Eesti Pank

amount of support from deposits from other countries in the European Union, mainly Germany, Austria and the Netherlands. The banks use international deposit platforms to access funds more easily to support their growth. The volume of non-resident deposits has grown stably, even after Russia launched its full-scale invasion of Ukraine in February 2022 (see Figure 11). This indicates that local geopolitical tensions have not particularly affected the flows of deposits from abroad.

The level of liquid assets in the banking sector is high. Liquid assets were 28% of all of the assets of the banking sector at the end of March 2025 (see Figure 12). At 80%, the majority of these were claims on the central bank. The good resilience of the banks is confirmed by their liquidity coverage ratios, which show that their liquid assets were notably larger than the estimated net outflow of funds during a 30-day stress period (see Figure 13).

Figure 13. Liquidity Coverage Ratio



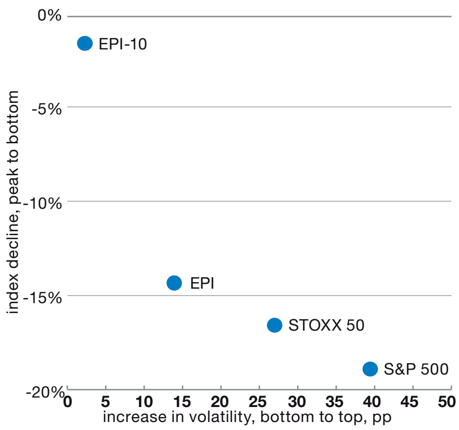
Source: European Central Bank

Box 3: The uncertainty around global trade has affected Estonian pension funds

The increased uncertainty surrounding global trade is also reflected in securities markets. After the US introduced its protectionist tariffs, prices for securities fell sharply on many exchanges, and volatility increased. Estonian pension funds were not left untouched by this. Both the EPI index, which shows the general return on second pillar pension funds, and the EPI-10 index for funds with a conservative strategy are lower than they were at the start of February. The volatility of the net value of units in pension funds has also increased (see Figure B3.1). The value of assets in funds that have a larger weighting of equities has fallen most, losing almost 15%.

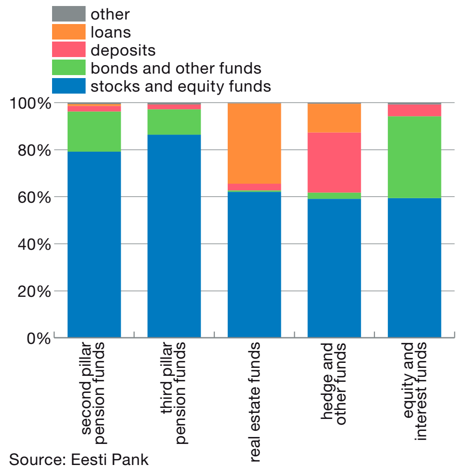
It is particularly pension funds that are exposed to price falls and volatility in foreign securities, and pension funds are much the largest part of the Estonian fund market. The assets of pension

Figure B3.1. Change in stock market and pension fund indexes and historical annualised volatility in them 01.02.25-30.04.2025



Sources: Bloomberg, Pensionikeskus, Eesti Pank calculations

Figure B3.2. Breakdown of investment by funds at the end of March 2025



Source: Eesti Pank

funds totalled 6.7 billion euros at the end of March 2025, and those of other investment funds were 2.5 billion euros. A very large part of the assets of pension funds are invested in securities that are traded on foreign securities exchanges, and so what happens in those markets affects the assets of the pension funds. At the end of March 2025, 88% of the assets of pension funds were invested abroad. Pension funds have put the majority of their assets in equities or equity funds, which had about 80% of those assets at the end of March 2025, and so the value of the funds is particularly sensitive to instability in equity markets. The uncertainty and increasing volatility have consequently affected the results of Estonian pension funds, and have increased the fluctuations in their portfolios.

THE BANKS HAVE BECOME MORE EXPOSED TO THE RISKS FROM COMPANIES CONNECTED TO THE REAL ESTATE SECTOR

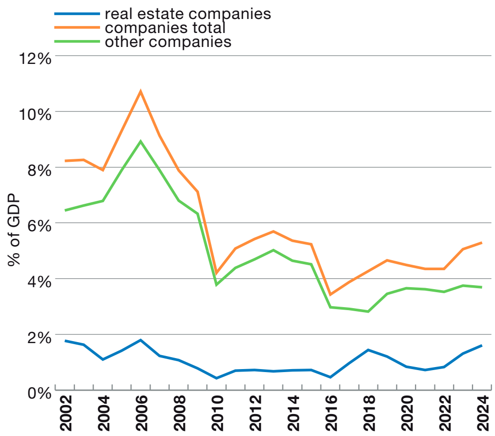
Development has been quite active in commercial real estate in recent years despite the difficulties facing the economy. There was an increase in transaction activity in the second half of 2024 that came mainly from domestic investors. There was consequently an increase in borrowing activity and in the exposure of the banks to risks from commercial real estate. The increase in supply has at the same time increased the amount of unoccupied office space. Interest rates continuing to fall and economic activity gradually recovering have given support to investment in commercial real estate in 2025 as well, but uncertainty about the future has increased, especially because of the external environment and the geopolitical risks. If the economy were to suffer a more serious blow, real estate companies could fall into difficulties and the loan losses of the banks could increase.

INVESTMENT IN COMMERCIAL REAL ESTATE HAS INCREASED IN RECENT YEARS DESPITE THE DIFFICULT CIRCUMSTANCES

The Estonian commercial real estate market has had to cope with quite a challenging economic climate over the past five years. The pandemic placed tight restrictions on commercial activity that caused a substantial change in the use of office space, as working from home became common and the need for office space declined. Many owners of commercial real estate made concessions to tenants in those challenging times and gave temporary relief on rents, which helped keep the overall levels of vacancies and rental prices relatively stable. The pandemic also boosted the growth in e-commerce, increasing the need for logistics centres and warehousing. The recession that started in 2022 reduced the demand for commercial real estate though in many sectors, as companies started to rationalise their activities and cut costs as their revenues fell and the prices of inputs rose.

Investment in commercial real estate still increased a little despite the uncertain economic environment and high interest rates (see Figure 14). One of the main reasons for this was that it was mainly large, experienced and well capitalised companies that had survived in the market after the recession of 2008-2010. Commercial real estate projects take a long time to complete, and so they are often funded on the assumption that demand will recover when the economic cycle turns. There has been constant growth over the past two decades in the share of those sectors that mainly use office space, such as healthcare, financial services and professional

Figure 14. Corporate sector investment in buildings and land



Source: Statistics Estonia

services. The steadily increasing demand for energy efficient spaces also played a role more broadly, while demand for warehousing facilities has been supported by the strong growth in e-commerce. Investment in retail space is driven mainly by the need to modernise, which is driven by tight competition in the market. Development of residential space has been quite slow over the past couple of years, as the real estate developers working there react more quickly to changes in demand.

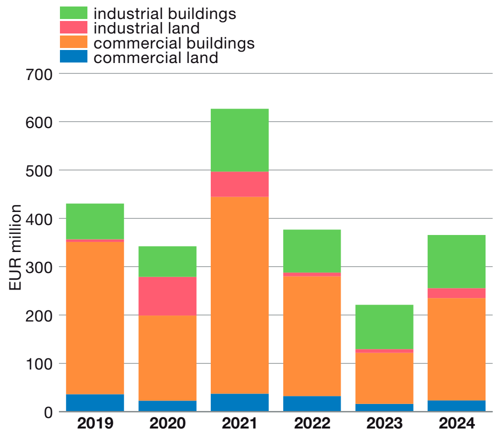
Looking forwards, the economic climate does not favour rapid growth in transaction activity for commercial space and in demand for it. There are though some particular economic sectors and areas that are growing and supporting demand for commercial real estate. When economic activity recovers and demand for commercial space increases again, a fall may be expected in the vacancy rate, which has risen for the past two years. Any serious blow hitting the economy could however cause difficulties for a lot of real estate companies and increase the risk of loan losses of the banks.

THE VACANCY RATE FOR COMMERCIAL PROPERTY INCREASED AS THERE WAS A LOT OF DEVELOPMENT ACTIVITY

The volume of transactions for commercial and production property started to increase again in the fourth quarter of 2024 after two quiet years. The increase in the total value of transactions was driven primarily by some unusual, large transactions for retail space (see Figure 15). The participation of local investors in the commercial real estate market has increased noticeably in recent years. Those investors mainly use funds borrowed from banks operating in Estonia, and so the exposure of the banks to the sector has increased.

