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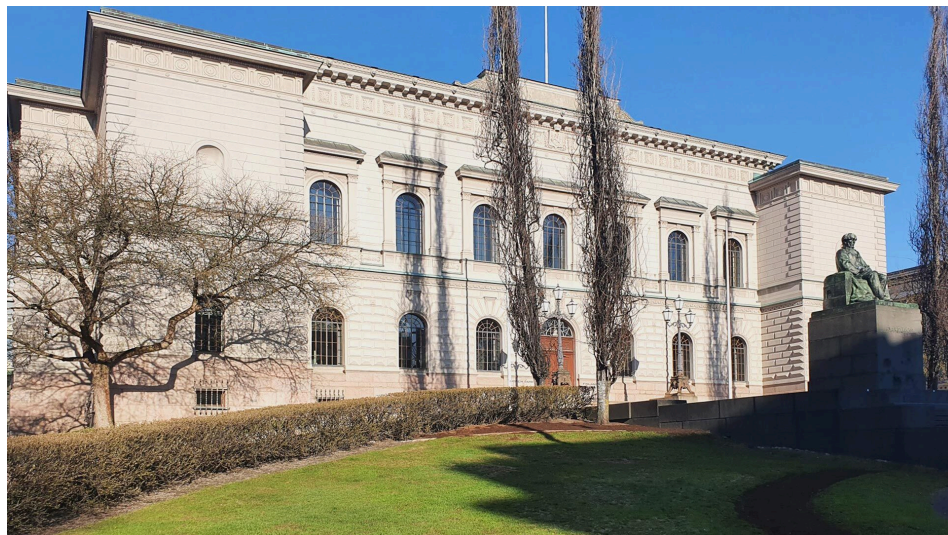


EDITORIAL

Confidence in the financial system is created through persistent action

27 Apr 2023 – Editorial – Financial stability

The tightening of financing conditions can expose the vulnerabilities and risks that were built up during the period of low interest rates, both in Finland and elsewhere. Although Finland's banking sector is well placed to withstand any real-life stress test that it may face, there is good reason to be properly prepared for an increase in credit and liquidity risks. Financial stability is founded on confidence, and the basis for this is created through persistent action. Occasional crises should not be allowed to delay the work being done to strengthen the resilience of the financial system.



Interest rates were low for a long period, but this came to an end last year. Central banks in the world's main economic regions, including the European Central Bank (ECB), began to raise their key interest rates at a brisk pace. The aim of this was to curb the soaring rate of inflation. Although interest rates have risen exceptionally fast, the current level is not especially high by historical standards. However, even a moderate rise in interest rates matters as, in many countries, debt accumulation by households,

businesses and central government grew considerably during the time of low interest rates.

Finnish households have more debt than ever before, amid fast rising interest rates. The effects of the rapid and steep rise in interest rates have been a cause of anxiety to many in recent months. The impact of higher interest rates is felt particularly in the most indebted households, unless their loans are hedged against rising interest rates. According to a survey by the Bank of Finland, about a quarter of the total housing loan stock is hedged against interest rate rises. However, the proportion of the most indebted households that have taken out interest rate hedging is less than for other households, and this is a cause of concern.

A loan taken when interest rates were low can turn out to be too large for some borrowers, even where the household's financial standing ought to be sufficient for managing repayments. Households need to be able to meet other expenses, too. The alternative scenario examined in the Bank of Finland's economic forecast made in December 2022 demonstrated that the recession could be deeper than projected if households have to cut back on their spending by more than expected because of high levels of debt. This would have an adverse impact especially on businesses providing consumer services and consumer products, and there have already been signs of an increase in these companies' credit risks. The impact of higher interest rates on households, businesses and the real economy may become evident to an even greater extent as the current year wears on.

The rise in interest rates and the tighter financing conditions have weakened the financial cycle. Prices in securities markets have fallen across a broad front, and price volatility has grown. The housing and real estate markets have dampened significantly, and the rate of credit growth has slowed.

The decline in residential property prices has led many to ponder how long this might continue. Nobody has a crystal ball, but the decline in securities and property prices during a downturn is typically sharper when preceded by a rapid, debt-driven rise in prices. This appears to be the case now as well: prices have dropped the most in the largest urban centres, where residential property prices were climbing the fastest and property sales were financed by larger than average loans.

In Finland, the financial cycle has, in recent years, been fairly calm and no major overheating of the housing or credit markets has been detected. It is possible that the downward correction in house prices will remain moderate in Finland. On the other hand, large shares of housing company loans with long interest-only periods show that borrowers have also taken risks. In Sweden, the vulnerabilities of the housing and real estate markets have been considerable for a long time already. Due to the interconnectedness of the Nordic banking sector, the risks are in many respects shared. Developments in the Swedish real estate market should be monitored very closely in Finland.

Higher interest rates and tighter financing conditions can expose the risks that were taken and the vulnerabilities that were built up when financing conditions were looser. These risks became a reality during the spring in the United States, where Silicon Valley

Bank's sudden collapse raised questions about the risk management and supervision of mid-sized banks in the US. The wave of distrust expanded to Europe, where it affected the fate of Swiss bank Credit Suisse, which had long been in difficulty.

The financial market authorities and central banks took steps to stabilise the situation in the United States and Switzerland, including the provision of liquidity to banks in order to safeguard financial stability. The situation in international financial markets is now stable, but investors are still rather sensitive to any bad news. If market uncertainty increases and is prolonged, this could, through the banks' market funding, be reflected in the price and availability of credit – in Finland as well.

Banking is a business based on confidence. The spring turbulence in the US banking sector was a reminder of how quickly the situation can escalate if confidence in banks is shaken. The most vulnerable operators will quickly be the subject of close scrutiny if customer confidence and the risk appetite of the market dry up. Digitalisation in banking, rapid communications, and the sharing of information and disinformation on social media have brought new dimensions to financial stability, the significance of which is not yet fully understood.

Confidence in the stability of the banking system is based on a number of factors: the transparency of banks' operations and risks, well-functioning micro- and macro-level regulation and supervision, the sufficiency of capital and liquidity buffers, and an effective bank resolution mechanism. These are all areas in which regulatory reforms have been made since the global financial crisis, and these reforms have stabilised Europe's banking system.

Confidence in Finnish and Nordic banks has remained strong. Nordic banks' funding costs have risen by less than those of other European banks during this period of market uncertainty. The structural vulnerabilities of the Finnish banking sector are significant and relate to the high level of household indebtedness and linkages in the real estate market. Counterbalancing the structural vulnerabilities of the sector, the capital position and profitability of banks are above average. Based on earlier stress tests, it is estimated the banks could withstand even large financial losses originating from the housing market. A fresh assessment of the crisis resilience of banks will be available in July, when the results of the European banking supervisors' current round of stress tests are published.

Finland's banking sector is also well placed to withstand any real-life stress test that it may face if the economy slows further. The crisis resilience of banks has been strengthened by setting them additional capital requirements based on macroprudential regulation, for the purpose of covering systemic risks. The resilience of the financial system has been improved with the new backup system for daily payments. This will ensure the usability of bank accounts under all circumstances.

Significant progress has been made in curbing excessive household indebtedness during the current year. A respecified recommendation issued to banks by the Board of the Financial Supervisory Authority concerning an upper limit on the debt servicing burden of residential mortgage borrowers came into effect at the start of 2023. New legislation is to enter into force at the start of July 2023 on containing the risks related to housing

loans and especially housing company loans, through measures such as limiting the maximum maturity of such loans. A Ministry of Finance working group issued its recommendations in April concerning measures for promoting the debt sustainability of households. The cap on debt service-to-income (DSTI) proposed by the working group merits support and is particularly important both in terms of financial stability and for ensuring the debt sustainability of individual households.

There has been considerable discussion in recent times about the need to rebalance Finland's general government finances. The increase in Finland's debt level and its differentiation from the debt trend of the other Nordic countries also give cause for concern in regard to financial stability. A robust level of debt sustainability for the country is an essential condition for financial stability, especially for a country like Finland whose banking sector is concentrated, internationally connected and comparatively large in relation to the national economy. The price a country pays for its debt imposes in practice a floor on the price of market funding for its banks and businesses. The risk premia demanded by investors from the government and from banks have traditionally been low, which reflects the confidence of investors. This confidence should be nurtured by maintaining a strong banking sector and through responsible management of the public finances.

The foundations for financial stability are created through persistent action. Although a lot has been done already, the work to promote resilience needs to continue. In recent years, attention has been given especially to unforeseen shocks from outside the financial system, and to ensuring preparedness for such shocks. The latest crises have shown that not all the vulnerabilities and risks threatening financial stability originate from within the system. The current macroprudential policy toolkit should include a countercyclical capital buffer (CCyB) requirement that can be flexibly set. Reducing the requirement would support the lending capacity of banks during downturns in the economy, even where these are unexpected. This would help curb the downward spiral that can emerge between a slowing economy and diminished lending from banks.

The existence of factors such as the pandemic, Russia's war in Ukraine, geopolitical instability and climate change, which are external to the financial system, emphasises the importance of reforms and regulatory projects for promoting stability. It would be short-sighted to postpone such projects in Finland or in Europe due to the occasional crisis. We will in any case have to deal with the reform challenges sooner or later – and their severity might have increased by that time.

It is particularly important that the EU banking union be completed. Currently it covers common banking supervision and the banks' resolution mechanism, but not a common deposit insurance scheme. The standing of European banks has improved in recent years despite the pandemic and other uncertainties in the operating environment. The non-performing loans inherited from the sovereign debt crisis that have been an obstacle to the completion of the banking union have largely been eliminated from banks' balance sheets. Completion of the EU banking union would be an important step for unity across Europe and would further strengthen confidence in Europe's banking system. Both are necessary in the prevailing conditions of geopolitical and economic uncertainty.

Helsinki, 27 April 2023

Marja Nykänen
Deputy Governor

Tags

[financial stability](#), [macroprudential stability](#), [indebtedness](#), [households](#), [banks](#)



SIMPLY SHORT

Higher interest rates are beginning to bite

27 Apr 2023 – Simply Short – Financial stability

Banks and the rest of the financial system in Finland have remained stable despite the many disruptions in the global economy and financial markets this spring and in recent years. Households with high debts in relation to their income may come under particular strain in the near future, as both loan servicing and other daily costs are rising at the same time. There is still work to be done to improve resilience to crises. Key steps would include a stronger cap on household borrowing in Finland, and a common system of protection for bank deposits across Europe.

Rapid rise in interest rates is a strain on borrowers and investors Banks in Finland are well equipped to meet growing risks
Work still to be done to improve resilience to crises



The rapid rise in interest rates is now a strain on many borrowers and investors, both in Finland and around the world. Interest rates have risen sharply from their previous exceptionally low level. In Finland, for instance, the 12-month Euribor, which is the commonly used reference rate for loans, is now (April average) at around 3.7%, whereas a year ago it was still at zero and had been a negative rate for a number of years before

that.

Central banks began raising the interest rates which they set for monetary policy purposes, because inflation – a rise in the general level of prices for goods and services – had climbed far too high. Energy prices were rising in Europe following the start of Russia's war in Ukraine more than a year ago, and even before that, inflation had been rising due to the higher prices of many raw materials in response to the disruptions in the international economy brought by the COVID-19 pandemic.

The steep rise in costs is exposing risks that were taken by households, businesses, investors and banks during the period of low interest rates. As reference rates rise, the interest rates on most loans in Finland have also been increasing substantially. Share prices and the prices of fixed-rate debt securities have, in turn, fallen, which has caused considerable losses to investors. Bank funding raised on financial markets has also become more expensive.

In March, international financial markets experienced a sudden spring storm when investors lost confidence in specific banks. First in the eye of the storm was the US Silicon Valley Bank, which failed due to a run on deposits – when large numbers of customers withdrew their deposits urgently from the bank. In Europe, the Swiss bank Credit Suisse, which had long been in difficulty, was sold to a competitor. The authorities acted quickly to resolve these crises, which prevented the problems from spreading far and wide.

Chart 1.



Finland's financial system has remained stable and banks are well placed to meet growing risks. Banking regulation and supervision was tightened widely following the global financial crisis of 2008. The banks now have more assets for covering losses and for improving their liquidity positions. Finland also has a new backup system for ensuring that customers can access their bank accounts under all circumstances.

The turmoil seen in international financial markets in March has subsided for the time being. However, turbulent conditions could still return and their impact could also reach

Finland. Finnish banks acquire considerable funding from international investors to enable them to grant loans to households and businesses, and if instability were to intensify in the markets, this could elevate bank funding risks in Finland, too.

The risks carried by Finnish banks could also grow when it comes to lending. Among the banks' customers, households that are heavily indebted, in particular, may come under exceptional strain in the near future, as both loan servicing and other daily costs are rising at the same time. If such financial difficulties reduce sales of products and services by businesses, then not only will spending be down but investment will fall as well. Losses could then increase, also via secondary effects in the economy.

The housing market in Finland has slowed due to the sharp rise in interest rates and living costs. Purchases of residential property by households and investors have been below their normal level, and property prices have fallen throughout the country. A lot of new homes are under construction at the same time as an increasing amount of existing dwellings are on sale, especially in the Helsinki metropolitan area. This is increasing risks in the construction sector and in housing finance from the banks.

Sustained efforts are still needed in Finland and jointly in Europe to improve resilience in the financial system. There is also still a need for improved tools to safeguard financial stability.

The Bank of Finland has long been in favour of a debt-to-income cap that would curb household borrowing and therefore strengthen the ability of households to repay debts. The Bank is currently supporting a new proposal from a Ministry of Finance working group. The proposal is that the cap would set an upper limit on how much of a borrower's income could be used for debt servicing. The calculation would be based on a higher interest rate than the rate prevailing at the time the loan is taken out.

It is important that in Europe a common deposit insurance scheme be introduced in place of separate national systems. Such a scheme would protect customers' deposits if a bank were to become insolvent or go bankrupt. The common scheme proposed for the EU banking union would strengthen customers' confidence in the banks and prevent bank runs on deposits. In a crisis situation, it would also reduce detrimental linkages between banks and their home countries.

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FINANCIAL STABILITY ASSESSMENT

Rise in interest rates is testing the resilience of borrowers, investors and the financial system

9 Jun 2023 – Financial Stability Assessment – Financial stability

The Finnish financial system has remained stable despite the spring turbulence in the international financial markets. The rapid and steep rise in interest rates has led to an increase in financial stability risks in Finland as well. The increase in loan servicing costs is a strain on households, housing companies, residential property investors and businesses. The credit and liquidity risks of banks are also expected to increase. Occasional crises should not prevent the promotion of regulatory initiatives, however. A statutory ceiling on borrowers' debt servicing expenditure should be introduced in Finland, and completion of the EU's banking union should be expedited.



The collapse of the US Silicon Valley Bank in March 2023 sparked a chain of events that

led to the takeover of giant Swiss bank Credit Suisse by a rival. The prices of securities issued by banks have fluctuated widely on international securities markets during the spring. These events demonstrate how major and abrupt changes in the economic environment, such as a substantial rise in interest rates, can reveal excessive risks that were taken during times of loose financing conditions.

The Finnish financial system has remained stable and able to function despite the economic shocks of recent years. Finland's banking sector is nevertheless concentrated, reliant on financing from international financial markets, and sensitive to serious disruptions in the domestic and Nordic housing and real estate markets. A recent decision by the Board of the Financial Supervisory Authority (FIN-FSA) concerning the setting of a systemic risk buffer will strengthen the crisis resilience of Finland's banking sector.

Higher lending rates are straining the debt servicing capacity of households and their ability to maintain their level of spending. In Finland, household indebtedness in relation to income is higher than ever before, amid high and fast-rising interest rates. The higher interest rates affect the most heavily indebted households in particular, with a significantly greater share of their income now being allocated to debt servicing. The declining level of household consumption could deepen the economic downturn and adversely affect the outlook for the economy.

Finland's financial system is well placed to withstand the elevated risks associated with higher interest rates and tighter financing conditions, provided that the economy and the housing market develop in line with forecasts. The good profitability and capital position of the country's banks are protecting them from an increase in the risks associated with funding, liquidity and customer creditworthiness. Stress tests confirm that Finnish banks and insurance companies would be able to withstand losses arising if the economy and financial markets perform considerably below expectations.

The Bank of Finland supports the merits of a debt-to-income cap or other regulatory measure for limiting the maximum level of a borrower's debts or debt servicing costs in relation to their income. The proposal for a cap on the debt service-to-income (DSTI) ratio made by the Ministry of Finance working group that investigated household indebtedness and the impact of higher interest rates is welcome. This could be used to curb the systemic risks related to substantial levels of household debt.

There is also a need to strengthen Finland's general government finances from the perspective of financial stability. Domestic banks and many companies in Finland are dependent on financing from international financial markets. Access to finance and the cost of finance are closely tied to international investor confidence in Finland as a country with a low credit risk. This reputation should not be compromised.

The spring 2023 events in the US and European banking markets have served as a reminder of the need to further strengthen Europe's banking regulation and the importance of completing the unfinished reforms of the EU's financial architecture. Many development projects have progressed slowly in the EU or their outcomes have fallen short in some way. The Basel III reform concerning regulation of the capital adequacy of banks is being implemented in the EU in a lighter form, in part, than is set

out in international recommendations.

Forming a missing pillar of the banking union is the concept of a common deposit insurance scheme. Completion of this has awaited the reform of legislation on resolution and deposit protection. Progress with deposit protection has also been impeded by the large amount of non-performing assets on the balance sheets of euro area banks. In recent years the volume of these bad loans has decreased considerably, which has largely removed this obstacle. Completion of the banking union should be promoted in a determined manner.

