Financial Stability Assessment

Geopolitical tensions and a standstill property market are casting a shadow over financial stability

Financial stability | 23 May 2024

Finland's financial system is stable, but the standstill in the housing and real estate markets and the considerable sensitivity to interest rate movements are adding to the risks. The deterioration in the international security environment, harmful phenomena in the wake of financial market digitalisation, and climate change are exposing the financial system to operational disruptions and new severe risks. A diversity of macroprudential policy measures will reinforce the resilience of banks and borrowers, enabling better preparedness for fluctuations in housing market activity and housing prices. Trust in the resilience and reliability of the financial system must be enhanced by further preparing for the realisation of liquidity and cyber risks.



Finland's financial system has remained stable despite the recession. The housing market has responded strongly to the exceptionally rapid rise in interest rates. Prices of existing homes have decreased substantially, housing sales have fallen markedly and the construction of new dwellings has virtually halted. Bankruptcies among construction companies have increased, and banks' credit risks on loans to the construction industry have grown. This has coincided with a decline in household indebtedness.

If interest rates are cut and the economy recovers as anticipated, this will bolster the stability of the financial system. The recovery of the Finnish economy is projected to be slow, with the risks tilted to the downside. If housing and real estate sales do not pick up as expected and house and property prices continue to fall, the economic situation could deteriorate further, and the risks faced by banks and by residential property and real estate investors could increase. Climate change, digitalisation and geopolitical threats are undermining financial stability in new ways that can be unexpected or difficult to assess.

Table 1 summarises the key policy recommendations for strengthening financial stability that are put forward in the Bank of Finland's financial stability assessment. The resilience of banks and borrowers must be maintained and reinforced through macroprudential policy measures. Banks therefore need to hold sufficient capital buffers to counterbalance the vulnerabilities of housing and real estate finance, among other things. Similarly, the authorities would need to be able to deploy the countercyclical capital buffer requirement more flexibly to allow for a better macroprudential policy response to unforeseen economic shocks.

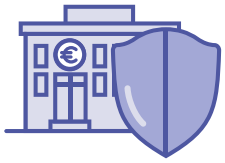
The aim of the other policy recommendations is to firmly strengthen trust in the resilience and reliability of the financial system, for example by preparing for cyber risks and operational disruptions. The consolidation of Finland's public finances will also contribute to financial stability. A capital markets union is needed to improve the preconditions for growth in Europe and its strategic autonomy. The resilience of the financial system must be furthered by completing the EU banking union. Changes in financial regulation must take account of anticipated developments in risks and the operating environment.

Table 1. Summary of the financial stability assessment for Finland

Operating environment risks for the financial system		
		

Source: Bank of Finland.

Table 1. Summary of the financial stability assessment for Finland

		
The recession in the housing and real estate markets weakens the economy and impairs the debt-servicing capacity of households, businesses and investors.	The deterioration in the international security environment exposes the financial system to severe shocks and widespread disruptions.	Climate change, biodiversity loss and digitalisation increase financial sector risks and vulnerabilities in ways that are difficult to assess.
Factors bolstering the resilience of the financial system		
		
The Finnish banking sector is able to withstand a higher-than-expected increase in credit risks in the Nordic housing and real estate markets.	Banks' ample liquidity offers them protection against temporary funding constraints. Back-up systems have been put in place as a contingency measure for operational disruptions.	Institutional supervision serves to ensure that supervised entities also make provision for novel risks in their business and risk management.

Source: Bank of Finland.

Table 1. Summary of the financial stability assessment for Finland

Policy recommendations for strengthening financial stability		
The resilience of financial market participants must be maintained by means of macroprudential policy.	**Trust in the resilience and reliability of the financial system must be firmly strengthened.**	**The financial regulatory framework must be continuously developed to accommodate the constant changes in risks and the operating environment.**
Banks need sufficient capital buffers as a counterbalance to their structural vulnerabilities. A cap on borrowers' debt-servicing burden is needed to prevent excessive household indebtedness. The responsiveness of macroprudential policy should be improved by allowing for a more flexible use of the counter-cyclical capital buffer requirement.	The financial sector and the authorities must continue to prepare for operational disruptions and an increase in cyber risks. Finland's public finances must be strengthened to secure their funding and increase central government´s fiscal ability to respond. Finland must actively promote the completion of the banking union and, by extension, the unity and stability of the European financial system.	Tools must be designed for the assessment of systemic risks and the protection of the financial system against climate and cyber risks. Progress towards a capital markets union must be stepped up given the increase in both the private and public sector's funding needs as a result of climate change. The scope of macroprudential policy must be expanded to include non-bank financial actors, but the targeting of measures must be carefully designed.

Source: Bank of Finland.

Modest growth in sight despite economic performance still being hampered by high interest rates

The operating environment of the Finnish financial system has changed substantially during the past two years. The European Central Bank (ECB) and many other central banks tightened their

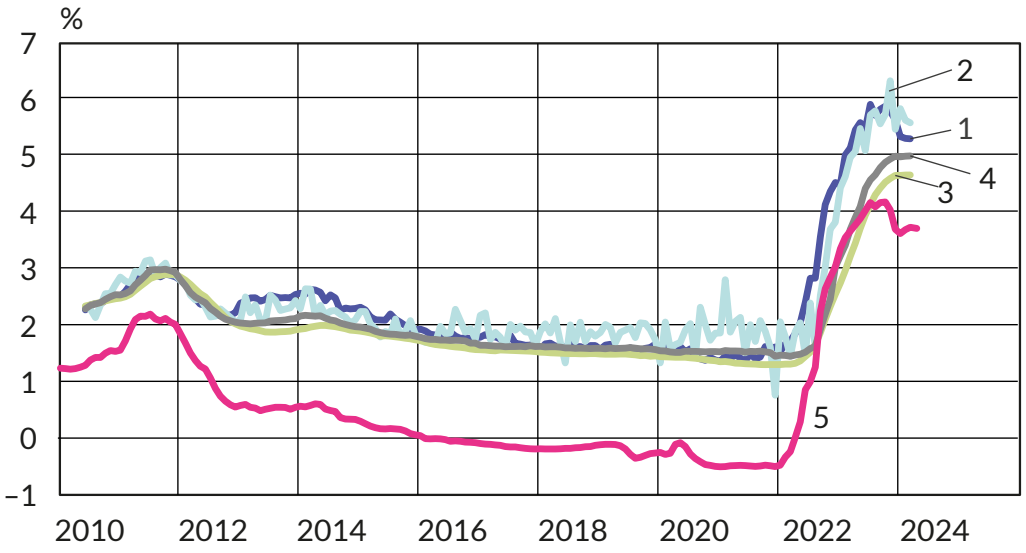
monetary policy in 2022 and 2023 in order to curb excessively high inflation. The sharp rise in interest rates has slowed inflation and weakened economic growth in Finland and elsewhere in the euro area.[1] The Finnish economy has contracted due to the inflation surge, weak demand and higher interest rates. Private consumption has grown slowly, and investment and exports have declined.

In Finland, the rise in market interest rates passed through rapidly to the interest rates on new and existing loans, as most loans are tied to Euribor rates (Chart 1).[2] The loan-servicing costs of Finnish households and businesses have grown. The average interest rates on new loans started to decline slightly at the end of 2023. Nevertheless, tight financing conditions continue to dampen economic growth and slow inflation.[3]

Chart 1.

Interest rates on new loans have declined from their peak in 2023

1. Average interest rate on new household loans
2. Average interest rate on new corporate loans
3. Average interest rate on the stock of household loans
4. Average interest rate on the stock of corporate loans
5. 12-month Euribor



Loans from Finnish credit institutions to households and non-financial corporations in Finland.
Sources: Refinitiv and Bank of Finland.

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The financial markets have been calm since the energy crisis triggered by Russia's invasion of Ukraine abated (Chart 2). The Finnish financial system has remained stable overall. Although financing costs have increased substantially, the availability of bank loans and market-based finance has remained generally good in relation to financing needs. In all the main industries, companies have identified insufficient demand as the greatest obstacle to growth. Although financial difficulties have been less substantial, they have become more common especially in the construction industry.[4] Interest rates on construction companies' new loans continued to rise in early 2024.

Chart 2.

No signs of an increase in risk aversion in 2024



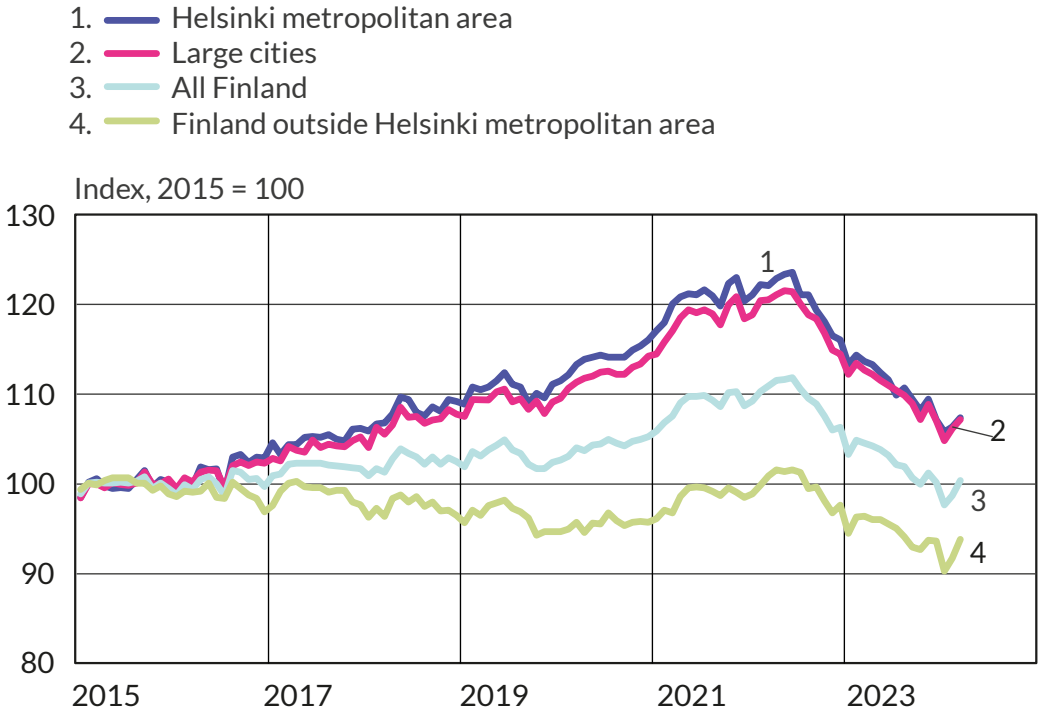
A higher value indicates higher stress and risk aversion in the financial markets.
Sources: Bloomberg, Datastream and calculations by the Bank of Finland.

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Rapid inflation and higher interest rates have weakened Finland's housing and real estate markets in particular. Higher loan-servicing costs and other expenses are putting a strain on households, housing companies, real estate investors and construction companies. There has been a clear decrease in the number of residential and property transactions concluded by households and major professional investors. Housing prices have decreased faster than at any time since the recession of the early 1990s, and the greatest decrease has taken place in the Helsinki metropolitan area (Chart 3).[5] Residential construction has decreased dramatically, and bankruptcies among construction companies have increased rapidly.

Chart 3.

Housing prices have declined most in the Helsinki metropolitan area



Nominal prices of existing dwellings in housing companies in Finland.
Helsinki metropolitan area = Helsinki, Espoo, Vantaa and Kauniainen.
Large cities = Helsinki metropolitan area, Turku, Tampere and Oulu.
Sources: Statistics Finland and calculations by the Bank of Finland.