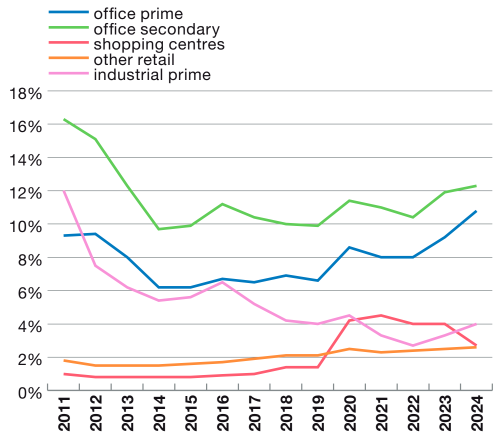
A substantial amount of new commercial space has come onto the market in recent years, and so the amount of space standing empty has increased, particularly for offices and storage facilities. Demand for commercial space has been supported by the interest that companies have shown in moving to smaller and more modern properties, but the large amount of new office space arriving on the market has meant that a lot of property is left unused in both new and old buildings. Some 11-12% of office space is standing empty, which is similar to the level in 2011-2012, when the economy was recovering from the global financial crisis and the subsequent recession (see Figure 16). The market for commercial space for shops and storage, where development has been dynamic in recent years, has also reached some degree of saturation. There has been an increase in the number of tenants who are behind on their rent payments in manufacturing, which has had a difficult few years, and in the amount of empty manufacturing property, which has averaged about 5% of the total commercial space available. The share of space in shopping centres in Tallinn that was standing empty declined last year, but the turnover of retail firms remains weak, and that continues to put pressure on the occupation of retail space.

Figure 15. Value of transactions with real estate for commercial and industrial purposes



Source: Land and Spatial Development Board

Figure 16. Average vacancy rate for commercial real estate in Tallinn

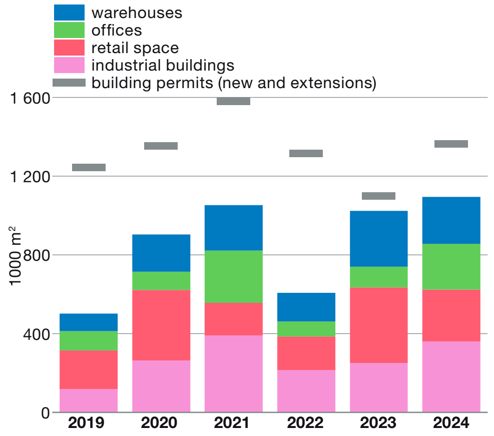


Source: Colliers

There will be a lot of development activity in the near future as well despite the amount of new commercial space that has been added and the increasing amount of empty space. Construction started particularly in 2024 on industrial and retail space, but development continues for new office and warehousing buildings (see Figure 17). Construction plans for the coming years are also indicated by the increase of a quarter in the number of construction permits issued last year, the majority of which were for industrial properties.

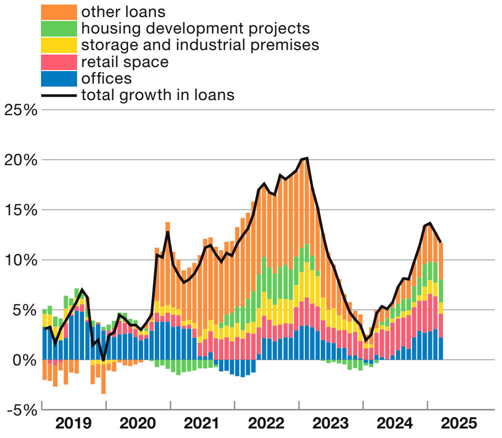
The decline in occupancy rates for buildings will in future particularly affect owners of office buildings, and so their ability to cover their loans may deteriorate. The average rental

Figure 17. Commercial real estate construction starts and building permits



Source: Statistics Estonia

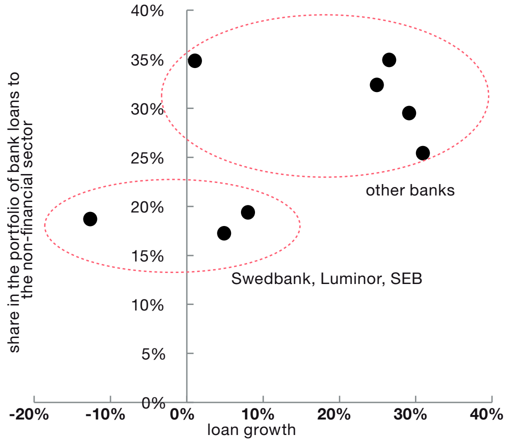
Figure 18. Growth in loans to real estate and construction companies and contributions to growth



Source: Eesti Pank

price of offices did not fall last year, but downward pressure on prices and shorter rental contract terms are visible in new contracts being signed. Owners of older office space will have to be ready to invest in renovation and modernisation if they want to maintain their rental income, and their rental prices will need to be adjusted. The owners of warehousing properties, especially shop and storage properties, will need to consider the pressure that the increase in supply will put on rental prices.

Figure 19. Growth of loans to real estate companies and their share in the bank loan portfolio



Source: Eesti Pank

THE EXPOSURE OF THE BANKING SECTOR TO THE RISKS FROM COMMERCIAL REAL ESTATE INCREASED

The growth in lending to real estate and construction companies accelerated in the second half of 2024. Borrowing was particularly active in the fourth quarter, when certain large individual transactions made a major contribution. The loan portfolio of the sector increased by 13% over the year in total to reach 5.2 billion euros (see Figure 18). All segments of commercial real estate contributed to the growth in the portfolio, but there was a particular increase in borrowing to finance retail and office space.

The exposure of the banks operating in Estonia to the risks from the commercial real estate market have increased significantly over the past five years. Loans to real estate and construction companies were stable at 41-42% of the corporate bank loan portfolio before 2020, but that share has now increased to 49%.

Exposure to the commercial real estate market has increased more at smaller banks. The large banks with roots in Sweden and the other banks operating in Estonia all issue loans for developing retail and office space, but LHV, Bigbank and Coop Pank play the central role in financing development of residential properties, and those three banks have a relatively large portfolio of loans to companies in real estate and construction. The market share of those three banks in the market for loans for commercial real estate has increased over five years from around 20% to 40%. Loans to companies in real estate and construction are a much larger part of the total portfolio of loans from those three banks to the non-financial sector at up to 30% (see Figure 19).

The average loan-to-value ratios in the portfolios have increased a little, but they are relatively conservative. The loan-to-value ratio of the new loans issued last year for commercial property averaged 54%. Across the whole loan portfolio, the loan-to-value ratio for development projects that fund investment in construction averaged 45%, while the ratio for loans for purchasing commercial real estate that will create a cash flow was 43% (see Figure 20).

THE ABILITY OF REAL ESTATE COMPANIES TO PAY THEIR LOANS HAS NOT DETERIORATED DESPITE REVENUES FALLING AND INTEREST EXPENSES RISING

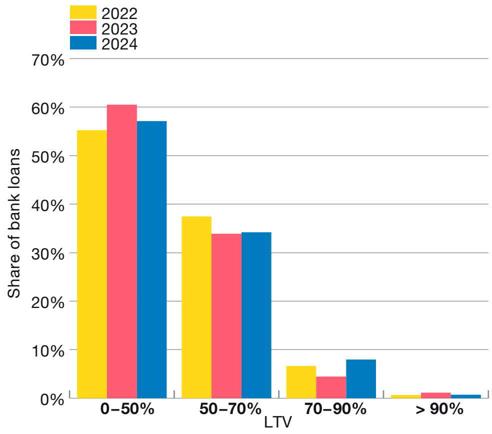
The sales revenues of real estate companies have declined because of the two years of recession and the subsequent stagnation (see Figure 21[1]). Falling revenues and increasing interest and other costs have driven rental tenants to optimise their costs, and so demand for commercial real estate has weakened. Sales revenues of Estonian real estate companies have fallen by more than the average for companies in other sectors.

Lower sales revenues and reduced profits because of asset revaluation ate into the operating profit of real estate companies in 2023 and 2024. Those companies have however managed to rein in their operating costs and so their operating profit margin has not particularly narrowed. Real estate companies, unlike those in other sectors, managed to keep their labour costs under control in 2024.

Interest expenses have increased notably in the past two years, and real estate is one of the sectors most affected by interest rates because of its high debt levels. The rise in base interest rates caused interest expenses as a share of operating profit to increase to around 20% in other sectors, but in real estate that figure was almost 50% (see Figure 22[2]).

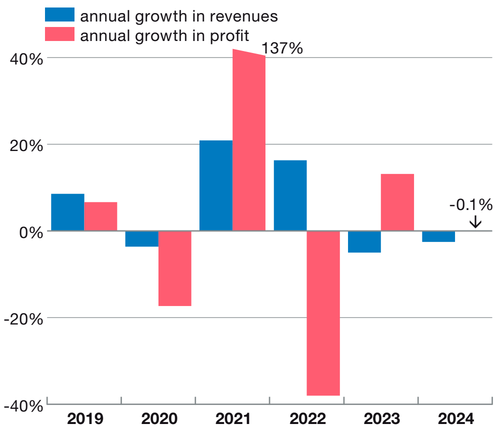
The net profit of the real estate sector grew in 2023 despite the higher interest expenses however, and it remained at the same level in 2024. It should be noted in this that the profit earned by the real estate sector got a lot of

Figure 20. Bank loans to real estate and construction companies by LTV ratio



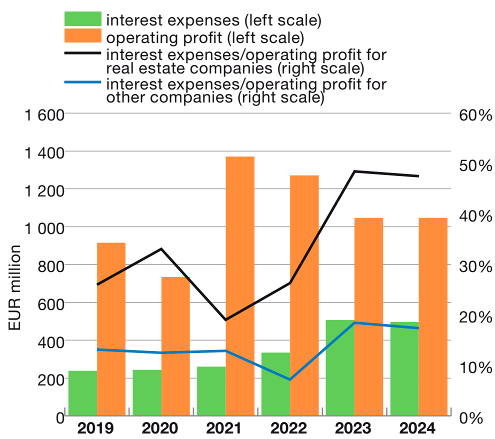
Source: Anacredit

Figure 21. Sales revenues and profit of real estate companies



Source: Statistics Estonia

Figure 22. Interest expenses and operating profit of real estate companies



Source: Statistics Estonia

1 The growth in sales revenue in 2024 is calculated from the short-term statistics of companies, while the growth in profit for 2024 is found from GDP data.