The deterioration in the geopolitical environment has elevated the threat of cyberattacks against Finnish financial firms and payment systems. A backup system for daily payments was built by the authorities in 2022 for use in the event of serious disruptive situations or emergencies. The authorities and the financial sector should continue with their intensified contingency preparations for dealing with serious disruptive situations in the financial sector.

Steep rise in interest rates reveals risks taken during period of low rates

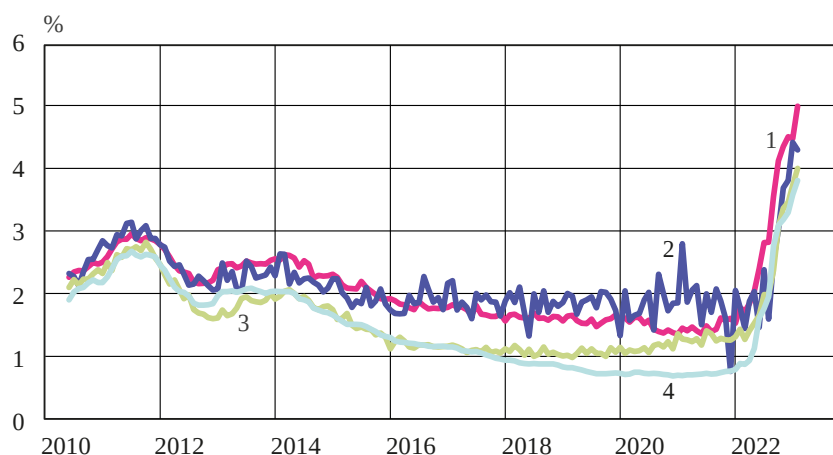
Over just a short period, the surge in inflation and the steep rise in interest rates have transformed the environment for existing and prospective borrowers, banks and economic policy in Europe and the United States. Central banks have rapidly raised their key interest rates in order to curb the high inflation caused by the COVID-19 pandemic and Russia's war in Ukraine.

Market rates in the euro area have jumped from around zero to several per cent in just one year. Rising market rates have rapidly passed through to interest rates on both new and existing loans to households and businesses (Chart 1). Finland is one of the countries where the pass through has been rapid, partly due to the common use of short-term market rates as reference rates for bank loans.

Chart 1.

Interest rates on new housing, corporate and housing company loans have risen rapidly in Finland

1. New loans to households, total
2. New loans to non-financial corporations
3. New loans to housing corporations
4. New housing loans to households



Loans granted by Finnish MFIs, excl. overdrafts and credit card credit.

Source: Bank of Finland.

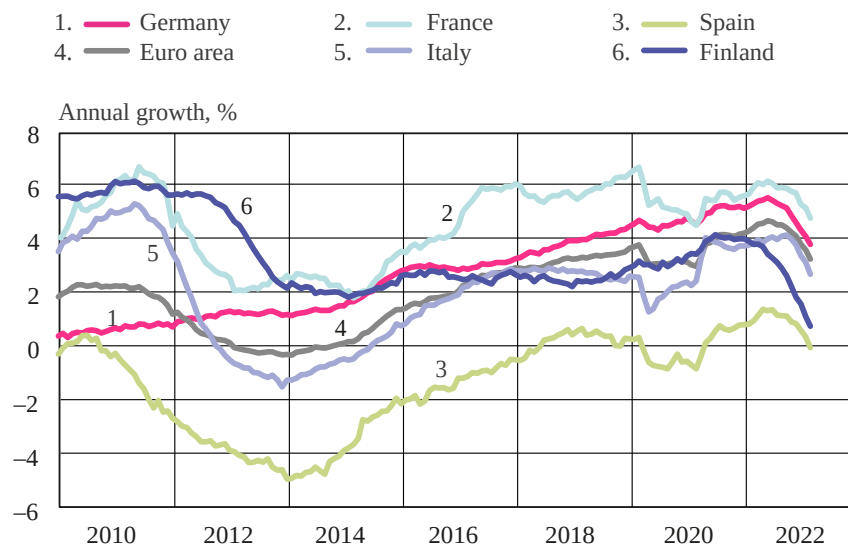
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Rising interest rates have caused a downturn in the financial cycle in Europe. A long period of rising real estate prices is coming to an end in many countries, and the growth rates in lending to businesses and households are slowing down (Chart 2). In Finland, loans taken out by households have decreased particularly sharply. Vulnerabilities that may have developed during the upturn in the financial cycle – such as overvaluation of property prices or an oversupply of new-build construction – can potentially cause serious disruptions in the financial system during a financial downturn.

Chart 2.

Growth in household loans has slowed rapidly in the major euro countries and especially in Finland



Source: European Central Bank.

22.5.2023

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The rapid rise in interest rates has increased the risks to the international financial system ([see related article \(in Finnish\)](#)). The broadly based fall in prices has led to valuation losses on the securities markets and a reduced risk appetite. The increase in financing costs has decreased borrowing among households and businesses. This has also been reflected in the size of mortgages and property prices, which have begun to fall. Rising interest rates and higher construction costs weaken the profitability of residential construction, which reduces construction activity and housing supply.

Higher interest rates pass through more quickly to banks' lending rates than to their deposit rates. This strengthens banks' net interest income and improves their profitability in the short term. At the same time, however, banks pay a higher price for their market funding. In the longer term, high interest rates can increase the credit risks of banks. Higher financing costs may cause payment difficulties for borrowers, and this could increase banks' non-performing assets and credit losses. The growth in net interest income may also slow down over time if banks have to attract deposits by offering higher deposit rates.

The rise in interest rates and the tightening of financial conditions have an impact on borrowers, investors and financial sector entities, and ultimately on financial stability. A more normal interest rate environment promotes financial stability as it curbs the growth of vulnerabilities stemming from indebtedness and risk-taking. Rapid changes in interest rates also increase the risks associated with financial intermediation and may

reveal excessive risks taken and vulnerabilities built up during low interest rates. The sudden collapse of Silicon Valley Bank and several other US banks in March 2023 serves as an example of this.

Economic growth is expected to remain subdued both globally and in the euro area, and there is considered to be a high risk of weaker than expected growth. Increased geopolitical tensions, slowing globalisation and protectionist policies are curbing world trade. According to the Bank of Finland's interim forecast, the Finnish economy will see a shallow recession this year and slow growth in 2024 (see the article [‘Finnish economy in hibernation’ in the Bank of Finland Bulletin](#)). Inflation is high this year but will slow and then fall below the 2% mark next year. Slower growth in the cost of living and a reasonably high level of employment will support households' ability to service their loans and financial stability in general.

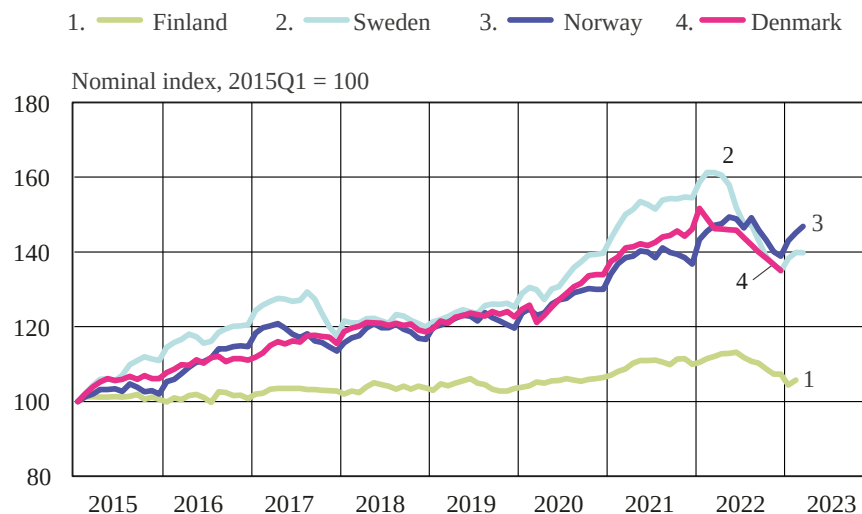
Housing market slowing down and prices falling

Residential property prices began to fall in Finland and the other Nordic countries during 2022 (Chart 3). In Finland, prices have fallen by around 7.5% from the peak of 2022. A comparison of the Nordic countries shows that the fall has been steepest in Sweden, where housing prices had increased particularly strongly during the pandemic.^[1]

1. Residential property prices are expected to continue declining in 2023. In their reviews made early in the year, banks operating in Finland predicted that housing prices will fall by around 5%–7% in the Helsinki metropolitan area and by slightly less across the whole country, on average. Sveriges Riksbank has forecast that Swedish housing prices will fall by around 20% from the 2022 peak (Monetary Policy Report February 2023).

Chart 3.

Residential property prices have begun to fall in all Nordic countries



Finland: existing dwellings in housing companies. Sweden, Denmark and Norway: all dwellings. Danish quarterly data became available in 2021. Sources: Statistics Finland, Valueguard, Statistics Denmark, Eiendom Norge, Macrobond and calculations by the Bank of Finland.

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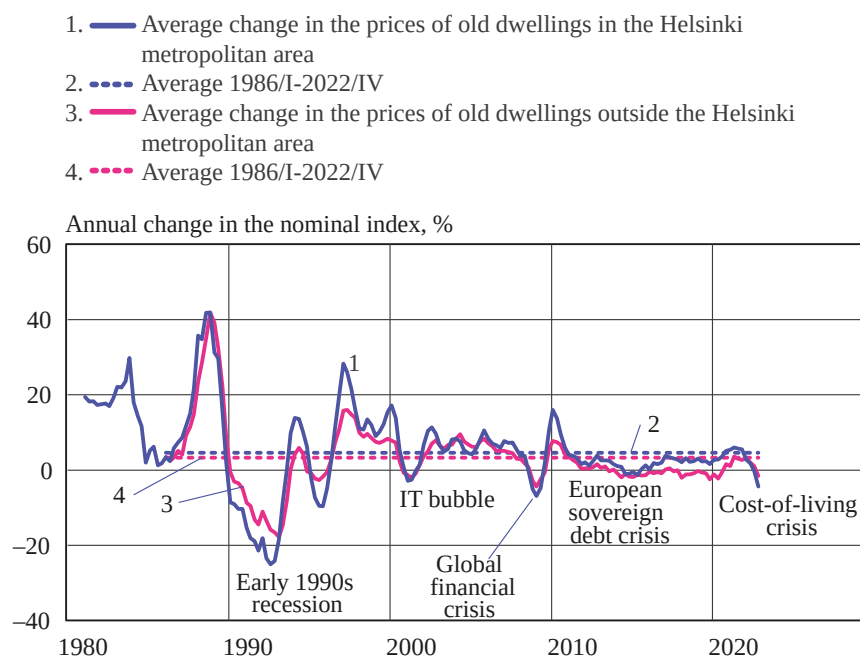
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The turnaround in the Finnish housing market in mid-2022 was slightly more marked in the Helsinki metropolitan area and other major cities than elsewhere in the country (Chart 4). In economic disruptions, housing prices commonly decline more in locations where they had earlier increased the most. On average, housing prices tend to be higher and mortgage loans larger in the major cities than in other parts of Finland.^[2] The impact of higher interest rates on housing demand and on households' and investors' willingness to borrow is therefore greater in the major cities.

2. See [Bank of Finland blog post \(in Finnish\)](#).

Chart 4.

Residential property price fluctuations greatest in Helsinki metropolitan area



Sources: Statistics Finland and calculations by the Bank of Finland.

22.5.2023

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Uncertainty concerning the future level of interest rates makes it difficult to estimate loan servicing costs, which increases caution among households with house purchasing intentions. The demand for housing has fallen rapidly, but the supply remains ample. There were more properties for sale in March 2023 than a year earlier.^[3] New-builds are still being completed in large numbers, but construction is gradually declining. The number of new building permits issued and new construction starts decreased during 2022 and in early 2023.

Volatility in the housing market amplifies the upturns and downturns in the economy as a whole, as investment in residential property construction varies more than total GDP. The strong cyclical fluctuations in construction affect the turnover and profitability of construction companies and employment in the construction industry. Housing accounts for a significant proportion of households' total wealth. Falling property prices reduce households' wealth, especially mortgage borrowers' wealth relative to their debts. This may reduce indebted households' opportunities and willingness to move to another property, to take on new loans or to make purchases.^[4]

3. See [Housing prices and the housing market – Etuovi.com](https://etuovi.com) (in Finnish) (retrieved: 3 April 2023).

4. The decline in residential property prices will reduce the net wealth of mortgage borrowers in particular, i.e. the

Outlook weakened in real estate investment market

The deteriorating operating environment has added uncertainty regarding the profitability, financing and valuation of real estate investments. Property occupancy rates fell during the pandemic years. The recent substantial rise in the costs of property maintenance and construction has increased the risks affecting real estate investors. At the same time, other structural changes in society, such as increased online shopping and remote working, also reduce the need for office space and business premises.

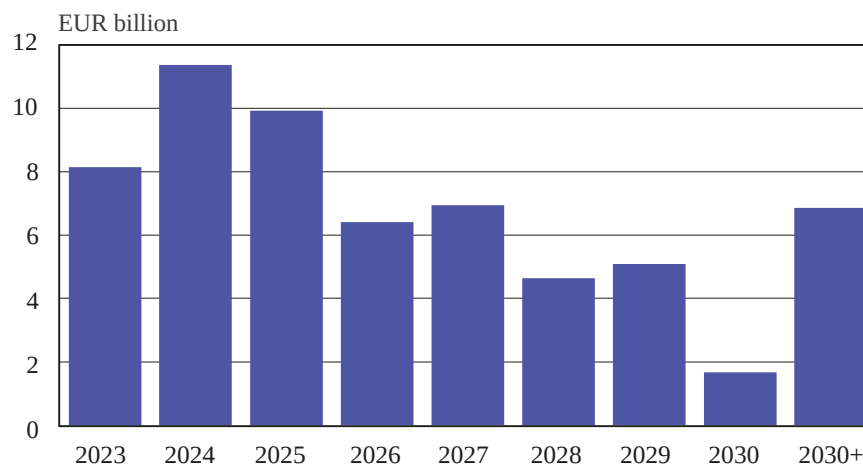
As in other countries, the outlook for real estate investment has weakened in Finland. According to KTI Property Information Ltd, Finnish investment properties lost an average of 3.4% of their market value in 2022. The biggest cause of this was that rising interest rates increased the return requirements on investment property. The number of real estate transactions made in January–March 2023 decreased by around 80% from the same period the previous year. The fall in housing prices will have an impact on the assets and the profitability of many real estate investment corporations, as residential properties are key investments for professional investors.

The downturn in the real estate sector has also been reflected quite strongly in the Nordic securities markets. Some real estate investment corporations' share and bond prices have fallen sharply, especially in Sweden. On average, Swedish real estate investment corporations have quite a high debt ratio, and many of them depend on market funding in addition to traditional bank financing. Swedish real estate investment corporations' risk premia have increased sharply compared to Swedish government bonds since Sveriges Riksbank started raising interest rates, which triggered investors' concerns about the consequences of increased costs in the real estate sector. Swedish real estate corporations' market funding will mature fairly evenly over the coming years, with the largest proportion of euro-denominated funding due for repayment in 2024 (Chart 5).

difference between their assets and liabilities, or, in simpler terms, the difference between the current market value of their home and the outstanding amount of their mortgage.

Chart 5.

A large volume of corporate bonds issued by Swedish real estate investment corporations are set to mature in 2024 and 2025



Source: Bloomberg.

22.5.2023

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The real estate market plays an essential role in financial stability, as commercial property financing accounts for a large share of banks' lending stock. In many countries, risks appear to be concentrated in small and medium-sized banks that specialise in real estate financing. Real estate financing also accounts for a major share of lending in many Nordic banks ([see related article \(in Finnish\)](#)).

So far, the volume of credit losses and non-performing loans in the real estate sector has remained low. At the end of 2022, non-performing loans to the real estate sector accounted for 1.8% of European banks' lending stock. In Nordic banks, the corresponding share was 0.1%–1.0%. The importance of banks as lenders to real estate corporations will increase, as corporations may have difficulties refinancing their bond-based market funding if investors continue to be cautious towards the sector.

Rising interest rates and higher living costs are testing households' resilience to risks

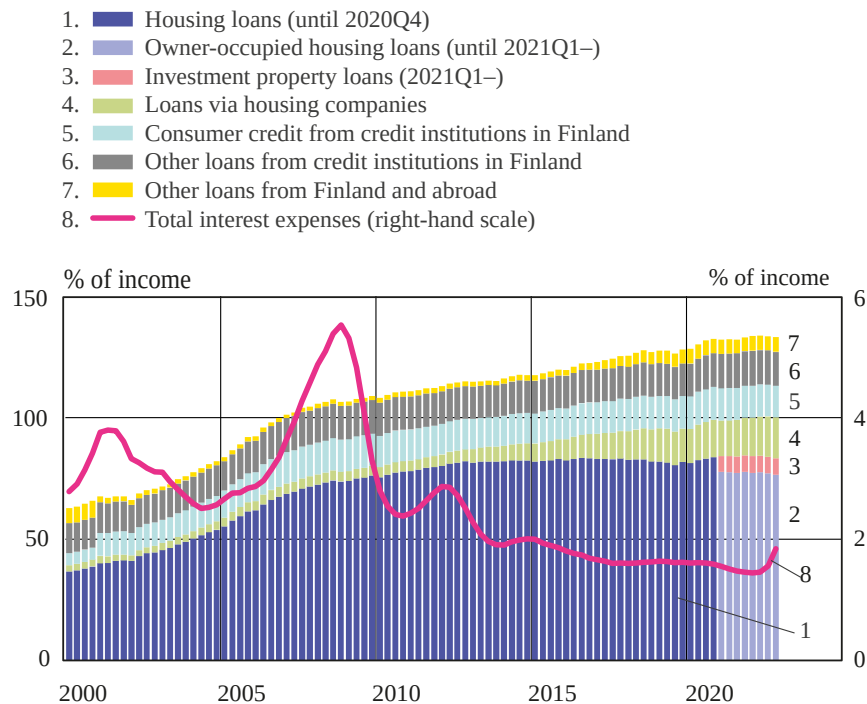
The interest rates on household loans have risen sharply since spring 2022. In February 2023, the average interest rate on new housing loans was 3.8%, compared with 0.9% a year earlier, and the average interest rate on the housing loan stock was 2.4%. The average interest rate on the housing loan stock will rise further this year in line with updates to loan reference rates. Almost the entire loan stock is tied to Euribor rates with a maturity of 12 months or less, which means the loan interest rates are updated at least once a year.