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Although the employment rate has remained fairly solid, layoffs have increased and the unemployment rate has started to rise. According to forecasts, the unemployment rate will rise temporarily, but the economic outlook will improve gradually in the immediate years ahead. The markets expect the Governing Council of the ECB to start lowering interest rates in summer 2024, and economic growth in Finland is anticipated to start recovering slowly from the second half of the year onwards.[6] If the growth path is as anticipated, this would help with debt servicing, increase the demand for finance, rouse the housing and real estate markets and alleviate threats to financial stability. The risks to the real estate market and to real estate finance triggered by higher interest rates could still continue to cause losses to investors and lenders in Finland, the other Nordic countries and Europe.[7, 8]

The financial stability outlook is subject to significant uncertainty in the short and medium term. Risks could grow and be greater than expected especially if high inflation in the euro area is more persistent than projected, if interest rates stay high for longer than expected, if the recovery of the Finnish economy is delayed, or if the housing and real estate market recession is longer and deeper than anticipated.

Geopolitical tensions have increased in Europe, the Middle East and between the superpowers, which has increased geoeconomic fragmentation, or the division into competing blocs. Russia's war in Ukraine, the situation in Gaza and trade restrictions between different countries could still lead to disruptions in the global economy and financial system. (More on risks and threats to stability below.)

Structural vulnerabilities still considerable, new threats growing

The key vulnerabilities in Finland's financial system and potential threats to stability can be divided into three groups: (1) cyclical vulnerabilities related to the economy, housing and real estate markets and the financial markets; (2) long-term structural vulnerabilities independent of cyclical variations; and (3) new global vulnerabilities related especially to changes in the international security environment, digitalisation and climate change.

Chart 4 presents an assessment of the vulnerabilities of the key participants and customer groups in Finland's financial system and of the phenomena affecting them, and shows their expected trajectories if the economy performs as forecast in the immediate years ahead. The resilience of the Finnish financial system has been reinforced on a long-term basis through international and national regulation and supervision (see: Regulation has proved its worth in the turbulence of recent years). The assessment takes account of policy measures carried out and other factors which reduce vulnerabilities and improve resilience to risks.

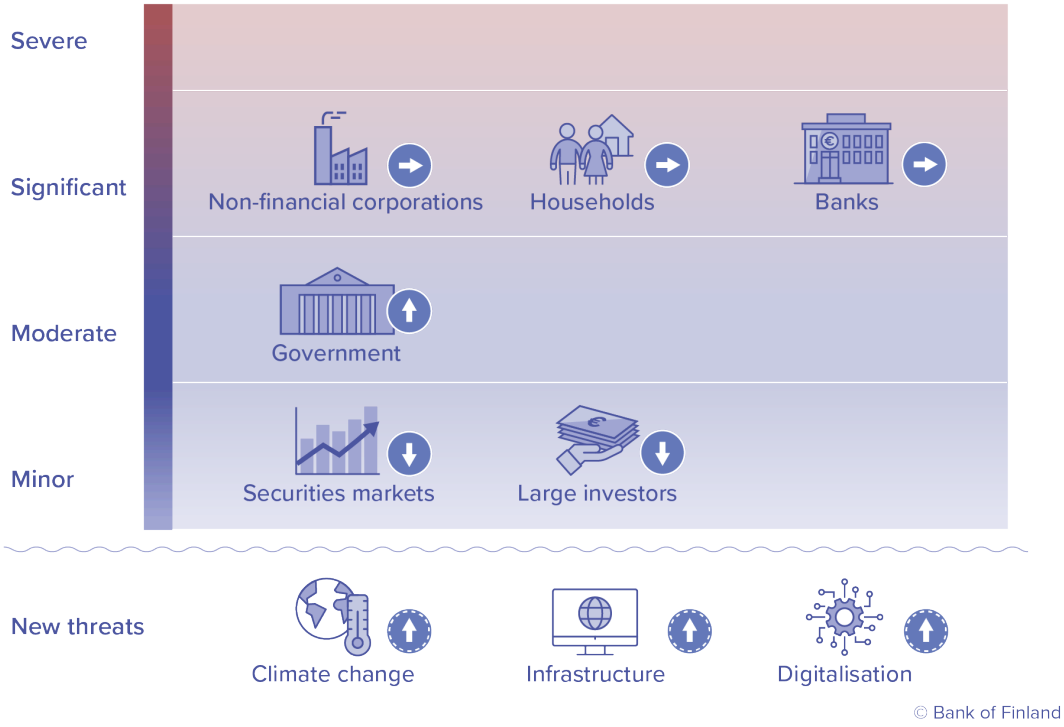
The most significant vulnerabilities in Finland's financial system concern structural factors in the banking sector, such as the large proportion of housing and real estate financing in bank lending, and banks' exposure to the risk of default by households and businesses. Risks related to government indebtedness have grown to a level that is relatively high from the perspective of financial stability.

The vulnerabilities presented to the financial system by the securities markets and major professional and institutional investors are relatively minor and are diminishing as the interest rate environment normalises. Climate change and the digitalisation of the financial sector are causing new vulnerabilities to the financial system. Vulnerabilities related to the infrastructure of

the financial system are also on the increase, especially due to the rise in cyber threats. The assessed vulnerabilities and their expected trajectories will be examined more closely in the following sections.

Chart 4.

Assessment of the Finnish financial system's vulnerabilities and their expected trajectories

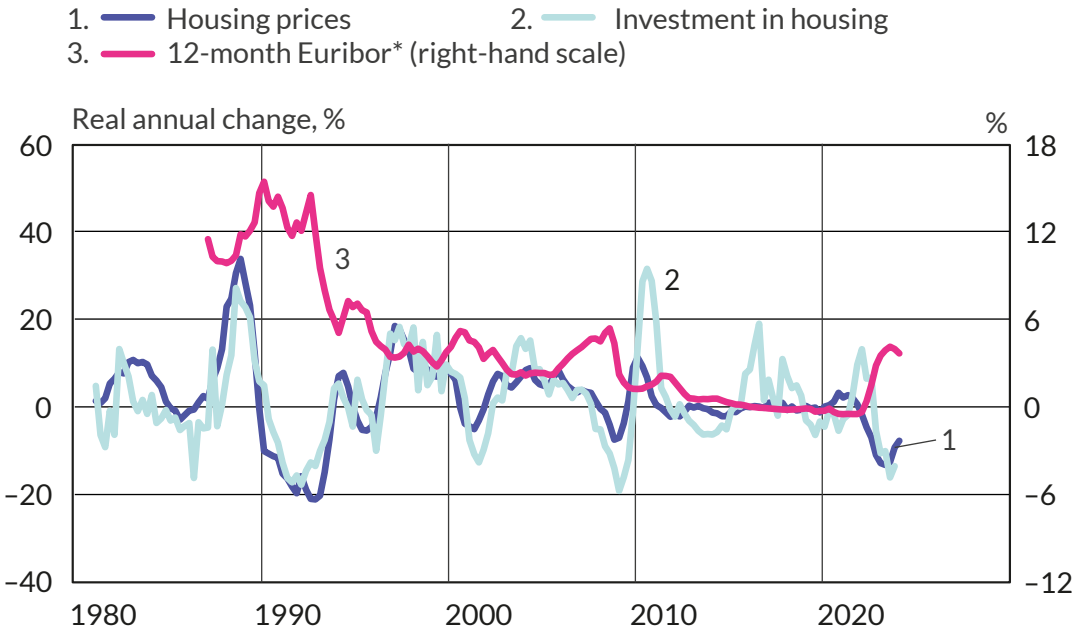


Housing and real estate markets sensitive to changes in interest rates and demand

In Finland, the financial cycle has cooled down in recent years and is currently weak overall. Higher interest rates have reduced borrowing by households and companies. The housing and real estate markets in Finland are very sensitive to sudden changes in interest rates and demand.[9] The rapid increase in interest rates has triggered a strong market downturn, as the number of housing transactions has decreased, construction has declined, and housing prices have declined (Chart 5). Higher financing costs have also reduced corporate non-residential investment. Share price performance on NASDAQ OMX Helsinki has been muted and has fallen behind international peers.

Chart 5.

Housing prices and construction are sensitive to interest rate movements



*12-month Helibor before 1999.
Sources: Statistics Finland, Refinitiv and Bank of Finland.

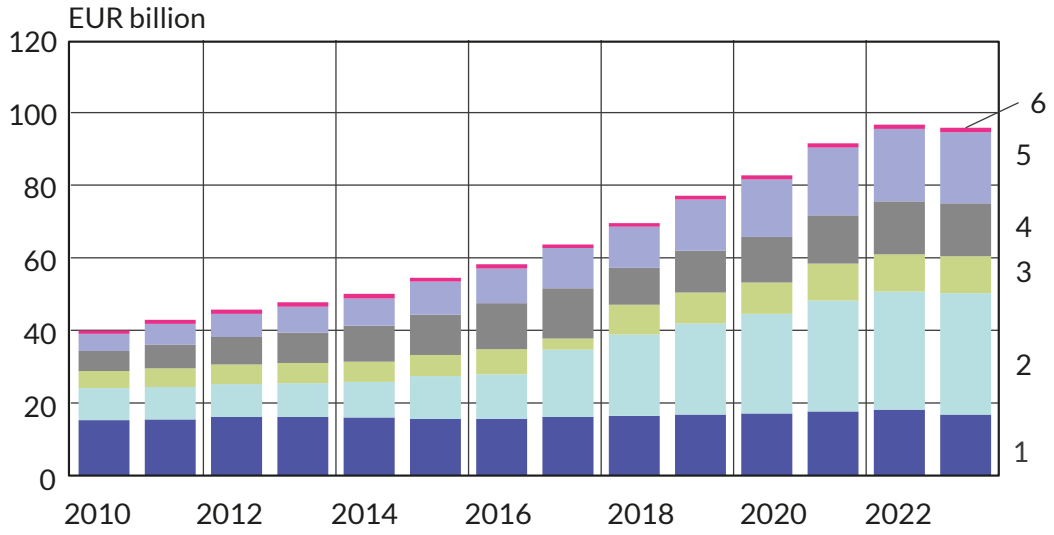
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The vulnerabilities of housing and real estate financing and of large cities' housing markets in particular grew during the period of low interest rates. Significantly more loans were taken out than at present. Households became more indebted, because new mortgages were larger than before and had longer maturities. Large housing company loans for new-build construction and the long interest-only periods previously granted for such loans may have increased the use of high leverage in housing purchases, which makes it difficult for home buyers and residential property investors to estimate the overall costs involved.[10] Residential property investment increased, and the professional real estate investment market grew (Chart 6).

Chart 6.