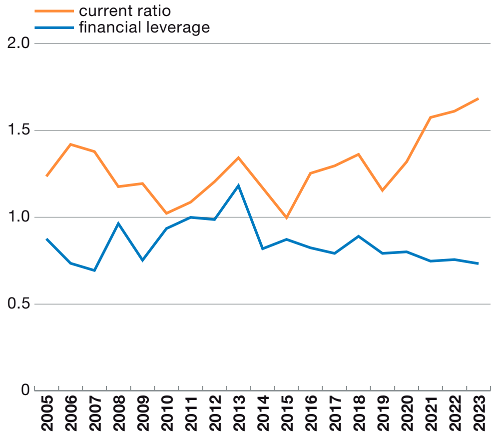
2 The data for 2024 are estimates based on calculations by Eesti Pank.

support from changes in the value of financial investments and from the revaluation of real estate properties. Revaluation of assets made a major contribution to the operating profit of real estate companies when inflation was high in 2021 and 2022, providing around a fifth of it. Revaluation has been small as a share of operating profit over the past decade at around 10-15%. Assets were revalued upwards in 2023 as well, when there was a small price correction in the commercial real estate market.

The financial leverage of real estate companies has not increased, but it remains larger than that in other sectors. The ratio of the debt liabilities of real estate companies to own funds fell in 2019–2023 (see Figure 23[3]). The liabilities of the companies are mainly to non-bank companies in Estonia and to banks operating in Estonia. The increase in the market share of smaller banks with a large risk appetite has seen loans from Estonian banks increase within the structure of liabilities from 37% to around 40%.

The ability of real estate companies to meet their short-term debts by paying suppliers, employees and lenders generally improved in 2021-2023. The volume of current assets at real estate companies has grown faster than their short-term liabilities. Around half of the current assets are cash, deposits and short-term financial investments. Short-term solvency is on average better than that of companies in other sectors, mainly because the real estate sector has high levels of leverage and little need for working capital, as companies in it employ only a small amount of labour, while the transaction cycles are longer than those in retail or industry.

Figure 23. Financial leverage and short-term liquidity of real estate companies



Source: Statistics Estonia

Real estate companies have coped well in recent years with servicing their bank loans. There was a slight increase in the second half of 2024 in the amount of bank loans overdue by more than 60 days, but such loans remain a very small part of the loan portfolio at 0.3% at the end of March 2025.

Weak demand for commercial real estate in the future could hurt the financial position of real estate companies, but at the same time interest expenses should be reduced as interest rates fall and that will ease the pressure on profitability. They will also be helped in servicing their loan payments and paying other debt liabilities at the right time even while sales revenues are lower by their large financial buffers, stable leverage, and smaller total expenses.

3 Financial leverage is calculated as long-term liabilities and short-term debt obligations as a ratio to own funds, and the working capital ratio is calculated as the ratio of current assets to short-term liabilities.

FASTER GROWTH IN LENDING MEANS BANKS HAVE TO BE SURE THEIR CAPITAL BUFFERS ARE SUFFICIENT

The debt liabilities of Estonian companies and households started to grow faster in the second half of 2024, and the rate of growth exceeded the long-term growth in the economy. Growth was particularly fast for housing loans and commercial real estate loans as demand recovered in the real estate market. Active borrowing was supported by the growth in the economy and the fall in base interest rates, but uncertainty about events elsewhere in the world is putting a lid on optimism. When the uncertain international climate may reduce the ability of borrowers to pay and rapid growth in lending is making the system more vulnerable, it is important that the banks hold sufficient capital buffers that they can remain resilient to any possible deterioration in the economic environment.

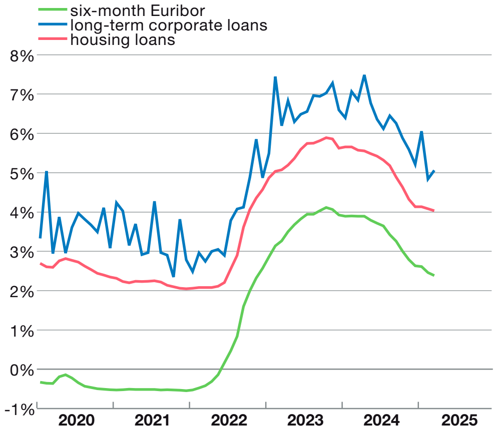
AS THE ECONOMY HAS RECOVERED, SO THE GROWTH IN LENDING BY BANKS HAS ACCELERATED

Recovering economic growth and falling interest rates are supporting demand for loans. The Estonian economy started to grow again in the fourth quarter of 2024 after a recession that lasted two and half years, with support coming from increases in exports and in private consumption. The revival of the economies in foreign markets, and also in Estonia, suggested that companies would start to increase their investments in business volumes after the long period of recession. This has then in turn increased the need for loans. As base interest rates started to be cut from the middle of 2024 (see Figure 24) and competition between the banks in the lending market increased, so the environment for borrowing became more favourable. Demand from households for loans has been supported not only by the improvement in the borrowing environment, but also by the labour market remaining strong and by disposable income increasing. Borrowing activity may however be restrained from increasing even further by the uncertainty that is coming from geopolitical risks.

Growth was already strong in the loan portfolio of the non-financial private sector, and it increased even further in the first months of 2025. Growth over the year in loans issued by banks was at 6-7% half a year ago, but by the end of March 2025 that rate had risen to 8.4% (see Figure 25). This is a fast rate of growth, especially given that the economy grew by only 3.5% in nominal terms in 2024.

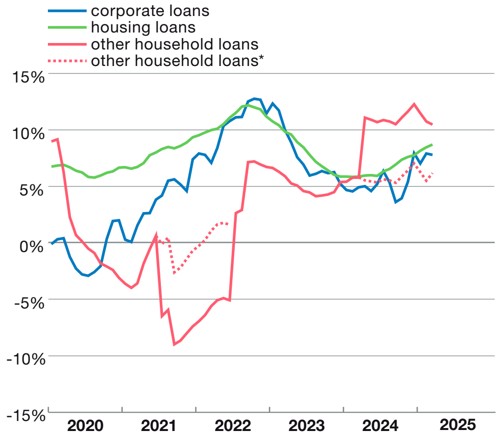
Estonia also stands out for its rapid growth in lending in comparison to other countries in the euro area. Estonia was one of the top three countries alongside Lithuania and Croatia for fast growth in lending in February 2025. Estonia is also a leader among the countries of the euro area if the growth in lending is compared to long-term

Figure 24. Interest rate on new loans and six-month Euribor



Sources: European Central Bank, Eesti Pank

Figure 25. Annual growth of corporate and household loans



*adjusted for structural changes
Source: Eesti Pank

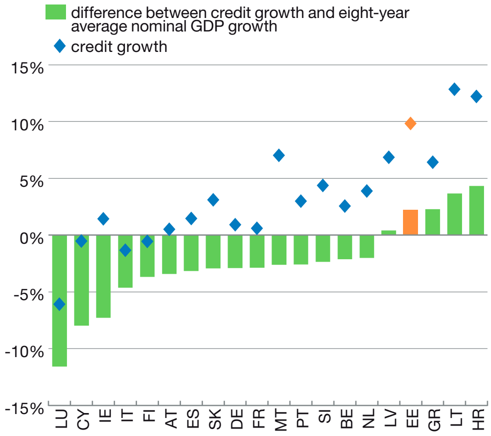
economic growth in the country, on average over an eight-year window for example (see Figure 26).

The increase in the rate of growth is apparent both in loans issued to Estonian companies and in those to households. Growth of around 8% in lending to companies has been led by real estate companies above all (see the section on the exposure of banks to risks associated with real estate companies). The growth in the portfolio of loans to companies would have been 5% without the real estate sector (see Figure 27), which indicates that growth has been moderate in the loan portfolio to other sectors such as manufacturing and logistics. Only in the primary sector has the stock of outstanding loans shrunk in recent months.

The rate of growth in housing loans issued to households increased as the real estate market became more active, and it reached 8.7% in March (see next section). The portfolio of car leases increased following the spurt of growth of 9% at the end of 2024 as there was a record volume of transactions in anticipation of the introduction of the car tax this year. Consumer loans were also used to buy cars, and this contributed to the strong growth in the consumer loan portfolio of the banks at the end of the year.

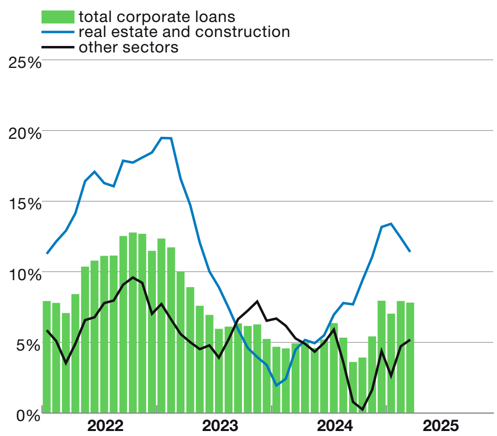
It emerges overall that although there has been general growth in borrowing activity among companies and households, the rapid rate of growth in the loan portfolio has been driven primarily by financing for real estate. The growth in lending was not distributed evenly across segments, but was focused in loans for residential property and commercial real estate. Growth was also pushed up by one-off factors such as the jump in car leases issued at the end of 2024. Large transactions in infrastructure have earlier caused similar volatility in rate of growth, and this may happen again in future.