In the latter half of 2022, households took fewer new housing loans with interest rate hedging than in the first half of the year or in 2021 (see the article ‘[Strong rise in interest rates puts strain on mortgage borrowers](#)’). The share of fixed rate mortgages remained very small. Interest rate hedges, such as interest rate collars or caps, are more common in annuity loans and first-home loans than in other loans. In June 2022, approximately 25% of the stock of Finnish housing loans was hedged against rising interest rates. New mortgage borrowers with the highest debt levels have used interest hedging less than mortgage borrowers with smaller debts.

Household indebtedness in relation to income is higher than ever before, amid fast rising interest rates. Household indebtedness decreased slightly in the latter half of 2022 but is still at a historically high level (Chart 6). The stock of housing loans has contracted a little since autumn 2022, and in February 2023 the loan stock grew at an annual rate of just 0.6%.

Chart 6.

Household indebtedness fallen slightly but still historically high



Finnish households' debts and interest expenses as a ratio of disposable annual income.

Sources: Statistics Finland and Bank of Finland.

24.4.2023

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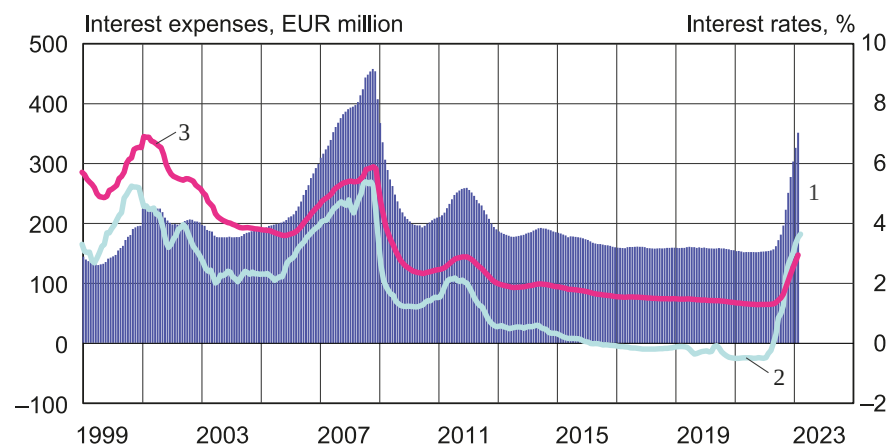
Given the higher levels of indebtedness, the rise in interest rates is pushing up

households' interest expenses – both monthly costs and those for the entire loan term – compared with periods when mortgages were significantly smaller and had a shorter maturity (Chart 7). The rise in interest rates and in prices also affects the capital and maintenance charges for housing company loans paid by homeowners. Not all these impacts are visible yet, as cost rises involve time lags.

Chart 7.

Interest expenses growing rapidly as lending rates rise

1. ■ Households' average interest expenses
2. — 12-month Euribor
3. — Average interest rate on the stock of household loans



Interest expenses are calculated on the basis of households' stock of loans and the average interest rate on the loan stock. The loan stock includes household loans from credit institutions (excl. housing company loans).

Sources: Bank of Finland and Refinitiv.

22.5.2023
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Higher interest rates are driving up expenditure by mortgage-indebted households and reducing their financial margin, especially where housing loans are large relative to income. Many indebted households also hold significant wealth, however. Livelihood problems and financial distress are more common among low-income households, which usually do not have a housing loan (see related [analysis article](#) on the Bank of Finland's Euro & talous website and a [Ministry of Finance report](#); both in Finnish).

If the recession is mild and short-lived as suggested by forecasts, households' ability to service their debts is not expected to be at risk on a broad scale. The employment situation will remain favourable, providing support to loan servicing. So far, there have been no alarming signs of an increase in debt servicing difficulties. The statistics are not pointing to unusually high levels of loan renegotiations. The proportion of non-performing mortgages and housing corporation loans^[5] has remained small. Banks' credit and impairment losses on unsecured consumer credit have grown slightly since

spring 2022.

Large housing company loans for new-build construction and the high proportion of variable rate loans have fuelled the risks to households from housing company loans. So far, there have been no clear signs of the realisation of credit risks (see the article [‘Risks associated with housing company loans are increasing – Regulatory reforms will restrict use of housing company loans in the future’](#)). The risks may grow and materialise after a time lag, however, as interest rates and housing property maintenance and repair costs increase. In addition, for some housing companies the ending of long interest-only periods will come at the same time as the reset date of the loan reference rate.

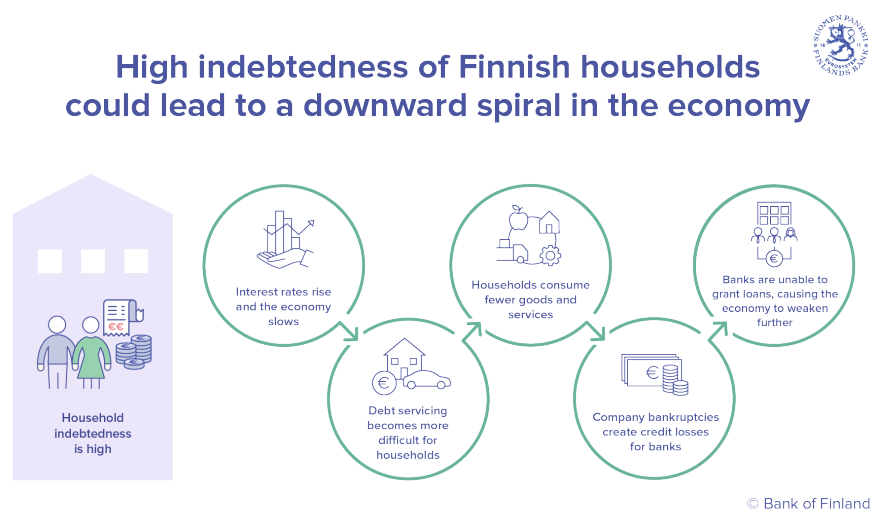
The rising loan servicing costs and increase in essential consumption spending are weakening the ability of households to maintain their previous spending levels and accumulate savings. Households’ deposits decreased in January–February 2023. The household savings rate fell below zero in 2022, which means that household spending exceeded income. Some highly indebted households, in particular, may have to markedly reduce spending if the disruptions in the economy drag on and intensify.

If private consumption decreases substantially, this would have significant consequences for the real economy (Chart 8). The recession would be deeper than forecast and the recovery would be slower.^[6] If sales of products and services decrease significantly, the capacity of companies to invest and employ workers would deteriorate. If companies’ liquidity problems and bankruptcies increase, there would be a substantial increase in banks’ credit losses on loans to businesses and households. Such a situation could weaken the ability of banks to grant loans and thereby support sustainable economic growth.

5. Housing corporations include all corporation forms of housing units: housing companies, housing cooperatives, residential real estate companies, right of occupancy associations and other housing corporations, as well as companies engaged in renting, ownership and management of housing (excluding management of real estate on a fee or contract basis).

6. See [Household consumption could be hard hit in the energy crisis – Bank of Finland Bulletin](#). See also Kärkkäinen, S. and Silvo, A. (2023), [Household debt, liquidity constraints and the interest rate elasticity of private consumption](#), BoF Economics Review 2/2023.

Chart 8.



Broad-based increase in corporate credit risks

Several successive crises and rapid changes in the operating environment have tested the resilience of businesses. The financial buffers of smaller businesses, in particular, were already depleted during the COVID-19 crisis. Since last year, Russia's war in Ukraine and the energy crisis have weakened the capacity of many companies to operate. Fast-rising inflation has also been eroding the profitability of those businesses that cannot fully pass higher costs on to the prices of their final products. The critical question for businesses is how much households cut back on their spending because of the strain caused by rising interest rates and living costs.

Corporate financing costs follow movements in market interest rates and increase rapidly as rates rise. Banks and investors have reacted to the weakened business outlook, which, in addition to the upward trend in interest rates, is further tightening corporate financing conditions. Banks have been tightening their credit standards since the first quarter of 2022.^[7] In the case of large enterprises, weaker investor demand in the debt securities market also contributes to tightening financing conditions.

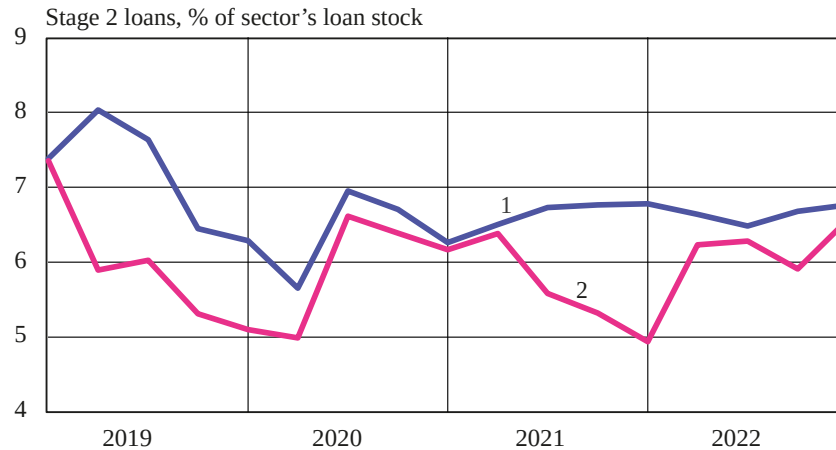
The weaker operating environment has led to a broad-based increase in the corporate sector's credit risks. The proportion of bank loans with a significant increase in credit risk (Stage 2 loans) has grown over the past year (Chart 9). Banks' corporate credit risks have increased in almost all industries and in all company size categories. So far, the higher credit risks have not resulted in credit losses. The share of Finnish banks' non-performing corporate loans has decreased over the past year. If the economy develops as forecast, the corporate sector's debt servicing capacity is not expected to deteriorate to an extent that would threaten the stability of the Finnish financial system.

7. See 'Bank lending survey – Results for Finland Q4/2022' (suomenpankki.fi) (in Finnish).

Chart 9.

Banks assess that corporate credit risks in particular have increased in 2022

1. — Households 2. — Non-financial corporations



Stage 2 loans are loans the credit risk of which has increased significantly since initial recognition but which are not credit-impaired.

Source: Financial Supervisory Authority.

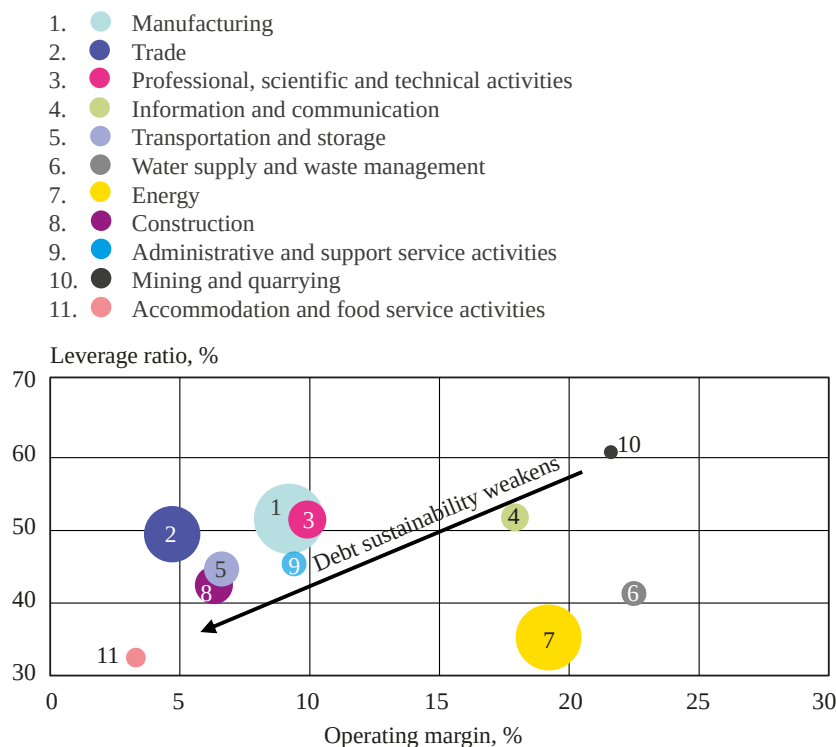
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The ability of businesses to withstand higher interest rates and other challenges in the operating environment varies across industries (Chart 10). Profitability is weak and leverage ratios are low especially in accommodation and food service activities, which were hit badly by the pandemic, and in the construction sector, which is vulnerable to the dampening of the housing market. According to Suomen Asiakastieto Oy, Finnish bankruptcies increased in January–March 2023 by 30% year on year. This was the highest level in 15 years, which is the entire period for which comparable data are available. The number of bankruptcies was particularly high in the most vulnerable industries.

Chart 10.

The most vulnerable industries in terms of debt sustainability account for a small share of domestic corporate credit stock



The x-axis describes the operating margin of the industry, and the y-axis the leverage ratio. The size of the circle describes the industry's share of the stock of credit to domestic non-financial corporations in February 2023. The financial statements data are from 2021.

Sources: Statistics Finland and Bank of Finland.

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Volatile market situation weighs on banks' funding outlook

The cost of market funding for banks has increased rapidly over the past year, in step with market interest rates. Financial market uncertainty has also increased and banks' credit risk premia have risen slightly and have fluctuated more widely than before (Chart 11). There is also greater dispersion in credit risk pricing between banks, especially in the case of unsecured bonds.

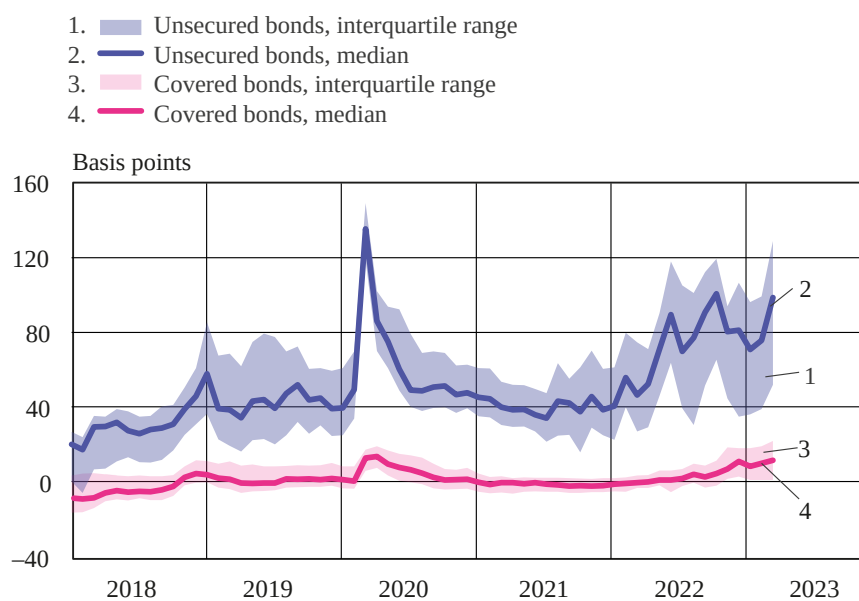
The near-term outlook for bank funding has deteriorated. Higher interest rates are generating pressure for banks to raise deposit rates. Maturing TLTRO^[8] loans, MREL

8. Targeted longer-term refinancing operations (TLTROs) are operations in which the ECB provides longer-term

requirements and the discontinuation of the ECB's covered bond purchase programmes are fuelling the need for Europe's banks to acquire more funds in the financial markets, which will intensify competition in the deposit and debt securities markets.

Chart 11.

Financial market uncertainty has driven up funding costs for Finnish banks as well



Spreads Difference between yields on domestic banks' euro-denominated bonds and swap rates.

Sources: Bloomberg and calculations by the Bank of Finland.

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Domestic banks' dependence on market funding elevates their funding risks in a volatile market situation (see '[Pankkien varainhankinnan hallinta korostuu rahoitusolojen kiristyessä](#)' (in Finnish)). The good reputation of Finnish banks is based on solid capital positions and high-quality assets, which has ensured their access to international financial markets even in times of market disruptions.

In its Financial Sector Assessment Program (FSAP) for Finland, the International Monetary Fund (IMF) drew attention to the high reliance of banks on market funding (see related [blog post](#) on the Bank of Finland's Euro & talous website, in Finnish). The price and availability of market funding typically react to shocks in the real economy and financial markets faster than retail deposits, which are regarded as a more stable form of funding. Severe market disruptions could have a significant negative impact on the price

financing to banks to stimulate lending to households and businesses. The minimum requirement for own funds and eligible liabilities (MREL) aims to ensure that banks hold an adequate amount of own funds and liabilities which can be used in the event of a bank resolution to cover the bank's losses and recapitalisation capacity.

and availability of market funding, which could result in a deterioration of banks' liquidity positions and lending capacity.

