REPORT

Stability in the Financial System

20 November 2024

FI Ref. 24-31857

Contents

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Stability assessment

Sweden is experiencing a mild economic downturn, and unemployment is relatively high. However, the lower inflation and the Riksbank's interest rate cuts are contributing to increased optimism about the future, primarily for households. The economy has begun a slow recovery that is expected to continue into next year. How the economy will develop is dependent on households' and companies' expectations about the future as well as global growth. While the US economy has shown resilience, growth has been weaker in the euro zone.

The economy is also sensitive to a potential escalation in ongoing conflicts. There is an elevated risk that a deterioration in the geopolitical situation will impact global trade and energy prices adversely. This also means that the risk of cyber attacks on the financial sector could increase further. This places higher demands on digital operational resilience, and work is ongoing in the financial sector to strengthen this. Finansinspektionen (FI) also coordinates measures in the civil contingency sector for financial services to prepare for a heightened state of alert.

In this environment, investors' risk-taking has increased during the year. The risk appetite has benefited from the central banks cutting their policy rates and also communicating their intentions to make further cuts. As a result, the stock market has risen during the year, while credit risk premiums have declined.

In the real economy, households and non-financial corporations are continuing to be cautious and restrictive in their consumption and investments. Household savings is high from a historical perspective, and household debt is decreasing in relation to disposable income. Non-financial corporations' bank loans are decreasing, while commercial real estate firms' total debt is relatively stable. Lower interest rates mean that the pressure on commercial real estate firms is starting to lessen somewhat, but the firms that are more vulnerable should continue to work to strengthen their financial position.

The banks have experienced a period of historically high profitability, but their net interest income has plateaued. The uncertain state of the economy continues to contribute to higher credit risk for Swedish banks, which have low credit losses, though, compared to their European counterparts. Swedish banks also have good liquidity coverage and are assessed to be able to manage stressed scenarios. The vulnerabilities for both the insurance sector and the fund sector are largely unchanged. The fund managers who are affected by the procurement of the new fund marketplace need to prepare for the coming transfers of premium pension capital to avoid the occurrence of any potential problem.

Taken together, the financial stability outlook has improved somewhat since the last stability report. The economy is weak, but interest rates are decreasing and the low credit growth is helping to reduce the build-up of cyclical systemic risks. FI makes the assessment that the low growth rate in lending is primarily driven by lower demand from borrowers rather than a limited supply of credit from the banking sector. FI therefore intends to leave the countercyclical buffer rate unchanged in Q4 2024.

Increase in risk-taking in the financial markets

Expectations of additional interest rate cuts and an economic recovery are impacting the development on the financial markets. Investors' risk appetite has increased, and market volatility is rather low.

The stock market rose clearly during the year, and the OMX 30 index is close to its historical peak in nominal terms. The number of initial public offerings also increased compared to last year, which indicates a more positive atmosphere. Some segments on the market, for example the technology sector in the USA, are highly valued in relation to expected future profit growth. This could make them particularly sensitive to unexpected and unfavourable events. Because the sector also has a large market share on the stock exchange, a negative development could have an impact on broader equity indices.

Credit risk premiums have decreased gradually and are currently at their lowest level since mid-2022. Firms have been able to issue bonds in SEK to a greater extent than before, which broadens their financing options. In contrast, however, the conditions for foreign currency have not yet improved sufficiently for commercial real estate firms to issue bonds in other currencies to a greater extent. This could indicate that foreign investors are currently being cautious about increasing their holdings of bonds of Swedish commercial real estate firms.

Risk-taking on the financial markets is increasing despite elevated uncertainty related to both the weak economy and the serious security situation, which means that the financial markets could be sensitive to adverse developments. The sudden increase in volatility at the beginning of August is an example of this. If global risk premiums are suddenly revalued, this could lead to strong price corrections on the financial markets, particularly for risky assets.

Dampened debt development

The low credit growth in the economy is helping to reduce the build-up of cyclical systemic risks and also signalling that the financial conditions in the economy remain tight.

Households are continuing to be cautious due to the dampened economic growth and are choosing to save more. The interest rate for new mortgages has begun to turn downward, but households' interest expenses in relation to disposable income are still high. Growth in lending to households is increasing slowly but is still low due to the higher interest rates and the weak economy. Household debt in relation to disposable income is decreasing, however, which in the long term makes households less vulnerable to unforeseen events. With lower interest rate expenses and greater optimism about the future, it is likely that household consumption will pick up again well into next year.

The annual growth rate in lending to non-financial corporations is negative and continuing to decrease. This break in the trend comes after a long period of steady increases in lending to non-financial corporations. Commercial real estate firms' total debt has remained relatively unchanged since mid-2022. Debt in relation to operating profit is still decreasing moderately, while the loan-to-value ratio has turned downward following a stabilisation in real estate values. Given the uncertain state of the economy, vulnerable commercial real estate firms should continue to focus on strengthening their balance sheets and reducing their debt.

Improved market liquidity but maturity imbalances a vulnerability

Liquidity on the government bond and covered bond markets has started to improve from low levels. FI's liquidity indicators indicate that liquidity on the bond markets has improved compared to last year, particularly for government bonds. The driving factors are primarily lower transaction costs, lower volatility, more securities that are traded regularly, and larger transaction volumes compared to the past year. The proportion of market actors that consider liquidity in both government bonds and covered bonds to be good right now has increased this year compared to last year. A similar trend is also evident for corporate bonds with an investment grade rating, according to the Riksbank's financial markets survey.[1]

Despite this, the bond markets are vulnerable to disruptions in the event of increased stress. Market makers'[2] risk mandate and incentives to hold large bond trading books have decreased in recent years.[3] This can be expected to impact market liquidity in stressed periods. There is a similar uncertainty about liquidity in stressed situations on the equity and foreign exchange market since trading in recent years has become more automated and fragmented. When market uncertainty spiked and the stock markets fell at the beginning of August, trading on the international stock exchanges was still able for the most part to continue in an orderly manner. The markets recovered quickly, with limited contagion effects. However, this event could be an example of underlying vulnerabilities on financial

[1] For more information: Financial Markets Survey, Sveriges Riksbank, Autumn 2024.
[2] Market makers undertake to provide bid and ask prices on the secondary market.
[3] To read more: "Obligationsmarknaderna – en kartläggning", Kommittén för finansiell stabilitet: FI 2013:09 (Committee for Financial Stability), Swedish Government Official Reports.

markets that could be revealed following sudden changes in circumstances. If the markets’ functionality is suddenly impaired, this could lead to large price fluctuations, thereby potentially limiting financing options. In the long term, this could also pose risks to financial stability.

On the fund market, it is important for fund managers, particularly in less liquid assets such as corporate bonds, to be able to manage liquidity risks and meet the redemption requirements that could arise even in stressed situations. Market actors impacted by the procurement of the new fund marketplace need to be prepared and work actively to plan for the coming transfers of premium pension capital. In this way, they can reduce potential risks that could arise, for example problems handling redemptions or an unjustified large impact on market prices as a result of necessary sales.

Some of the banks’ core operations are to transform financing with short maturities into loans with long maturities, which generates significant maturity imbalances. It is therefore important that banks have good and stable access to financing, which the major Swedish banks have. They also meet the liquidity requirements by a good margin, even in foreign currency. The risk of major banks experiencing problems with their financial overall is currently low. One growing source of deposits in recent years at smaller credit institution is deposit platforms. If a larger share of the banking sector’s deposits would end up on this type of platform, it could lead in the long run to elevated risks to financial stability, since lending via these platforms can be particularly volatile. FI has therefore stated that this should be reflected in how the institution calculate their liquidity requirements.

Higher demands on digital operational resilience due to security situation

The financial system is both concentrated and closely interlinked. The clearest example is the banking sector, which is largely concentrated to the major banks in terms of deposits and lending. Banks’ large exposures to the commercial real estate sector and life insurance and occupational pension undertakings’ significant exposures to the banking sector are other examples of concentrations and interconnectedness. A high degree of interconnectedness in the financial system is to some extent unavoidable and could contribute to efficiency gains, but it simultaneously places high demands on risk management in firms as well as regulation and supervision to limit related systemic risks.

The high degree of interconnectedness and concentration are also key vulnerabilities in the operational function of the financial system. For the past two years, FI has been the authority responsible for the civil preparedness sector Financial Services. This assignment entails, among other things, that FI is leading the work to coordinate measures to ensure that nationally essential activities in the sector can be maintained during heightened states of alert and in the event of war.

The tense state of geopolitical security is increasing the risk of cyber attacks to the financial system. Many actors in the financial sector are also dependent on one another, and an attack against on actor can rapidly impact others, which in a worst-case scenario could lead to extensive disruptions that will result in a major impact on financial stability. FI makes the assessment that there is more to do to build up a sufficient resilience to various types of disruptions. An important step is the EU's Digital Operational Resilience Act (DORA)[4], which goes into effect next year. Companies are now preparing to comply with the new requirements. The regulation is expected to also strengthen FI's supervision work since reported data will make it easier to measure and analyse vulnerabilities among financial corporations.

A few third-party providers are also being used for many critical services since it can be more effective, safer and cheaper for a firm to outsource these services. However, this also means there is a risk that disruptions at critical third-party providers will impact many financial actors simultaneously. Outsourcing therefore places higher demands on the firms' governance and control of how they are managing risks.

Finally, a major development project is under way in the Swedish payment infrastructure. It is important that actors who are affected take responsibility for ensuring the stability of the Swedish payment infrastructure. High resilience and a good ability to manage risks are particularly important aspects when new systems are developed.

[4] Regulation (EU) 2022/2554 of the European Parliament and of the Council of 14 December 2022 on digital operational resilience for the financial sector and amending Regulations (EC) No 1060/2009, (EU) No 648/2012, (EU) No 600/2014, (EU) No 909/2014 and (EU) 2016/1011.

Macrofinancial situation

The influential central banks have now begun to loosen their monetary policies by starting to implement expected interest rate cuts. Global economic growth has slowed, and the serious geopolitical situation is contributing to risks of disturbances. At the same time, the lower uncertainty about inflation and interest rate forecasts has led to an increase in risk-taking on the financial markets. Liquidity on the bond market has improved slightly according to both the market actors and FI's liquidity indicator, but it is unclear how good liquidity actually is under stressed market conditions.