Figure 26. Yearly growth in loans to the non-financial sector, February 2025



Sources: European Central Bank, Eurostat, Eesti Pank calculations

Figure 27. Corporate loan growth



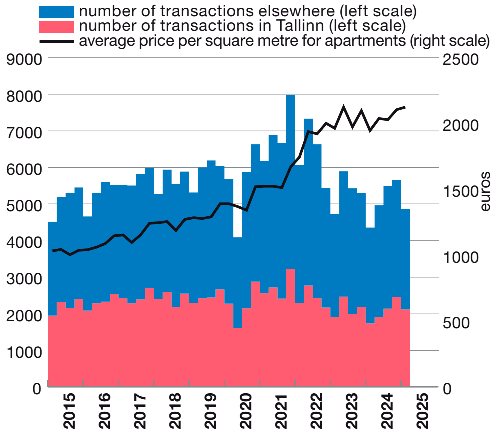
Source: Eesti Pank

THE BUOYANT HOUSING LOAN MARKET IS OUTPACING PURCHASES AND SALES OF RESIDENTIAL PROPERTY

Transaction activity in the Estonian housing market started to increase again after a quieter interlude that lasted until the middle of 2024. By the number of transactions, 2024 was the worst year of the past decade, and the number of transactions was last at a similar level in 2015 (see Figure 28). The number of contracts signed was particularly low in the first half of the year though, and in the second half of the year there was notably more interest in purchasing housing. There was also greater dynamism in the housing market in the first months of 2025 than there was in 2023 or 2024. It is probable that some decisions about buying housing had been postponed in the expectation that prices would fall but as this did not happen, buyers chose to make their planned purchases as the outlook for the economy improved a little. Refugees from the war in Ukraine[4] helped stop prices falling to

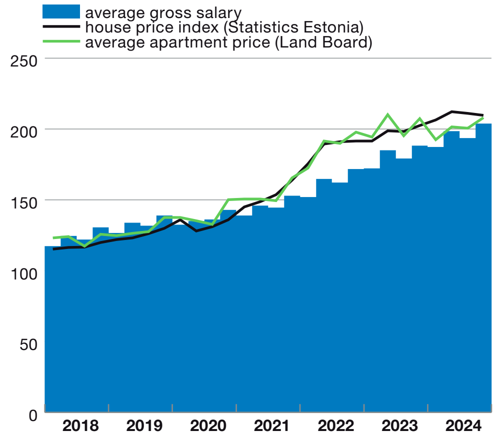
4 As at the start of February 2025 there were 35,755 refugees from Ukraine under temporary protection in Estonia with a current temporary residence permit.

Figure 28. Number of transactions with apartments in the quarter and average price



Source: Land and Spatial Development Board

Figure 29. Average gross salary and the average price of housing, 2015=100



Sources: Land and Spatial Development Board, Statistics Estonia

some extent, as they increased the activity in the markets for both renting and buying apartments.

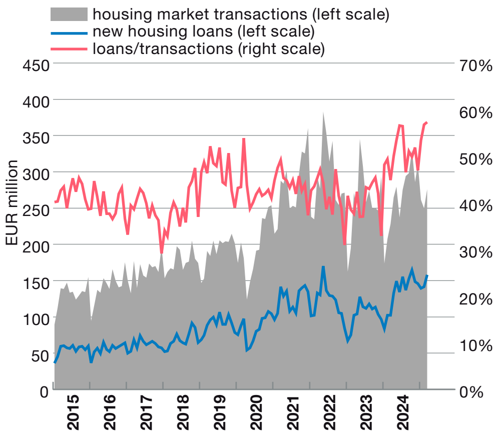
The increase in the moderate rate of purchases and sales has not yet caused any additional upwards pressure on prices for apartments. The average square metre price has changed relatively little in the past couple of years and the price level was 5-10% higher at the end of 2024 than it was at the end of 2022. Fluctuations in prices have mainly been caused by the natural changes in the transaction structure in a small market, where the average price depends to a large extent on the share of transactions in a given period that are for new apartments or apartments in Tallinn. The average square metre price of new developments has not risen much in recent years, but the high price level that was reached a couple of years ago has pushed a lot of buyers towards apartments in the more affordable secondary market. On average around 20% of transactions in 2021-2023 were for new apartments, but this share was down to 11% in 2024.

Apartment prices stabilising and wages rising have made the housing market less overvalued. High inflation in 2021–2023 made buying housing harder for many households, but their purchasing power had recovered to some extent by the end of last year. Rising wages have reduced the earlier mismatch between housing prices and household incomes (see Figure 29), and this has eased the risks associated with the overvaluation of the housing market.

Increased interest in purchases has helped reduce the time that properties are on the market, but the lack of clarity arising from geopolitical uncertainty remains an obstacle to increased transaction activity and faster growth in prices. It is forecast that there will be some small growth in the economy this year, which will boost the real estate market, but it is not probable that the number of transactions or the rate of increase in prices will reach the levels seen in 2021-2022. The steady downward movement of interest rates has made buyers feel more confident, but the instability in the external environment is discouraging long-term investment and financial liabilities. The possible impact of demand on the price level has been partly offset by the sufficiency of supply in the secondary market and by new developments, which real estate developers are ready to expand. The rise in VAT in July 2025 may have some temporary impact in the immediate future, as it may encourage buyers to complete their transactions earlier.

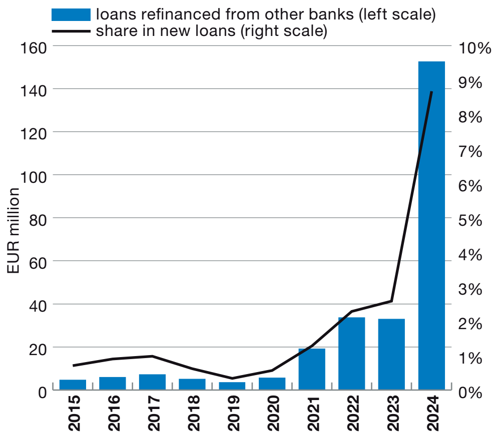
The volume of housing loans grew notably faster in the past year than the number of sales transactions in the real estate market for residential property (see Figure 30). Faster growth in borrowing has been aided partly by an improvement in lending conditions. There was however a larger number of transactions than in earlier years for residential real estate that did not use borrowed money or used a much smaller amount of it. That trend turned in 2024 though and real estate transactions were again increasingly funded with housing loans.

Figure 30. Number of housing market transactions and new housing loans



Sources: Eesti Pank, Land and Spatial Development Board

Figure 31. Loans refinanced from other banks and share in new loans



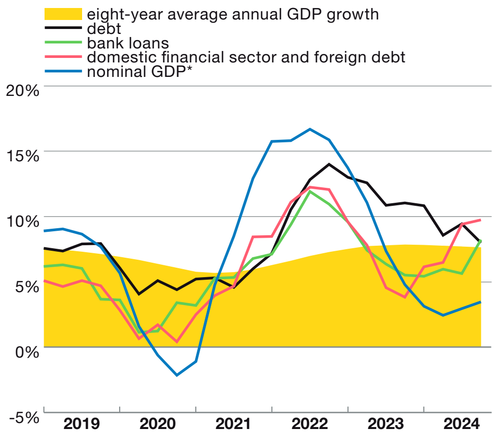
Source: Eesti Pank

Refinancing and adjustments to the terms of earlier contracts kept the housing loan market busy in 2024. Euribor climbing higher made borrowers increasingly aware of the high margins on the loans they had taken earlier, and so they looked for ways to reduce their loan costs. Banks that were looking to grow fast saw in this an opportunity to expand their client base, and they started to offer more favourable conditions than before to attract clients from other banks. The result was that around five times as many housing loans were transferred from one bank to another in 2024 as in the previous couple of years (see Figure 31). Banks equally worked to hold onto their existing clients, which was evident from the increased amount of changes to contract terms within banks. The ultimate outcome of the increased competition between banks was that both interest margins and other borrowing conditions became more favourable for clients.

FASTER GROWTH IN LENDING POINTS TO AN INCREASE IN CYCLICAL RISK

The growth in debt exceeded long-term growth in the economy at the end of 2024. Growth in lending by the banks picked up at the end of the year, suggesting that growth in the indicator for the debt of the whole non-financial private sector could prove very fast. Yearly growth in debt reached 8% at the end of 2024, which was a little faster than the average GDP growth of 7.6% in the final eight months of the year (see Figure 32). The indebtedness of the non-financial private sector, or the debt-to-GDP ratio, increased by five percentage points over the year to 123%.