Crisis resilience of government and banks helps safeguard financial stability

The Finnish financial system incorporates significant structural vulnerabilities. These include the strong focus on housing and real estate loans in credit institutions' lending; the interconnectedness with foreign banking and financial systems; the large role of banks in financial intermediation; and high household indebtedness. These vulnerabilities may amplify crises or other disruptions in the banking sector.

The presence of such structural vulnerabilities means it is important that in the event of disruptions in the economy the banking sector's capital position is solid. The Board of the Financial Supervisory Authority imposed, in March 2023, a requirement on Finnish credit institutions to maintain a systemic risk buffer (SyRB) amounting to 1.0%. This was an important and well-founded decision. When setting the SyRB requirement, the FIN-FSA Board took into consideration not only the structural risks and vulnerabilities of credit institutions, but also the joint Bank of Finland/FIN-FSA stress test calculations estimating the resilience of the banking sector in exceptionally severe crisis situations affecting the Finnish economy and banking system.^[9]

In December 2022, the Bank of Finland published an [Assessment of Public Finances](#), according to which the forecast trajectory of Finland's public debt ratio is both divergent and concerning in comparison to euro area peer countries. Finland's debt-to-GDP ratio has grown almost continuously since the global financial crisis, and this upward trend is forecast to continue unless a correction is made to the trajectory of the public finances. A robust level of public debt sustainability and strong public finances are also important for financial stability.

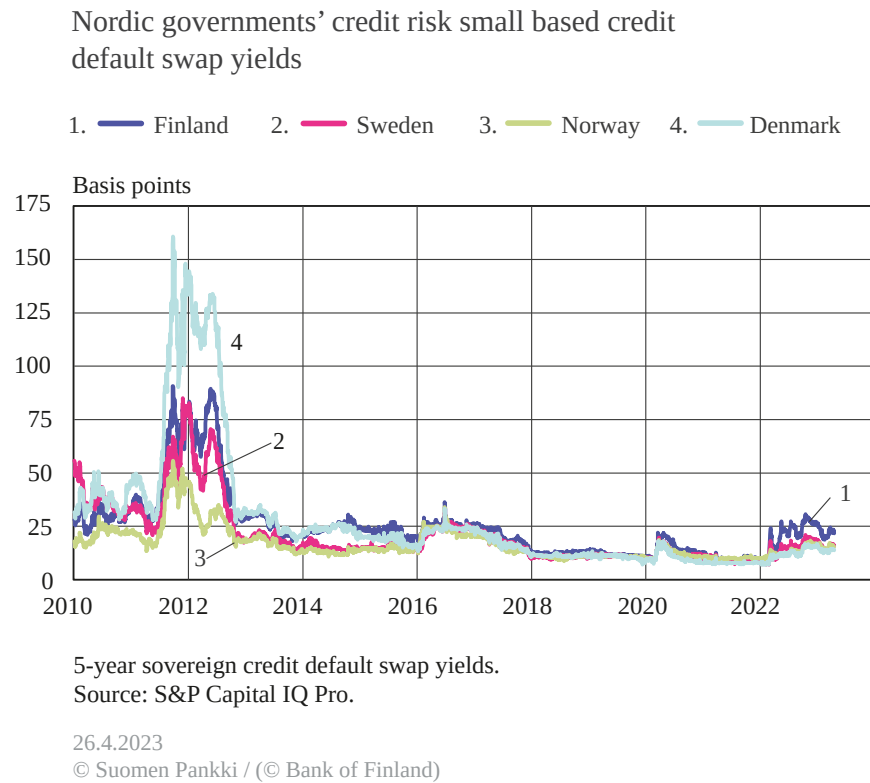
The price at which domestic companies and banks obtain market funding is usually based on the prevailing yield on government bonds. Changes in the risk level of a country's government debt will have an impact on the banking sector, and a decline in a country's credit rating will typically cause a downgrade in banks' credit ratings. A robust level of debt sustainability is an essential condition for financial stability, especially for a country like Finland whose banking sector is concentrated, interconnected and comparatively large in relation to the national economy, and relies on funding which is strongly based on refinancing from the international financial markets.

Finland has paid low credit risk premia on its sovereign debt. Risk premia can be measured on the basis of the yields on sovereign credit default swaps (CDSs) or by comparing sovereign bond yields against the equivalent yields for countries with lower credit risk. The risk premia on Finnish government debt have risen slightly in the past year compared to the other Nordic countries (Chart 12). The credit rating agencies Fitch Ratings and S&P Global Ratings have assigned Finland's long-term government debt the

9. The calculations made using the joint Bank of Finland/FIN-FSA stress test framework are available in the [appendix](#) to the FIN-FSA Board's macroprudential decision of 29 March 2023.

second highest rating, with a stable outlook. It is important that Finland actively seeks to maintain its status as a country with low credit risk by conducting credible fiscal policies with a persistent, long-term approach.

Chart 12.



Use of capital buffer requirements in macroprudential toolkit should be more flexible

The risk-bearing capacity of banks can be improved by introducing a systemic risk buffer (SyRB) requirement and other discretionary capital buffer requirements impacting the size and composition of credit institutions' capital buffers. An important question is how these requirements should be adjusted in a crisis or other serious disruption, and how they can be adjusted (See the article [‘Capital buffer requirements in the macroprudential toolkit are supporting the risk-bearing capacity of banks’](#)).

The Board of the FIN-FSA may, if necessary, support banks' lending capacity by lowering the capital requirements, for example in a situation where a severe disruption in the economy is causing losses to banks or otherwise weakening their capital position. In the event of a disruption, banks could, in the worst case, even reduce lending to improve their capital ratios.

In such a situation, it might be justified to lower credit institutions' capital requirements temporarily in order to break a downward spiral in the economy. The easing could be

done primarily by lowering the countercyclical capital buffer (CCyB) requirement – a tool for preventing cyclical risks to the financial system – for credit institutions.

Many EU countries apply more flexible criteria than Finland for setting the CCyB rate. This enables the countries to prepare better for unexpected developments in the economy or the financial markets. The conditions for setting a CCyB requirement should therefore be augmented in Finnish legislation. (See the article [‘How can Finland’s use of the countercyclical capital buffer requirement be further developed?’](#))

Cap on debt service-to-income (DSTI) ratio would improve households’ debt sustainability

The loan-servicing costs of new housing loans taken out by households increased in 2022 from the previous year, despite the decrease in the size of loans relative to income (Chart 13). A working group appointed by the Ministry of Finance assessed in spring 2023 the risks related to household indebtedness in an environment of rising interest rates. The working group’s recommendation for a binding cap on the debt service-to-income (DSTI) ratio is particularly important for financial system stability. The requirement would impose an upper limit on how much of a household’s income could be taken up by debt servicing costs. The calculation of debt servicing costs would be based on a higher interest rate than the rate prevailing at the time the loan is taken out, and a separately specified maximum maturity for loans.

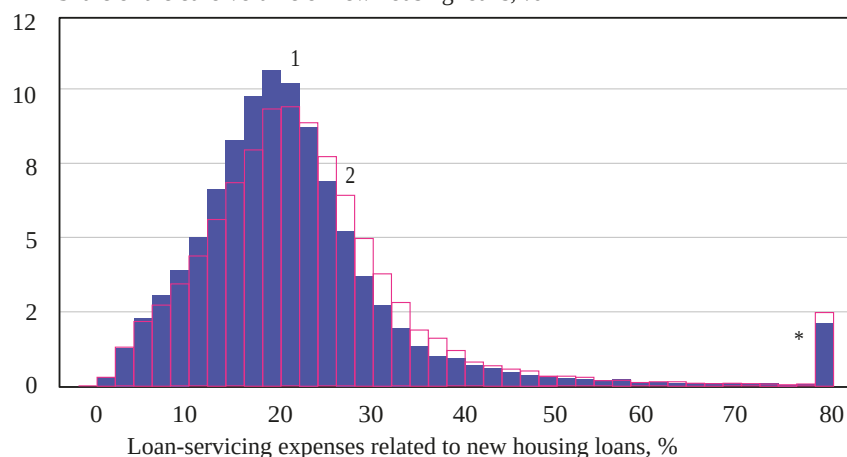
The cap on the DSTI ratio would be an important tool for preventing problems caused by high household indebtedness and for improving households’ debt-servicing ability in an environment of rising interest rates or rising costs of living. The DSTI cap would have the same effects as the earlier proposed cap on the debt-to-income (DTI) ratio, i.e. the debt cap. The calculation of the cap on debt-servicing costs could take into account, in more detail than the debt cap, the differences in interest rates between the various types of debt, for example.

Chart 13.

Households' debt-servicing burden has grown with the rise in interest rates

1. ■ Year 2021
2. □ Year 2022

Share of the euro volume of new housing loans, %



* Outliers of the right-hand tail have been added to the haircut value 80%. The chart describes the distribution of housing loans based on borrowers' loan-servicing burden (annual servicing expenses of new housing loans relative to net income).

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

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Completion of the banking union is important

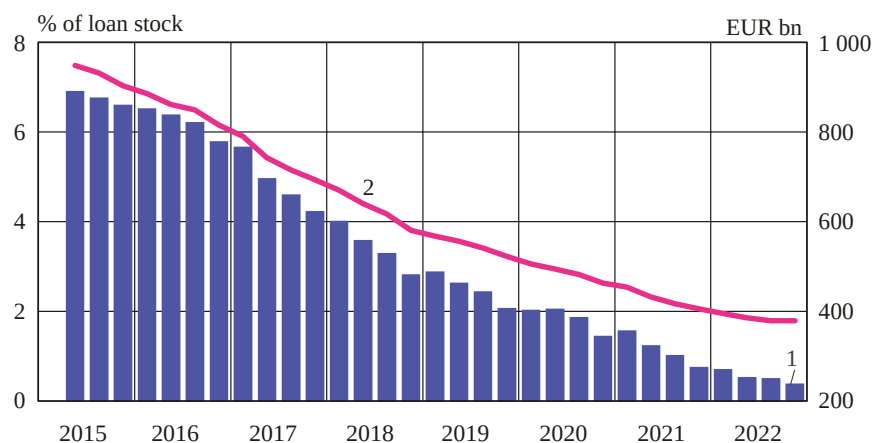
The European banking union is made up of the Single Supervisory Mechanism (SSM) and the Single Resolution Mechanism (SRM) for banks. The third pillar of the banking union, a common European deposit insurance scheme (EDIS), is still absent. A common deposit insurance would increase public confidence in the banking system, prevent deposit runs and reduce harmful links between banks and their home countries. Completion of the banking union should be promoted in a determined manner.

Progress with a common European deposit insurance scheme has had to wait for legislative reforms on bank resolution and depositor protection. The development of common deposit insurance has also been slowed by demands to reduce the risks in the European banking sector. The non-performing exposures that have burdened banks' balance sheets since the global financial crisis and the euro area sovereign debt crisis have decreased significantly in recent years. In less than ten years, the amount of non-performing exposures in the balance sheets of large European banks has decreased from nearly EUR 1 trillion to some EUR 350 billion, which is only about 2% of the banks' total stock of loans (Chart 14).

Chart 14.

Debt crisis legacy NPLs have been cleared from European banks' balance sheets

1. ■ Non-performing loans (right-hand scale)
2. — Non-performing loans, % of loan stock (left-hand scale)



European banks' non-performing loans.
Source: European Central Bank.

22.5.2023

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Occasional crises should not prevent the promotion and completion of regulatory initiatives

The implementation of Basel III reforms on bank capital requirements in the EU is entering the final phase. The final package of reforms to be implemented in EU legislation may well differ significantly from the initial recommendations by the Basel Committee on Banking Supervision. Bank capital regulation in the EU will therefore be less tight, in some respects, than international regulations.

The initial objective of improving the comparability of banks' capital ratios and promoting a level playing field internationally is not about to be achieved. The new rules will nevertheless improve the transparency of banks' risks and reduce unjustifiably large differences in the risk weights of assets of banks applying the internal ratings based approach and in the risk-weighted capital requirements of these banks.

The capital markets union being prepared in the European Union would help investors diversify risks and, for example, finance green investments. Although the capital markets union has made slow progress, recently it has moved ahead in several areas. Positive progress has been achieved in the regulations on, for example, securities clearing services, the harmonisation of corporate bankruptcy legislation, streamlining the listing process for SMEs^[10], and European long-term investment funds (ELTIF).^[11]

Other European regulatory initiatives promoting financial stability include revisions to the scope for national macroprudential authorities to set capital buffer requirements for credit institutions (revision of the macroprudential framework), and creating legislation on markets in crypto assets.

In recent years, new EU regulations have been developed to help authorities and the financial industry to prepare for cyber-attacks on financial firms and financial market infrastructure and other severe operational disruptions (see '[Financial sector contingency planning will help ensure continued functioning of society in all circumstances](#)'). In 2022, Finnish authorities created a backup system to ensure daily payments can still be made if bank customers cannot access their accounts due to a serious disruption or emergency in the country.

Russia's war in Ukraine speeded up the green transition by forcing countries to decouple from Russian fossil fuels and move to renewable energy sources. Financial sector entities will have to carefully assess their customers' business if it is strongly focused on non-renewable energy sources.

The Bank of Finland is a member of the Network for Greening the Financial System (NGFS), a global forum formed by central banks and financial supervisors, which works actively for the identification of climate change-related transition risks and physical risks^[12] and the development of climate scenarios used in risk assessment. The European Commission adopted in 2022 a Complementary Climate Delegated Act on the definition of sustainable business activities^[13], and the ECB has published climate-related statistical indicators^[14]. Development of the macroprudential toolkit in relation to climate risks must also be assessed in the future.

Tags

[macroprudential tools](#), [liquidity risk](#), [housing markets](#), [financial stability](#), [systemic risks](#)

10. See [Capital Markets Union: new proposals on clearing, corporate insolvency and company listing to make EU capital markets more attractive](#) (europa.eu).

11. See [Capital markets union: Council adopts revised framework for European long-term investment funds - Consilium](#) (europa.eu).

12. Transition risk refers to risks that lead to a loss of business profitability or the failure of a business in transitioning towards a low-carbon economy. Physical risk refers to direct financial losses from climate change that are incurred by e.g. non-life insurance companies that have to compensate policyholders for the damage caused by climate change.

13. [EU Taxonomy: Complementary Climate Delegated Act](#) (europa.eu).

14. [ECB publishes new climate-related statistical indicators to narrow climate data gap](#) (europa.eu).



ANALYSIS

Strong rise in interest rates puts strain on mortgage borrowers

9 Jun 2023 – Analysis – Financial stability



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The long-continued growth in household indebtedness came to a halt at the end of 2022. Households were borrowing less as a result of the rapid rise in interest expenses and the cost of living, together with uncertainty about the economic outlook. Household debt is nevertheless still at a very high level. The majority of new mortgages are variable rate loans, and a modest amount of these are taken out with interest rate hedging. Interest rate hedging is used least by the highly indebted. The increase in households' debt servicing expenditure and the higher cost of living has meant that more and more households are having to think carefully about ways to balance their finances.



The surge in inflation since the start of 2021 and the subsequent hikes in interest rates that began in 2022 are causing difficulties for many households and borrowers. Inflation

was pushed higher by the increase in oil prices, pandemic-related factors^[1] and Russia's war in Ukraine. The availability of energy weakened because of the sanctions imposed on Russia, and at the same time the prices of energy and raw materials rose sharply. The cost of living for households increased considerably. To curb the surge in inflation, the European Central Bank began to put up interest rates in summer 2022. In anticipation of the ECB's rate rise, market rates had already been increased before this.

A rise in market interest rates in Finland is swiftly reflected in lending rates. Most (more than 90%) household loans are variable rate loans, with the rate varying according to changes in reference rates. Although the surge in market rates has been exceptionally strong, interest rates are still significantly below the peak they reached in the decade to 2010. Nevertheless, for many mortgage borrowers the level is clearly higher than anything experienced before. In the financial margin assessments for housing loan applicants, efforts are nevertheless made to prepare the applicants for possible interest rate rises. Since 2010 the Financial Supervisory Authority (FIN-FSA) has recommended that banks ensure borrowers can manage their debts even when interest rates are higher than now (6%) and can pay off their loan at those rates within a 25-year period.

This article examines household indebtedness and debt sustainability, especially from the perspective of mortgage lending. The calculations and assessments made are largely based on the FIN-FSA's data on new housing loans collected from the banks.^[2]

Most new housing loans have no hedging products

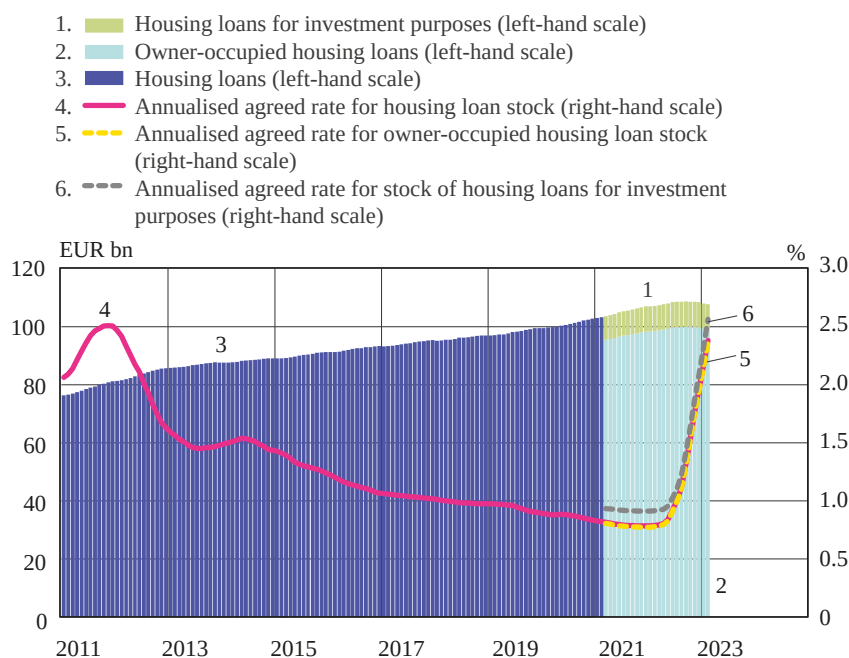
The average annual interest rate for the housing loan stock indicates the level of households' interest expenses for all existing mortgages. The average interest rate for the housing loan stock has risen exceptionally steeply since spring 2022 (Chart 1). In January 2023 it was 2.2%, while just a year earlier it was 0.8%. The last time the rate was so high was in May 2012. The average interest rate for the housing loan stock is expected to rise further due to new housing loans being taken out at the highest interest rates and existing loans undergoing interest rate resets. The rise in interest rates on housing loans in Finland has also been rapid compared to other European countries, where it is more common to tie mortgages to fixed or longer term interest rates.