	Level	Development
Risk-taking in financial markets	Yellow	↗
Lack of market liquidity	Orange	↘

The colors indicate the current level of vulnerability. Green represents low vulnerability. Yellow, orange and red indicate differing degrees of elevated vulnerability. The arrows show how FI assesses that the vulnerability develops. An upward-pointing arrow means that the vulnerability is increasing and a downward-pointing arrow that it is shrinking. The assessment of vulnerabilities are based on a combination of quantitative measurements and expert assessments.

Influential central banks have begun to cut interest rates

Inflation in Sweden and larger economies is now in line with, or slightly lower than, the inflation targets (Diagram 1). Global inflation expectations have also decreased, and many forecasters now believe that inflation will stabilise around the inflation targets. The influential central banks have therefore begun to loosen their monetary policies by starting to cut interest rates. But even if interest rates were to be lowered at the rate that households, firms and market participants are now expecting, the pressure from high interest rates will persist for some time going forward. This means that the recovery in the global economy could be prolonged.

In the euro zone, economic growth has been weak for several years, and the outlooks here are predicting a slight improvement in 2025. The USA has had better economic development in recent years, and the outlooks here are expecting more dampened economic activity in 2025 after relatively good development in 2024.[5]

One challenge for the larger economies will be the balance between finding a soft landing for the economic slow-down and the shift in focus from fighting inflation to economic growth. If interest rates remain at high levels too long, this could lead

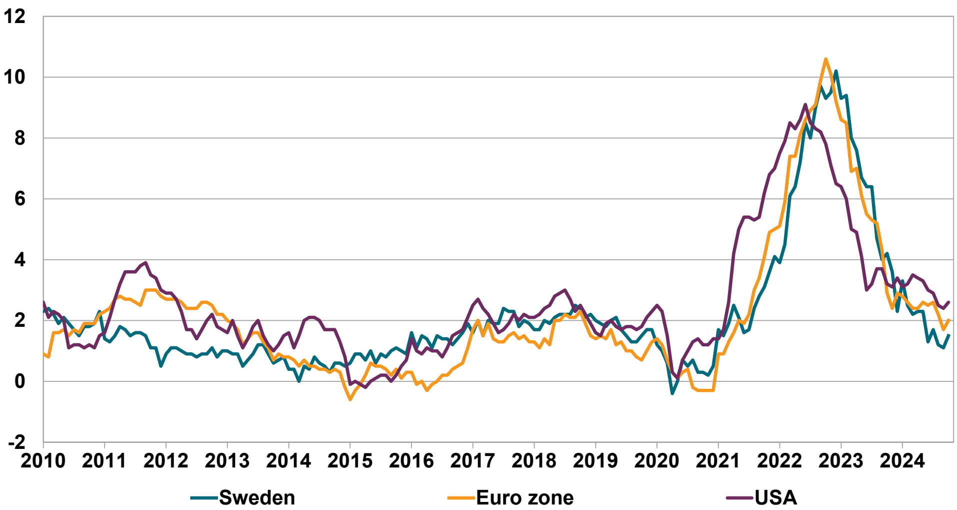
[5] See, for example, "World Economic Outlook", (October 2024), International Monetary Fund (IMF).

to further increases to unemployment and the economic downturn could be deeper and more drawn out. There is also a risk that inflation will rise again and be higher than expected. This in turn could mean that interest rates will not be lowered at the rate expected, which could lead to a new dip in the confidence of firms, households and market participants and a delay in the economic recovery.

The geopolitical tensions have escalated further in the past six months and are very high. The serious security issues are contributing to risks of higher inflation since, for example, they could have a significant impact on commodity prices, energy prices and freight costs. The conflicts could also lead to obstacles in trade policies that could impact both economic growth and inflation. In addition to the ongoing war in Ukraine, there are fears of both a full-scale war in the Middle East and China's increasing local aggression.

1. Lower inflation in both Sweden and larger economies

Per cent



Source: Statistics Sweden and Refinitiv Workspace.
Note: Refers to CPIF (Sweden), HICP (euro zone) and CPI (USA), annual change.

Given the USA's significance for the global economy, the aftermath from the presidential election in the USA in the autumn could contribute to greater security and economic uncertainty. This uncertainty could spill over into the global financial markets and lead to increased turbulence. At the same time, there is still uncertainty in the real estate sector in China. Lower demand for oil in China also indicates that economic development there is generally weaker, which has also contributed to lower oil prices on the global market.

Overall, the economic outlooks appear to have improved as the central banks have gradually lowered their policy rates. But there is also considerable uncertainty remaining. This refers to how quickly the economic downturn could turn but primarily uncertainties are linked to both armed and financial conflicts.

Economic downturn in Swedish economy

Sweden's GDP is increasing slightly in 2024 and, according to current forecasts, is expected to grow at a moderate rate next year.[6] The current economic recession in the Swedish economy is expected to last until 2026. High interest rate expenses and higher prices on goods and services have decreased households' buying power, and weak consumption is restraining demand in the economy. Household consumption is expected to recover as real incomes start to increase at the same time as interest rate expenses are decreasing. On the other hand, if unemployment were to increase sharply as a result of the current weak economy, this would be an additional burden for households.

Households under pressure, high interest rates and construction costs, and cautious development in housing prices have contributed to a significant decrease in construction investments, which also has slowed economic growth. The rate of construction of housing in particular is expected to continue to be low for both units that are sold to households and those managed as rentals.

The export sector so far has been able to resist the downturn relatively well, but there are now signals that demand is decreasing as the global economy slows. The sector is compensated to some extent by increased competition since the Swedish krona currently is weak against larger currencies. At the same time, a weak and volatile currency can have a negative impact on firms' opportunities to manage currency risk and makes foreign financing more expensive.

The public finances in Sweden are still very strong. Lower inflation increases the capacity for more expansive fiscal policy. Public consumption is also expected to increase faster than normal both this year and in 2025. This contributes to the recovery of the domestic economy.

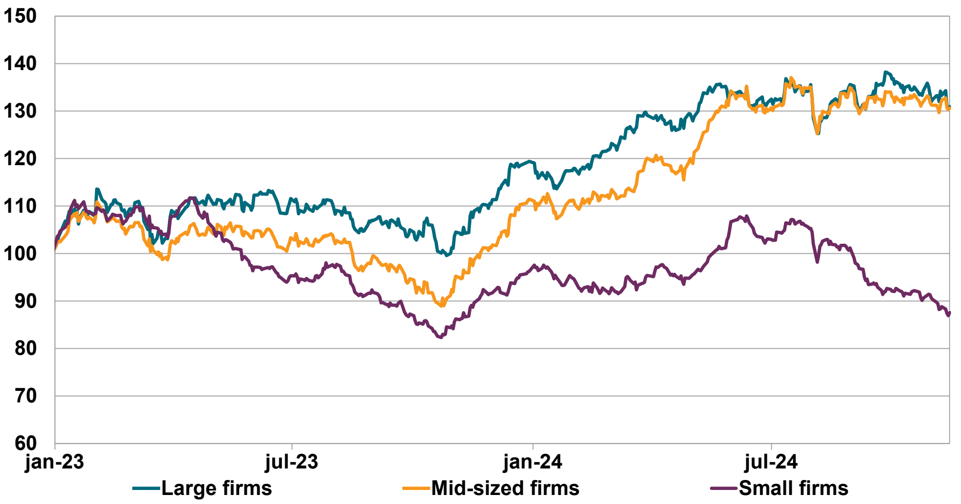
Lower interest rates contribute to higher risk-taking

Lower interest rates have made riskier asset classes such as shares and loans more attractive, and prices have increased. Over the past year, interest rates on both short- and long-term maturities have fallen at the same time as credit risk premiums for covered bonds and corporate bonds have decreased. This development has contributed to lower financing costs for firms and an increased inflow into, for example, equity funds from the public (see the section "Still some liquidity risks on the Swedish fund market"). The total turnover of shares on the

[6] According to NIER (September 2024), GDP in Sweden is expected to increase by 0.7 per cent in 2024 and 1.8 per cent in 2025.

Stockholm stock exchange, Nasdaq Stockholm, was largely unchanged during the first nine months of the year compared to the same period the previous year. Activity on the exchanges (large-, mid- and small cap) shows a slight decrease in turnover in companies on the large cap list and a corresponding increase primarily for mid-size companies. However, share price development has been better for the larger companies than the smaller companies. One reason for this is that the risk premiums for small companies have increased while they have decreased somewhat for larger companies.[7] This development was noted in the spring's stability report as well, and the trend appears to be persistent and strengthening. Furthermore, there has been an increased inflow in passively managed index funds, which benefits the large companies that are part of these indices.

2. Price trend for firms on the Stockholm stock exchange
Index 2022-12-30: 100



Source: Refinitiv Workspace.
Note: OMX Stockholm Large Cap Index; OMX Stockholm Mid Cap Index; OMX Stockholm Small Cap Index.

For companies active in the manufacturing industry, share valuations measured as forward-looking P/E ratios[8], have increased moderately since the end of last year. This also applies for most other sectors with an exception of the automobile, metal and mining industries.[9] Even the number of FI-approved prospects for initial public offerings has increased slightly during the year but continues to be at relatively low levels.

[7] Source: PWC "Riskpremien på den svenska aktiemarknaden", 2024.
[8] P/E: price to earnings: share price in relation to the market's expectations regarding the companies' future profits (in 12 months).
[9] Source: Refinitiv/Datastream Indices 12m Forward Ratios.