Figure 32. Annual growth of credit aggregates and nominal GDP



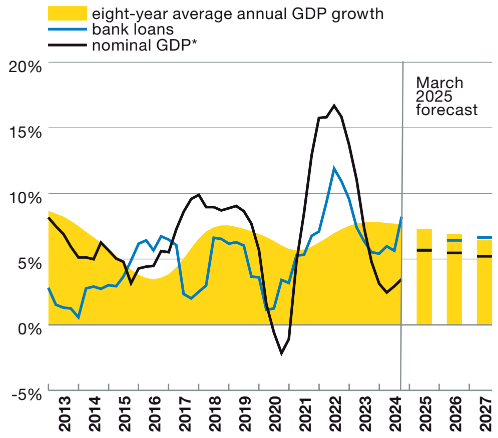
* four-quarter moving average of GDP growth
Sources: Eesti Pank, Statistics Estonia

The figure for the rate of growth does not however properly reflect the dynamics in 2023-2024, as an extensive revision of the statistics caused a large structural increase in indebtedness in 2023 (see the technical explanation below). It is consequently more accurate to use data on bank loans or more broadly on borrowing from the Estonian financial sector and abroad when estimating the growth trend in cyclical risks.

Growth in the debt liabilities from the domestic financial sector and abroad became faster in the second half of 2024 and was around 10% at the end of the year. The growth in this particular credit aggregate consequently exceeded that in long-term nominal GDP by more than two percentage points, which is a clear indication that cyclical risks are increasing. The methodology used by Eesti Pank shows that debt at this level justifies maintaining the countercyclical capital buffer at 1.5% at least.

Growth in the economy continues to support the higher level of borrowing in 2025, and growth in borrowing is expected to be relatively strong moving forwards. The lack of clarity in the external environment is causing uncertainty around investment and borrowing decisions however, and so a similar mini-boom in the credit and real estate markets to that seen in 2021-2022 should probably not be expected. The Eesti Pank March forecast 2025 expects the growth in the loan portfolio of the banks this year for the year as a whole to be at a similar rate to the growth in nominal GDP at around 6%, and expects growth in credit to be 6-7% in the coming years (see Figure 33).

Figure 33. Forecast of annual growth in non-financial sector debt and nominal GDP



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

Eesti Pank requires the banks to hold a countercyclical capital buffer to minimise the risks from rapid growth in credit. The countercyclical capital buffer requirement of 1.5% that applies in Estonia has two components, with an unchanging constant 1% base requirement, and a 0.5% cyclical requirement that was introduced because of the increase in risks that came with the rapid growth in credit in 2021-2022. Overdue loans started to increase gradually from a very low level during the subsequent recession. To avoid the danger of loan losses being amplified during the recession because of the vulnerability that increased when credit was growing fast in 2021-2022, Eesti Pank considered it necessary to keep the cyclical requirement at 0.5% for at least as long as overdue loans continue to grow. As the economy has started to grow again, so the risk of loan losses increasing further has diminished. Growth in both lending by banks and debt has picked up again from the second half of 2024 however, indicating a further increase in cyclical risks.

In summary, Eesti Pank currently considers it necessary to maintain the countercyclical buffer rate at 1.5%. This is because the growth in the debt of companies and households has been faster than the long-term growth in the economy. It will be possible to lower the buffer requirement to the 1% base requirement once the pace of growth in credit has calmed. The danger of geopolitical risks escalating equally needs to be considered though, as that could push the economy back into recession. Were that to happen, then maintaining the current high level of the capital buffer would be a necessary way of supporting the resilience of the banks.

The revision of statistics raised the debt level of 2022-2023 substantially from its earlier estimate

Data on the debt of the non-financial sector comes from the dataset of financial accounts from the national accounts. An important source for recording the financial assets and liabilities of the non-financial sector in the quarterly financial accounts is the annual reports submitted by companies, which are available for use in compiling statistics eight months after the deadline for submitting them. When the financial account for the fourth quarter of each year is compiled, the seven previous quarters are also revised and the data from earlier periods consequently become more accurate. The earlier data on financial assets and liabilities recorded in the financial account, including the debt of the non-financial sector, change to a greater or lesser extent each year when additional data are received and the earlier data are corrected.

Amendments to the Commercial Register Act that came into force in 2023 allow businesses to be fined and removed from the commercial register if they do not submit their annual reports on time. More companies than before submitted their reports following this change to the law, and so the coverage of corporate balance sheet data recorded in the Centre of Registers and Information Systems increased. Over 26,000 more companies had submitted an annual report for 2023 by the time the financial accounts statistics for the fourth quarter of 2024 were compiled than had done so in 2022. The methodology used for the national accounts records the position of the financial assets and liabilities of these additional companies at the end of the period, and other changes in volumes. The additional reports from non-financial sector companies increased debt liabilities by around 1.5 billion euros in total.

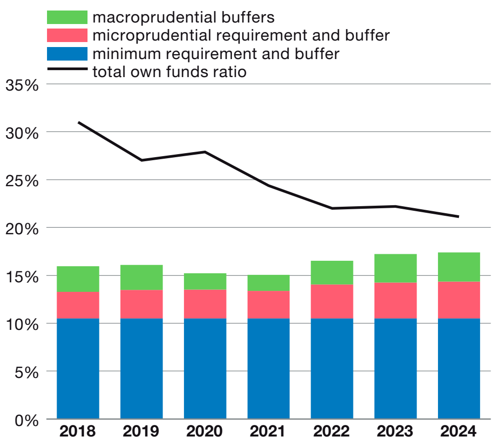
The growth in debt liabilities is also affected by the reclassification of companies out of the non-financial sector and into the other financial intermediaries sector, and in the other direction. The net effect of the reclassifications increased the stock of debt liabilities by around 0.5 billion euros.

IT IS IMPORTANT FOR THE BANKS TO BE SUFFICIENTLY CAPITALISED SO THEY CAN COPE WITH DIFFICULT ECONOMIC CIRCUMSTANCES

The capitalisation of the banks was satisfactory in 2024, but large profit distributions reduced the available own funds they held. Available own funds that exceed the capital requirements were reduced by almost 15% over the year, and they stood at below a billion euros at the end of the year, which was 3.7% of risk-weighted assets (see Figure 34). The large profit distributions were driven by the desire to pay dividends out before the new tax rates started to apply from 2025[5]. The reduction in own funds means that the banks have smaller capital buffers for expanding their activities or for covering possible losses in the future.

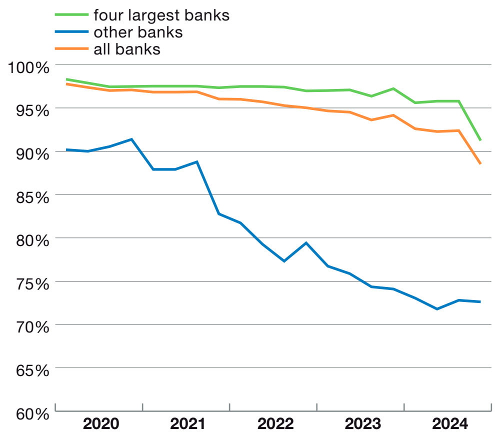
The structure of own funds also weakened. The own funds of the banks in Estonia were earlier largely composed of Common Equity Tier 1 capital, which is equity capital paid in and the non-distributed profits of the business (see Figure 35). In recent years however the banks have started to raise funds from the markets that can be classed as own funds (see Figure 36). One reason for this change is that the expectations of shareholders for dividends are higher than the price of the subordinated funds from the market. The increase in the share of subordinated funds within own funds brings with it though the danger that it may not be possible to roll them over cheaply enough on maturity if conditions in the market are difficult.

Figure 34. Capital requirements and total own funds ratio



Source: Finantsinspektsioon

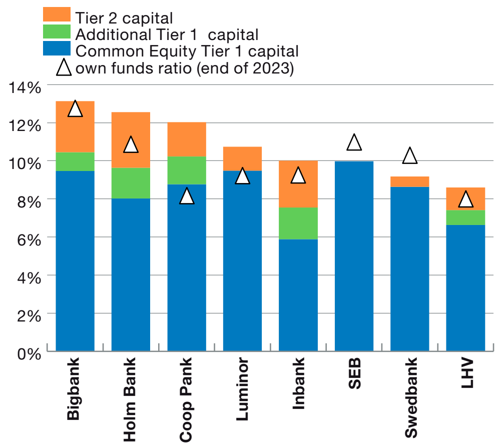
Figure 35. Share of CET1 capital in total own funds



Source: Finantsinspektsioon

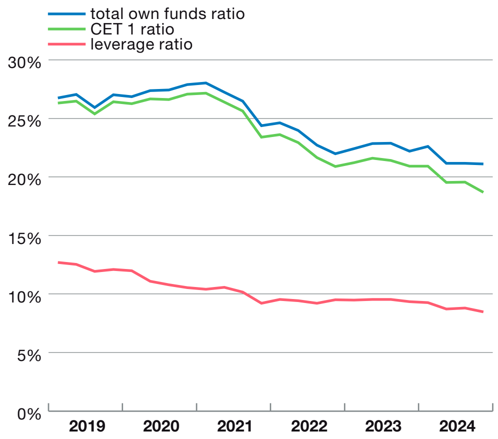
5 The advance income tax rate for the banks rose from 2025 from 14% to 18%, and the general tax rate on dividends paid by all companies rose from 20% to 22%.