1. Oinonen, S. and Pönkä, H. (2022). Koronapandemiasta toipuminen kiihdytti inflaatiota, mutta inflaation ennustetaan tasaantuvan. Bank of Finland. ('Inflation driven up by pandemic recovery but now projected to level off')

2. The data collected from the banks concern housing loans but also contain information on the borrowers' other debts and their income at the time the loan was granted. Some of the data is available up to the end of 2022. If borrowers have a share of housing company loans, these are included in the borrowers' overall debt burden.

Chart 1.

Annualised agreed rates for housing loan stock have risen exceptionally steeply



Source: Bank of Finland.

6.6.2023

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Some mortgage borrowers have sought protection against increased interest rates with hedging products or by taking fixed rate loans, though the popularity of the latter has been low in Finland. It is more common for variable rate loans to be accompanied by a hedging product (for which a fee is charged), such as an interest rate collar or cap. The immediate interest rate risk to households is also lowered by the fact that some housing loans are repaid in fixed instalments. With a fixed instalment loan, the repayment period depends on interest rate movements: it is longer when interest rates rise, and shorter when they fall. Although borrowers will not see the effect of higher interest rates immediately in their monthly loan servicing costs, the interest expenses paid over the entire repayment period will nevertheless rise if interest rates go up (Table 1).

Table 1.

Share of different repayment methods for new mortgages and respective proportions that are hedged, by euro volume

	Share of loans	Hedged
Annuity loans	76.2%	26.5%
Bullet loans	10.5%	0.3%
Fixed instalment loans	9.4%	12.1%
Fixed-period loans	3.8%	9.1%
All new housing loans	100.0%	22.4%

New housing loans granted in 2022

Hedging includes hedging products for which a fee is charged, such as an interest rate collar or cap

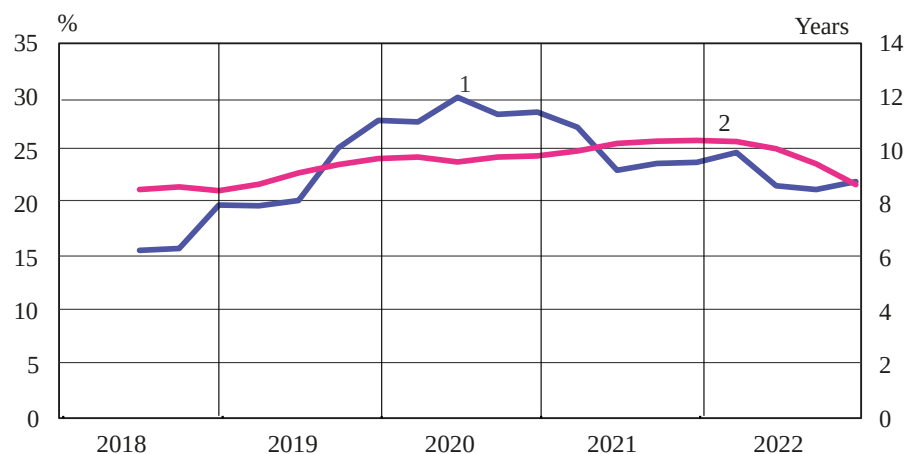
Sources: FIN-FSA and calculations by the Bank of Finland.

Approximately 22% (by euro volume) of new mortgages granted in 2022 were taken out with interest rate hedging. This percentage shows a clear decline since the peak in 2020 (Chart 2). The rise in interest rates in 2022 did not result in any significant decrease in the popularity of hedging products. However, the periods for which these products have been used have started to shorten. This may well be explained by the rise in the cost of hedging products. The use of hedging products is slightly more common with loans to first-time buyers than with other new mortgages, although the proportion (by euro volume) of loans with interest rate hedging arrangements has clearly decreased compared to previous years. In the last quarter of 2020, just over 38% of new first-home loans measured by euro volume were hedged against a rise in interest rates, whereas in the corresponding period in 2022 only around 28% were hedged.

Chart 2.

Periods for which hedging products are used have started to shorten

1. — Share of loans with interest rate hedging (left-hand scale)
2. — Average length of the hedging arrangement (right-hand scale)



Shares of loans with interest rate hedging and their average length of hedging
Sources: FIN-FSA and calculations by the Bank of Finland.

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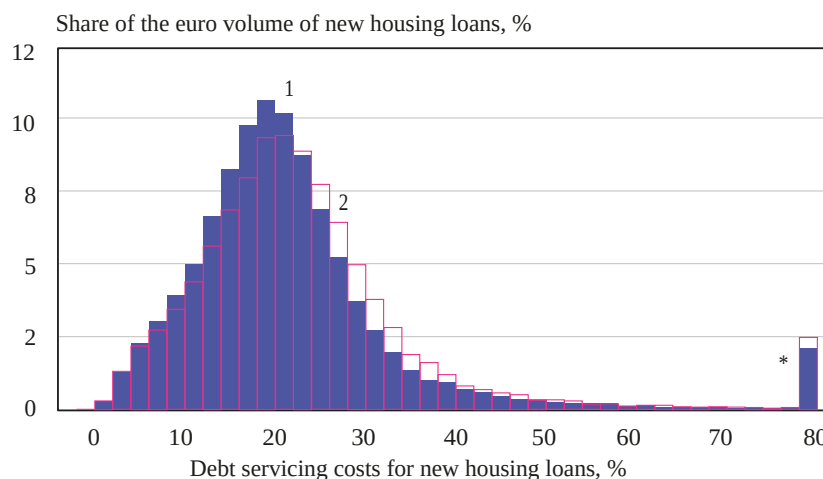
Rising interest rates have made it harder for households to service their debts

The debt servicing costs associated with new mortgages taken out by households in 2022 in relation to the borrower's income increased from the previous year. It increased especially towards the end of 2022: in the last quarter of 2022 the typical (median) debt servicing costs in connection with a new mortgage were 19% of the borrower's net income, whereas in the last quarter of 2021 this figure was 17%. The debt servicing burden distribution (Chart 3) illustrates the increased costs of servicing a loan in relation to the net income of borrowers between 2021 and 2022.

Chart 3.

Rising interest rates have made it harder for households to service their debts

1. ■ 2021
2. □ 2022



*Outliers of the right-hand tail have been added to the 80% cut-off value.

The chart shows the distribution of housing loans by the loan servicing burden of borrowers (annual servicing costs of new housing loans relative to net income).
Sources: FIN-FSA and calculations by the Bank of Finland.

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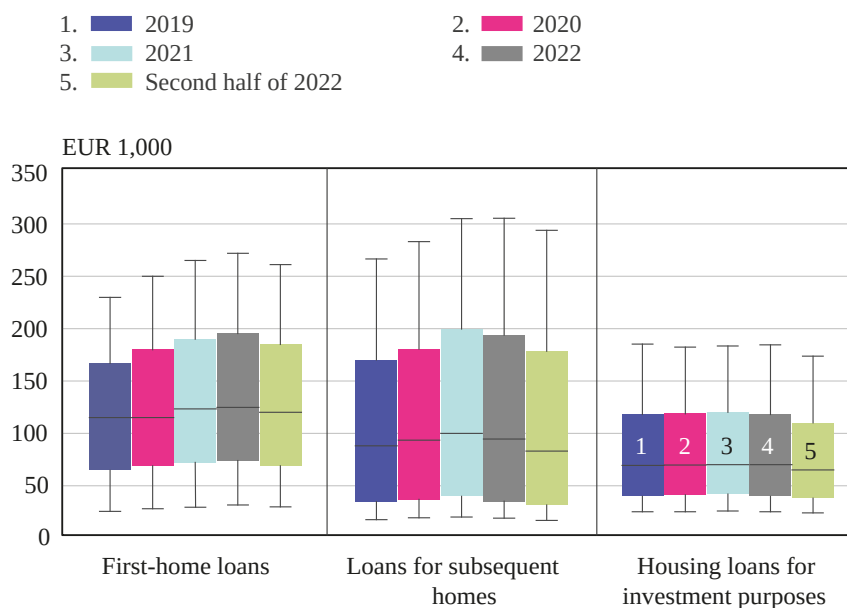
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Debt servicing expenditure increased in 2022, particularly on account of the rise in reference rates, since housing loan margins remained more or less the same as the previous year. The increase was moderated by the fact that repayment periods were extended. Although a typical repayment period for a housing loan is still close to 25 years, periods longer than this have clearly become more common. The rise in debt servicing costs for first-time buyers was also limited by the fact that the average size of mortgages taken out by households did not grow, but in fact fell slightly compared to the previous year.

The average size of mortgages granted to non-first-time buyers fell (Chart 4). The decrease in the size of individual mortgages accelerated during the second half of 2022. The typical size (median) of a mortgage at that time was EUR 92,000, which is around 10% less than for the same period a year earlier. The slowdown in the housing market is thus evident not just in the reduced total number of mortgages taken out compared with recent years, but also in the smaller sizes of individual mortgages.

Chart 4.

Mortgages were smaller towards the end of 2022 than in previous years



The box plot chart shows the distribution of the size of new housing loans. The box contains half of the loan observations for each group, i.e. the observations between the lower and upper quartiles. The median size of the loan is marked in the box with a horizontal line. The whiskers on the box plot extend to the lowest and the highest deciles, i.e. 20% of the observations fall outside the whiskers.

Sources: FIN-FSA and calculations by the Bank of Finland.

6.6.2023

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Despite the rise in loan servicing expenditure, the ability of households to manage their mortgage costs remained good on the whole in 2022, according to the statistics. The proportion of non-performing loans in the loan stock fell during almost the entire year. Losses and impairments recorded for mortgages also remained at a minimum. The volume of renegotiated loan agreements is an indicator of how active households are in discussing interest-only periods for their existing loans. In 2022, this volume was no higher than usual. Favourable developments in the labour market also helped to maintain the repayment capacity of households.

Although households have managed to service their loans adequately so far, the rise in interest rates and the cost of living has meant that the risk of not being able to manage this has grown.^[3] Households are also more concerned now about the state of their

3. Kauko, Karlo (2023) Asuntolainoja, korkoriskejä ja sähkökriisi – Kuinka Suomen kotitaloudet selviytyisivät iskuista? Bank of Finland. ('Housing loans, interest rate risks and the electricity crisis – How would Finnish

finances. This is evident from a survey^[4], which revealed that households' confidence in the current state of their finances and the prospects for the immediate future is at an all-time low.

Growth in indebtedness of new mortgage borrowers comes to a halt

Uncertainty about the economic outlook, accelerated inflation and the rise in interest rates had the effect of reducing household borrowing and slowed the growth of loan stocks in 2022. The long-continued increase in household indebtedness came to a halt in 2022. Relative to disposable income, household indebtedness stood at 133.1% in the last quarter of 2022.

One of the principal reasons for the halt was the significant slowdown in the housing market and therefore in mortgage lending in the last half of 2022 and at the start of 2023. In December 2022, the value of new housing loans was approximately EUR 1.1 billion, which is around 40% less than the year before and only slightly more than at the time of the global financial crisis in 2008. In early 2023 the volume of mortgages taken out has continued to remain small.

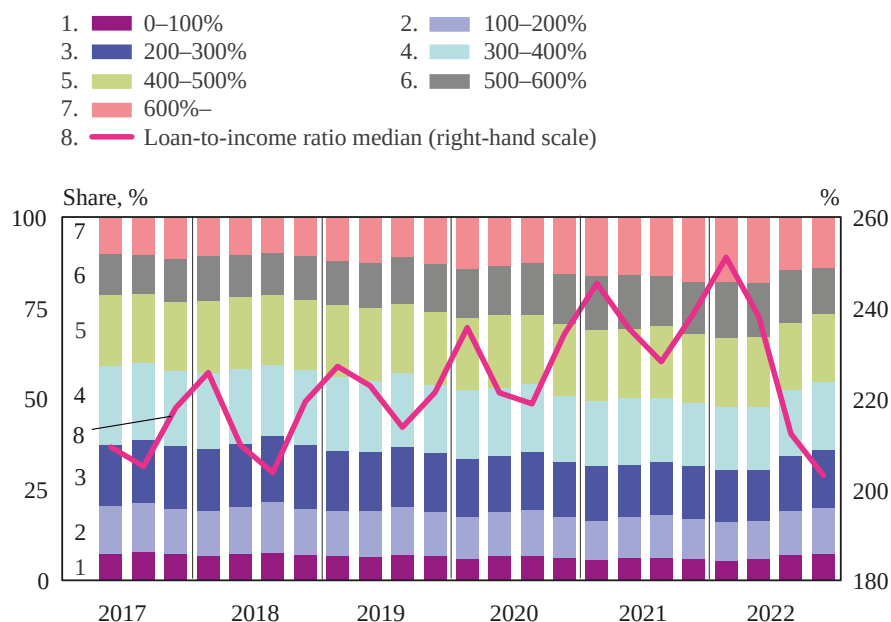
A clear turnaround in indebtedness was also evident in the latter half of 2022 in the loan-to-income ratios for individual loans calculated for borrowers taking out new mortgages. The sizes of new mortgages relative to borrowers' incomes have increased steadily in recent years. This is because new housing loans have increased in size faster than the increase in income. In the last half of 2022, however, the trend was reversed and the loan-to-income ratio for mortgage borrowers diminished as loans became smaller (Chart 5).

households survive the shocks?')

4. Statistics Finland: [Consumer confidence very weak – slow rise continued in March 2023](#).

Chart 5.

Size of new mortgages relative to applicants' incomes fell in 2022



The bars depict the euro volume share of new housing loans with different loan-to-income ratio values (calculated from the row level). The line indicates the median value for the loan-to-income ratios.

Sources: FIN-FSA and calculations by the Bank of Finland.

6.6.2023

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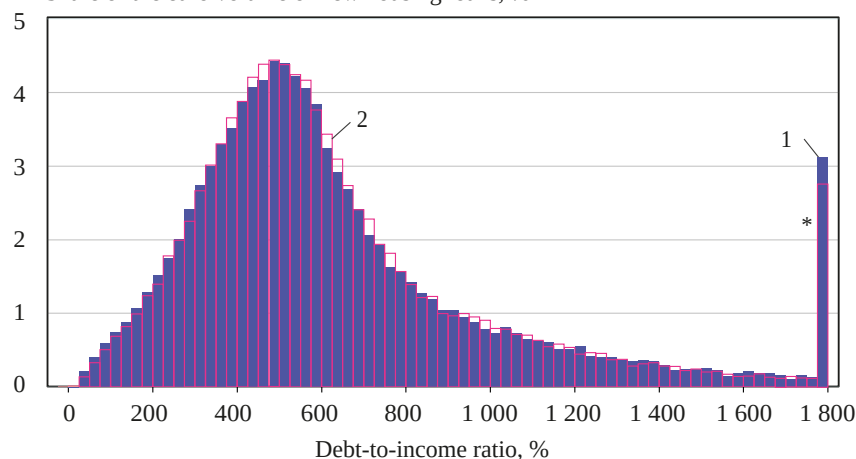
Despite the rise in indebtedness coming to a halt, the indebtedness of new mortgage borrowers relative to income has remained high. The total debt of new mortgage borrowers relative to annual net income in 2022 was typically around 546% (median weighted by loan size), which is virtually the same as the year before (548%). A significant number of loans were granted to applicants who had a very high ratio of total debt to disposable income (Chart 6).

Chart 6.

Mortgage borrowers' debt-to-income ratios occasionally very high

1. 2022
2. 2021

Share of the euro volume of new housing loans, %



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

The chart shows the distribution of housing loans by debt-to-income ratio calculated from the net income of borrowers.

Sources: FIN-FSA and calculations by the Bank of Finland.

6.6.2023

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Highly indebted are least protected from rises in mortgage interest rates

Households are more vulnerable to the shocks associated with rises in interest rates and with other aspects of their finances the greater their debt-to-income ratio or the less they have other financial buffers available to them, such as other sources of wealth or assets. Protecting loans from rises in interest rates through hedging reduces the interest rate risk of households and therefore also their vulnerability.

Below we use two indicators to examine the indebtedness of households that are considered the most vulnerable based on new housing loans taken out in 2022.

- The first indicator (Indicator 1) describes the *debt-to-income ratio* for new mortgage customers estimated from their net income. On the basis of this indicator, those categorised as vulnerable are borrowers whose debt-to-income ratio (see Chart 6 above) is over 800%. Around 23% of new mortgages exceed this threshold, measured by euro volume.
- The second indicator (Indicator 2) describes the *stressed debt-service-to-income (DSTI) ratio*, in line with the Financial Supervisory Authority (FIN-

FSA) recommendation.^{[5],[6]} According to this indicator, those categorised as vulnerable are borrowers whose stressed ratio of debt servicing costs to net income exceeds the **60% threshold** recommended by the FIN-FSA Board in 2022.^[7] Around 16% of new mortgages exceed the stressed DSTI threshold, measured by euro volume.