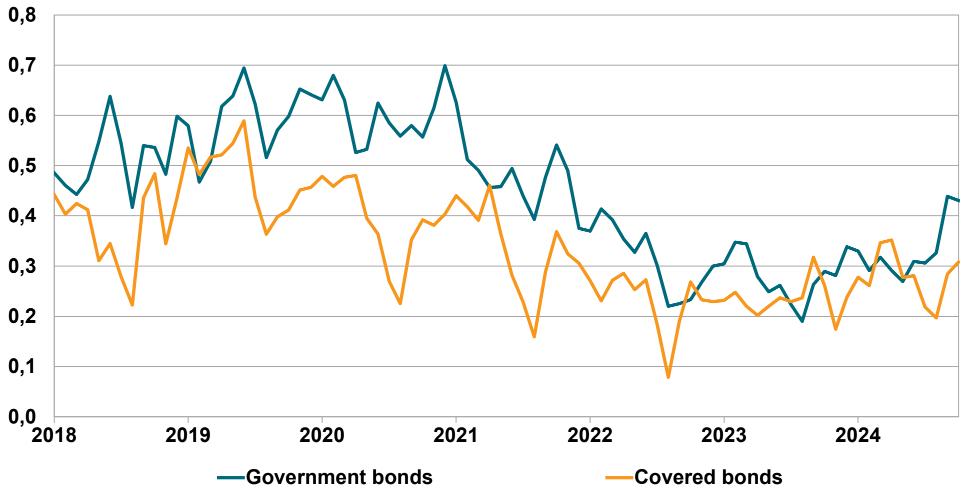
Another indicator of increased risk-taking is an increased interest in starting alternative investment funds, according to the number of applications that FI has received. These funds allow more investment alternatives and in general are riskier than investment funds, where the regulatory framework limits certain types of investment assets.

Liquidity on financial markets has improved from low levels

According to FI's liquidity index, liquidity has improved on the market for government bonds during the year and to some extent also for covered bonds (Diagram 3). The improvement was driven in part by lower volatility and lower transaction costs. However, liquidity is still based on a relatively low turnover in government and covered bonds, even if the turnover has increased slightly compared to the same period last year. One probable contributing cause to the increase in turnover is that the Riksbank has decreased its holding in these bonds, both through sales and letting the bonds mature. Foreign actors' activity on the fixed-income market has been relatively stable during the year (see In-depth review – Foreign actors represent a significant part of the activity on the bond market). The view of the development on the fixed-income market is also confirmed by the market's actors in the Riksbank's financial markets survey.[10]

3. Market liquidity on the bond market

Index



Source: FI's transaction reporting system, Refinitiv, Swedish National Debt Office and Svenska Handelsbanken Bond Indices.

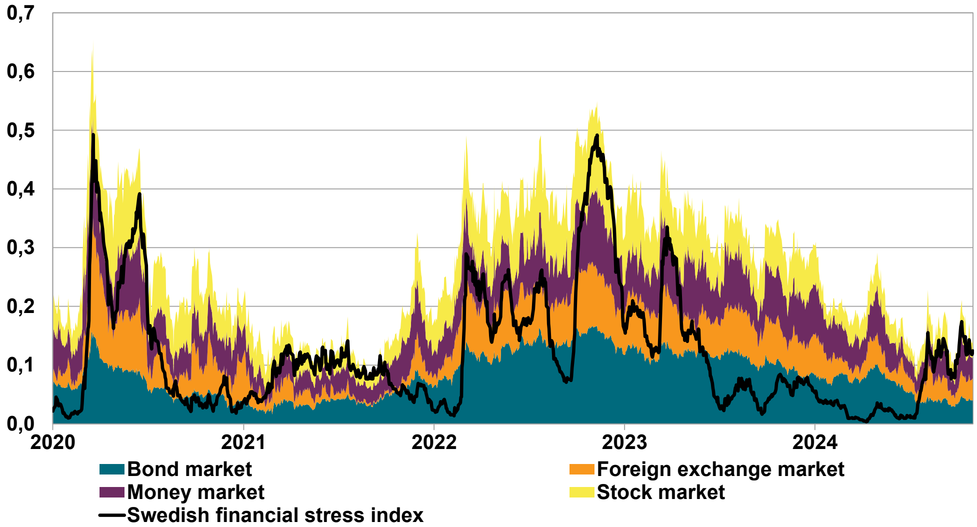
[10] For more information: Financial Markets Survey, Sveriges Riksbank, Autumn 2024.

Note: Higher values signify higher liquidity. The series show a two-month moving average of the index. The liquidity indicator is an aggregate of various individual indicators for covered bonds and nominal government bonds with benchmark status.[11]

Despite the somewhat more positive view on liquidity on the bond market, the financial stress on the financial markets increased according to the Riksbank's stress index (Diagram 4).[12] The increase was initiated by sudden and significant movements on the international equity and foreign exchange markets due to the events on the Japanese financial market on 5 August. Contributing causes were the sharp rise in volatility (VIX)[13], greater spreads between bid and ask prices on US equity options, increased margin calls on derivative positions, and significant settlements of so-called carry trades.[14]

4. Increased financial stress from low levels

Index



Source: Sveriges Riksbank.

Note: Swedish stress index. Ranking: 0= low stress, 1= high stress.

The trigger for the market stress in August is believed to be a combination of different events that occurred at approximately the same time. The primary explanation from market analysts is an unexpected interest rate increase by the Bank of Japan, somewhat weaker labour market statistics than expected in the

[11] For a more detailed description of the methodology, see Crosta and Zhang, "Nya likviditetsindikatorer för räntemarknaden", FI Analysis 21, FI Ref. 20-15313. An English translation is available at www.fi.se.

[12] The Riksbank's stress index is based on the development of a number of indicators on each submarket, for example volatility (equity and foreign exchange markets) and the difference in interest rates (bond market and money market).

[13] VIX (CBOE Volatility Index) is a measure of the stock market's expectations for volatility based on S&P 500 option prices.

[14] Carry trade is a transaction where an investor borrows in one currency with low interest rates, for example the Japanese yen, and reinvests the money in assets with higher return.

USA, and increasing geopolitical tensions in the Middle East. The market was able to manage the situation relatively well, and the episode proved to be short-lived. Ten days after the event the stock markets had recovered most of the downturns.

Hidden illiquidity on the financial market – a source of vulnerability

According to some market analysts, the strong increase in volatility in August cannot only be explained by fundamental factors. They also point to more technical factors, such as a series of unusually large trading orders for options in VIX before the market opened in the USA – at a time when liquidity often is low. This is said to be a contributor to the rapid rise in volatility. The conclusion that some forecasters draw from the event is that liquidity during periods of elevated market stress can be more fragile than previously thought.[15]

Liquidity on the Swedish stock market is hard to assess for several reasons. It is normally good at opening and, primarily, closing, since the US market has opened by that point, but in between liquidity is thin. That trading to a greater extent is concentrated to closing is partly explained by a largerlarge share of passively managed equity funds.[16] In addition, the trading of shares occurs in Swedish companies alongside Nasdaq Stockholm via a number of different trading venues and trading systems.[17]

Since the introduction of the EU Securities Market Directive and Regulation (MiFID II and MiFIR) in 2018, trade also occurs largely bilaterally between market participants. For example, it is carried out through banks' and securities companies' trading in their own accounts through systematic internalisers or in systems without order transparency offered by trading venues (so-called dark pools).

Even the average transaction size has decreased due to increased fragmentation and more sophisticated trade technologies, for example automated algorithms. To ensure the best order execution, order volumes are split into smaller parts and sent to the trading venues that offer the best conditions for closing. One effect of this is poorer insight into and transparency on the market. There has also been a discussion internationally over the past few years about the extent to which market liquidity is actually available in stressed situations.

[15] See, for example, "Pre-market trades blamed for record Vix surge", Kilburn and Bartholomew, August 2024, Risk.net.
[16] These funds often have as their objective that the return reflects the return in a specific equity index. Since index valuation is based on closing prices for underlying shares, the passive fund also strives to rebalance its portfolio to closing prices.
[17] Such as Cboe Europe Equities, Aquis and Turquoise.

The volatility in August is yet another example of unforeseen events triggering relatively strong liquidity-driven price fluctuations. This in turn can lead to liquidity, which is available on the markets under normal conditions, suddenly disappearing during periods of market stress – just when investors need it most. As trading has become more fragmented, it has become more difficult to gain an overview of liquidity. Order books have been thinned out, which makes it more difficult to forecast the actual price and liquidity. This could make the markets more sensitive to large changes in market prices and economic conditions.

For the fixed-income markets, even the market makers' incentives and financial capacity to take market risk, and thereby hold large trading books of bonds, has decreased in recent years. This is explained in part by a worsening of the market conditions for market makers' trading operations in bonds, new regulations – primarily for capital and liquidity requirements – and fees charged, such as resolution fees and bank taxes.[18] It has become more expensive for market makers to finance holdings of bonds. This in turn has negatively impacted the possibility to earn money on trading and led to a decrease in risk-taking. This can be expected to decrease the market makers' possibilities for absorbing flows from investors and offering sufficient liquidity in stressed periods.

Market stress and increased volatility also lead often to higher margin calls for actors holding derivative positions. To produce liquid funds and meet these requirements, actors may be forced to sell assets, not infrequently on a declining and highly volatile market, which could generate procyclical effects and augment volatility. This in turn could lead to increased uncertainty, lower risk appetite, and impaired market liquidity.[19]

Similar fears about liquidity – or the absence of liquidity – in the presence of market stress are also voiced by Swedish market participants. This type of hidden illiquidity is a possible source of vulnerability that can lead to problems for participants' financing and risk management. There is therefore cause to follow the development in the area since the hidden illiquidity can entail a risk for less functional financial markets and by extension risks for financial stability.

In-depth review – Foreign actors represent a significant portion of the activity on the bond market

The Swedish bond market plays a key role in how the financial system functions. States, municipalities, regions, banks and firms issue bonds to finance their

[18] To read more: "Obligationsmarknaderna – en kartläggning", Kommittén för finansiell stabilitet: FI 2013:09 (Committee for Financial Stability), Swedish Government Official Reports.
[19] See, for example, "Putting Out the NBFire: Lessons from the UK's Liability-Driven Investment (LDI) Crisis", WP/23/210, IMF.

operations, and the markets also offer investors a way to invest capital. Foreign investors[20] constitute a significant share of the trading on these markets. It is therefore interesting to follow their role and activity on the Swedish bond market.

Foreign investors contribute to more liquid markets and broaden the investor base. Their presence thus improves access to market financing for Swedish issuers. However, the presence of foreign investors can also contribute to greater volatility if many of these investors choose to leave the market simultaneously during periods of high uncertainty and financial stress. In order to understand possible risks to the stability of the Swedish bond markets, it is therefore interesting to analyse foreign investors' market behaviour.