Figure 36. Own funds of credit institutions as % of assets at the end of 2024



Source: Finantsinspektsioon

Figure 37. Banking sector capitalisation

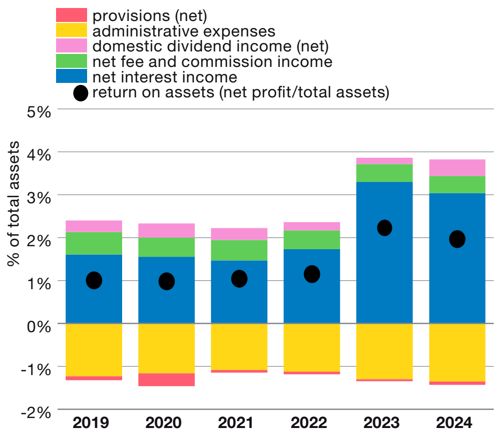


Source: Finantsinspektsioon

The capitalisation indicators have fallen for the faster growing banks, as the volume of risk assets they hold has increased faster than their own funds. Their own funds have increased, but not in proportion to their risk-weighted assets. The average ratio of total own funds to risk-weighted assets of the banking sector was 21% at the end of 2024, and the ratio for Tier 1 capital was 19%; both of these ratios were a little lower than they were a year earlier (see Figure 37). The lowest figure for any of the banks for total capitalisation at the end of the year was above 18% and the lowest CET1 figure was 13%, and both of these figures were below the averages for both large and small banks in the euro area[6]. The average leverage ratio was 8.5%, and the lowest was above 7%, and this was more than double the minimum requirement of 3%.

The capitalisation of the banks remains satisfactory over the short term, but the risks from uncertainty in the operating environment have increased. To strengthen the resilience of the banks, Eesti Pank has applied additional capital buffer requirements to them. A 1.5% countercyclical capital buffer requirement has applied to all the banks since autumn 2023, and from 2025 Eesti Pank added Coop Pank AS and Bigbank AS to the list of systemically important banks and an additional 0.5% capital buffer requirement started to apply to them. The systemically important credit institutions named earlier were Swedbank AS, AS SEB Pank, AS Luminor Bank and AS LHV Pank, and they remain subject to an additional capital buffer rate of 2%.

Figure 38. Income, expenses and profit of the banks, excluding dividends from non-residents



Source: Eesti Pank

The capacity of the banks to earn profit has been strong and has allowed them to build up capital buffers. The net profit of the banking sector was at about the same level in 2024 as in the previous year (see Figure 38), as it exceeded a billion euros after taxes. Net profit would have exceeded 800 million euros without the dividends received from foreign subsidiaries.

The profitability of the banks is expected to decline in future, though it will still remain strong. The fall in the Euribor market interest rates has reduced their interest income by more than their interest expenses.

6 The average total own funds ratio of the banks in the euro area was reported by the European Central Bank at around 20% at the end of 2024 for both significant and less significant banks. The Common Equity Tier 1 ratio was 16% for significant banks and 18% for the less significant ones.

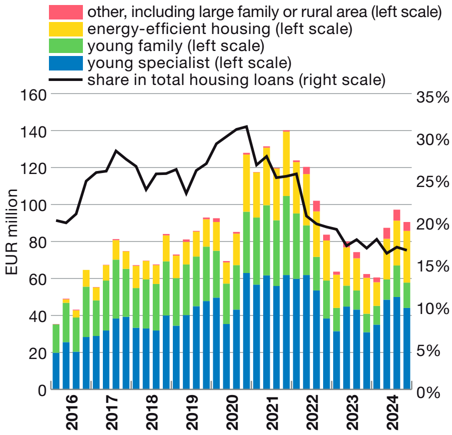
Box 4. The role of state support measures for taking housing loans has diminished

There has been a notable decline in recent years in the use of loan guarantees from the state in the housing market. The amount given in guarantees peaked in 2021 when there was a great deal of activity in the housing loan market. The share of loans issued with guarantees from the Estonian Business and Innovation Agency (formerly KredEx) peaked in 2020 though, when 30% of newly issued loans were covered. The share of loans covered by state guarantees fell to 17% in 2023-2024 (see Figure B4.1).

Interest in the guarantees may have declined partly because of changes in the demographic structure of borrowers, and partly because there are more house buyers in the housing loan market who have been able to cover the down payment by selling other property, or who took an additional mortgage to take advantage of the rapid rise in real estate prices in 2021-2023.

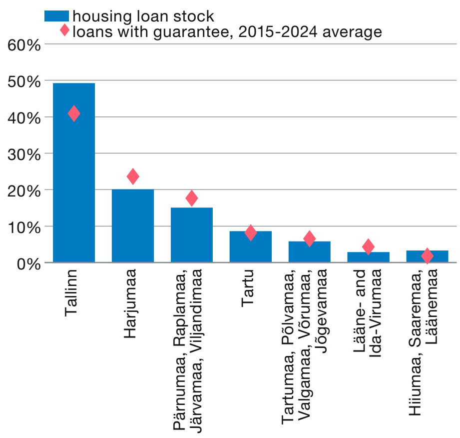
Changes in 2022 to the conditions of the guarantees helped align them better with the original goals of the state support. A relatively large part of loan applicants were earlier able to meet the conditions of the guarantees, but the changes narrowed the target groups and tightened the conditions by adding the requirement that borrowers could not currently own any residential property at the point they applied for a loan[7]. New target groups of large families and buyers of residential property in rural areas were added at the same time, but this did not particularly increase the total value of loans covered by guarantees. It is likely that some of the new target groups have partly replaced the earlier group of borrowers that qualified.

Figure B4.1. Loans with guarantee and their share in total housing loans



Sources: Estonian Business and Innovation Agency, Eesti Pank

Figure B4.2. Regional distribution of loan guarantees and housing loans



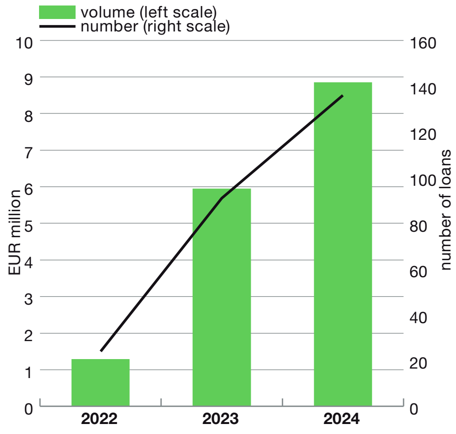
Sources: Estonian Business and Innovation Agency, Eesti Pank (HFCS, 2021)

The distribution of housing loan guarantees across counties in Estonia similar to the general distribution of housing loans issued (see Figure B4.2). The guarantees are not used very much outside of the larger population centres though, as the relatively low market value of real estate may mean they are not needed and it is not worth paying the fee for them, and buyers prefer to make a larger down payment and smaller monthly payments. An obstacle to getting a loan for building a house in a rural district or carrying out large-scale renovation can be that the value of the collateral is not high enough, as the value of the collateral does not cover the costs of building. Support from the state is needed to overcome such hurdles in the market. Eesti Pank considers it important that the target group for the guarantees in rural areas and their regional spread should remain clearly limited in order

7 Except in cases where they undertook to dispose of their current residential property within 12 months of buying the property covered by the guarantee.

to minimise possible market distortions and excessive credit risks. The loan guarantee for rural areas is different to the other guarantees, which are mainly intended to help with a lack of funds for a down payment, and Eesti Pank considers that in this case it is reasonable to require a down payment of at least 15%, rather than the 10% that is in the general conditions. If the borrower is simultaneously in a different target group, such as a young family or large family for example, then it would be reasonable to require a 10% down payment, or a 5% down payment for large families.

Figure B4.3. Co-financing loans granted by the Rural Development Foundation



Source: Rural Development Foundation

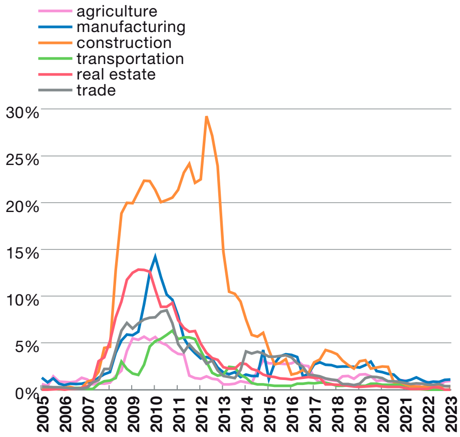
Borrowers taking out a housing loan can also get support from the Rural Development Foundation as well as from the Estonian Business and Innovation Agency. The joint loan with the Rural Development Foundation is like the guarantees for housing loans in rural areas, as it is intended for improving living conditions in rural districts or buying property there, and easing the problems that come from the low value of real estate as collateral there. These joint loans have been issued in cooperation with the banks since the end of 2021. The total number and value of such loans has so far been very modest, but there has been notable growth in the past two years (see Figure B4.3).

Overall the modest take-up of the state loan guarantees indicates that the housing market as a whole is functioning better than before. The changes made to the guarantee conditions in 2022 helped to direct state support more precisely to where there were real hurdles in the market, such as a lack of collateral or limits on down payments. The state measures being granted too liberally could unreasonably encourage borrowing and interfere with the operation of the loan market. Excessive intervention in the housing market can also cause excessive price pressures that could make housing less available.