Real estate investment markets grew strongly in low interest conditions

1. Institutional investors
2. International investors
3. Listed real estate investment companies
4. Non-listed real estate investment companies
5. Real estate funds
6. Foundations, associations and others



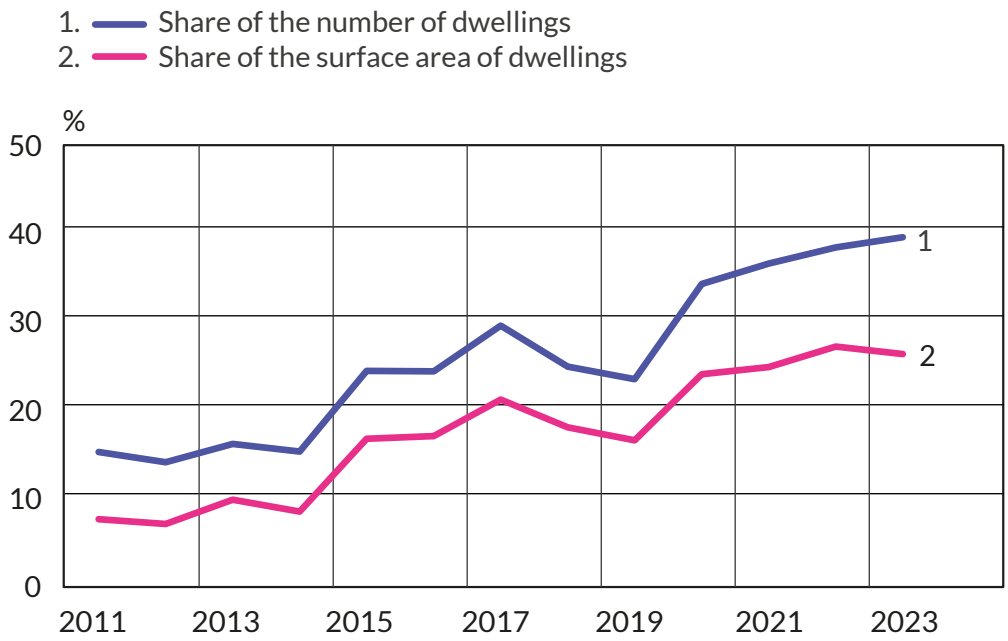
Real estate investment by professional investors in Finland.
Source: KTI Finland.

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The **real estate investment market** has undergone extensive structural changes in recent years. The proportion of housing in all real estate investment grew during the period of low interest rates. Returns were attractive, and major professional investors purchased or built large volumes of new rental housing properties (Chart 7). By contrast, the attractiveness of commercial and office premises as investments declined, as increased e-commerce and the prevalence of teleworking reduced demand for these premises.[11]

Chart 7.

Importance of professional investors in housing production has increased in the past ten years



Share of dwellings completed for professional property investors in relation to the number of all new dwellings in blocks of flats per year in Finland.
Sources: Statistics Finland, KTI, and calculations by the Bank of Finland.

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Although the markets expect the interest rate level to decrease in the coming years, the outlook for the Finnish economy remains subdued. The anticipated developments in the operating environment support the gradual recovery of the housing market, real estate investment, construction and borrowing. If demand in the housing markets of growth centres picks up faster than the supply of housing, there is a risk of a housing shortage. In this case, housing prices and borrowing could surge more than forecast, which could increase the risks of excessive household indebtedness over the medium term.

A revival of investor demand for residential properties and investor-driven construction is subject to uncertainty, because the rise in the interest rate level has altered the investment environment. In the current interest rate environment, investors can obtain reasonable returns on investments other than in real estate. Investors can therefore demand a better return than before on the risks of the real estate market. The loan-to-value limit on housing company loans in accordance with

new regulations will improve the financing structure of new builds and prevent excessive growth of housing company loans in future economic upswings.

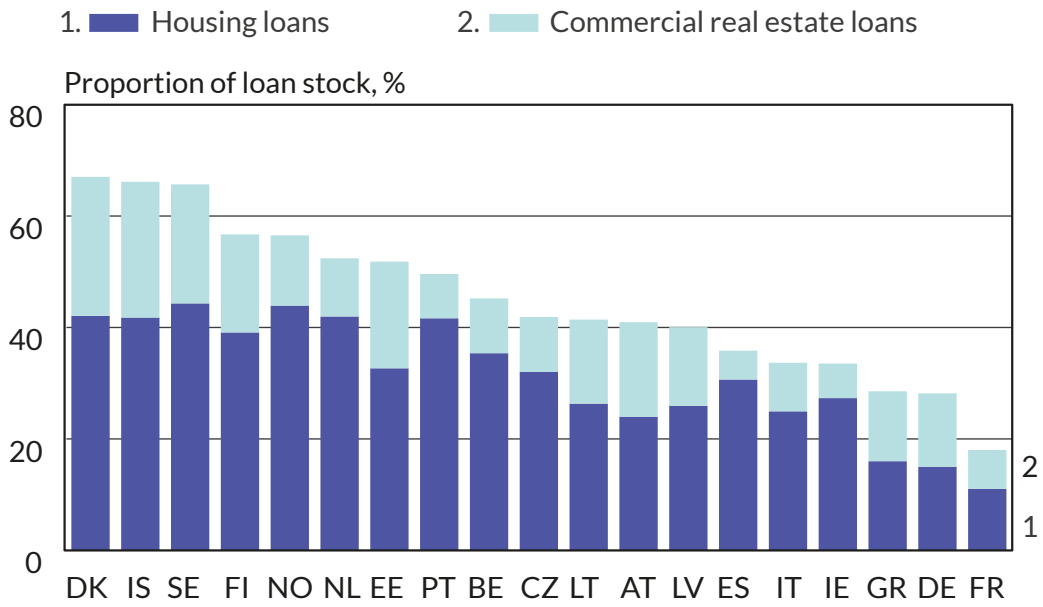
Banking sector exposed to housing and real estate financing risks

The most significant structural vulnerabilities of the credit institution sector in Finland are the large size of the sector and of individual credit institutions in relation to the national economy, cross-country interconnectedness, dependence on international market-based funding, significant risk concentrations relating to residential mortgage and real estate lending, and among the key customer groups, the high indebtedness of households, in particular.[12] These vulnerabilities have long been identified as significant, and in recent years have remained mostly unchanged or have in part eased a little.

Structural vulnerabilities are closely tied to the housing and real estate markets of Finland and other Nordic countries. Lending collateralised by real estate comprises a large proportion of the loan portfolio of banks (Chart 8). Banks use residential mortgages as collateral when issuing covered bonds, with which they obtain a large portion of their market-based funding. Banks also hold each other's debt securities. The major Nordic banks grant loans and engage in business operations in several different countries. Cross-country operations diversify risks, but they also increase the interconnectedness of financial systems and therefore add to the probability of risks spreading from one country to another.

Chart 8.

Nordic banks have large volumes of lending collateralised by real estate



Situation at end of 2023.
Source: European Banking Authority.

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Credit institutions play a big role in the financing of Finland's households and housing corporations and especially in the financing of small and growing enterprises. If they were to materialise, disruptions and crises in the credit institution sector could threaten financial intermediation and the stability of the entire financial system. The costs of financial crises for the real economy and for the public finances would be very high.

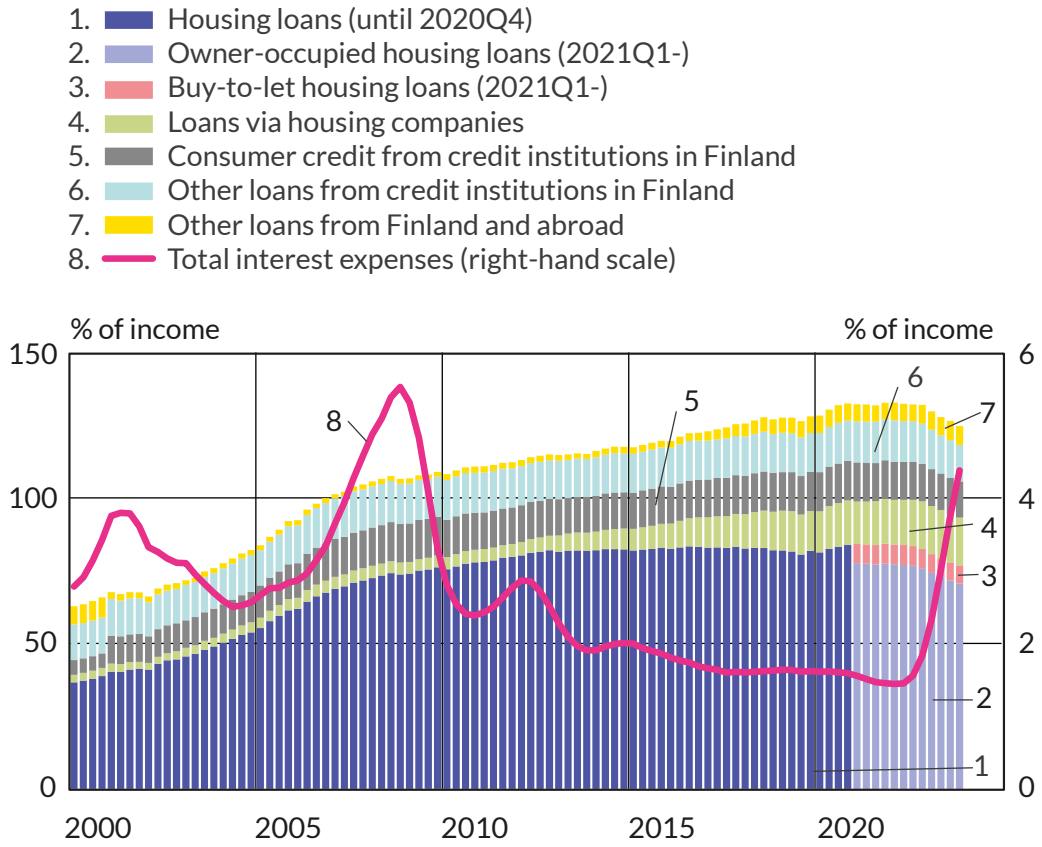
Vulnerable customer groups of credit institutions include indebted households that are vulnerable to increases in interest payments, and industries sensitive to abrupt movements in demand, such as accommodation and food service activities, which were badly hit by the pandemic, and the construction industry. Companies that are dependent on international supply chains and exports are vulnerable to disruptions caused and exacerbated by increased geopolitical tensions, for example. For the time being, most households and companies have found ways of adapting to the more difficult operating environment.[13]

Finnish households' debts in relation to income have declined substantially from their peak at the

end of 2021. Indebtedness has decreased because household borrowing has declined substantially and nominal disposable income, such as wages and social benefits, has grown more quickly than before. Although households' interest payments have grown substantially, the increase in incomes and the reduction in borrowing have contributed to easing the interest burden. The majority of household debt is variable rate long-term debt related to housing (Chart 9). Housing company loans and high-interest, unsecured consumer credit form a larger proportion of household debt than previously, which can increase the risks associated with indebtedness.[14]

Chart 9.

Household debt has decreased relative to income



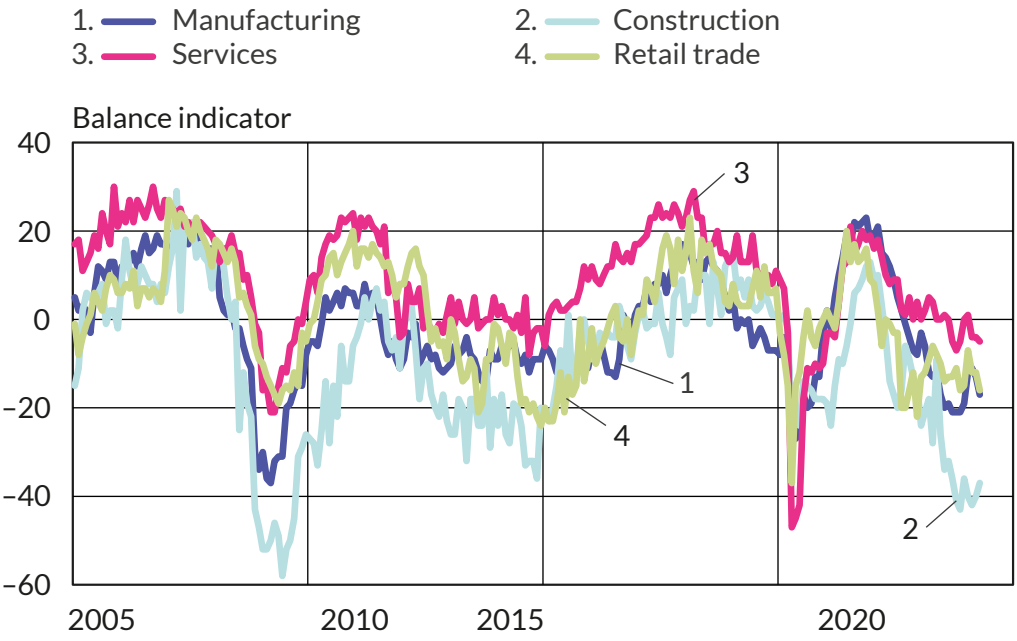
Finnish households' debts and annual interest expenses relative to disposable annual income.
Sources: Statistics Finland and Bank of Finland.