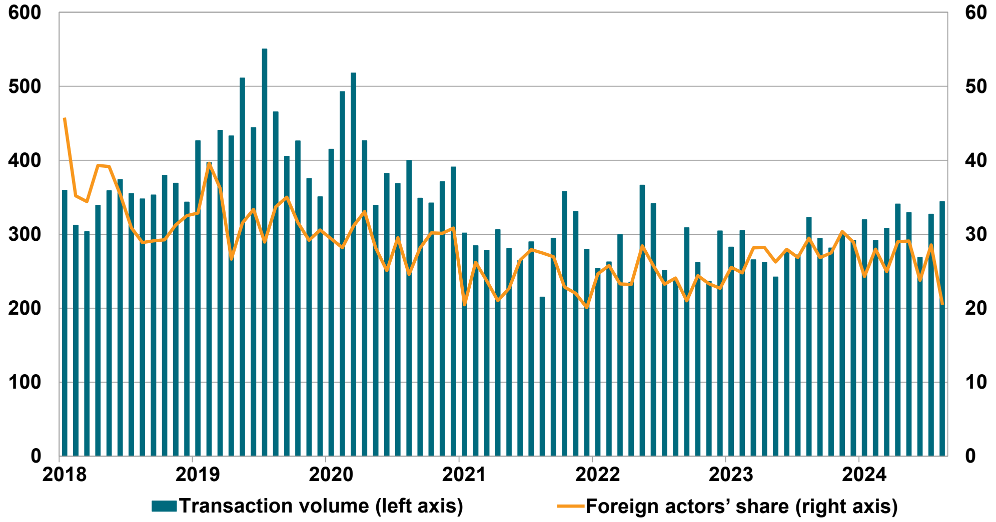
Their behaviour in stressed market situations can differ depending on the source of the stress and how strong and drawn-out the period is. In addition, their behaviour is impacted by the type of participant the investor is, the issue currency of the bonds that they own, and the interest rate risk of the bonds. It is therefore difficult to draw any far-reaching conclusions about how these investors act as a collective and how this could impact the Swedish bond market's functionality.

Foreign investors represent a significant portion of the total turnover on the Swedish bond markets, but their share has decreased slightly in recent years. In conjunction with the pandemic, total turnover on the Swedish bond market decreased in general from at the most more than SEK 500 billion per month to just over SEK 250 billion per month during the period 2021–2022. The transaction volume has since recovered slightly. During the pre-pandemic years 2018–2020, foreign investors' activity on the market decreased from around 40 per cent to 25–30 per cent of the turnover. Foreign investors' share of trading has since then remained at these low levels, and from 2021 to today it has been rather stable at between 20 and 30 per cent (Diagram F1). The high share shows that foreign investors are still important for the Swedish bond market.

[20] Foreign investors are categorised here as investors domiciled outside of Sweden. Foreign-registered funds and subsidiaries to the major Swedish banks are considered Swedish participants. We are also choosing to classify the subsidiaries and parent companies in Nordea Group and Danske Bank Group as Swedish actors.

F1. Total transaction volume and foreign actors' share of trading

SEK billion (left axis) and % (right axis)



Source: FI.

Note: Transaction volume is seasonally adjusted.

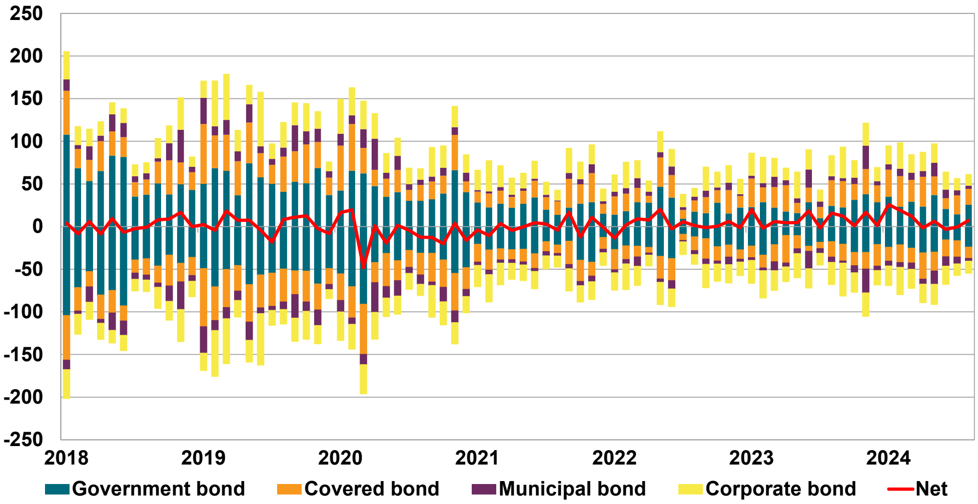
In terms of traded amounts, foreign investors are primarily active on the market for government bonds. During the period 2018–2024, just over 40 per cent of the foreign investors' trading consisted of transactions in government bonds, around 25 per cent in both corporate bonds and covered bonds, respectively, and just under 10 per cent for municipal bonds. During the same period, foreign investors purchased Swedish bonds for a higher value than what they sold for (Diagram F2)[21].

If we instead look at foreign actors' turnover in bonds as a share of total turnover for each type of bond, the share in corporate bonds is particularly high, 54 per cent of trading. However, broken down into currency, there is a large difference between bonds issued in foreign currency, 88 per cent of total trading, and bonds issued in SEK, 13 per cent of total trading. Furthermore, foreign actors represent 30 per cent of trading on the government bond market, 20 per cent of trading in covered bonds, and 34 per cent in municipal bonds.

[21] This is to some extent natural since bonds mature, and if the holder replaces a matured bond by purchasing a new bond, this is registered as a purchase. *Corporate bonds* as a category includes bonds issued by non-financial corporations. *Municipal bonds* include bonds issued by Kommuninvest, municipalities and regions.

F2. Foreign investors' volumes of bond purchases and sales

SEK billion



Source: FI.

Note: A positive value shows the total volume purchased by foreign investors and a negative value shows the total sales volume in nominal terms. Net is the difference between the volume purchased and the volume sold.

At the start of the pandemic, volatility on the financial markets increased and most bond rates rose sharply. The largest change in net purchases of Sweden bonds by foreign investors was in March 2020, when the pandemic broke out; they sold government bonds and covered bonds, net, for approximately SEK 29 billion each and corporate bonds for just over SEK 600 million. This corresponds to approximately 11 per cent, 10 per cent, and 1 per cent, respectively, of the turnover in March 2020 in each bond type. During the same period, foreign investors purchased net just over SEK 10 billion in municipal bonds, which corresponds to more than 23 per cent of the turnover in March 2020.

In conjunction with the increase in interest rates in 2022, foreign investors' net purchases of Swedish bonds increased and were once again positive after having been negative since the start of the pandemic. We observed this trend for government bonds, covered bonds, and municipal bonds, while corporate bonds moved in the opposite direction.

Households

Households are still impacted by high interest rates, and fewer households are taking new loans. They are restrictive in their consumption and are prioritising saving a larger portion of their income. At the same time, households are now clearly more optimistic about the future as a result of expectations of future interest rate cuts and lower inflation. If interest rates are lowered as expected, households' cash flows, which have been under pressure, will be strengthened going forward.

	Level	Development
Debt growth	Green	→
Cash flow	Orange	↘
Financial position	Yellow	→

The colors indicate the current level of vulnerability. Green represents low vulnerability. Yellow, orange and red indicate differing degrees of elevated vulnerability. The arrows show how FI assesses that the vulnerability develops. An upward-pointing arrow means that the vulnerability is increasing and a downward-pointing arrow that it is shrinking. The assessment of vulnerabilities are based on a combination of quantitative measurements and expert assessments.

Households continue to be cautious but are more optimistic

Economic growth remained weak in 2024, and household demand for new loans continues to be low. Debt is increasing marginally in nominal terms but has decreased clearly in relation to GDP and disposable income (Diagram 5).

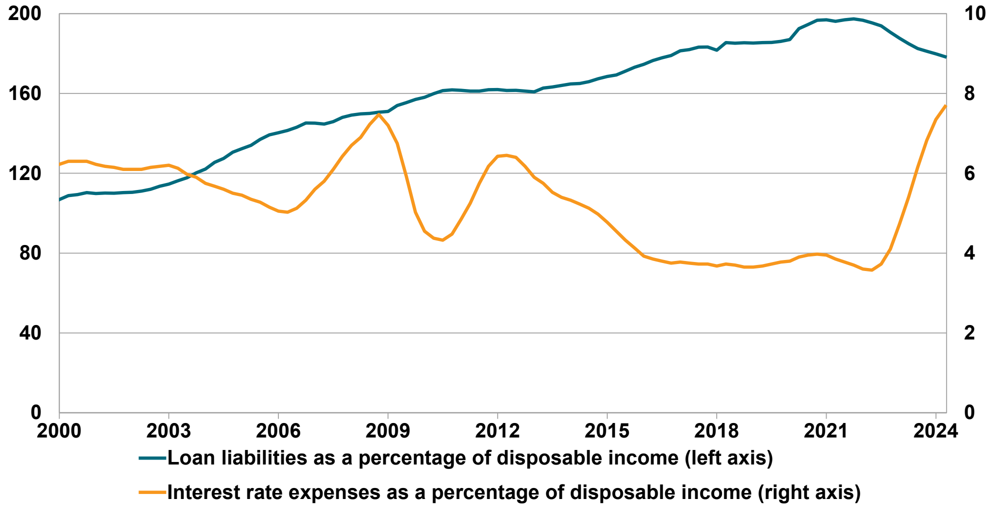
Households' interest rate expenses, measured as a share of disposable income, decreased in the second quarter of this year. It was the first time this ratio declined in two years. Despite this downturn, the ratio is still at a very high level historically, and the reduction is not yet visible when using a moving average across four quarters.

Even though households are still diverting a large share of their income to interest payments, lower inflation and interest rates are signalling that a change is coming. The ratio of household interest expenses to income is expected to improve already at the end of the year if expectations related to interest rate decreases are met. According to the most recent forecast from the National Institute of Economic Research (NIER), unemployment is also expected to peak during the third quarter and then level off and slowly decline next year.