APPENDIX 1. DETERMINANTS OF NON-PERFORMING LOANS IN ESTONIA'S CORPORATE SECTORS[8]

Non-performing loans (NPLs) are a significant risk to financial stability, as they weaken the balance sheets of banks, constrain lending capacity, and amplify systemic risks in periods of economic distress. Extensive research has analysed NPLs at the aggregate level, but there is limited understanding of how individual economic sectors experience and recover from financial shocks. This appendix examines the sectoral dynamics of NPLs in Estonia, where economic cycles have historically had a pronounced impact on loan performance. The findings bridge the gap between aggregate-level studies and firm-specific analysis, and they emphasise the role of sector-specific factors alongside broader macroeconomic trends.

Figure A1.1. Share of overdue corporate loans in the loan stock by industry



Source: Eesti Pank

Loan portfolios in advanced economies including Estonia were relatively stable before the global financial crisis of 2008–2009, but that crisis triggered a sharp economic downturn that saw substantial increases in NPLs. This analysis uses a unique dataset from Eesti Pank of quarterly data from 2005 to 2023 across the six key corporate sectors of agriculture, manufacturing, construction, wholesale and retail trade, transportation, and real estate (see Figure A1.1). The NPL ratio in construction in Estonia surged from about 2% in 2007 to around 20% in 2010 and nearly 30% at its peak. NPL levels were also elevated in real estate and manufacturing. The six sectors considered here collectively account for 83.5% of total loans and 89.3% of total NPLs. Certain sectors hold a larger share of total NPLs than they do of all loan exposures, as real estate accounts for 39% of total loans but 42.1% of total NPLs, while manufacturing holds 12.5% of total loans but 14.9% of NPLs.

Dynamic time-series regression models are employed to investigate how macroeconomic conditions and sector-specific financial variables influence NPL ratios.

The baseline model is specified as follows for each sector:

$$NPL_t = \alpha + \delta(GFC) + \beta(NPL_{t-1}) + \gamma(Z_{t-1}) + \varepsilon_t$$

where:

NPL_t represents the ratio of non-performing loans at time t.

NPL_{t-1} is the lagged dependent variable, included to control for the persistence in NPLs over time.

Z_{t-1} is a vector of explanatory variables.

GFC is a dummy variable taking the value of 1 from the first quarter of 2008 to the fourth quarter of 2009 to capture the effects of the Global Financial Crisis, and 0 otherwise.

Coefficients (α, β, δ, and vector γ) are parameters estimated in the model.

ε_t represents the error term.

8 This Appendix is based on Eesti Pank Working Paper 1/2025. Nicolas Reigl. *Determinants of Non-Performing Loans: An Empirical Analysis Across Major Sectors.*

The results reveal significant persistence in NPL ratios, indicating that past credit risks heavily influence current loan performance (see Table A1.1). The global financial crisis had a lasting impact across multiple sectors, as NPL ratios remained elevated for a long time, especially in construction and real estate. Macroeconomic variables, particularly the unemployment rate and real GDP growth, consistently emerge as predictors of NPLs across sectors. The unemployment rate significantly impacts loan quality, especially in agriculture, wholesale and retail trade, and transportation, highlighting the critical role of labour market conditions in shaping credit risk. One possible transmission channel for this is that higher unemployment reduces disposable income and directly dampens consumer spending, and this then impacts sectors that are sensitive to demand like wholesale and retail trade, transportation, and, indirectly, agriculture. Another possible transmission channel is that firms may pre-emptively reduce their workforce when faced with economic challenges in an attempt to cut costs in response to expected declines in profitability or heightened financial stress. The debt-to-gross operating surplus ratio, which indicates how able firms are to service their debt, also shows a positive association with NPLs in several sectors.

Table A1.1: Regression results for Non-Performing Loans across sectors

Variable	Agriculture	Manu-facturing	Construc-tion	Wholesale and retail	Trans-portation	Real estate activities
Intercept	0 0	-0.01 -0.01	-0.02* -0.01	0 0	-0.01*** 0	0 0
NPL (-1)	0.81*** -0.06	0.71*** -0.09	0.91*** -0.08	0.85*** -0.07	0.82*** -0.06	0.86*** -0.06
GFC	0 0	0.01* 0	0.02** -0.01	0.01** 0	0 0	0.02*** -0.01
Real GDP growth (-1)	-0.02* -0.01	0.01 -0.02	-0.01 -0.05	-0.02 -0.02	0.02 -0.01	-0.03* -0.02
Inflation (-1)	-0.02 -0.01	0.01 -0.02	0.03 -0.02	-0.01 -0.01	0.02* -0.01	-0.01 -0.01
Unemployment rate (-1)	0.05* -0.03	0.25** -0.1	0.24 -0.15	0.07** -0.03	0.12*** -0.04	0.09 -0.06
Six-month Euribor (-1)	-0.01 -0.04	-0.06 -0.06	0.05 -0.11	0 -0.04	-0.01 -0.03	0.04 -0.04
Observations	75	75	75	75	75	73
Adjusted R^2	0.9	0.91	0.96	0.95	0.95	0.99

Robust standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.
NPLs (-1) represents lagged non-performing loans for each sector.

Further analysis shows that sector-specific financial indicators generally have less explanatory power but are notably important in wholesale and retail trade, where leverage and profitability significantly affect the dynamics of NPLs. House prices significantly influence NPL ratios in the construction sector, suggesting that conditions in the property market substantially impact credit quality in the sector, though this relationship is weaker in the real estate sector itself. Importantly, the analysis identifies spillover effects from the real estate sector to construction, indicating that there are interconnected financial vulnerabilities between these sectors during economic downturns.

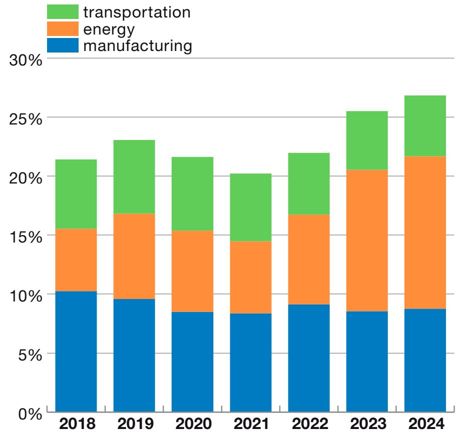
The theoretical frameworks often suggest that higher interest rates increase debt-servicing burdens and thereby raise NPL levels, but there is limited evidence here for interest rates having a statistically significant and robust impact on NPLs. These inconsistencies may arise because financial conditions affect credit risk through different channels in different sectors. Extended analysis shows that construction and real estate are more dependent on the interest rate environment when a higher lag structure is included for instance, or if the specific effect of the global financial crisis is not controlled for, suggesting that those sectors are particularly sensitive to prolonged changes in financial conditions and large macroeconomic shocks.

APPENDIX 2. THE CARBON INTENSITY OF THE CORPORATE LOAN PORTFOLIO OF THE BANKS

Eesti Pank assesses the climate risks to the Estonian financial sector regularly so that it can if necessary increase the resilience to climate risk of the financial sector as a whole. The banking sector does not directly create substantial carbon emissions through its own activities, but the loans it issues and the investment it makes support different sectors of the economy that do have carbon footprints. This makes it important that assessment of the risks from the transition to an economy that is sustainable for the climate measure the carbon intensity of the assets of the banks. The more carbon intensive the loan portfolio is, the larger the transition risk it faces, as additional requirements set by law can make the portfolio more expensive and harder to adjust. Assessment of the carbon intensity of the loan portfolios of the banking sector must consider the carbon emissions of each economic sector and the share of the loan stock to that sector within the whole loan portfolio.

Around half of the total loan portfolio of the Estonian banking sector consists of corporate loans, as they were 47% at the start of 2025, and so the carbon intensity of the loan portfolio of the banks depends heavily on which specific sectors are funded. The sectors that are most sensitive to changes in climate policy are those with large greenhouse gas emissions. In Estonia this means primarily the energy sector, or electricity, gas, steam and air conditioning supply, but also transportation and storage, and manufacturing. Those sectors have expanded their share of the total loan portfolio in recent years, especially because lending to the energy sector has increased (see Figure A2.1).

Figure A2.1. Loans to carbon-intensive industries as a share of the corporate loan portfolio



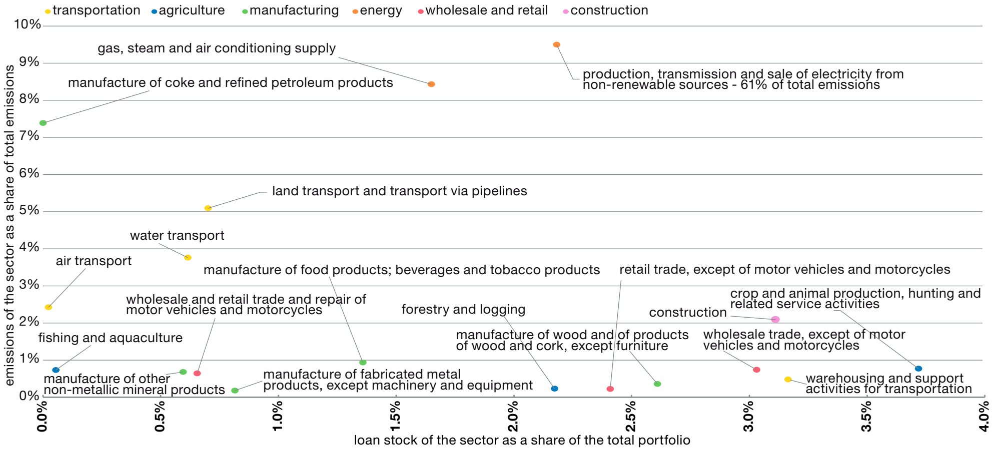
Source: Eesti Pank

Around two thirds of all of the loans to the energy sector went to the production, transmission and sale of electricity at the end of 2022, and this had increased to 80% by the end of 2024. The banks generally lent to companies producing electricity from both renewable and non-renewable sources, but it is notable that there was a slight shift towards funding renewable energy. The portfolio of loans to renewable energy was 55% of the loan portfolio to the whole energy sector at the end of 2022, but this had increased to 63% by the end of 2024. There was a substantial reduction in Estonia's greenhouse gas emissions at the same time, as emissions in 2023 were 9% less than in the previous year, mainly because of changes in the energy sector. The emissions of production units that came under the European Union's emissions trading system (ETS) were around 38% less than in 2022[9]. This gives good grounds to conclude that the carbon intensity of the corporate loan portfolio has not particularly increased in the past couple of years.