When it comes to guarding against interest rate risks, it is concerning that the most highly indebted new mortgage borrowers have made less use of hedging products than those who are not so highly indebted (Table 2). According to Indicator 1, in 2022 only around 10% (by euro volume) of the mortgages of those who were vulnerable in terms of their debt-to-income ratios were hedged, whereas the corresponding figure among those categorised as less indebted was much greater, at 27%. Besides the standard hedging products, fixed rate and fixed instalment loans may be thought of as coming under a broader definition of ‘hedging’. If these are also included in the analysis, the share of loans protected against interest rate hikes increases significantly. Even under this broader definition, however, the heavily indebted have hedged their loans against interest rate rises to a smaller extent than the less indebted. In determining the vulnerability of households, the calculations only take account of the size of mortgage granted, any other loans already taken out and the borrower’s net income. They do not take into consideration the borrower’s other sources of wealth or assets.

Table 2.

Debt-to-income ratios and hedging arrangements for new housing loans by euro volume

Debt-to-income ratio, interval	Separately purchased hedging products for which a fee is charged (weighted)	‘Broader definition’ hedging products (weighted)*
Under 800%	27%	38%
Over 800%	10%	23%

New housing loans granted in 2022

*Includes both standard hedging products and fixed rate and fixed instalment loans.

Sources: FIN-FSA and calculations by the Bank of Finland.

If a comparison is made by borrower type, when interest rates rise, the most vulnerable

5. We use the first indicator to estimate the proportions of hedged mortgages, because the hedges with the DSTI indicator are already taken into account as a mitigating circumstance, which would confuse the comparison.

6. According to the FIN-FSA recommendation, the DSTI ratio refers to a borrower’s entire debt servicing costs relative to net income. Debt servicing costs under the recommendation should, as a rule, be no more than 60% of the loan applicant’s net income. This 60% threshold is calculated as the stressed DSTI ratio, i.e. the servicing costs for a loan are calculated with a considerably higher rate of interest than now. Under the FIN-FSA recommendation, an interest rate of 6% is applied to loans.

7. In the calculations, an interest rate of 6% and a 25-year repayment period were applied to new mortgages. More details can be found in [this](#) article (in Finnish).

according to Indicator 2 are mainly borrowers who have taken out a housing loan for investment purposes and non-first-time buyers (Table 2). First-time buyers typically have a lower amount of existing debt, which reduces the overall debt burden of such households compared to other mortgage borrowers.

The most vulnerable to increased interest rates also include mortgage borrowers residing in the Greater Helsinki area or in coastal regions, by comparison with those who live elsewhere in Finland. The debt burdens resulting from mortgages in particular are huge in the Greater Helsinki area, because housing is more expensive there and the mortgages are bigger than in other parts of Finland. Among the other most vulnerable groups are students, entrepreneurs and borrowers in higher income brackets, as these groups had relatively higher stressed DSTI ratios than the other groups examined.^[8] With respect to high income earners, however, it is worth noting that the vulnerability indicator used in the calculations does not take into account the larger amount of disposable income that this group has after essential outgoings, compared with those in other income brackets.^[9]

8. There may be some uncertainty regarding the income data associated with specific loans that the calculations are based on where this concerns, for example, students and entrepreneurs. The income data used are the data that is logged in the banks' systems when loans are granted and do not necessarily take into consideration a student's future increased income level or all elements of an entrepreneur's income.

9. Kauko, Karlo (2023) Asuntolainoja, korkoriskejä ja sähkökriisi – Kuinka Suomen kotitaloudet selviytyisivät iskuista? Bank of Finland. ('Housing loans, interest rate risks and the electricity crisis – How would Finnish households survive the shocks?')

Table 3.

Newly granted housing loans by group and the proportions of vulnerable borrowers

Group	New housing loans (EUR million)	Vulnerable borrowers, %*
All housing loans	17,964	16.4%
Subsequent home purchasers	11,637	18.8%
First-time buyers	5,026	8.2%
Purchases of a property for investment purposes	1,301	26.3%
High earners**	5,860	22.0%
Middle-income earners**	10,251	13.4%
Low-income earners**	1,853	14.9%
Wage earners	14,706	14.7%
Entrepreneurs	2,488	24.8%
Pensioners	555	16.8%
Students	109	31.0%

New housing loans granted in 2022.

- Vulnerable borrowers are those whose debt servicing costs relative to their net income exceed the 60% threshold recommended by the FIN-FSA Board in 2022.

** The observations fall into three income brackets – high, middle and low – as follows.

The low-income group is the lowest quintile of net income.

The middle-income group is the middle three quintiles.

The high-income group is the uppermost quintile.

Sources: FIN-FSA and calculations by the Bank of Finland.

Various ways to guard against risk

In Finland, borrowers had benefited from a long period of exceptionally low interest rates, which kept down their debt servicing costs. These low debt servicing costs enabled households to consume more than before, but also to increase their savings and other assets. On the other hand, during the time of low interest rates, many households may also have taken out a larger loan than they would otherwise have done if interest rates had been higher.^[10]

The calculations presented here raise the concern as to whether indebted households have protected themselves sufficiently against the risk of rising interest rates. The use of hedging products has declined, and they are used least by those who are heavily indebted. Tying a mortgage to a fixed interest rate is even rarer than the use of hedging products. The calculations given here, however, only take account of the income data provided at the time the loan was granted and therefore ignore any other sources of wealth or assets that borrowers may have, such as savings or capital income. According to a survey commissioned by Finance Finland, savings are clearly the most common way for households to prepare for rising interest rates.

Housing costs and the exceptionally high increase in the cost of living have made life hard for many households and borrowers, and serve as a reminder of how important it is to have a good level of financial risk tolerance. For many households and borrowers, the rise in interest expenses and in other housing costs may still be to come if a reset date for their mortgage is due or if there are pressures to raise housing company management charges. The situation has therefore changed, and many households are having to think carefully about ways to balance their finances.

Tags

[interest rates](#), [financial stability](#), [housing loans](#), [indebtedness](#), [households](#)

10. Nyholm, J. and Silvo, A. (2022) Finnish household debt accumulation follows economic cycle. Bank of Finland.



ANALYSIS

Risks associated with housing company loans are increasing – Regulatory reforms will restrict use of such loans in the future

9 Jun 2023 – Analysis – Financial stability



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Rising interest rates and rising costs are straining the finances of housing companies in Finland, causing an increase in the direct and indirect financial stability risks associated with housing company loans. Although housing company loan renegotiations are showing a slight upward trend, there is otherwise little evidence so far of debt servicing problems. The way housing company loans are used in the residential property transactions of households and investors has long been a cause of concern for the authorities. Regulatory amendments on the repayment and maximum amount and duration of housing company loans are on their way. These will be important for keeping household indebtedness and credit risks in check.



Elevated interest rates and costs are adding to the direct and indirect risks associated with housing company loans

Households' shares of housing company loans today account for an increased proportion of the overall housing-related debt borne by households in Finland. Large housing company loans in the case of new dwellings, in particular, have increased households' overall indebtedness over the past 10 years and have substantially altered the structure of household debt. A property's share of a housing company loan reduces the buyer's need to take out a large housing loan or investment loan in their own name. The stock of housing company loans in February 2023 was approximately EUR 25.6 billion, accounting for around 15% of household debt and corresponding to 20% of disposable household income.

The way housing company loans are used in the housing transactions of households and investors has long been a cause of concern for the authorities. When purchasing residential property, the buyer must be mindful of the financial charges collected by the housing company to repay the property's share of the housing company loan, as these will form part of the buyer's overall debt servicing costs. If a property's share of a housing company loan is large and if there are long interest-only payment periods, buyers may find it more difficult to estimate the overall costs involved, perhaps causing them to buy a property that is very expensive in relation to their debt servicing capacity and their ability to pay maintenance charges.

Interest rates on housing company loans are currently rising rapidly amid an uncertain economic outlook and falling housing prices. Housing company loans are typically variable rate loans, and the use of interest rate hedging for housing company loans is limited. Indebted households and investors are particularly affected by the strong rise in interest rates. Given the large amount of variable rate loans, the expiry of interest-only periods may lead to a very rapid and substantial rise in debt servicing costs.

According to the Finnish Real Estate Federation, housing companies' maintenance charges are currently subject to significant upward pressure because of the rising cost of living. An increase in housing costs could force households to cut back on other consumption expenditure, which could further weaken the economy. If residential property investors have difficulty finding tenants, this could be reflected in housing company cash flow and could cause debt servicing problems with respect to housing company loans, especially in cases where investors hold a large proportion of a housing company's shares.

Residential property investment that relies heavily on debt financing could amplify cyclical fluctuations in the housing market and the construction industry. Investors might have to sell some of their properties if the returns on buy-to-let housing weaken significantly due to rising costs. This could lead to greater downward pressure on housing prices. In recent years, the demand for new homes has been maintained by residential property investors. However, the weakening level of investor demand has also reduced the number of new build projects for construction companies. Construction companies are at risk of having many unsold dwellings left on their balance sheets.

The difficulties of the buy-to-let housing market add to the risks faced by households, as a substantial proportion of buy-to-let investors are private individuals.^[1] A housing company loan is ultimately the shared responsibility of all the shareholders in the housing company, although each property owner is primarily responsible for their share of the housing company loan and for the financial charges. Consequently, the difficulties of investors could undermine the debt servicing capacity of the entire housing company.

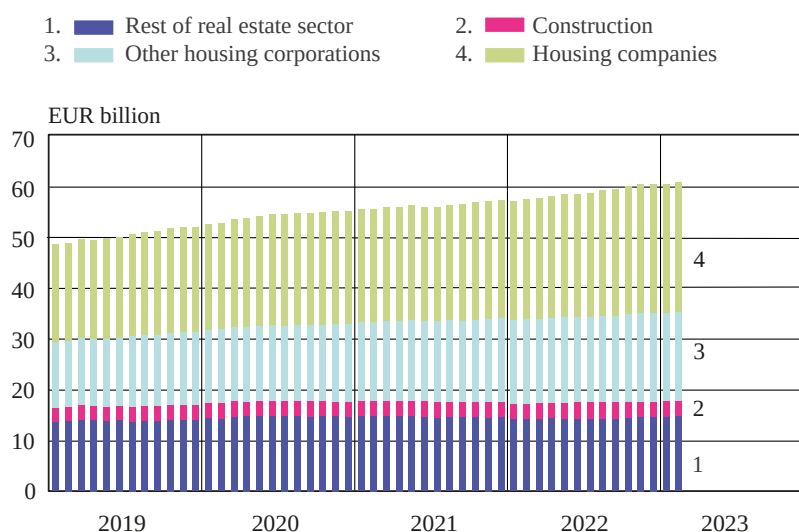
Growth in housing company loans has continued despite rising interest rates

During the past decade, the growth in housing company loans has been significantly above that seen in the traditional housing loan stock. The annual growth in the housing company loan stock has remained strong despite the recent weakening in the Finnish housing market cycle. The stock of housing company loans was up in February 2023 by 8.5% year on year, while at the same time the annual growth in the stock of housing loans has stalled and the amount of new housing loans has diminished considerably (Chart 1).

1. Residential property investors' costs growing rapidly – Bank of Finland Bulletin (in Finnish).

Chart 1.

Housing company loan stock still on the rise in February 2023



Loans issued by banks operating in Finland to industries and/ or sectors related to properties.

Sources: Credit data collection and calculations by the Bank of Finland.

25.4.2023

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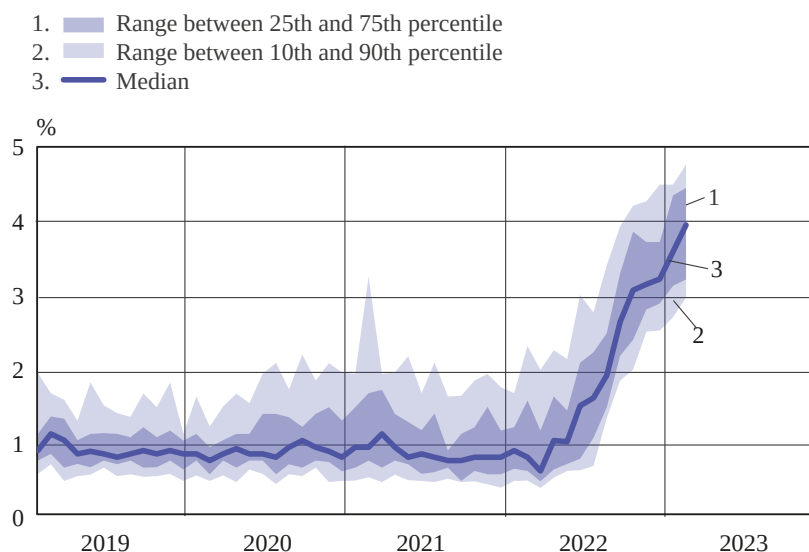
The growth in the housing company loan stock is being maintained by the relatively brisk new build activity and renovations. A large number of new homes are due for completion in 2023 in the Helsinki metropolitan area and in the growth centres. This year, the increase in the number of housing company loans can be expected to slow down due to a substantial decrease in the number of new residential building permits.

The exceptionally sharp and rapid rise in interest rates has also been reflected in the housing company loans that have been granted. The average (weighted median) interest rate of new housing company loans^[2] in February 2023 was approximately 4.3%, while as recently as June 2022 it was 1.6% (Chart 2). During the pandemic, the interest rate distribution for new housing company loans widened, especially due to the highest observations (i.e. the difference grew between the highest and lowest interest rates being paid). During the current interest rate shock, the interest rate distribution for housing company loans has changed fairly evenly. This indicates that the rise in interest rates has affected the debt servicing burden of housing companies in a uniform manner.

2. For new loan agreements.

Chart 2.

Substantial increase in housing company loan interest rates due to general rise in interest rates



Interest rate distribution for new housing company loans (weighted percentiles).
Sources: Credit data collection and calculations by the Bank of Finland.

22.5.2023

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Housing companies' tighter finances have not yet led to an increase in bank credit risks

So far, the tightening financing conditions have been visible in the credit standards for housing company loans only as a rise in lending rates. Although in the final quarter of 2022 a marginally higher proportion of all housing company loans were renegotiated, the increase was not significant in comparison with previous years (3.7% of the loan stock in December 2022). Reasons for renegotiations include a change in the repayment schedule, reference rate or loan margin. In contrast with lending to households, banks can unilaterally change the agreed loan margin in the case of a housing company loan.

Increasing debt servicing problems could also lead to greater flexibility in debt servicing. Banks offer flexibility in debt servicing to customers with moderate and temporary liquidity problems in order to provide them the chance to improve their financial situation. In the case of housing company loans, the proportion granted flexibility in debt servicing has remained very small (0.2% of the loan stock in the final quarter of 2022).

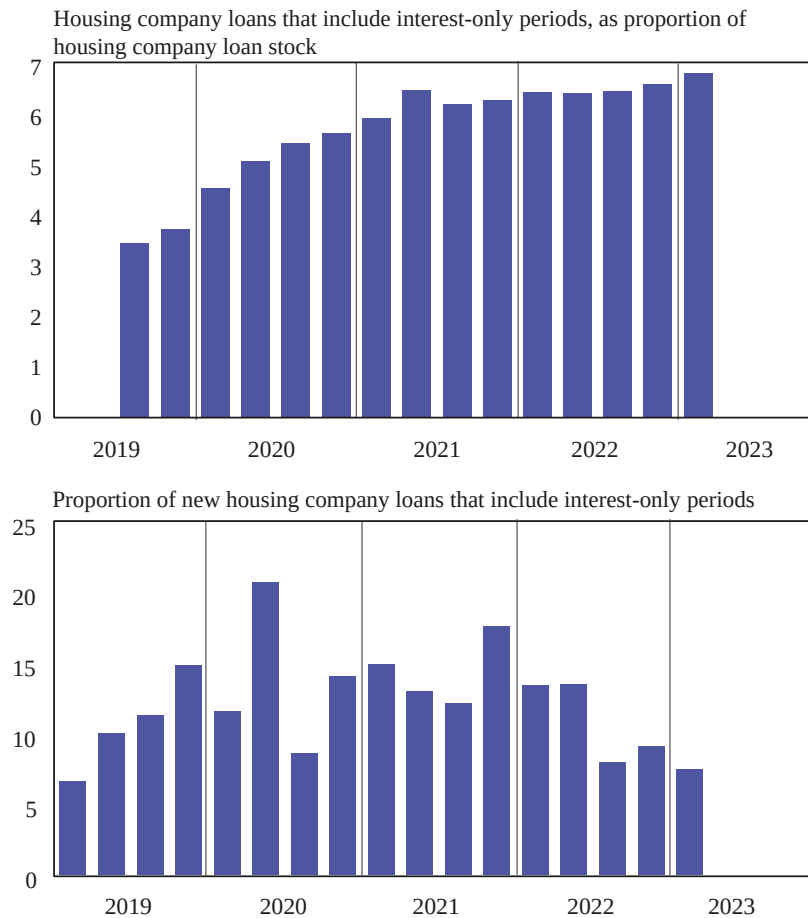
Interest-only payment periods^[3] have increasingly been applied to housing company

3. 'Interest-only period' refers here to cases where it is only interest that is required to be paid on the loan at that time.

loans in recent years. In early 2023 (January–February), the proportion of the entire housing company loan stock to which interest-only periods applied was approximately 7%. The corresponding pre-pandemic figure was less than 4%. In new housing company loans, the proportion has been around 12% on average, although there has been considerable variation (Chart 3). The figure was at its highest in the second quarter of 2020, at just over 20% of all new housing company loans. Since then, the share has decreased, and in early 2023 (January–February) it was about 7.5%.