Survey data confirms the view that the financial situation for many households is still tough, but it is also clear that households are expecting their financial situation to improve. Households have become more confident about their finances in the past six months, and they now expect their financial margins to begin to improve significantly going forward.[22]

5. Households are still diverting a large portion of their income to interest payments

Per cent



Source: Statistics Sweden.
Note: Loan liabilities as a percentage of disposal income are current debt divided by the past four quarters' aggregate disposable income. Interest expenses as a percentage of disposable income are interest expenses (pre-tax) divided by disposable income. The ratios are stated as a four-quarter moving average.

Lower interest rates and higher wages improve households' financial margins

Despite a brighter outlook, households continue to be cautious with their finances and consume carefully. They are cautious about purchases of capital goods and have adapted their consumption of necessities to the higher price level.

Higher salaries, lower inflation, and expected unemployment stabilisation, however, entail that households' real disposable income is now increasing. This will contribute to the slow recovery of households' purchasing power, which decreased considerably over the past two years as prices rose sharply.

The most recent development in interest rate cuts, which are expected to continue, combined with lower energy costs has primarily benefited households that own their home. FI previously identified a risk of significant fee increases from tenant-owner associations due to higher interest rates and rising operating costs. The

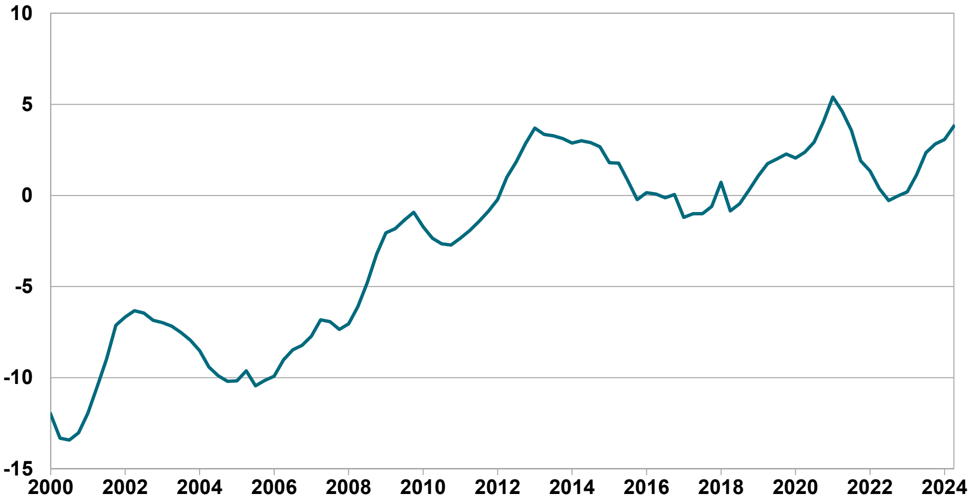
[22] NIER's aggregate barometer indicator for households has been strengthened significantly in the past year and is now in line with the historical normal value.

falling interest rates are now decreasing the pressure on these associations. Their finances continue to represent a vulnerability for households in tenant-owned units since they still have high operating costs.

Households are saving more

Due to their restrictive consumption, Swedish households are saving a larger share of their disposable income, and this share is now at a high level historically (Diagram 6). Survey day from NIER also indicates that households think it is now a good time to save. This high savings rate confirms that households are cautious, but increasing optimism and falling interest rates could induce households to save less during the coming year.

6. Households place a large portion of their income in savings
Per cent

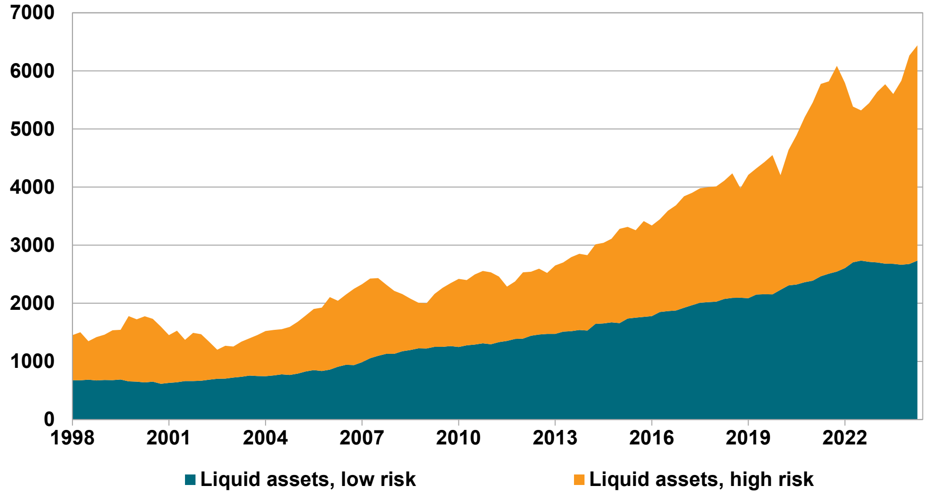


Source: Statistics Sweden.
Note: The diagram shows the share of disposable income that goes to savings, excluding savings in occupational and premium pensions and amortisation payments.

High savings, rising share prices, and good return on interest-bearing assets have resulted in an appreciation in the value of households’ aggregate financial assets in 2024 (Diagram 7). Primarily, risky assets such as shares and funds appreciated in value. However, bank deposits remained the same over the past two years. The fact that households’ bank deposits have not decreased indicates that households have not needed to use their buffers, at least to an extent visible at the aggregate level.

7. Households' liquid assets have increased

SEK billion



Source: NIER and Statistics Sweden.
Note: Bills, coins and deposits are classified as low risk. Swedish listed shares, foreign shares and fund units (excl. fixed-income funds) are classified as high risk.

A stable debt level and high aggregate savings indicate a decrease in vulnerability in households' financial position. At the same time, there is no data on how these assets and debts are distributed between households, which makes it difficult to determine if fewer households are vulnerable today than previously. For example, high income-earners primarily benefit from upswings in the stock exchange since they own a majority of the shares.

Surveys from NIER also indicate that many individual households still are having difficulty balancing their budgets. The share of households that say they need to use savings to cover their costs increased as inflation and interest rates rose, even if there was an improvement in 2024. For households that are renting their home, the share that can save from their income is noticeably lower than prior to the pandemic. Furthermore, the number of payment orders registered with the Enforcement Authority has increased in recent years. Deficient and sometimes conflicting data makes it difficult to draw far-reaching conclusions about whether households as a whole have experienced and improvement in their financial position or if the improvement only applies to certain groups.

In-depth review – New report on borrower-based measures

That households have good access to loans is a key part of a well-functioning economy. But household debt can also entail risks. Financial imbalances could arise, i.e., situations where large and rapidly growing debt among households could amplify fluctuations in the economy – both upturns and downturns. Financial imbalances could also ultimately threaten financial stability.

The indebtedness of Swedish households has been high and rising for a long time, driven by a combination of low interest rates, the design of the tax system, and a strictly regulated rental market. A number of organisations have expressed concern about this development, including the Riksbank, the IMF, the OECD, the ESRB and the European Commission.[23] In Sweden, FI is responsible for taking measures to counteract financial imbalances.[24] To dampen the risks associated with high and rising indebtedness, FI introduced a mortgage cap in 2010 and an amortisation requirement in 2016. The latter was then tightened in 2018.[25] The umbrella term for these types of measures is *borrower-based prudential tools*.

FI introduced a mortgage cap and amortisation requirement in an environment with exceptionally low interest rates and rapidly rising housing prices and debts. The measures were introduced to ensure households' resilience to economic shocks and were based primarily on the macroeconomic risks that could arise if households rapidly decrease their consumption or demand for housing, and thus amplify an economic downturn. In turn, these types of amplification mechanisms could threaten financial stability.

FI has continuously evaluated the effects of the macroprudential measures it has taken.[26] These evaluations show that the measures have slowed the increase in debt, primarily for borrowers with the highest debt. In FI's assessment, this has dampened the risks associated with high indebtedness. At the same time, FI has highlighted the need for data at the household level to better understand if and to what extent household liquidity has deteriorated as a result of these measures. If there has been a deterioration, this could increase how vulnerable households are to shocks. To strengthen household liquidity, the current regulations have an amortisation valve that allows households experiencing financial stress to pause their amortisation payments.

FI has not been able to identify that macroprudential measures have noticeably impaired the relative situation of young adults on the housing market or dampened construction and turnover on the housing market despite the theoretical possibility of such occurring.[27] Overall FI has concluded that the macroprudential measures

[23] The European Commission has made the assessment over several years that Sweden has macroeconomic imbalances as a result of households' high indebtedness and high housing prices. In order to decrease the vulnerabilities, the Commission has recommended, among other things, that Sweden reduce the interest rate deductions on mortgages and raise the property tax.
[24] For a discussion on FI's assignment, see the memorandum "Finanspektionen och finansiell stability", FI Ref. 19- 27340. Available in Swedish.
[25] For a discussion on and evaluation of FI's borrower-based measures, see the report "Låntagarbaserade åtgärder vid hög inflation och stigande räntor", FI Ref. 22-23763. Available in Swedish.
[26] See "Samlad utvärdering av makrotillsynsåtgärder", FI Ref. 21-17295. An English summary is available at www.fi.se.
[27] See Olsén Ingefeldt & Thell (2019), "Unga vuxnas ställning på bostadsmarknaden", FI Analys 19, FI Ref. 19-24604. An English translation is available at www.fi.se.

have dampened the risks associated with household indebtedness without having excessive adverse side-effects.

In the spring of 2023, the Government appointed a committee tasked with conducting an overview of the borrower-based measures. One of its main tasks was to analyse which macroeconomic risks are associated with household indebtedness and analyse how borrower-based macroprudential measures could counteract the macroeconomic risks associated with household indebtedness. The committee reported its findings on 4 November.[28]

The committee concluded that, in Sweden, the risks imposed on financial stability by household indebtedness are limited, and it is not certain that current measures have strengthened household resilience. The committee therefore makes the assessment that the risks to financial stability would not increase in an unacceptable manner if today's measures were relaxed.

Furthermore, the committee makes the assessment that the costs associated with today's borrower-based measures are significant. The mortgage cap limits how large the mortgage may be in relation to the value of the home. This can impact in particular those with little savings or those who do not own their own home. Through the credit assessment, the amortisation requirements limit the size of the loan that a household may take. Amortisation payments also impact the household's cash flow by functioning as a type of involuntary savings. This money cannot be used for other forms of savings or consumption. These limitations lead to welfare costs for households.