The carbon intensity of the loan portfolio can be estimated more accurately at the level of sub-sectors by combining the loan stock for each sub-sector with the total emissions of greenhouse gases for that sector (see Figure A2.2). Risk assessment needs to consider those sectors that have average levels of carbon intensity but dominate within the loan portfolio of the banks, and so are important for the risks of the banks. Comparing the shares of sub-sectors within total emissions and their loan stock within the whole corporate loan portfolio points the spotlight

9 Data on emissions from production units covered by the ETS are important, as those units produce nearly 75% of all emissions in Estonia. See https://kliimaministeerium.ee/rohereform-kliima/kliimapoliitika/kasvuhoonegaaside-heitkogused.

Figure A2.2. Loan positions of the most carbon-critical industries



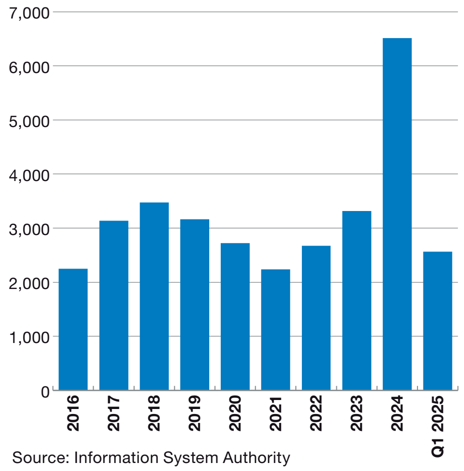
Sources: European Environmental Agency, AnaCredit database, Eesti Pank calculations

at the production of energy from non-renewable sources. The emissions of this sub-sector were 61% of the total greenhouse gas emissions in Estonia in 2022. The loan stock of the sector was however only 2.2% of the total corporate loan portfolio, which was smaller than that of several other sectors such as farming of crops and livestock, wholesale trade, construction, and activities supporting transportation and storage. A closer analysis shows that the loan portfolio is not dominated by any single sub-sector with the highest emissions, but rather the opposite, as the sectors with the largest emissions are generally a relatively small part of the loan portfolio, while sectors that are larger in the portfolio have smaller emissions.

APPENDIX 3. CYBER ATTACKS WERE NOT ABLE TO DISRUPT THE OPERATION OF VITAL PAYMENT SERVICES OR THE FINANCIAL SECTOR SIGNIFICANTLY IN 2024

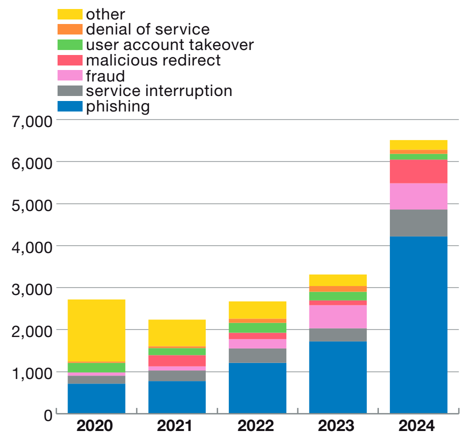
Technological development, increasing digital dependency, and geopolitical tensions have increased cyber risks. The incidence of cyber incidents and attacks has grown from year to year in Estonia. Data from the Information System Authority (RIA) show that twice as many incidents with an impact were registered in 2024 as in the previous year. There were 6515 incidents registered during the year that resulted in a breach of data confidentiality, integrity or service availability, caused people or businesses to lose money, damaged information systems, or caused interruptions to the continuity of services (see Figure A3.1). Some two thirds of the incidents were cases of phishing and fraud that mainly caused financial losses to individuals, and these were the drivers of the growth in incidents with an impact (see Figure A3.2).

Figure A3.1. Number of cyber incidents with an impact registered in Estonia



Source: Information System Authority

Figure A3.2. Number of cyber incidents with an impact registered by type



Source: Information System Authority

Denial-of-service attacks, which are the most impactful on the operation and the stability of the financial sector, broke previous records in 2024 for both the size and number of attacks, but they had less impact than before and did not cause any major losses. The main aim of denial-of-service attacks is to sow instability, cause confusion and highlight a particular political stance. The RIA believes that the majority of denial-of-service attacks aimed at Estonia are politically motivated, as they generally come in waves and can be connected to various domestic events and decisions. The attacks became more intensive after Russia started its full-scale war in Ukraine and they have increased each year since then. The attackers appeared to be better prepared in 2024 as they were trying to find new weak points and using new technology. A total of 580 denial-of-service attacks were registered in 2024, which was a fifth more than in the previous year, though only 105 of them had any negative impact. Defensive measures were much stronger in 2024 so that where one in three denial-of-service attacks succeeded in 2022, only 18% did so in 2024.

The impact of cyber attacks on the operation of vital payment services

Eesti Pank pays attention to cyber risk because it has a legal obligation as the central bank to organise the continuity of vital payment services so as to reduce the impact that any emergency or interruption to vital services could have on the Estonian economy. It also has to estimate the potential impact of any cyber incident or attack on the financial sector in order to support financial stability and carry out macroprudential supervision.

Cyber attacks impacted the operation of critically important infrastructure in the Estonian financial sector on three occasions in 2024. The start of Russia's full-scale war in Ukraine in 2022 provoked several consecutive waves of denial-of-service attacks on institutions in the Estonian financial sector that obstructed the operation of card payment systems and interrupted the payment services of the banks providing vital payment services. There were nine denial-of-service attacks registered in 2022 that affected the continuity of payment services. The duration of the interruption to services ranged from 26 minutes to eight hours. There were no incidents that interrupted the reliable operation of payment services between the start of 2023 and June 2024, which shows that the payment system operator and the banks providing vital services had put efficient cyber defence measures in place that were able to stop the attacks effectively.

The number, complexity, frequency and duration of attacks against institutions in the Estonian financial sector increased from the third quarter of 2024 though. There were three successful attacks, two of which affected the card payment services of the banks providing vital services, and one of which was aimed at the state institution providing authentication services for the banks and affected payment services at several banks. The impact of the three incidents was that payment services were temporarily interrupted for between one hour and 17 minutes, and four hours and 38 minutes. Given the increase in cyber dangers and the intensity of the attacks, the capacity of the owners of the critical infrastructure in the Estonian financial sector to identify cyber attacks and react to them is good despite the three incidents that affected payment services.

Cyber risks and financial stability

Most of the cyber attacks target individual companies and so have a limited impact. If an attack succeeds in taking out a critical part of the financial system though or if its impact is transmitted from one part of the system to another, it could have a systemic impact on the functioning of the financial sector. The financial sector as a whole is made vulnerable to cyber attacks by the high degree of concentration of services that are critical to the operation of it like payment systems or asset management services, the increasing dependence of the services provided by financial institutions on the same third-party IT service providers, and the high degree of interconnectedness between financial institutions. The IMF estimated in spring 2024 that around a fifth of the cyber attacks over the past 20 years have been aimed at financial institutions.

It found three main ways that cyber attacks can threaten the systemic stability of the financial sector:

1. cyber attacks can cause a loss of trust in one or more participants in the system, and a bank run could then cause a shortage of liquidity that could threaten the solvency of a financial institution and pass through to other participants in the financial system;
2. there could be a lack of replacement services if the operations of the owner of payment infrastructure or a critically important service provider are interrupted for example, or if a key provider of cloud services is taken out;
3. participants in the financial system are vulnerable because they are so interconnected through the technology that they use, if several significant financial institutions use the same software for example, or because they hold financial positions in one another or hold similar positions.

Financial stability could also be threatened by cyber attacks on companies operating outside the financial sector that are of critical importance for the financial system. An interruption to the electricity network for example would affect the normal operation of the financial system and the impact could spread into the non-financial economy.

The initial impression is that the stable functioning of the Estonian financial sector would be threatened most by cyber attacks through a loss of trust and through possible interruptions to service providers or infrastructure that are of critical importance for the services in the financial sector. The risks from the interconnectedness within the financial system are generally smaller in the Estonian financial sector, as the financial positions taken within the system between the banks are small. Of greater importance from that point of view is the connection between the largest banks in Estonia and the parent banks in the large banking groups of Sweden.