Chart 3.

Interest rate shock has not led to more prevalent interest-only periods in new housing company loans, %



An interest-only period is deemed to apply to a loan if the final date of that period has been entered for the time following the reporting period. The last observation for the first quarter of 2023 is for January–February.

Sources: Credit data collection and calculations by the Bank of Finland.

22.5.2023

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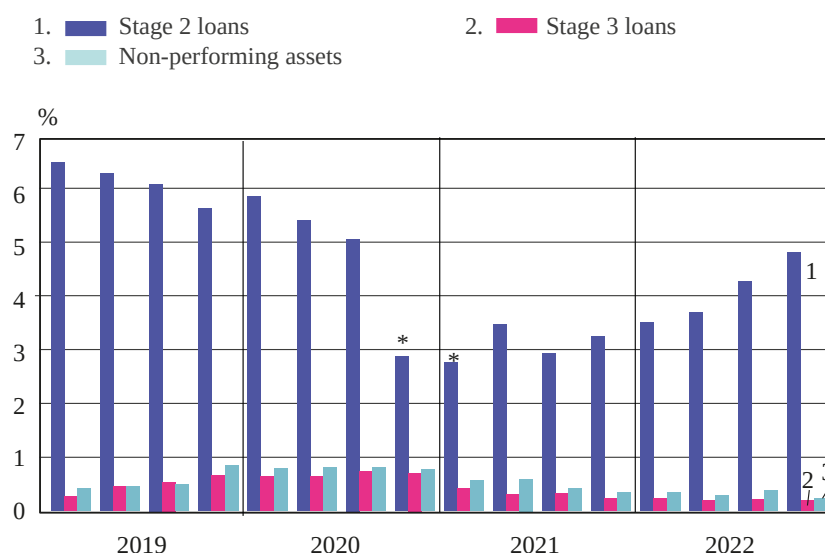
performing housing company loans. The share of non-performing loans has, in fact,

diminished since the pandemic. All in all, the amount of non-performing housing company loans is small. However, the amount of loans with an increased credit risk (Stage 2 loans^[4]) has increased in recent years (Chart 4).

Any financial difficulties that housing companies and their shareholders might have will not be immediately perceptible in banks' credit risk indicators, as there are several ways in which housing companies can improve their financial health. Housing companies strive to mend their finances primarily by raising the financial and maintenance charges, or by collecting additional charges. They can also take possession of properties for which the charges have not been paid.^[5] If the financial situation remains challenging for a long time, the problems may become visible – after some delay – in the form of increased credit risks and credit losses for banks.

Chart 4.

Volume of loans with an increased credit risk is on the rise



The information for each quarter is from the end of the quarter. The observations regarding stage 2 loans in quarters 2020Q4 and 2021Q1 (marked with asterisks) include some abnormalities and should therefore be interpreted with caution.

Sources: Credit data collection and calculations by the Bank of Finland.

22.5.2023

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4. The Bank of Finland defines loans in this increased credit risk class as loans in which it deems credit risk to have increased substantially since being issued.

5. According to the Finnish Real Estate Federation, payment arrears among housing company shareholders have increased only moderately for the time being.

New legislation will impose restrictions on loans to households and housing companies

At the beginning of July 2023, legislation^[6] will enter into force that will impose restrictions on loans to households and will introduce new regulations, particularly on housing company loans. The aim is to curb the level of household indebtedness from mortgages and housing company loans used in new-build construction, and to improve the transparency of indebtedness risks to homebuyers. The legislation will also limit the extent to which residential property investors other than households can use housing company loans for financing their investments.



Regulatory amendments affecting housing company loans – In brief

- In new-build construction, housing company loans can account for no more than 60% of the unencumbered price of the homes sold.
- In new-build construction, the repayment period for housing company loans can generally be no more than 30 years.
- During the first 5 years after the completion of a building, any interest-only period can be no longer than 1 year.

The lender^[7] can, however, diverge from the maximum repayment period in the case of 10% of its loans.

According to information from the Federation of Real Estate Agency in Finland, in a very high proportion (around 63%) of the completed transactions for new-build apartments and terraced houses in early 2023 (January–February), the property's share of a housing company loan exceeded the forthcoming 60% maximum limit (Chart 5). Very large shares of housing company loans also remain fairly common: the property's share of a housing company loan exceeded 70% in around 21% of transactions. Nevertheless, such large shares of housing company loans have been in decline since 2018.

Based on completed transactions, setting the loan-to-value limit at 60% could have an impact on the construction of new builds and on the financing of housing transactions. Replacing housing company loans with homebuyers' own housing loans would make the loan repayment obligation clearer for buyers. If households and investors choose not to replace a reduced housing company loan share with a residential mortgage, this could

6. See https://www.eduskunta.fi/FI/vaski/KasittelytiedotValtiopaivaasia/Sivut/HE_101+2022.aspx (in Finnish).

7. All the lenders that currently issue housing company loans in Finland are credit institutions, although the regulation also applies to entities other than credit institutions.

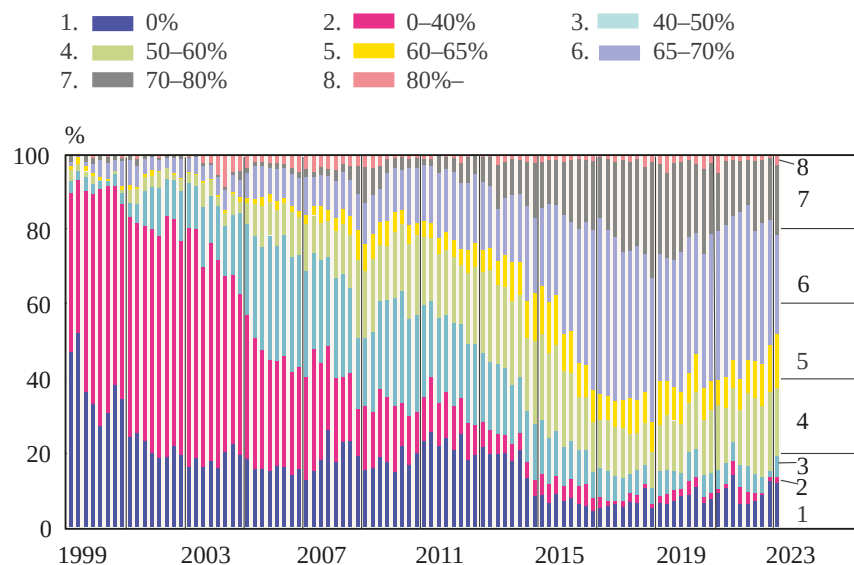
reduce their willingness to buy new residential properties.

The new regulations will make it more important for construction companies to manage their financial risks and balance sheet structure. One potential effect of the restrictions is that a higher number of dwelling reservations would be needed before construction can begin. The loan-to-value limit will mainly affect the construction of owner-occupied homes, as housing company loans are not generally used to finance rental housing projects.^[8]

In the government proposal it was considered that restricting the loan-to-value limit could result in a reduction in housing construction. This applies especially to properties whose financing has typically included a major share of a housing company loan. Construction projects that are most dependent on housing company loans typically include those of small construction companies.

Chart 5.

Housing company loan shares exceed 60% in a large proportion of new home sales



The chart presents the proportions of the unencumbered prices of new-build apartments and terraced houses represented by the property's share of any housing company loan, based on completed transactions by quarter, from 1999Q1 onwards. The last observation for 2023Q1 includes January and February.

Sources: Federation of Real Estate Agency in Finland and calculations by the Bank of Finland.

22.5.2023

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8. Imposing a loan-to-value limit on housing company loans would only affect a share of construction finance – Bank of Finland Bulletin.

The new legislation will also restrict the maximum repayment period of housing company loans: in the future, housing company loans will generally include a repayment period of no more than 30 years. In recent years, as little as around 2% of the housing company loans granted have had a duration of over 30 years. Therefore, the new regulation is unlikely in the short term to have a major impact on the granting of housing company loans.

In addition to the maximum repayment period, the new legislation will restrict the duration of interest-only periods. During the first 5 years following the completion of a new build, an interest-only period will be possible only within the first 12 months. According to statistical data collected by the Bank of Finland, interest-only periods used in new housing company loans are predominantly more than one year in duration (about 86% of cases on average, measured in terms of loan volume). In new housing company loans, interest-only periods had an average duration (weighted median) of just over 4 years in 2022.

New regulation is necessary because the increased indebtedness of households from housing company loans has long been a cause of concern for the authorities. The legislation will contribute to curbing excessive risk-taking and indebtedness and will place the regulations for housing company loan practices on a firmer foundation.

Tags

[housing markets](#), [regulation](#), [financial stability](#), [housing company loans](#)



ANALYSIS

Capital buffer requirements included in the macroprudential toolkit are supporting the risk-bearing capacity of banks

9 Jun 2023 – Analysis – Financial stability



Jukka Topi
Principal Adviser

Capital buffer requirements imposed on banks are among the key instruments available in the macroprudential policy toolkit. They safeguard the risk-bearing capacity of banks. Some of the requirements are imposed on the basis of the structural features of banks or the financial system. The countercyclical capital buffer (CCyB) requirement, in turn, is set on the basis of cyclical conditions. It can be relaxed in difficult economic conditions, if necessary, and thereby support bank lending. To ensure there is scope for lowering the CCyB requirement, it should be possible to set the requirement above zero already at the neutral phase of the credit cycle.



The objective of macroprudential policy is to prevent systemic risks that threaten the stability of the financial system, and to prevent and mitigate any ensuing financial crises and other disruptions and their adverse effects on the real economy.^[1] The objective is safeguarding the stability of the financial system as a whole, but since in many countries – such as Finland – banks are a key part of the financial system, ensuring the stability of the banking sector is a key element of macroprudential policy.

The capital buffer requirements^[2] that are imposed on banks and other credit institutions are among the most important macroprudential instruments. A capital buffer requirement means that banks are required to hold, in addition to the risk-weighted minimum capital requirements^[3], a certain percentage of the highest quality Common Equity Tier 1 (CET1) capital relative to their risk-weighted assets in case of various systemic risks. The primary purpose of the capital buffer requirements is to ensure that banks have sufficient risk-bearing capacity so that they can continue operating even in difficult conditions. The goal is to prevent and reduce systemic risks, in particular, created within the banking system and the effects of these.

Smooth financial intermediation is particularly important in times of economic disruptions and downturns. It is essential that a weakening of a bank's position does not amplify an economic downturn via tighter lending conditions. Capital buffer requirements help banks prepare for a situation in which credit growth is slow or is decreasing, or for an even more difficult financial system crisis or other severe disruption.

As a result of the capital buffer requirements, banks' capital buffers are stronger than before. In difficult conditions, banks with a solid capital position are usually better able to continue lending and raise market financing. They are also better prepared to absorb losses resulting from stress or crisis situations. During very weak cyclical conditions, it may be necessary for macroprudential authorities to relax the capital buffer requirements on banks and thereby support bank lending, if for example banks' losses would otherwise limit their ability to provide credit.

The outbreak of the COVID-19 pandemic in spring 2020 was the first situation in which banks' capital buffer requirements and also other requirements were lowered extensively.^[4] For example, national CCyB requirements were reduced or deactivated completely in many EU countries. Before the pandemic, Finland did not have a positive cycle-neutral CCyB requirement that could have been relaxed during the pandemic. The

1. For example in Finland, the Board of the FIN-FSA has specified in its macroprudential strategy that the primary goal of macroprudential policy is to reduce the probability of financial crises and other severe disruptions to the financial system and their adverse effects on the real economy. This will then promote long-term economic growth by preventing the build-up of systemic risks and vulnerabilities, and supporting financial intermediation in the event of disruptions to the economy or the financial system. See https://www.finanssivalvonta.fi/contentassets/9b1b4d24040649e1b3d3a1d167fd485e/mv_27062022/finanssivalvonnann-johtokunnan-makrovakaust strategia_en.pdf.

2. Provisions on banks' capital buffer requirements in Finland are laid down in chapter 10 of the Act on Credit Institutions (610/2014) and the supplementing Ministry of Finance Decrees.

3. The amount of capital banks are required to hold under the capital requirements depends on the estimated risk level of their assets. The estimated risk level is determined on the basis of the risk weights set on the assets.

4. See <https://www.ecb.europa.eu/press/pr/date/2020/html/ecb.pr200415~96f622e255.en.html>.

Board of the Financial Supervisory Authority (FIN-FSA), which takes the macroprudential decisions, considered it essential – in a very exceptional and uncertain pandemic situation – to ensure the ability of banks to provide credit, and so it lowered the structural buffer requirements in force at that time. The policy responses during the pandemic thus provide a good basis for a more detailed assessment of how the capital buffer requirements for banks included in macroprudential policy should be developed.

Capital buffer requirements are imposed to guard against various risks and vulnerabilities

The purpose of capital buffer requirements included in the macroprudential toolkit is to ensure that credit institutions have sufficient capital and risk-bearing capacity to guard against risks to financial stability. Different buffers have different purposes, however, as there are differences in the risks they are designed to prevent. The capital buffer requirements applied in Finland^[5] are given in Table 1.

5. Most of the capital buffer requirements included in the macroprudential policy toolkit were agreed globally in the standards issued by the Basel Committee on Banking Supervision and have subsequently been regulated extensively in the national legislation of the countries concerned. Within the EU, the minimum capital requirements under the existing Basel standards are in the Capital Requirements Directive. In contrast to the other requirements, the systemic risk buffer (SyRB) requirement is not based on the Basel standards; it is a capital buffer requirement introduced in EU provisions that can be applied to prevent structural risks in the banking and financial systems.

Table 1.

Banks' capital buffer requirements in Finland				
Capital buffer requirement	Risk basis	Justifications for setting or adjustments	Rate applied in Finland	Maximum rate in Finland
Capital conservation buffer (CCoB) requirement	General systemic risks	Permanently valid	2.5%	2.5%
Systemic risk buffer (SyRB) requirement	Structural systemic risks	Risks/ changes in risks	1.0% (as of 1 April 2024)	5.0%
G-SII requirement for global systemically important banks	Structural risks caused by systemically important banks	Risks/ changes in risks	-	3.5%
O-SII requirement for other systemically important institutions	Structural risks caused by systemically important banks	Risks/ changes in risks	0.5%–2.5% (three banks)	3.0%
Countercyclical capital buffer (CCyB) requirement	Cyclical systemic risks	Risks/ changes in risks or financial market disruptions	-	2.5%

Sources: Financial Supervisory Authority and Bank of Finland.

The capital conservation buffer (CCoB) requirement is valid permanently. It is designed to ensure that banks build up their Common Equity Tier 1 capital in normal circumstances to prepare for difficult times and losses.^[6] In Finland, as in the other EU countries, the statutory CCoB rate is 2.5%.

Decisions on the other capital buffer requirements for banks are taken in Finland by the Board of the FIN-FSA. The CCyB requirement can be imposed on banks if there is a risk of overheating in the credit cycle. Possible signs of overheating may include excessive growth in lending or a steep rise in housing prices. The CCyB requirement is necessary for mitigating cyclical systemic risks. Economic downturns following an overheating of

6. See Guidance by the Basel Committee on Banking Supervision on risk-based capital buffer requirements: https://www.bis.org/basel_framework/chapter/RBC/30.htm?inforce=20191215&published=20191215.

the credit cycle can be especially difficult and cause major losses to banks.^[7]

The primary objective of the CCyB requirement is to ensure that the banking sector's capital buffers are so strong that it can continue providing credit to the real economy also in the contraction phase of the credit cycle, despite possible losses. A secondary objective is that the CCyB requirement could curb the overheating of the credit cycle in an upswing by increasing the price of credit and thereby, to some extent, dampening the demand for credit. In Finland, the financial cycle has been very moderate in recent years, and the CCyB requirement has therefore not been raised above zero.^[8]

Some banks are so important to the functioning of the financial system that any difficulties they experience could threaten the stability of the entire global financial and banking system. Capital buffer requirements may be imposed on such individual banks either in the form of buffer requirements for global systemically important institutions (G-SII buffers) or for other systemically important institutions (O-SII buffers). The importance of the institution is assessed based on various criteria, including size, interconnectedness and complexity. Authorities also assess whether other operators could replace their activities. Finland has set O-SII buffer rates for Nordea (2.5%), OP Group (1.5%) and Municipal Finance (0.5%).

Financial and banking systems may also contain specific structural vulnerabilities. These can mean that systemic risks and threats stemming from them may be very significant to the whole financial system and the economy. Such vulnerabilities include high risk exposures of the banking sector to certain types of borrowers and strong interconnectedness between the sector and foreign financial systems. In response to such threats, it may be necessary to set systemic risk buffer (SyRB) requirements.^[9] In March 2023, the FIN-FSA Board decided to set an SyRB requirement of 1.0% for all Finnish credit institutions.^[10] The requirement will enter into force in April 2024.

Besides the capital buffer requirements imposed in Finland, banks may be required to comply with capital buffer requirements imposed by certain foreign authorities. Compliance with foreign CCyB requirements is based directly on the level set by law for the particular volume of assets in each country. In addition, the FIN-FSA Board may recognise an SyRB requirement imposed in a country of the European Economic Area (EEA) to the extent it concerns exposures in that country.