Based on these assessments, the committee proposes as a first step to raise the mortgage cap from 85 to 90 per cent and remove the stricter amortisation requirement. At a later stage, a uniform amortisation requirement will be introduced at 1 per cent for mortgagors with an loan-to-value (LTV) ratio above 50 per cent. The committee takes that the position that this will facilitate entry into the owned housing market and lead to an increase in liquid savings at the same time as it preserves a sound amortisation culture. In order to limit future risks, the committee also proposes the implementation of a loan-to-income (LTI) ratio cap of 550 per cent of gross income along with a flexibility ratio.[29]

FI welcomes the committee's work since it is important for the measures to be evaluated to ensure effective regulation. At the same time, the trade-off between benefits and costs of the implemented measures is difficult, as illustrated by the different conclusions drawn by FI and the committee despite similar theoretical frameworks and the same data. FI will now analyse the committee's conclusions and proposals in more detail and evaluate their potential impact. We will also

[28] See "Reglering av hushållens skulder", Report by the Committee on the Overview of Borrower-based Macroprudential Measures (SOU 2024:71). Available in Swedish.
[29] The flexibility ratio entails that a certain portion of the lenders' borrowers may be exempt from the LTI ratio cap.

review other potential changes to reduce households' costs while at the same time protecting household resilience and financial stability.

Non-financial corporations

Non-financial corporations continue to reduce their loans. At the same time, interest rate cuts are expected to contribute to lower financing costs going forward. As the economy improves, it is probable that these companies will begin to increase their loans again. Commercial real estate (CRE) firms, which continue to be exposed, have already begun to borrow more than earlier this year thanks to the lower financing costs. However, lower inflation and more vacant rental premises are expected to limit growth in CRE firms' rental income going forward.

	Level	Development
Debt growth	Green	→
Indebtedness	Yellow	→
Financing	Yellow	↘

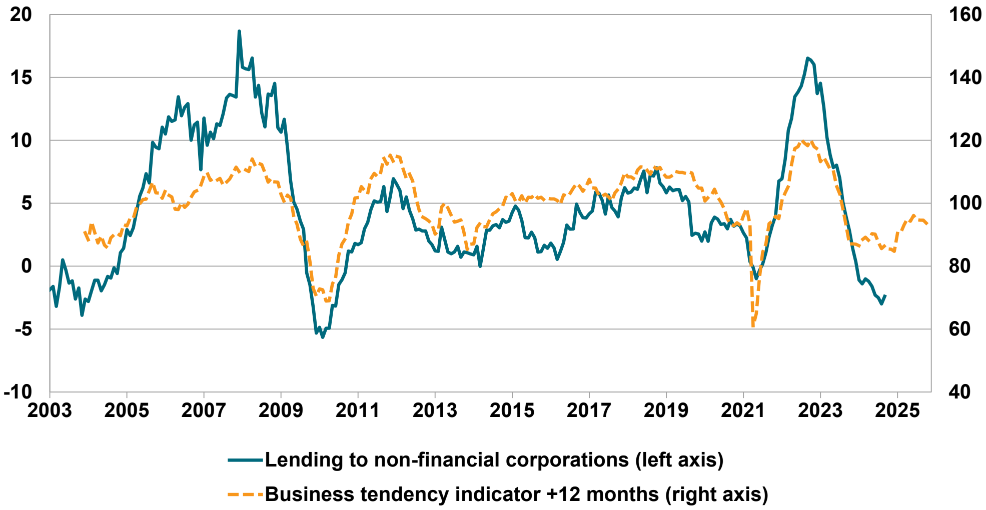
The colors indicate the current level of vulnerability. Green represents low vulnerability. Yellow, orange and red indicate differing degrees of elevated vulnerability. The arrows show how FI assesses that the vulnerability develops. An upward-pointing arrow means that the vulnerability is increasing and a downward-pointing arrow that it is shrinking. The assessment of vulnerabilities are based on a combination of quantitative measurements and expert assessments.

Corporations decrease loans and continue to encounter challenges

As a result of the weak economy, non-financial corporations, particularly in the trade and service sectors, are continuing to decrease their loans from monetary financial institutions. The loans are now decreasing at a rate similar to that after the global financial crisis in 2007–2008. Less borrowing from non-financial corporations means that their vulnerability decreases in the long run. Lending to non-financial corporations, however, could recover if the economy improves as expected going forward (Diagram 8).

8. Firms are reducing their loans

Annual change in per cent (left axis) and index, average = 100 (right axis)



Source: FI, NIER, and Statistics Sweden.

Note: Lending to non-financial corporations includes lending from monetary financial institutions, but not market financing. The barometer indicator, which summarizes survey responses for the confidence indicators for industrial, services, construction, retail and households. It has been shifted forward 12 months since this is when covariation is strongest.

One sign that the economy is moving towards a recovery is visible in part from the increase in production in the private sector. In September, production increased by around 2.4 per cent compared to last year. However, the number of bankruptcies continues to be elevated, particularly in construction, retail and some service industries. Most bankruptcies are still occurring among firms with few or no employees. Furthermore, construction continues to be lower than it was one year ago. Housing construction is normally more sensitive than the construction industry at large, and housing investments have fallen sharply in recent years. Even if the number of apartments that entered production increased slightly during the first half of 2024 compared to 2023, the trend continues to be negative, and the number of apartments started has been decreased by 50 per cent since the first half of 2022.

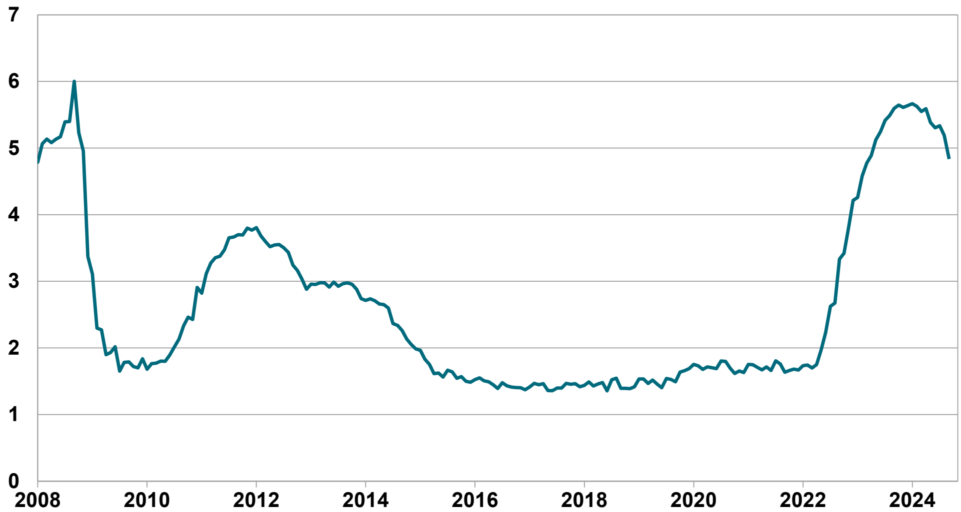
Now that inflation has fallen, there is less room for CRE firms to increase their rents. Rental growth decreased during 2024 from very high levels. Combined with rising vacancies, there is a clear risk of impaired earnings going forward. For example, the degree of vacancy for office premises in Stockholm has reached its highest level since Q1 2007. The degrees of vacancy are particularly high in the suburbs, where demand is weaker than in attractive central areas. In order to meet this challenge, CRE firms may be forced to search for new strategies, for example by attracting rental guests in new segments, offering more flexible rental agreement, or investing in transforming or selling premises.

Continued pressure on firms' financing costs despite interest rate cuts

The interest rate on new bank loans to non-financial corporations is decreasing slowly from high levels (Diagram 9). Market prices are indicating that interest rates will drop further in the future, although probably not back to pre-2022 levels. Because many non-financial corporations have short fixed-interest rate periods, their financial expenses are quickly impacted by changes to interest rates. For firms that have extended their fixed-interest rate period with interest rate derivatives, however, there can be a delay before the lower interest rates are fully realised.

9. Lending rates to non-financial corporations decrease

Per cent



Source: Statistics Sweden.
Note: Refers to the average interest rate on new loans from monetary financial institutions to non-financial corporations.

CRE firms continue to represent approximately 40 per cent of the total debt among Swedish non-financial corporations. Concerns for the CRE sector has dampened as market rates have decreased, and there are expectations that the Riksbank will make additional policy rate cuts. This is reflected, among other places, in the lower credit risk premiums for the sector.

The CRE firms' aggregate debt increased slightly during the second quarter this year, primarily through increased market financing. However, their aggregate debt remains at a relatively stable level. Even if the listed CRE firms' average interest rate expenses continue to increase, they are increasing at a significantly slower rate than previously (Diagram 10). Despite higher interest rate expenses, the average interest coverage ratio[30] stopped declining but remains at a low level. Low interest

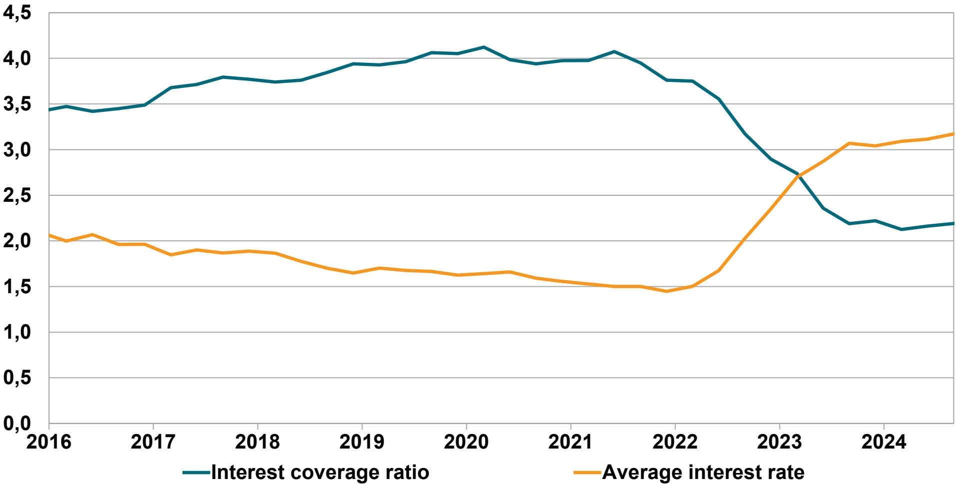
[30] The interest coverage ratio is the ratio between a firm's operating profit and its financial expenses and describes the firm's ability to pay the interest on its loans.

coverage ratios mean that the firms are more vulnerable to shocks (see In-depth review – Many CRE firms are more vulnerable to shocks).