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The vulnerabilities of **Finnish companies** are currently high in the construction industry and in real estate investment. The growth in costs and valuation losses has weakened the profitability of real estate investment companies. The construction industry has been hampered by growth in financing and other costs, and by the simultaneous decline in demand and turnover. Construction companies have a large stock of unsold new homes whose prices have shown less flexibility than those of existing dwellings. The order books and employment expectations of the construction industry have declined substantially, which has weakened the situation and outlook of the industry in relation to other industries (Chart 10).

Chart 10.

Confidence clearly weaker in construction than in other industries



Seasonally adjusted confidence indicator in the main industries.
Sources: Confederation of Finnish Industries and Macrobond.

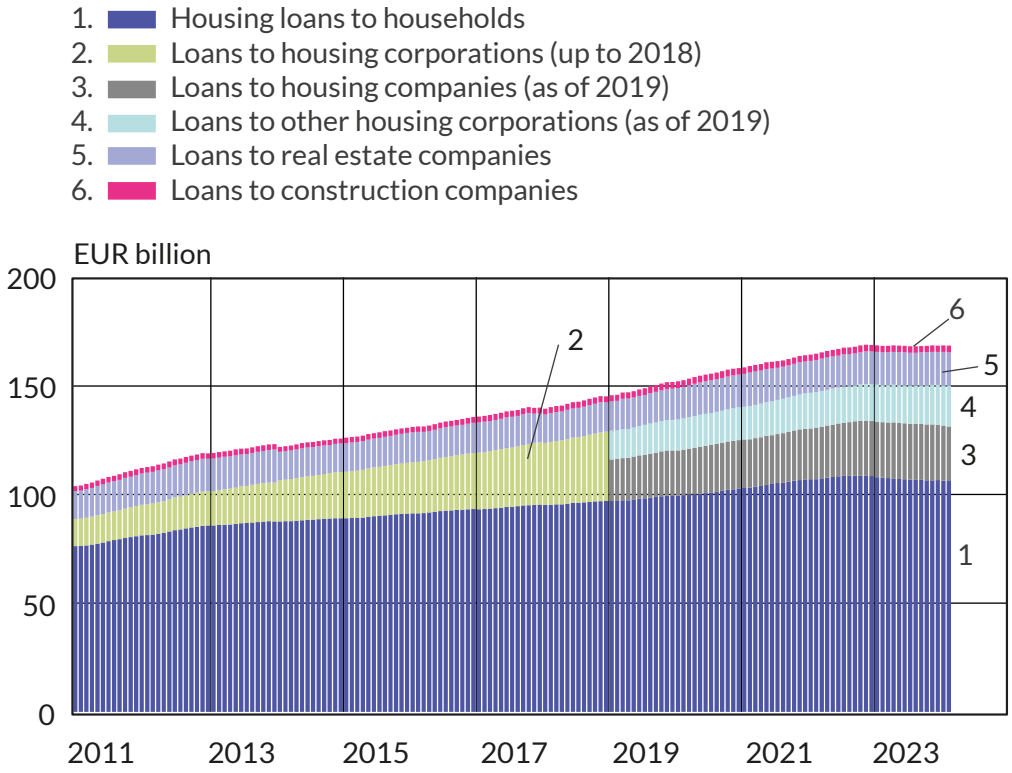
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Loans taken out directly by the construction industry and by private real estate investment companies account for a relatively small proportion of credit institutions' housing and real estate financing and of their entire loan stock (Chart 11), which lessens banks' direct credit risks. Founding contractors normally take out bank loans in the name of the housing company for the building under construction. The financing base of major real estate investment companies is

broader, and they finance rental housing properties not only through bank loans but by using market-based finance obtained from the bond markets. The availability and pricing of market-based finance depends on the investor's real estate risk assessment and yield potential.

Chart 11.

Majority of housing and real estate financing is for housing



Housing and real estate finance from credit institutions in Finland to households, businesses and other corporations.
Source: Bank of Finland.

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The structural vulnerabilities of the credit institution sector and its key customer groups are not projected to change substantially in the immediate years ahead. Household borrowing is expected to increase when the housing market gradually recovers. Nevertheless, indebtedness in the immediate years ahead is forecast to remain below the peak reached at the end of 2021. The housing and real estate markets will remain sensitive to financial and economic cycles, due, among other things, to the prevalence of variable rate loans and the large fluctuations in demand.

Rise in interest rates has rebalancing effect on securities markets

The rapid rise in interest rates has had both positive and negative effects on large domestic investors' returns in the real estate and securities markets. In 2023, the fixed-income and equity investments of funds and of employee pension institutions and life and non-life insurance companies were profitable, but real estate holdings generated losses on investment. The resilience of large investors has generally remained robust, and such investors have buffers and means to adapt to changes in the operating environment.[15]

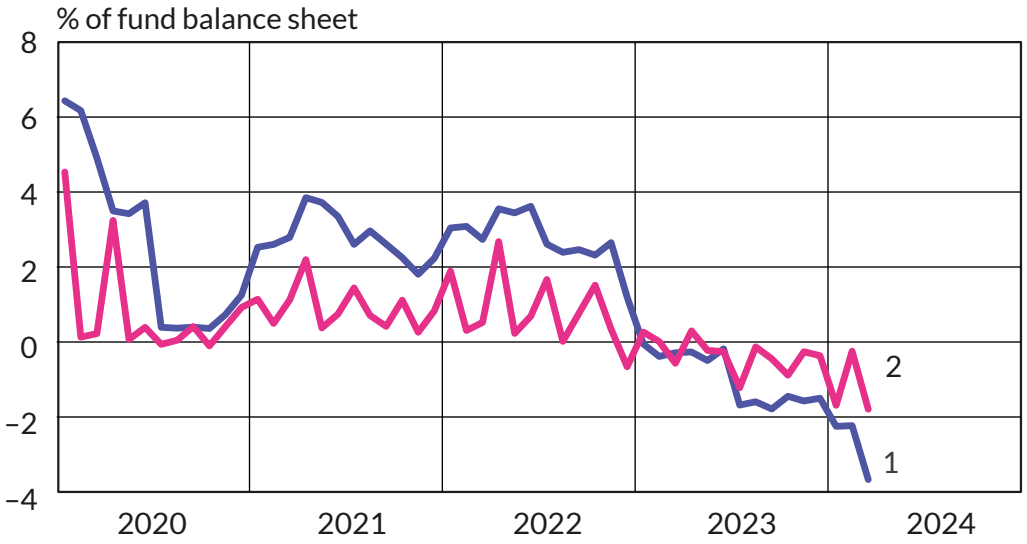
Employee pension institutions and life and non-life insurance companies are significant investors in the Finnish residential and commercial property market, both through direct investments and investments in funds. Large institutional investors contribute to improving the stability of the real estate market. The institutions make long-term investments with their own assets and funds collected as insurance premiums. Their total investments are relatively well diversified and they have financial buffers to withstand the risks of investment activities. The systemic importance of individual companies and the strong interconnectedness of the insurance sector with the rest of the financial system increase the system's vulnerabilities. The employee pension sector's risk-taking in the stock market has increased, and this adds to the sector's exposure to market risks.

Open-ended real estate funds are exposed to changes in the investment behaviour and risk appetite of their customers. The net asset value of Finnish funds has improved favourably overall, but the value of open-ended real estate funds has decreased as a result of falling property values and redemptions of fund shares (Chart 12). Redemption orders have grown in number, increasing the need for funds to manage their liquidity position by, for example, reducing the frequency of redemptions or postponing them. The challenging conditions in the real estate market are making it more difficult to determine property values. As real estate funds have loans from banks, this increases the risk that the difficulties encountered by funds could spill over to banks. Real estate funds' direct loans from banks operating in Finland have increased, but the outstanding amounts are relatively low.

Chart 12.

Redemptions from real estate funds exceed new investments

1. 3-month net subscriptions
2. 1-month net subscriptions



Net subscriptions to Finnish open-ended real estate funds.
Source: Bank of Finland.

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The vulnerabilities related to the **securities markets** and **large investors** in Finland are fairly modest as a whole, and there are no signs of excessive risk-taking in the securities markets. Foreign investors' interest in Finland as an investment location has remained strong. The rise in interest rates from their exceptionally low levels has rebalanced the investment environment and reduced pressure for excessive risk-taking and profit-seeking by investors in, for example, the equity and real estate markets.

Finland's financial system is not isolated from new global threats

Climate change and biodiversity loss pose financial risks and create vulnerabilities that are difficult to predict and assess. Climate risks could have a greater impact on the financial system already in the immediate years ahead and over a longer period. Physical climate risks, such as floods, forest fires and other risk events caused by extreme weather, may become more frequent and severe. This may drive up the losses of insurance companies and banks and also increase the

volume of uninsured damage incurred by households and businesses.[16]

Finnish banks have financed companies that use fossil fuels, and the profitability of these firms may weaken as a result of climate policy measures. This may increase banks' credit risks associated with climate change, i.e. transition risks.[17] Climate change may also affect the economy and the financial system via indirect channels, such as migration and increased geopolitical tensions.

As with climate change, biodiversity loss also poses both physical and transition risks. Many companies are dependent on a variety of ecosystem services, and biodiversity loss weakens these services. Policy measures to protect biodiversity may, in turn, affect the profitability of companies whose activities are detrimental to the environment.[18]

Digitalisation and technological advances in the financial sector are increasingly affecting the structures and functioning of the financial system. The entry of non-banking sector entities, such as fintech and bigtech companies relying on new technology, to the market and the cross-border provision of services have boosted competition in financial services. Changing business models, new partnerships and outsourcing of services create new linkages in the financial sector and make value chains longer and more complex.

While digitalisation opens up new opportunities for the financial system and improves its efficiency, it also creates new vulnerabilities and channels. Factors such as sophisticated deepfakes, the rapid spread of disinformation in the digital environment and increased popularity of securities trading on multilateral platforms may create risks[19,20] that could be amplified by the rapid advances in artificial intelligence (AI)[21]. The vulnerabilities arising from digitalisation are closely linked to the operational risks in the financial system. (See: Financial sector digitalisation and changed security environment increase the infrastructure risks).

ⓘ Financial sector digitalisation and changed security environment increase the infrastructure risks

The key infrastructure in the Finnish financial system[22] – payment and settlement systems – have operated reliably. The systems of the participants connected to the

infrastructure have also functioned without serious disruptions. As the financial system infrastructure operates as a network, significant disruptions of one participant could impact the functioning of the financial system as a whole. Additionally, significant dependence on operators outside Finland exposes the Finnish financial system to disruptions in systems located elsewhere in Europe.

Geopolitical tensions and Finland's changed security environment have increased[23] the risk that the infrastructure and individual actors could become the target of hybrid interference – cyberattacks by nation-state actors – and other attacks that affect operational activities. The threat posed by cybercriminals motivated by financial gain has also increased. Digitalisation and technological advances in the financial sector may amplify the effects of disruptions.