Capital buffer requirements are flexible in a downturn

Macroprudential policies have been implemented more widely in the EU since the global

7. See Guidance by the Basel Committee on Banking Supervision on setting the countercyclical capital buffer: <https://www.bis.org/publ/bcbis187.pdf>.

8. For a more detailed discussion on the measurement of cyclical systemic risks, see e.g. Koponen (2022) *Voidaanko pankkikriisejä ennustaa?* Bank of Finland Bulletin. ('Can banking crises be predicted?')

9. In Finnish legislation, the systemic risk buffer (SyRB) requirement is referred to as a capital buffer requirement imposed on the basis of the structural characteristics of the financial system.

10. See decision by the FIN-FSA Board: https://www.finanssivalvonta.fi/contentassets/84ea9cfo1a5d4f7f96a506311d71343d/mv_29032023/jk_paatos_makrovakaussalvoneet_29032023_en.pdf.

financial crisis. In Finland, the first capital buffer requirements were introduced in accordance with EU legislation in 2015. Capital buffer requirements are therefore still a fairly new way of safeguarding financial stability.

So far, there is little experience of very difficult economic situations in which, due to increased losses and risks, banks' capital levels are threatening to decline at such a rate that there is a risk of no longer meeting the requirements set for minimum capital and additional buffers. In Europe, the first situation in which such a risk was witnessed under the current macroprudential framework was the severe liquidity shock to the financial system and the increased financial and economic uncertainty in spring 2020, following the outbreak of the pandemic.

A serious downturn could become a problem not only for individual banks – due to the increase in losses and risks – but also for the ability of the banking system as a whole to intermediate finance. [Below is a description](#) of how banks could adapt to this hypothetical situation and how flexibility in the use of capital buffer requirements could support this adjustment. A problem could arise if banks choose to ignore the available alternatives and decide to limit their lending, thus amplifying the downturn.



Different ways for banks to adapt to declining capital ratios caused by losses and increasing risks

Banks have several ways of adapting to a faltering economy, higher risk levels for assets or a situation where the bank suffers credit losses:

- The best way to improve banks' risk-bearing capacity would be to raise additional funding through share issues or use profits to strengthen capital. However, in a difficult environment, unprofitable banks may find it very hard to raise capital through share issues, and no profits can be retained from a negative result.
- A second option could be for banks to let their capital ratios decline, even if this means an inability to meet the capital buffer requirements set for them. These requirements focus on the need to maintain buffers, but meeting the requirements is not a strict precondition for continuing the bank's operations. In a difficult situation, capital is allowed to fall temporarily below the buffer requirements, giving banks the opportunity to strengthen their capital in a controlled manner and in accordance with an agreed schedule. If the bank does not meet the capital buffer requirements, the authorities will impose restrictions on the distribution of its profits, concerning for instance the payment of dividends or variable compensations. The magnitude of the restrictions depends on how much the bank's own funds fall short of the imposed capital buffer requirements.

However, banks may be unwilling to let their own funds fall below the capital buffer requirements, and some may want to keep a buffer that exceeds them. This may be for different reasons, one being that it causes restrictions on profit distribution and other obligations that may complicate the acquisition of new capital. Another reason is that banks may fear that falling below the threshold could cause general damage to their reputation, which could, for example, make it more difficult to obtain market funding.

- A third option is for banks to adapt their operations in a way that reduces the risk-weighted assets that require own funds. This may require limiting or targeting lending, for example, to particularly low-risk borrowers. While this approach may improve the capital ratio of an individual bank, limiting lending in the banking sector as a whole may undermine access to financing and thus exacerbate the economic situation.

See Behn, M., Rancoita, E. and Rodriguez d'Acri, C. (2020), 'Macroprudential capital buffers – objectives and usability', ECB Macroprudential Bulletin, vol. 11.

From a macroeconomic point of view, banks should let their capital ratios fall rather than start restricting credit, or, in other words, use their capital buffers to enable continued lending. The Basel Committee on Banking Supervision has stressed that banks' capital buffers in excess of the minimum requirements are designed to provide flexibility in stress situations, allowing banks to maintain lending.^[11] The use of bank buffers has been assessed as the best option for economic growth, which was also the conclusion based on an analysis of the pandemic outbreak shock and the policy measures taken to counter it.^[12] According to the assessment, the use of capital buffers in a stress situation would not lead to a significant lowering of risk-bearing capacity.

In order to improve banks' ability and willingness to use their capital buffers for lending, macroprudential authorities should consider whether capital buffer requirements should be lowered during adverse cyclical conditions. A factor in favour of this is that banks whose capital buffers have exceeded the capital buffer requirements more than for other banks have been more likely to continue to grant loans even during adverse conditions. This conclusion is supported by experiences from the pandemic and other research data.^[13]

A situation like the one described above would warrant considering the impact of lowered requirements on the banking sector's ability to maintain its risk-bearing capacity. It should also be borne in mind that in a difficult economic environment banks will not necessarily be willing to lower their capital ratios even if the capital buffer requirements are lowered.^[14] It should also be noted that other mandatory provisions on banking (such as leverage ratio requirements and the MREL requirements imposed by resolution authorities) may include requirements for banks that overlap with the capital buffer requirements and thus reduce the impact of lowering them.^[15]

Lowering the capital buffer requirements would also mean that requirements which could be lowered would need to be in place to begin with. Under current regulations, the capital conservation buffer requirement is fixed and its magnitude cannot be altered. The G-SII and O-SII requirements for systemically important institutions are set on the basis of the characteristics of individual banks and these requirements should only be changed if there is a change in the values of the measures for these characteristics. SyRB requirements are similarly imposed on the basis of structural vulnerabilities in the financial system, and relaxing them would generally not be justified unless the structural risks have changed. The lowering of structural capital buffer requirements in Finland was justified in the exceptional circumstances of the pandemic in spring 2020, but the threshold for making further changes of this kind is very high.

11. Basel Committee on Banking Supervision Newsletter on buffer usability, October 2019, https://www.bis.org/publ/bcbs_nl22.htm.

12. See Borsuk, M., Budnik, K. and Volk, M. (2020), 'Buffer use and lending impact', ECB Macroeprudential Bulletin, vol. 11.

13. See Buffer usability and cyclical in the Basel framework, BCBS, October 2022, <https://www.bis.org/bcbs/publ/d542.pdf>.

14. See e.g. Andreeva, D., Bochmann, P. and Couaillier, C. (2020) ECB Macroeprudential Bulletin, vol. 11.

15. See e.g. Report of the Analytical Task Force on the overlap between capital buffers and minimum requirements, ESRB, December 2021.

Of the various capital buffer requirements, the countercyclical capital buffer (CCyB) requirement is the best suited for being lowered in an economic or financial disruption, as it can be adjusted in conjunction with cyclical conditions and, in particular, lowered in the event of disruptions to the operation of the financial system.^[16] However, the requirement cannot be used in a downturn or a disruption in the financial system if it had not already been set above zero. In this case, it would not be possible to lower the requirement either, as it cannot be set to a negative level.

Besides the overheating of the credit market, a downturn affecting the lending capacity of the banking sector can also be triggered by an external and extensive shock to the financial system. In order to counter the negative impact of such a systemic disruption on bank lending, authorities should be able to prepare for disruptions by setting a CCyB requirement even if there are no signs of overheating of the credit cycle. The article '[How can Finland's use of the countercyclical capital buffer requirement be further developed?](#)' examines ways to set the CCyB requirement above zero at a neutral phase of the credit cycle and what benefits this would bring. However, changing the way the CCyB requirement is applied would necessitate amendments to Finland's national regulations.

Tags

[financial stability](#), [capital buffer requirements](#), [macroprudential policy](#)

16. See chapter 10, section 5 of the Act on Credit Institutions (610/2014).



ANALYSIS

How can Finland's use of the countercyclical capital buffer requirement be further developed?

9 Jun 2023 – Analysis – Financial stability



Jukka Topi
Principal Adviser

Finland's application of the countercyclical capital buffer (CCyB) requirement could support bank lending in a more flexible manner than at present in situations where an external shock to the financial system poses a serious threat to the functioning of the credit market. This could involve, for example, setting the buffer requirement above zero already at the neutral phase of the credit cycle, which could be carried out in a variety of ways but would necessitate regulatory changes.



The capital buffer requirements used as macroprudential policy tools in Finland should

be developed further. They should allow the macroprudential authority to better support bank lending in a difficult environment. One possibility would be to relax the requirement to maintain a countercyclical capital buffer (CCyB) if, for example, an external shock to the financial system were to cause losses to banks and seriously undermine the provision of credit. This is not an option at present.

In Finland, the CCyB requirement can currently be imposed if, based on the applicable risk indicators, the credit market is observed to be overheating or there is other evidence of the existence of cyclical systemic risks. If the credit market is calm (i.e. the credit cycle is in a neutral phase), the CCyB rate has to be kept at zero and may not be relaxed. The other existing instruments would be of no help either, because, as a rule, the structural buffer requirements^[1] are not meant to be relaxed unless the risks or vulnerabilities addressed by them are easing.

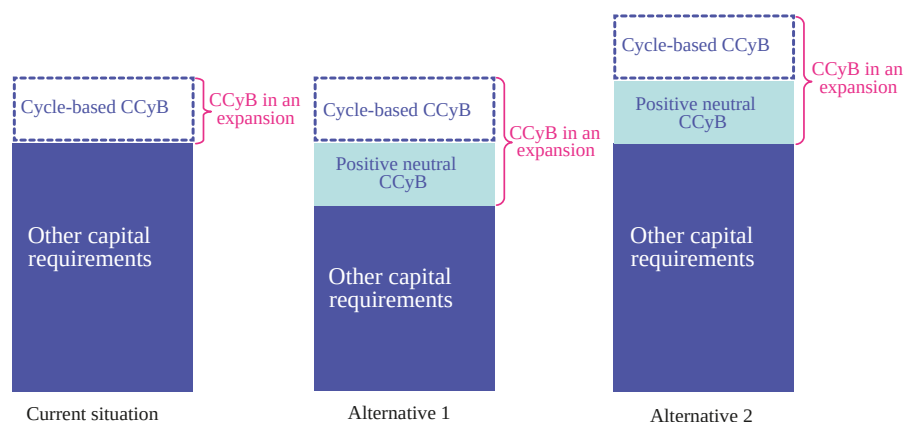
Systemic stress in the credit market can originate not only from the realisation of systemic risks inherent in the financial system but also from severe external shocks such as the COVID-19 pandemic that began in 2020 or Russia's invasion of Ukraine, which started last year. For this reason, many European countries and certain other countries, too, have decided to set their CCyB rate at a higher level than would be justified on the basis of the phase of the credit cycle.

Chart 1 compares the current application of the CCyB requirement in Finland and two alternative approaches for meeting severe external shocks to the financial system. Under both alternative approaches, the CCyB rate is already set at a specific level (i.e. above zero) in the neutral phase of the credit cycle and is raised further in the cycle's expansion phase. At the contraction phase of the cycle or during other shock events, the buffer can be fully released.

1. Systemic risk buffer (SyRB) and buffer requirements for global and other systemically important institutions (G-SII and O-SII buffers).

Chart 1.

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



CCyB = countercyclical capital buffer.

Source: Bank of Finland.

23.5.2023

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A positive neutral rate for the CCyB requirement, i.e. a positive rate for the CCyB in the neutral phase of the credit cycle, could be applied using alternative 1, that is by keeping the total amount of capital buffers unchanged while reducing the other macroprudential capital requirements. Using alternative 2 instead, the positive neutral CCyB component would be added to the other capital requirements, in which case the total amount of capital buffers would increase. It would also be possible to combine both alternatives 1 and 2 by relaxing the other capital requirements by an amount that is smaller than the size of the positive neutral CCyB component. The choice between the alternatives would depend on the regulatory parameters and on the estimates of the total amount of capital required on the basis of systemic risks.

In addition to determining the total capital requirement, there are other practical issues related to the use of the positive neutral CCyB requirement which would need to be resolved either by regulation or by decision of the macroprudential authority. These include the size of the positive neutral CCyB requirement and whether the authority would be obliged to keep the CCyB rate at zero for a specified period if the rate had been lowered to that level because of an economic shock.

A positive neutral CCyB requirement would offer a number of advantages^[2]:

- The macroprudential authority could react to extensive financial system shocks – both internal and external – in all cyclical phases, rather than reacting only

2. For more details of the advantages, see e.g. Stojkov, K. (2020), 'Different Approaches to Implementing a Countercyclical Capital Buffer', Reserve Bank of Australia Bulletin; and Darracq Pariès, M., Kok, C. and Rottner, M. (2020), 'Enhancing macroprudential space when interest rates are "low for long"', ECB Macroprudential Bulletin, Vol. 11.

after overheating of the credit cycle.

- At the different phases of the credit cycle, the requirement could then be relaxed by more than is currently allowed. If the credit cycle overheats, the requirement would be raised in the normal manner.
- A greater variation range than at present for the CCyB rate would reduce the need for banks to fall short of their combined buffer requirements, which would improve the usability of banks' capital buffers.

Under the Basel III framework, the Basel Committee on Banking Supervision (BCBS) originally envisaged a zero level for the CCyB rate in times of neutral cyclical conditions. However, the BSBC has expressed its support for the positive neutral CCyB rates introduced in many countries. This was made clear in the BCBS's Newsletter of October 2022, but with the condition that compliance be maintained with the agreed calibration of the minimum capital requirements and other regulatory buffers under the existing Basel standards.^[3]

To gain additional macroprudential policy space, it would be justifiable for Finland, too, to shift to applying a positive neutral CCyB requirement, as is the case in many other countries. This would necessitate national regulatory changes, however, as the current precondition for imposing the CCyB requirement is that cyclical systemic risks are increasing.

Tags

[credit cycle](#), [countercyclical capital buffer requirement](#), [macroprudential policy](#)

3. See the Newsletter of the Basel Committee on Banking Supervision on positive cycle-neutral countercyclical capital buffer rates, October 2022.



ANALYSIS

Financial sector contingency planning will help ensure continued functioning of society in all circumstances

9 Jun 2023 – Analysis – Financial stability



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The prevailing geopolitical uncertainties have brought an increase in operational risks and in threats to the financial infrastructure, which has heightened the need to be prepared for severe infrastructure disruptions. Against this background, the Finnish authorities put in place a backup system for everyday payments in 2022, the EU drafted legislation intended to bolster the resilience of financial services, and the European Systemic Risk Board (ESRB) assessed cyber risks facing the financial system.



Russia's war in Ukraine and Finland's NATO membership process have contributed to an

increase in the threats to Finland's critical financial infrastructure. In addition, financial sector digitalisation and the more widespread use of third-party services are adding to the risks affecting the technical systems of financial sector entities. More determined action must be taken to prepare for contingencies such as cyberattacks. If a severe cyberattack renders a bank unable to perform its functions, the problems will spread to other banks, possibly resulting in a loss of depositor and investor confidence in the banking sector.

In Finland, banks and other individual actors have long taken measures to improve their preparedness for various contingencies. The Bank of Finland, too, has made preparations for dealing with disruptions in the financial infrastructure and is able to support the financial sector's preparedness work, for instance within the framework of the National Emergency Supply Organisation and through participation in TIBER-FI^[1] testing.

In 2022, the authorities put in place a backup system for safeguarding daily payments in situations where normal European payment systems or systems of specific banks would be unavailable due to a severe disruption or emergency in society.^[2] If a Finnish bank or a significant branch of a foreign bank operating in Finland were to suffer a severe and prolonged disruption, the national emergency account system maintained by the Financial Stability Authority could, as necessary, be deployed to provide account and card services to the customers of that bank. The Bank of Finland, in turn, is responsible for safeguarding domestic interbank payments.

Finland has a collaborative system of preparedness in which the safeguarding of society's vital functions involves action from the authorities, the private and third sectors, and the general public. In September 2022, the first Government report^[3] on security of supply was submitted to Parliament. The report notes that the Finnish financial markets' level of preparedness does not at present fully meet the principles of the Security Strategy for Society or the preparedness aims set by the Government, because the regulations concerning the contingency planning obligation of financial corporations are general in nature. This will be addressed in the future development work mentioned in the report.

The EU has also adopted regulations that will in future have a bearing on the work undertaken in Finland to ensure security of supply and preparedness. Major new directives include the Critical Entities Resilience Directive (CER Directive) and the Network and Information Security 2 Directive (NIS2 Cybersecurity Directive), which both entered into force on 16 January 2023.

The purpose of the CER Directive is to improve the resilience of services vital to the EU, while the NIS2 Cybersecurity Directive aims to strengthen the level of both the EU's and member states' national cybersecurity in respect of sectors and actors identified as critical. The two directives are currently being transposed into Finnish law. The Digital Operational Resilience Act (DORA) is an EU Regulation that will enter into force in January 2025 and is designed to enhance the ICT risk management and system testing of financial market participants and raise supervisors' awareness of the cyber risks faced by

1. See: <https://www.suomenpankki.fi/en/money-and-payments/tiber-fi-implementation-guideline/>

2. Act on Certain Backup and Emergency Arrangements in the Financial Sector (666/2022).

3. See: <http://urn.fi/URN:ISBN:978-952-383-803-1>.

supervised entities.

Preparedness for cyber threats and other operational risks requires that central banks devote continuous efforts to stress testing and training, among other things. The ESRB recommends that the authorities develop approaches to evaluating the impact of cyber incidents on financial stability under various scenarios and assess which measures are the most effective in responding to the incidents.^[4] Building preparedness for threats helps to support financial stability and the continued functioning of society in both normal and extreme circumstances.

Tags

geopolitics, cyber risks, preparedness, security of supply

4. See: Advancing macroprudential tools for cyber resilience, ESRB, 2023.