In 2024, the interest coverage ratios of CRE firms have levelled off. This is a result of many firms having managed to curb the increase in their interest rate expenses while simultaneously increasing their operating profit. However, the low level of the interest coverage ratio indicates that multiple firms are under pressure and need to adapt their debt and increase their resilience.

Even though the Riksbank cut its policy rate and is expected to lower it further, the CRE firms' average interest rates will probably continue to increase slowly. This is because the large loans financed while interest rates were low will soon mature and may need to be refinanced at higher interest rate levels. It is thus important for CRE firms, particularly those that are more vulnerable, to continue to work to reduce their indebtedness.

10. Average interest rate and interest coverage ratio level off
Ratio and per cent

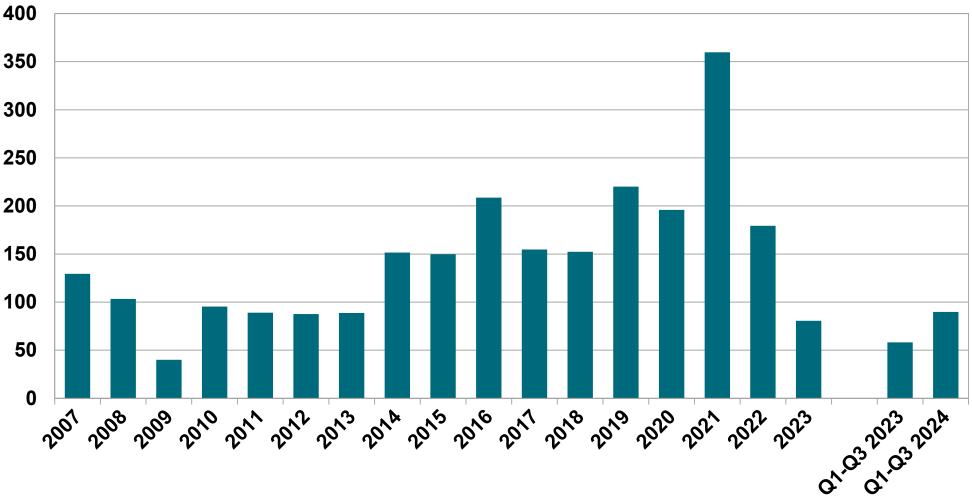


Source: FI and SEDIS.
Note: Average interest rate (per cent) refers to the volume-weighted average of the commercial real estate firms' carrying amounts. The interest coverage ratio refers to the median values of the operating result divided by the net financial income.

Property values have decreased moderately since their peak in 2022 and appear to now have stabilised. The property transaction market has continued to be sluggish during the first three quarters of the year (Diagram 11). This can make property valuations more uncertain since there are fewer comparable transactions that can be used as a basis for assessments. Compared to the same period last year, transaction volumes have increased slightly, primarily in the industry and logistics segments, while interest in community service properties and offices continued to be low.

11. Low property transaction volumes

SEK billion



Source: Pangea, JLL.
Note: Property transaction volume on the Swedish market by Swedish and foreign investors.

In-depth review – Many CRE firms are more vulnerable to shocks

Since 2019, FI has compiled detailed annual data from banks with large lending to CRE firms.[31] This data is an important part of FI's ongoing analysis of risks and vulnerabilities linked to the CRE market and the banks' asset quality.

The most recent data collection refers to the loan portfolio as per 31 December 2023. The banks' lending to Swedish CRE firms was just over SEK 1,100 billion. These loans were issued to more than 30,000 unique counterparties or more than 16,000 unique corporate groups. The majority, almost 97 per cent, of all CRE firms with bank loans in Sweden are small and mid-size firms. These firms represent approximately 45 per cent of the bank loans.[32]

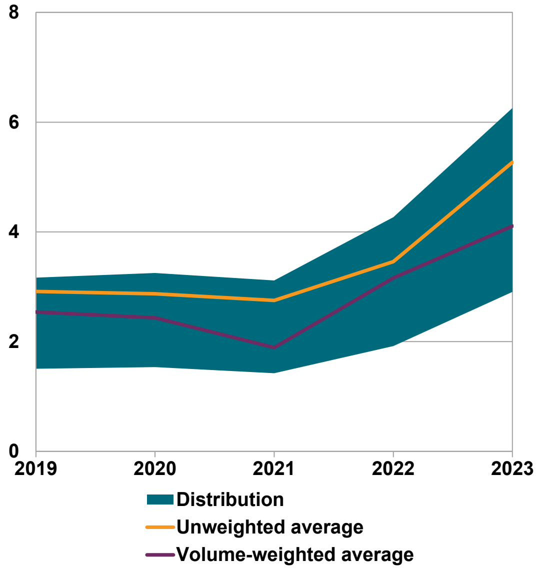
CRE firms' interest rates continued to increase in 2023 (Diagram F3). At the same time, the spread between firms increased with a significantly larger share having clearly higher interest rates than in previous years. Smaller firms mainly have higher interest rates, which is evident because the volume-weighted interest rate is lower than the average.[33] Higher interest rates have resulted in a decrease in CRE

[31] Danske Bank, Handelsbanken, Länsförsäkringar Bank, Nordea, SBAB, SEB and Swedbank.
[32] For more on the classification of CRE firms by size, see also Aranki and Cronbäck (2024) "Stora risker i små och medelstora fastighetsföretag", FI Analysis 45, FI Ref. 24-9432. An English translation is available at www.fi.se.
[33] An unweighted average gives the same weight to all firms regardless of volume, while a weighted average gives higher weight to firms with larger volume. If the weighted interest rate is lower than the unweighted interest rate, firms with large volumes would have lower interest rates, and vice versa.

firms' interest coverage ratios (Diagram F4). The spread between the firms' interest coverage ratio has also shrunk. Many firms, particularly smaller ones, now have an interest coverage ratio of almost 1.5.

F3. Interest rate of CRE firms

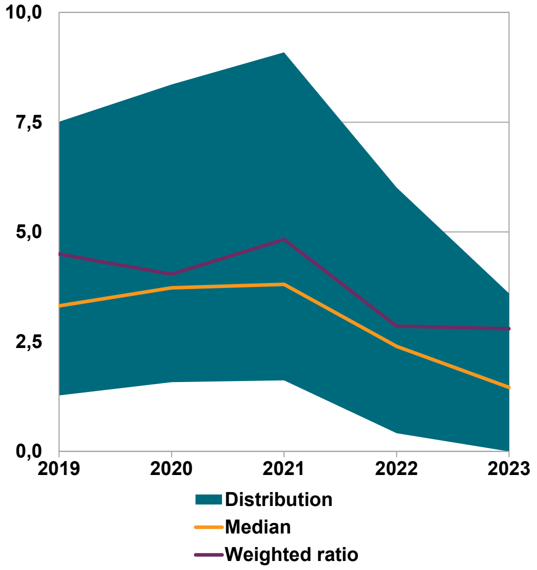
Per cent



Source: FI.
Note: Distribution refers to the quartile distance, which is the distance between the 75th and the 25th percentiles. *Unweighted average* refers to the average interest rate, and *volume-weighted average* refers to the average volume-weighted interest rate.

F4. Interest coverage ratio of CRE firms

Ratio



Source: FI.
Note: CRE firms' interest coverage ratio is calculated by dividing net operating income by the interest rate expenses. See previous notes for information about distribution. *Median* refers to the median value, and *weighted ratio* refers to the volume-weighted (aggregate) interest coverage ratio for all CRE firms.

Almost 5 per cent of the CRE firms that had a bank loan in 2023 had an interest coverage ratio of less than 1 and a loan-to-value ratio above 70 per cent.[34] This is a larger share than in the previous year when almost 4 per cent had similar key ratios.

FI applies a stress test to analyse how vulnerable CRE firms are to shocks, how these vulnerabilities develop over time, and how the banks' in turn can be impacted by vulnerable firms.[35] In a stressed scenario where CRE firms are assigned both higher financing costs and lower earnings, around 30 per cent of the firms become

[34] These are benchmarks used by FI to identify vulnerable CRE firms.
[35] FI's micro-based stress test method is described in more detail in Aranki, Lönnbark and Thell (2020) "Stresstest av bankernas utlåning till fastighetsföretag,", FI Analysis 24, FI Ref: 20-24428. An English translation is available at www.fi.se.

vulnerable (Diagram F5).[36] These firms represent one-third of the banks' lending to the sector.

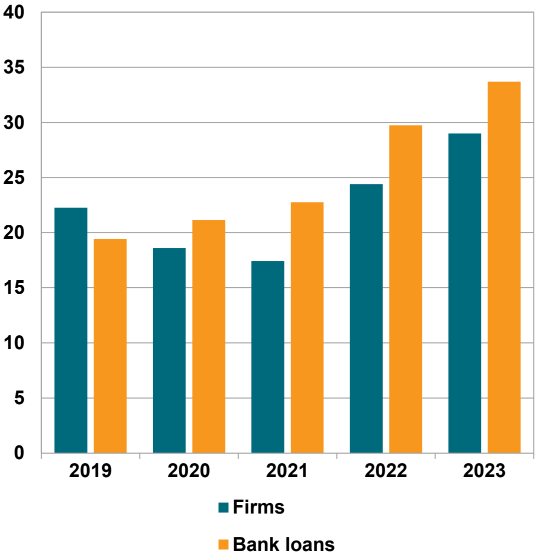
This is a clear increase compared to the corresponding calculations in previous years, primarily because the firms have a weaker financial starting point. The firms' low interest coverage ratios entail that the firms are now more sensitive to lower revenue than they were before. The high interest rates have increased the need for highly indebted firms to adapt their debt. Several CRE firms, particularly the larger firms, have decreased their debt, but the effect on the LTV ratios has been limited. This could be because the firms used property sales and did not successfully release enough capital due to their high leverage and falling property values.[37] The firms need to continue to work in various ways to adapt their debt to strengthen their financial position and reduce vulnerability.