Financial sector entities are responsible for their own continuity planning and contingency preparations for dealing with serious disruptions. The EU Regulation on digital operational resilience for the financial sector (Digital Operational Resilience Act, DORA)[24] aims at strengthening the operational reliability of the financial sector as from 2025. In Finland, the preparedness of infrastructure and operators has been improved by the national emergency account system established in 2022, which ensures critical banking and daily payment services in times of serious disruption. In addition, the Ministry of Finance has recently set up a working group on the management of financial market disruptions[25] to support cooperation between the private sector and the authorities in the event of different types of operational difficulties.

Fiscal consolidation would support the stability of the Finnish financial system

The rapid rise in interest rates has increased the debate on sovereign debt-servicing capacity. In many advanced economies, including Finland, general government debt grew rapidly and substantially on account of the support measures implemented during the pandemic. Business subsidies pushed up government guarantee liabilities in many countries. The accumulation of general government debt in Finland has continued in the post-pandemic era. The trajectory of Finland's government debt differs significantly from that of its reference group of euro area countries and other Nordic countries, which have below average public debt. Finland's general government debt-to-GDP ratio is still below the euro area average, but forecasts suggest that it will move closer to the average in the coming years.

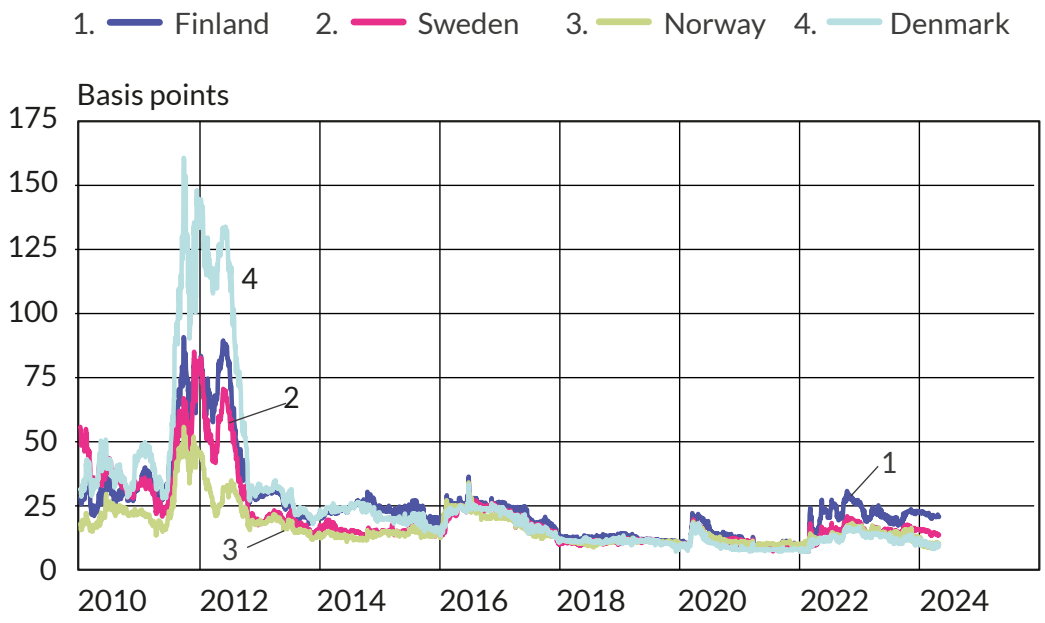
A country's economy as a whole will suffer if the country is faced with problems as a result of excessive indebtedness.[26] An increase in sovereign credit risk will affect not only the country's own debt-servicing costs or access to finance, but the price the country pays for its debt will generally serve as a reference value for local government and corporate risk premia. A broad-based increase in debt-servicing costs could have significant consequences for the real economy if higher financing costs were to result in decreased investment and consumption. A deterioration in the economy would further weaken the situation of borrowers, which could trigger a negative spiral.

International experience shows that changes in the risk level of a country's government debt will have a particularly strong impact on the country's banking sector on account of the interlinkages between banks and sovereigns. A decline in a country's credit rating will generally cause a downgrade in the credit ratings of banks operating in that country. Sovereign downgrades may also have significant consequences for other institutions, such as pension or insurance companies, if government bonds are no longer eligible as collateral or suitable for investment purposes. The government bond holdings of banks operating in Finland are fairly modest, and pension companies' portfolios are not significantly overweighted towards domestic investments. This reduces the interlinkages between the sovereign and the financial system and the impact of any elevated country risk on the financial system.

The vulnerabilities related to **Finnish government** indebtedness are fairly significant in terms of financial stability and are expected to deepen further in the immediate years ahead. Despite the fiscal adjustment measures, the general government debt-to-GDP ratio will continue to increase in the immediate years ahead.[27] If investors' confidence in Finland's solid debt-servicing capacity and the low level of the country's credit risk were to weaken, this could raise the price at which the government, credit institutions and large corporations obtain funding from the international financial markets. So far, the risk premia have remained low and stable (Chart 13).

Chart 13.

Low risk premia reflect investors' confidence in Nordic governments' debt-servicing capacity



5-year sovereign credit default swap spreads.
Source: S&P Capital IQ Pro.

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The consolidation of Finland's public finances would contribute to the stability of the Finnish financial system. A robust debt-servicing capacity for the country is an essential condition for financial stability, especially for a country such as Finland which has a large, interconnected and concentrated banking system whose funding is heavily dependent on the confidence of international investors. High indebtedness also weakens the government's ability to use expansionary fiscal policies to respond to potential crises in the economy or the financial system.

Sharply weakening economy and unexpected external shocks pose a threat to financial stability

In the event of economic growth being significantly weaker than expected or a sudden re-tightening of financing conditions due to major external shocks, the vulnerabilities identified above and the associated risks could, in the worst case, threaten the stability of Finland's financial system. Chart 14 shows **four key threats** to the stability of the Finnish financial system in the

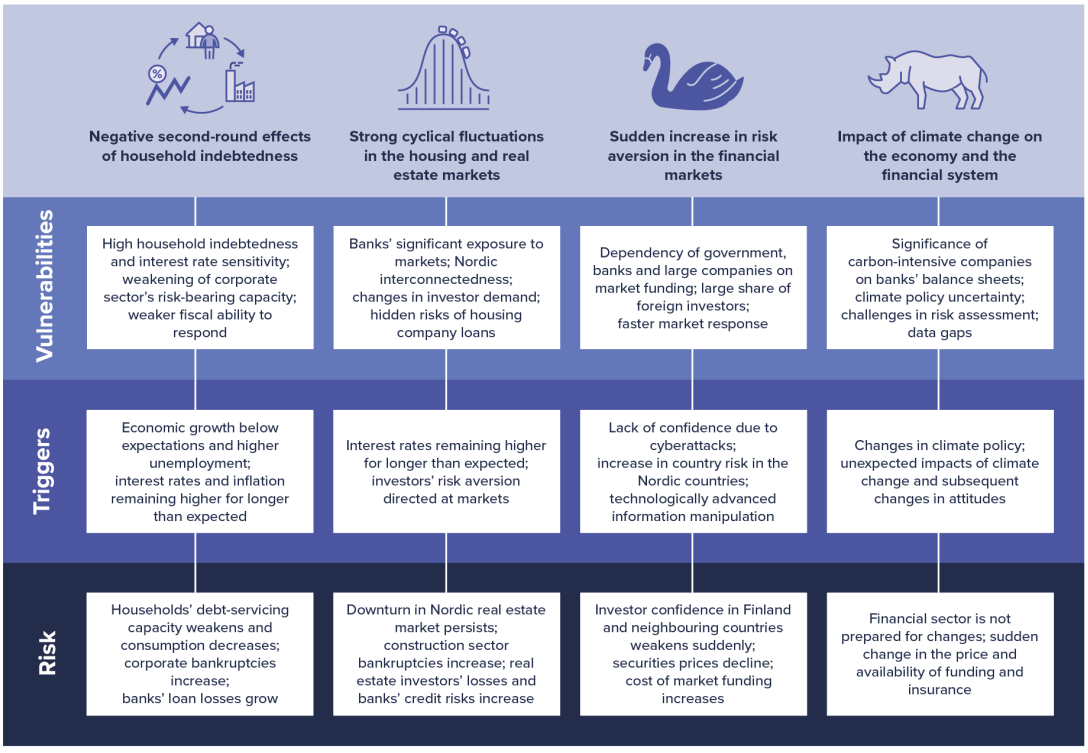
short and longer term.

The stability threats presented are not forecasts; they describe various adverse scenarios that would, if they materialise, have negative effects on financial stability and the economy. The effects would depend on how severe the materialised threats were and what kind of second-round effects they would have. Very serious effects are rare but possible.

The Finnish financial system has remained stable, despite the many crises experienced in recent years. By identifying possible stability threats and preparing for their materialisation, the authorities seek to ensure the financial system's resilience remains strong.

Chart 14.

Adverse scenarios that could, in the worst case, threaten the stability of Finland's financial system



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A strong contraction in private consumption, if persistent, could cause negative second-round effects in the economy. In the event of economic growth being significantly weaker than forecast and unemployment rising by more than expected, households could have to reduce spending further. Sales of companies' products and services would then decrease and their capacity to invest and employ workers would deteriorate. Companies' liquidity problems and bankruptcies would increase, and banks' losses on loans to businesses and households could increase

substantially. Such a situation could weaken the ability of banks to grant loans in support of economic growth. General government debt and interest expenses would increase further. Raising funding from the international financial markets would become more expensive and difficult for central government and for Finnish companies and banks.

In deep recessions and strong booms, real estate markets sensitive to changes in interest rates could amplify economic fluctuations further in Finland and the other Nordic countries. If interest rates remain high for longer than expected and the recovery in housing and real estate sales is delayed, investors could start demanding higher risk premia on real estate loans due to the weak market outlook. Housing and real estate prices would fall still further, which would increase the number of construction company bankruptcies, cause losses to investors, and increase banks' loan losses and the cost of funding due to the decline in collateral values. In the longer term, a rapid recovery in house sales could increase the risk of overheating in the housing market, due to housing supply bottlenecks created during an economic slowdown.

An increase in Finland's country risk and in the risk aversion of investors towards Finland could increase funding costs extensively. If the confidence of foreign investors in Finland as a safe investment were to weaken significantly due to, for example, the materialisation of risks in the real estate market, geopolitical hybrid interference, a weakening in the government's ability to service its debts, or other shocks, the cost of market funding for central government, banks and companies could rise substantially. The increase in banks' funding costs could push up the interest rates on loans to households and businesses or decrease access to loans and thereby weaken the economy further.

Climate change could have an adverse effect on the economy and the financial system if climate risks cannot be prepared for sufficiently and in a timely manner. The danger is that the climate risks to banks and other finance companies will be underestimated if the identification and assessment of risks is insufficient (see: Risks typically grow in the shadows – data collection must be developed further). A sudden tightening of climate attitudes or policy could cause rapid changes in the pricing of credit and collateral and disruptions in the availability of financial services in areas and industries that are unable to adjust sufficiently rapidly to policy objectives for preventing climate change. Correspondingly, underperformance in achieving climate policy goals could in the longer term magnify the physical risks as a result of climate warming.

ⓘ Risks typically grow in the shadows – data collection must be

developed further

The emergence of a financial crisis typically requires the presence of various vulnerabilities and triggers. It often also involves unforeseen factors, such as risks that have not been identified or assessed correctly and thus mitigated sufficiently by financial market entities or regulatory measures. All the key stability threats to the Finnish financial system described above include particular elements that have been identified and the risks of which are managed. Stability threats also include vulnerabilities and interconnections that are not fully visible due to, for example, statistical and reporting gaps. The Bank of Finland aims to promote more comprehensive data collection in Finland and in Europe. The key development priorities are in the areas set out below:

The risks created by **digitalisation and technological innovations** are new, which makes them difficult to identify. The transmission of information is increasingly rapid and the logic of algorithms is not transparent, which hampers the assessment of risks. The impact of information spreading rapidly in social media should be understood better so that the financial system can be strengthened against, for example, deepfakes and cyberattacks. The provision of financial services is becoming more extensive and the value chains produced are getting longer. The outsourcing of services creates new partnerships and increases the linkages between the entities. It is therefore necessary to extend data collection to the non-bank providers of financial services and financial products.

The comprehensive analysis of the physical risks of **climate change** requires more detailed data and new analysis tools. Climate scenarios provide location data on changes in physical risks – accurate even to the level of individual properties – but this cannot always be integrated with data on local economic activity or property ownership. The availability of location data could be improved by incorporating it in data collection and by improving the extent to which data can be integrated in analysis work covering the entire country.

The Finnish commercial real estate investment market is relatively small, and therefore not all the basic market data needed for the analysis is available, such as a comprehensive price index. The largest gap in the data relates to international interconnections. The majority of the investors in the Finnish commercial real estate market are Nordic or other foreign investors. The financial arrangements may be complex and the associated risks

and risk allocation are difficult to estimate. EU countries and particularly the Nordic countries should share their statistics more effectively than at present, including those on the non-bank financial sector. A Nordic-wide stress test exercise as proposed by the International Monetary Fund (IMF) would be useful for identifying cross-border contagion risks (Table 2).

Statistical data on individual borrowers should be supplemented to enable assessment of the loan-servicing ability of households. The credit register on household debt (positive credit register) introduced in early April considerably increases the information available on this. However, the register still does not have data on housing company loans, which are key for assessing the overall situation of borrowers. The register should also be supplemented with data on borrowers and their income and wealth, as these have an effect on repayment ability. Comprehensive register data would improve the capacity of the Bank of Finland and the Financial Supervisory Authority (FIN-FSA) to assess risks in the financial system and the necessary policy measures, in accordance with their statutory tasks.

Table 2. Nordic interconnectedness is one of the key vulnerabilities of the Finnish financial system but there is not enough information about it

	Risk-increasing interconnections	Risk-mitigating factors
 Bank exposure*	About 75% of Finnish banks' loans collateralised by commercial real estate are loans to the other Nordic countries.	Finnish banks' capital position is strong and loan losses in the real estate sector are moderate so far.
	Nordic real estate investors are a significant investor and owner group in the Finnish real estate	Large international investors are often able to buy even in a weakening market.

Source: Bank of Finland.

Table 2. Nordic interconnectedness is one of the key vulnerabilities of the Finnish financial system but there is not enough information about it

 **High significance of Nordic investors***	investment market.	
 **Information contagion**	An increase in risks in the Nordic real estate markets could hamper the funding of Finnish investors and banks.	There are currently no signs of significant funding challenges in the real estate or banking sector.

* The interconnectedness is partly hidden.

Source: Bank of Finland.

Resilience of banks and borrowers must stay strong

The Finnish banking sector is profitable and sound.[28] Counterbalancing the vulnerabilities, the sector has strong capital buffers that the Board of the FIN-FSA has reinforced by introducing capital buffer requirements that form part of the macroprudential toolkit. The FIN-FSA has imposed on the entire credit institution sector a systemic risk buffer requirement, due to the sector's structural characteristics and vulnerabilities.[29] In addition, capital buffer requirements have been set for three large credit institutions, based on their significance for the Finnish financial system.[30] Additional capital requirements imposed in other Nordic countries are applied to Finnish banks that have significant lending activity in those countries.

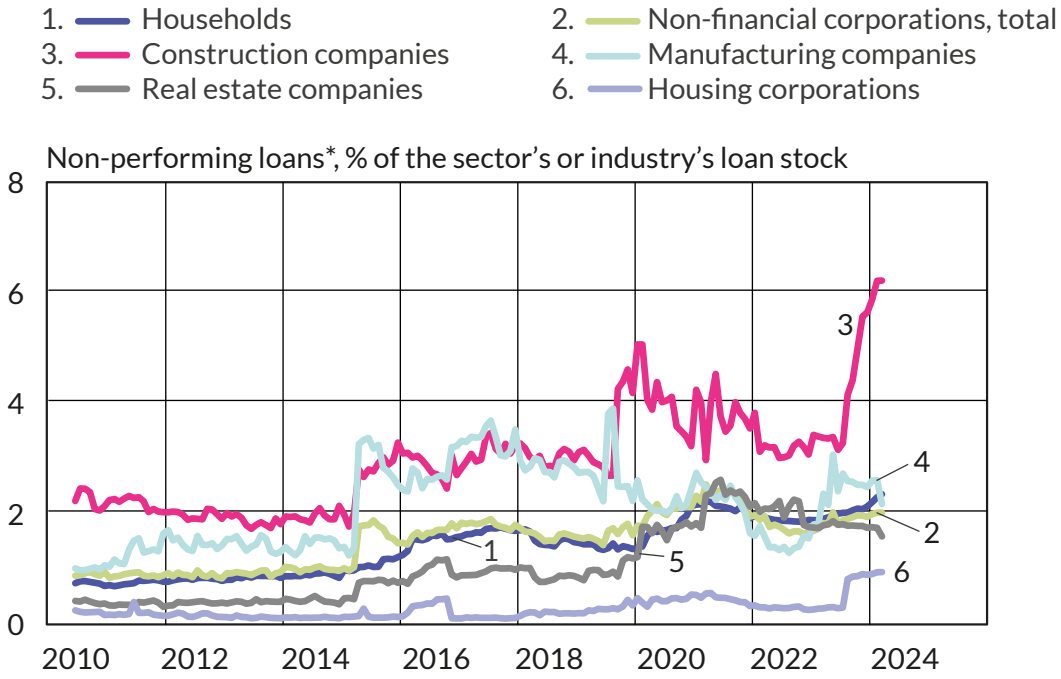
The resilience of borrowers has also been strengthened in a variety of ways. Measures applied in Finland include the maximum loan-to-collateral ratio (loan cap) for new residential mortgages and

the recommendations by the FIN-FSA on affordability testing of mortgage borrowers and the stressed maximum debt-service-to-income (DSTI) ratio. In July 2023, legislation entered into force that limits the maximum maturity of new mortgages and housing company loans and the size of housing company loans granted for new-build construction relative to the unencumbered price of the homes for sale. The statutory interest rate cap and marketing restrictions on consumer credit improve consumer protection.

The rise in interest rates boosted the banking sector's net interest income and operating profit in 2023. Loan losses remained small and they did not significantly weaken the profitability of banking business. The loan-servicing ability of households and companies has remained generally good. The share of loans with an increased credit risk and non-performing loans in banks' loan stock has increased as a result of the rise in interest rates, but the volume of bad loans is relatively small. The proportion of non-performing loans has grown rapidly in the construction industry, whereas in the real estate industry the proportion has remained fairly small (Chart 15).

Chart 15.

The proportion of non-performing loans has increased rapidly in the construction industry



Loans granted by Finnish credit institutions to households, non-financial corporations and housing corporations in Finland. *Loans overdue by more than 90 days and loans where the borrower is unlikely to pay due to repayment difficulties. Loans are net, excluding recognized impairment losses.
Source: Bank of Finland.

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If the economy develops as forecast, the Finnish banking sector's profitability is expected to remain good and its capital position to strengthen further. The anticipated decline in interest rates and the gradual recovery in economic growth will alleviate the credit risks of banks, but the 2023–2024 recession is still expected to further increase loan losses in the immediate years ahead.

The stress test conducted by the Bank of Finland and the FIN-FSA shows that credit risks and loan losses could reach very high levels if the operating environment is significantly more unfavourable than expected. In such a severe stress test scenario, covering three years, the banking sector's capital position would weaken substantially but the sector would withstand the situation thanks to its strong capital buffers (see: Finland's banking sector could withstand a recession even more

severe than forecast).

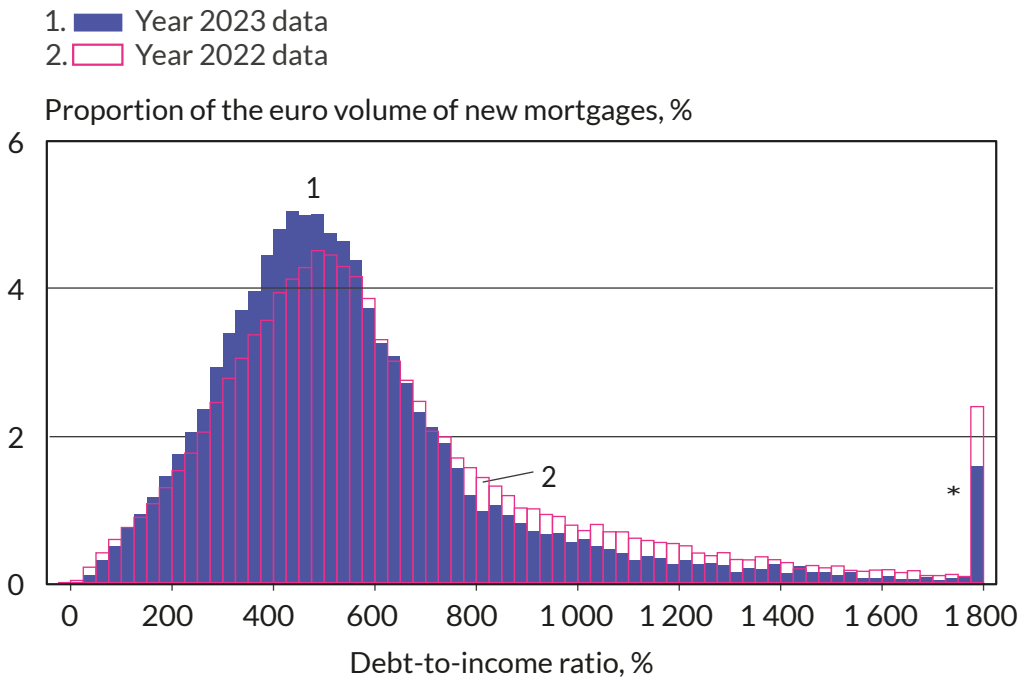
The strong resilience of the financial system is largely due to the significant improvements in financial regulation and supervision in the past 15 years (see: Financial regulation has proved its worth in the turbulence of recent years). The Finnish financial system is bank-centric and structurally vulnerable. It is therefore particularly important to ensure that Finnish banks continue to have sufficient capital in the future. The capital requirements imposed on banks must ensure that banks have the ability to absorb even large losses without jeopardising their lending capacity. The recent high profitability of the banks has improved the capital position of credit institutions in Finland and helped banks adjust to the higher capital requirements.

The overall level of capital buffer requirements set for the banks that is judged to be sufficient on financial stability grounds must be reviewed regularly. The sufficiency of banking sector capital in times of severe stress in the economy is assessed by conducting stress tests at least once a year. In the setting and timing of the capital buffer requirements, any procyclical impact of the requirements must be taken into consideration.

The purpose of borrower-based macroprudential instruments, such as the maximum loan-to-collateral ratio (loan cap) for new housing loans in Finland, is to curb excessive household indebtedness. The housing market has slowed and the volume of new mortgages has decreased significantly. The immediate concerns about the increase in household indebtedness have thus decreased (Chart 16).[31] It is nevertheless important that the maximum loan-to-collateral ratio and the FIN-FSA's recommendation on the maximum debt-service-to-income ratio continue to prevent particularly high-risk borrowing by households.

Chart 16.

Indebtedness of new mortgage borrowers has decreased



*Outliers of the right-hand tail have been added to the haircut value 1,800%.

Distribution of new housing loans based on the borrowers' debt-to-income ratio, calculated on the basis of net income.

Sources: Financial Supervisory Authority and calculations by the Bank of Finland.

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An uncertain operating environment highlights the importance of liquidity management

The liquidity position of the Finnish banking sector has remained stable, and the banks fulfil the minimum requirements of the liquidity regulatory framework. The strong capital position of Finnish banks and their well-diversified sources of funding help improve access to finance and the terms of financing. Funding costs have increased, but access to finance has remained good. An increased share of banks' total funding is made up of short-term financing, because long-term central bank refinancing operations have matured, financing conditions have tightened and deposits have shrunk.

The FIN-FSA uses stress-testing to assess the adequacy of banks' liquidity in a scenario where the operating environment is clearly weaker than expected. Based on the stress tests conducted in early 2024, the adequacy of Finnish banks' liquidity reserves would be limited in abrupt or protracted severe liquidity crises.[32] In its future supervisory measures, the FIN-FSA will pay particular attention to the adequacy of banks' liquidity reserves. The tightening of financial conditions and the sudden and powerful fluctuations in the financial markets in recent years underline the need for careful management and supervision of liquidity risks (See: 'Are banks' liquidity risks a cause for concern?').

ⓘ Are banks' liquidity risks a cause for concern?

After the global financial crisis, a number of regulatory reforms were implemented for banks, including minimum liquidity requirements (see: 'Regulation has proved its worth in the turbulence of recent years'). The runs on deposits[33] in regional banks in the United States in spring 2023 showed that the regulation and supervision of these banks had not been sufficient to prevent bank runs. In the United States, depositors withdrew money from the mistrusted banks in larger amounts and at a faster rate than in previous bank runs (Chart 17). The explanations put forward for this include the digitalisation of banking services and the impact of social media on how fast and effectively information spreads.[34]

The liquidity risk of banks operating in Finland is increased particularly by their dependence on short-term market funding. This dependency increases the vulnerability of banks to serious and long-term turbulence in the international financial markets.[35] This vulnerability was also raised by the IMF in its country report on Finland.[36] The IMF is particularly concerned about banks' high dependence on short-term, unsecured wholesale funding. In its assessment, the IMF also considers deposits by non-financial corporations to be a source of wholesale funding that is sensitive to turbulence.[37] The IMF recommends that authorities tighten the liquidity requirements for Finnish banks in order to get the banks to increase the share of longer term financing in their market funding.[38]

In Finland, short-term wholesale financing is mainly held by the largest banks, which have

a better ability to bear funding risks than smaller banks. Larger banks have access to a broader and more diversified selection of funding channels and funding instruments than smaller banks. As a result, their financing will mature more evenly, allowing them to avoid situations where large amounts of funding require renewing at the same time. In addition, large banks are more closely supervised and their capital adequacy requirements are stricter, which contributes to their resilience.

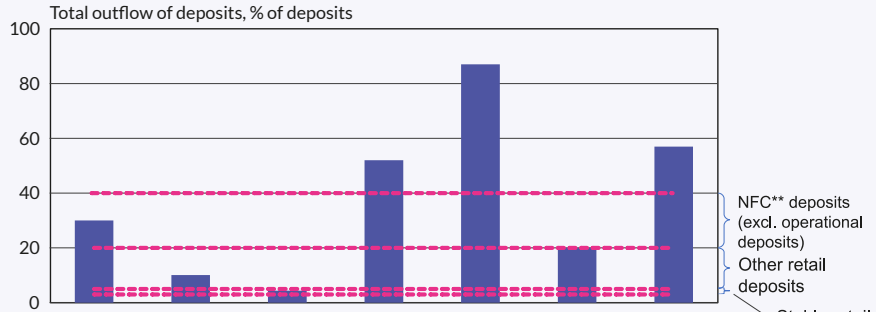
The events of spring 2023 raised the question of whether there is need to adjust the international supervision and regulation of banks' liquidity. In its preliminary assessment[39], the Basel Committee on Banking Supervision (BCBS) states that the reasons for the incidents were shortcomings in the banks' risk management and weaknesses in banking supervision. The BCBS finds that banking supervision should provide a flexible complement to regulatory requirements and should adapt the liquidity buffer requirements to each bank's business model and risks. It also finds that going forward, supervisory authorities should pay particular attention to the nature of banks' business activities and balance sheet structure in the supervision of liquidity risks.

A bank's liquidity crisis is always rooted in a very profound loss of confidence in the bank by customers and investors. Liquidity buffers, i.e. cash and cash equivalents, are essential for a bank but not necessarily sufficient to maintain the confidence of those providing funding to the bank. Liquidity crises and runs on deposits should therefore be prevented by proactively strengthening confidence on a broad basis – primarily through transparency and professional risk management by banks, but also through credible supervision, sufficient regulation and effective resolution processes.

Banks are subject to an international liquidity coverage ratio (LCR) requirement. Determining the LCR of a bank includes assessing the amount of funding that may dry up in the event of a crisis. It is possible that the current calculation method underestimates, in particular, the risk that banks' uninsured deposits by non-financial corporations may become exhausted in the event of disruptions in the financial system. There may be cause for the BCBS to review its international recommendations regarding the calculation of the LCR requirement. The supervision of liquidity risk should focus more on whether banks have sufficiently diversified their funding to different sources.

Chart 17.

Bank runs in the 2020s have been larger and faster than before



	Continental Illinois, 1984	Washington Mutual, 2008	Wachovia, 2008	Silvergate, 2022	SVB, 2023	Signature Bank, 2023	First Republic, 2023
Deposit insurance coverage (%)	15	74	61	11	6	10	32
Duration of outflow (days)	10	16	19	<7	1*	1*	7–14

The columns represent the share of total deposits that flowed out during the deposit run in the specified bank. The lines represent the LCR regulation minimum and maximum outflow coefficient thresholds for different deposit types within a 30 day horizon. The share of insured deposits and the duration of the event is displayed below the name of the bank.
*Incl. expected outflow the next day.
**Non-financial corporations.

Sources: Rose, J. (2023), Understanding the Speed and Size of Bank Runs in Historical Comparison, Economic Synopses, No. 12 and Bank of Finland.

14.5.2024 © Suomen Pankki

Need for new and more flexible macroprudential instruments

Housing sales and mortgage borrowing have slowed, and the immediate concerns about the rise in household indebtedness have eased. However, lending and the risks associated with it could grow rapidly when interest rates decline, as the pent-up demand for housing will be released but the increase in the supply of housing in response to the rising demand will take time.

Macroprudential policy must be prepared to address fluctuations in housing market activity and residential property prices. To a certain extent, macroprudential instruments can be used to influence the volume of mortgage borrowing and housing company loans and to curb problematic indebtedness. However, the impact of macroprudential policy on the housing market is only indirect. It is not the objective of macroprudential policy to control housing sales or housing prices.

The Bank of Finland believes that a binding ceiling on borrowers' monthly debt-servicing expenditure relative to income should be introduced to be able to curb increases in Finnish households' indebtedness and the systemic risks associated with mortgage lending. The

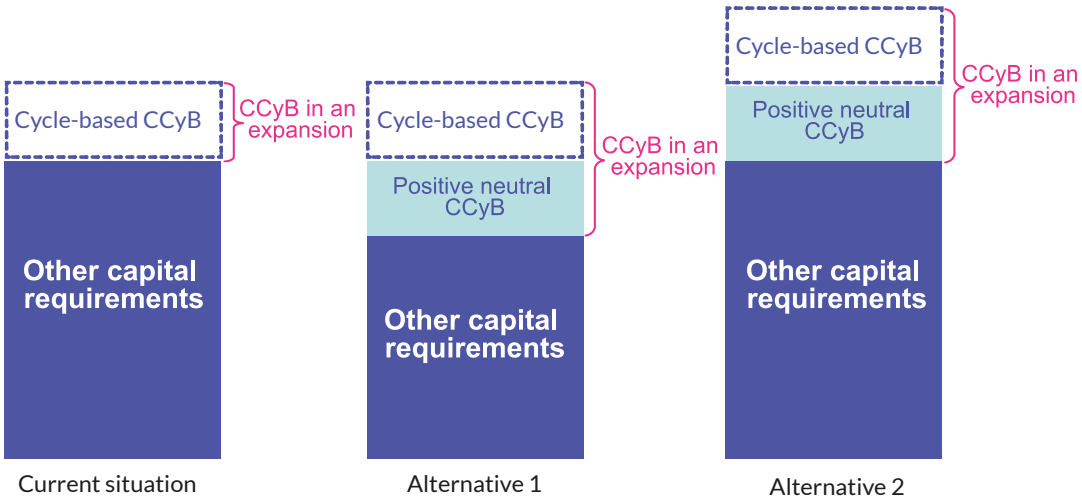
introduction of such a binding cap on the debt-service-to-income (DSTI) ratio has also been recommended by a Ministry of Finance working group[40] and by the IMF[41]. Under the working group's recommendation, housing companies' incentives to take on large loans would be reduced by limiting the right of residential property investors, in the case of new builds, to deduct housing company loan repayments from taxable rental income.

Authorities should have the ability to strengthen banks' lending capacity through easing of capital buffer requirements in unexpected economic stress or crisis situations caused by disruptions outside the financial system. Pandemics, natural disasters or other unforeseen shocks could cause even major losses to banks. The losses could decrease banks' capital buffers, thereby forcing banks to limit their lending to ensure they meet their capital requirements. The reduced lending would further exacerbate the stress experienced by the economy and the financial system.

There should be a way to prevent this kind of downward spiral between the contraction of lending and the weakening of the economy. In such a situation, the macroprudential authorities could ease the capital buffer requirements imposed on banks more flexibly than is currently possible. However, Finland differs from many other EU countries in that the FIN-FSA is only allowed to impose a countercyclical capital buffer (CCyB) requirement if there is a strong increase in lending or there are signs of other cyclical risks. It should be permissible for the FIN-FSA to set a CCyB requirement above zero already in the neutral phase of the credit cycle, when the financial system is not yet at risk of overheating. This would allow the requirement to be eased quickly in support of lending in stressed market conditions. The requirement could be set either by increasing the total amount of capital buffers or by keeping them unchanged while reducing the other macroprudential capital requirements (Chart 18).[42]

Chart 18.

Alternatives for imposing positive CCyB requirement in neutral phase of credit cycle



CCyB = countercyclical capital buffer.

Source: Bank of Finland.

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Pending reform of the EU's macroprudential framework

In January 2024, the European Commission published a report[43] on the review of the EU macroprudential regulatory framework. The report examines possible ways to improve and complement the existing provisions on macroprudential instruments in the EU Capital Requirements Regulation (CRR) and the Capital Requirements Directive (CRD). The Commission has not yet published any legislative proposals or more detailed views on the new regulatory framework.

As part of the reform of the EU's macroprudential regulatory framework, there should be clarification of the possibility of setting a positive CCyB requirement in the neutral phase of the credit cycle. In addition, the principles and conditions for the use of the systemic risk buffer (SyRB) requirement and the O-SII requirements for nationally systemically important institutions should to some extent be harmonised across the entire EU. It is also important that EU regulation should select and define the borrower-based macroprudential measures that are necessary to curb excessive household indebtedness. These measures should be made available in all EU countries.

The Commission also intends to assess the development of a macroprudential policy for non-bank financial intermediation and is launching a public consultation on the subject in May 2024. Extending macroprudential policy to other financial sector entities than banks is of paramount importance, but it requires a careful assessment of the systemic risks and vulnerabilities that the policy seeks to address.

This work should also take into account that the non-bank financial system consists of an assortment of highly heterogeneous sectors (such as different funds, insurance companies and market infrastructures), which is why it requires more than just a set of uniform measures. A critical step in the development of effective macroprudential policy measures targeting the non-bank financial sector is to improve the common knowledge base and the exchange of information regarding the risks of different sectors and their interconnectedness across EU countries.

A capital markets union must be firmly promoted

The European financial markets are highly bank-centric. The European Union would benefit from a more cohesive capital market. A capital markets union would allow for more effective channelling of savings into investments across the EU and make companies less dependent on bank financing.[44] From the perspectives of competitiveness, investment funding, sustainable growth and risk sharing in the EU, it is important to give fresh impetus to the EU's capital markets union (CMU) initiative, which was launched in 2015. Furthermore, a capital markets union will play a key role in strengthening Europe's strategic autonomy.

The capital markets union initiative has proceeded slowly and in small steps, but the ongoing discussions regarding the objectives of the next European Commission have now returned it to the spotlight. In spring 2024, both the Governing Council of the ECB and the Eurogroup of euro area finance ministers published statements[45, 46] in which they supported swifter progress to develop the capital markets union. They also identified priority areas such as development of the securitisation market and harmonisation of both capital market supervision and insolvency regulation.

The missing component of the banking union, the common European deposit insurance scheme (EDIS), would strengthen confidence in Europe's banking system. The EU banking union currently covers the Single Supervisory Mechanism (SSM) and the Single Resolution Mechanism (SRM). The European Commission has put forward a proposal for legislation to improve the current resolution mechanism[47], but the proposal does not yet include a common deposit insurance scheme. The non-performing loans that have prevented the completion of the banking union for over a decade have largely been eliminated from European banks' balance sheets, and banks' profitability has

improved[48]. Therefore, the introduction of a common deposit insurance scheme should not be delayed any further.

Using financial stability policy to prevent new threats

Authorities must have the ability to identify and assess new threats and risks to the stability of the financial system. Widely identified as factors that could threaten financial stability are the potentially harmful phenomena made possible by digitalisation, and also climate change and biodiversity loss.[49, 50, 51] In the fight against climate change, various tools for pricing CO2 emissions, such as a carbon tax or emissions trading, are generally considered the primary approach. Nevertheless, the authorities responsible for the stability of the financial system need to identify climate change-related vulnerabilities in the financial system and develop analytical tools and policies to address them.

Climate change-related risks could threaten financial and price stability. Central banks and supervisory authorities must ensure that their policy measures reinforce the ability of the financial system to support the green transition. The supervisory authorities must strive to further ensure that individual financial institutions take climate risks into account in their activities.

Macroprudential policy can be used to complement financial supervision and limit the accumulation of systemic risks. This will increase the climate resilience of the financial system as a whole. SyRB requirements imposed on the basis of structural vulnerabilities in the financial system are an example of a macroprudential policy instrument that could be calibrated to take climate risks into account as well. In a recently agreed revision of the EU Capital Requirements Directive, it is stated that climate risks are a justified basis for imposing an SyRB requirement.

Notes

1. See: 'How much does the ECB's monetary policy tightening affect growth in the euro area economy?' – Bank of Finland Bulletin (in Finnish). ↑
2. See also: 'Financing conditions tightened at differing pace in euro area' – Bank of Finland Bulletin (in Finnish). ↑
3. See: From significant recession towards growth – Bank of Finland Bulletin, Alternative scenario: Higher interest rates are slowing inflation and economic growth in Finland – Bank of Finland Bulletin. ↑
4. See: Confederation of Finnish Industries' Business Tendency Survey (April 2024), which describes the situation and outlook for manufacturing, construction, the retail trade and services. ↑
5. The real prices of dwellings, adjusted for consumer prices, have declined even more than ↑

their nominal prices.

6. See: interim forecast for the Finnish economy (March 2024) From significant recession towards growth – Bank of Finland Bulletin. ↑
7. See: Finland's banking sector could withstand even a harsher recession than forecast – Bank of Finland Bulletin. ↑
8. See: 'Brighter outlook for international financial stability' – Bank of Finland Bulletin (in Finnish). ↑
9. See: 'Housing prices are declining – Why and what are the potential effects?' – Bank of Finland Bulletin (in Finnish) and What factors influence house prices and residential construction? – Bank of Finland Bulletin. ↑
10. See also: Risks associated with housing company loans are increasing – Regulatory reforms will restrict use of such loans in the future – Bank of Finland Bulletin. ↑
11. See also: 'Real estate sector's credit risks on the rise in a challenging operating environment' – Bank of Finland Bulletin (in Finnish). ↑
12. For more details regarding the metrics of the credit institution sector's structural vulnerabilities, see: Appendix to decision of 29 March 2023 by the Board of the Financial Supervisory Authority: Basis for imposing the systemic risk buffer, values of related indicators and information to be provided on the decision (finanssivalvonta.fi). ↑
13. See also: Savings help households cope with rising interest rates – Bank of Finland Bulletin. ↑
14. The risks are eased, too, by the fact that a majority of household debt is held by middle and high-income households that also have financial assets. For more details, see: Savings help households cope with rising interest rates – Bank of Finland Bulletin. ↑
15. See also: Strong year in financial sector despite uncertain operating environment – economic developments and geopolitical situation the most significant risks also in 2024 - www.finanssivalvonta.fi. ↑
16. See: 'What do we know about the financial stability effects of the physical risks associated with climate change?' – Bank of Finland Bulletin (in Finnish). ↑
17. See also: 'Climate risks should be considered in planning macroprudential policy' – Bank of Finland Bulletin (in Finnish). ↑
18. See: 'Biodiversity loss poses a threat to the stability of the financial markets' – Bank of Finland Bulletin (in Finnish). ↑
19. See: e.g. These are the biggest global risks we face in 2024 and beyond | World Economic Forum (weforum.org). ↑
20. See: e.g. Financial stability conditions arising from the digitalisation of financial services (europa.eu). ↑
21. See: e.g. Genetic Artificial Intelligence in Finance: Risk Considerations (imf.org). ↑
22. See: Important market infrastructure to the Finnish financial market (suomenpankki.fi). ↑
23. See also: 'Implementation of the Eurosystem cyber resilience strategy in Finland' – Bank of Finland Bulletin (in Finnish). ↑
24. The Regulation entered into force in 2023 and will become applicable in 2025. See: Digital ↑

Operational Resilience Act – 2023– www.finanssivalvonta.fi (in Finnish).

25. See: Ministry of Finance sets up a working group on the management of financial market disruptions (valtioneuvosto.fi) (in Finnish). ↑
26. The management of public debt is eased if debt is used to finance investments that stimulate economic growth. Public debt can also be used to smooth cyclical fluctuations in the economy and to provide financial margin in times of crises to governments and, via governments, to the private sector. High indebtedness may have a negative impact on long-term economic growth, especially if borrowing becomes more expensive, interest payments increase and investment decreases. If investors begin to question a country's ability to service its debts, the interest rates on new debt may be much higher than on existing debt, especially if there is a need to borrow from the market during unfavourable times. In the worst case, this may lead to a sovereign debt crisis. ↑
27. See also the Bank of Finland's assessment of the public finances Correcting the course of the public finances even more challenging than expected – Bank of Finland Bulletin and the Ministry of Finance's press release IMF recommends additional measures to Finland for strengthening the public finances (valtioneuvosto.fi) (in Finnish). ↑
28. For a more detailed analysis on profitability and solvency, see: Strong year in financial sector despite uncertain operating environment – economic developments and geopolitical situation the most significant risks also in 2024 - www.finanssivalvonta.fi. ↑
29. See: Macroprudential decision: Systemic risk buffer set for banks, loan cap remains unchanged - 2023 - www.finanssivalvonta.fi. ↑
30. See: Macroprudential decision: Recommendation on mortgage borrowers' maximum debt-servicing burden – credit institutions' capital requirements also reviewed - 2022 - www.finanssivalvonta.fi. ↑
31. See also: 'Clear increase in first-home loans driven by taxation change' – Bank of Finland Bulletin blog post (in Finnish). ↑
32. See: Finnish banks' liquidity position stable but vulnerable to severe and long disruptions – 2024 – www.fiva.fi. ↑
33. See: 'Banks being put to the test – European regulation has improved resilience' – Bank of Finland Bulletin blog post (in Finnish). ↑
34. See: e.g. Krogstrup and Sangill (2024), New Technologies and the Future Governance of Bank Run Risk, Journal of Financial Regulation; Cookson, Fox, Gil-Bazo, Imbet and Schiller (2023), Social Media as a Bank Run Catalyst, Université Paris-Dauphine Research Paper, No. 4422754; Benmelech, Yang and, Zator (2023), Bank Branch Density and Bank Runs, NBER Working Paper, 31462; and Board of Governors of the Federal Reserve System (2023), Review of the Federal Reserve's Supervision and Regulation of Silicon Valley Bank, April 2023. ↑
35. See: 'Importance of bank funding management highlighted as financing conditions tighten' – Bank of Finland Bulletin (in Finnish). ↑
36. See: Finland: 2024 Article IV Consultation-Press Release; and Staff Report (imf.org). ↑
37. In its stress tests, the IMF assumes that in a crisis situation, banks' funding will run out ↑

considerably faster than assumed in the scenario used for calculating the Liquidity Coverage Ratio (LCR) which binds Finnish banks. Thus, the severe scenario used by the IMF in its risk assessment is more severe than a typical liquidity stress test.

38. See: IMF Executive Board Concludes 2024 Article IV Consultation with Finland. ↑
39. See: Basel Committee on Banking Supervision (2023), Report on the 2023 banking turmoil. ↑
40. See report by Ministry of Finance working group (in Finnish): Recent rise in interest rates does not appear to present widespread major problems for households. ↑
41. See: IMF Executive Board Concludes 2024 Article IV Consultation with Finland. ↑
42. The need to revise the mechanism for setting a CCyB requirement in the neutral phase of the credit cycle was examined in more detail in the context of the Bank of Finland's 2023 stability assessment. See: How can Finland's use of the countercyclical capital buffer requirement be further developed? – Bank of Finland Bulletin. ↑
43. See: Report from the Commission to the European Parliament and the Council on the macroprudential review for credit institutions, the systemic risks relating to Non-Bank Financial Intermediaries (NBFIs) and their interconnectedness with credit institutions. ↑
44. See also: 'New impetus for the EU's capital markets union' – Bank of Finland Bulletin (in Finnish). ↑
45. See: Statement by the ECB Governing Council on advancing the Capital Markets Union (europa.eu). ↑
46. See: Statement of the Eurogroup in inclusive format on the future of Capital Markets Union. ↑
47. See: Commission proposes reform of bank crisis management (europa.eu). ↑
48. See: 'Brighter outlook for international financial stability' – Bank of Finland Bulletin (in Finnish). ↑
49. See: ESRB (2022) Will video kill the radio star? Digitalisation and the future of banking (europa.eu). ↑
50. See: ESRB (2022) Mitigating systemic cyber risk (europa.eu). ↑
51. See: ECB (2023) Towards macroprudential frameworks for managing climate risk (europa.eu), NGFS (2019) Macroeconomic and financial stability implications of climate change, NGFS (2023) Nature-related Financial Risks: a Conceptual Framework to guide Action by Central Banks and Supervisors. ↑

Keywords

banks, climate change, digitalisation, financial stability, geopolitics, macroprudential policy, real estate market, regulation