The banks have the capacity to bear the losses that arise in the analysis (Diagram F6). The banks make ongoing provisions for expected credit losses[38] and also set aside capital for their lending to cover unexpected credit losses. The amount of capital is determined, for example, by the risk weights the banks calculate themselves. FI has also raised the capital requirements on banks' exposures to CRE firms. This additional capital requirement contributes to the banks holding enough capital to cover losses that could arise according to the stress test.

[36] The stress refers to a scenario where the CRE firms' interest rates increase by 3.5 percentage points, GDP decreases by 5 per cent, and CRE property prices fall sharply by more than 30 per cent.
[37] For more information, see Aranki and Cronbäck (2023) "Fastighetsföretagen kan behöva minska sin skuldsättning", FI Analysis No. 41, FI Ref. 23-29851. An English translation is available at www.fi.se.
[38] Bank provisions amounted to 0.3 per cent of lending to CRE firms in Q4 2023.

F5. Vulnerable CRE firms and their bank loans

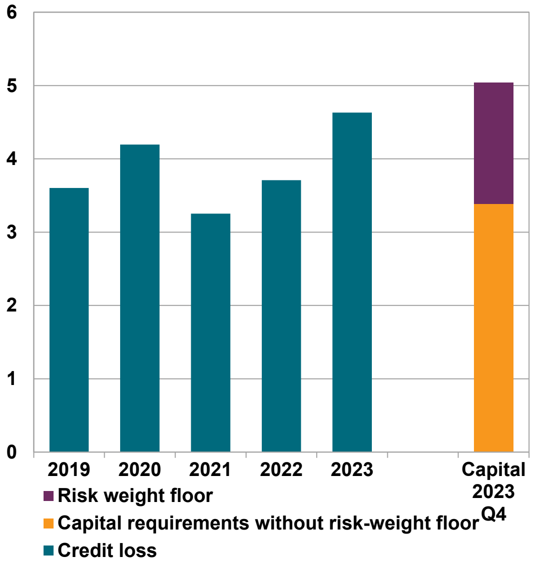
Per cent



Source: FI.
Note: The diagram shows the share of CRE firms and bank loans that are identified as vulnerable when stressed under FI's definition.

F6. Credit losses in FI's stress test and the banks' capital requirements

Percentage of lending to CRE firms

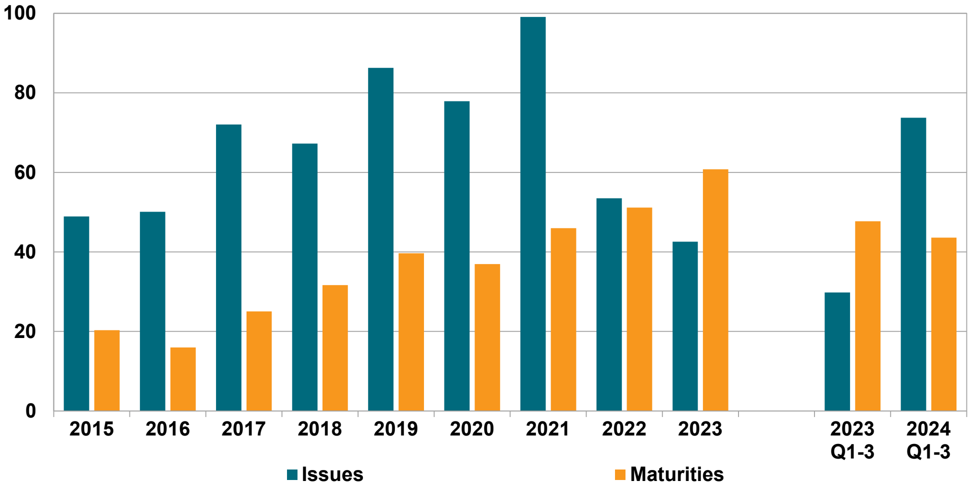


Source: FI.
Note: The estimates are based on data from Q4 2023. *Credit loss* refers to estimated credit losses during periods of stress. *Capital requirements without risk-weight floor* refers to the Pillar 1 requirement and capital buffers calculated from the risk weights the banks calculate themselves for loans for commercial real estate. *Risk weight floor* refers to the risk weight floor's contribution to the total capital requirement for loans for commercial real estate.

Easier for CRE firms to borrow on the bond market

The CRE firms' conditions on the bond market improved during the year. One year ago, the bond rates for firms with a credit rating of BBB began to decline after having previously been at historically high levels. At the beginning of the year, interest rates and credit risk premiums for CRE firms with lower credit ratings also began to decrease. This has contributed to increased activity on the primary market. During the first three quarters of the year, CRE firms issued bonds at a value of approximately SEK 74 billion (Diagram 12) compared to the same period in 2023 when issuance amounted to approximately SEK 30 billion. The improved market sentiment encouraged CRE firms, for the first time since 2021, to issue more bonds than what was maturing during the first three quarters of the year.

12. Issue volumes increased considerably in 2024
SEK billion



Source: Statistics Sweden.
Note: Issues refers to new issues and tap issues of bonds in SEK (excluding money market instruments).

It is beneficial that CRE firms now have better access to both bank loans and market financing. This reduces the refinancing risk for the firms and leads to greater possibilities for diversification of the firms' loans and credit risk. However, the refinancing risk continues to be large for some firms. This applies in particular to firms that had their credit rating downgraded to below investment grade, which means less advantageous interest rate terms and fewer potential investors.

Many CRE firms have focused on reducing their loans, particularly loans with high interest rates. Some firms have chosen to repurchase outstanding bonds, which has been beneficial for their financing costs (see In-depth review – Interest expenses increased less for CRE firms that repurchased bonds).

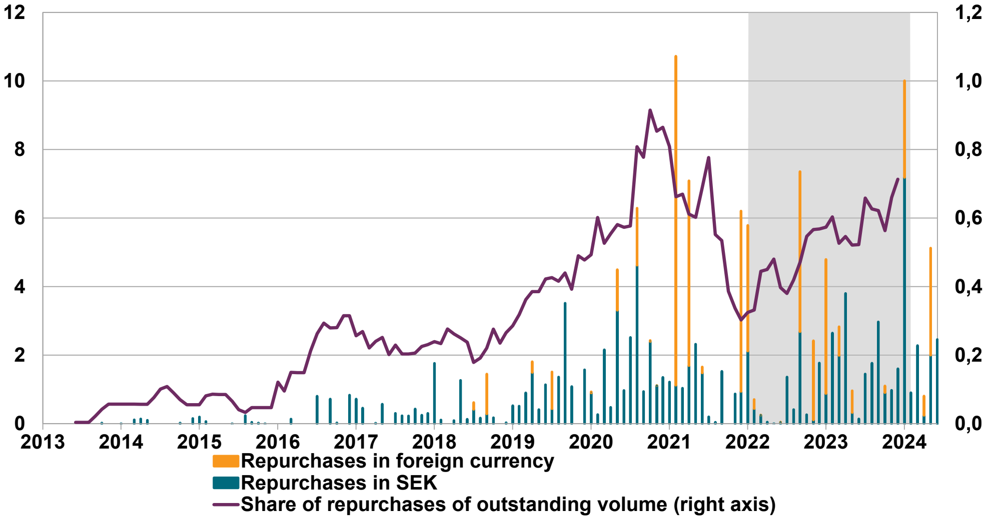
In-depth review – Interest expenses increased less for CRE firms that repurchased bonds

After the global financial crisis in 2008, CRE firms in Sweden increasingly began to raise financing via the capital market. The share increased from 16 to 32 per cent between the years 2013 and 2024. Because CRE firms carry large volumes of debt, financing costs typically constitute a considerable share of their total costs. When interest rates rise, repurchasing bonds can be one way for the firms to optimise their capital structure to reduce financing costs.

As market rates rose sharply in 2022, the spread in credit risk premiums also widened. Overall, the firms' financing costs increased and several listed companies had or risked having their credit ratings lowered due to adverse developments in both their interest coverage ratio and their loan-to-value ratio. This increased the pressure on these firms to take measures to improve their financial position and manage their refinancing risks. Several chose to buy back their bonds (Diagram F7).

F7. CRE firms' bond repurchases

Repurchases in SEK billion (left axis) and percentage share (right axis)

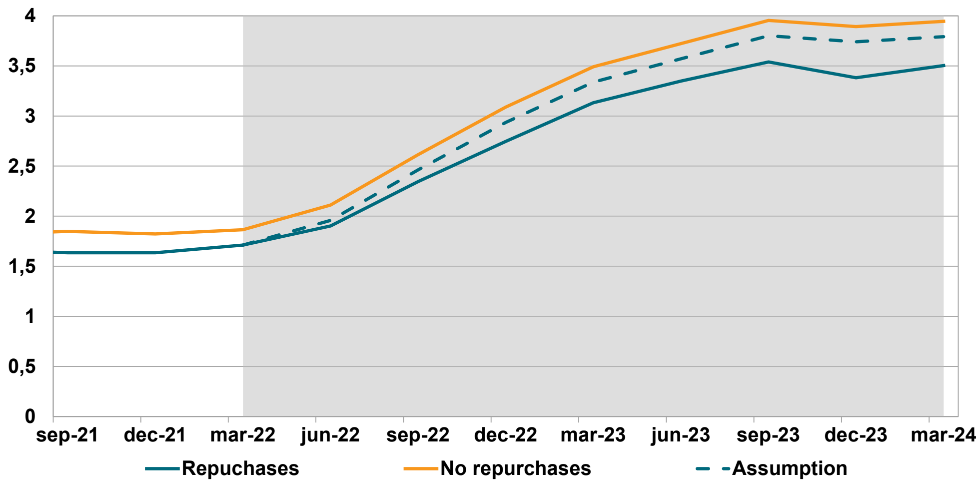


Source: Statistics Sweden and FI.
Note: The share of repurchases of total outstanding volume is a rolling average (twelve months) and has been shifted forward six months. The grey area refers to the period Q2 2022–Q1 2024.

In this in-depth review, we estimate the effect of bond repurchases on the firms' average interest expenses during the period from when the Riksbank raised the policy rate until the policy rate began to go down again: Q2 2022 and Q1 2024. We divide the firms into two groups, those that repurchased bonds during the period and those that did not, and compare how interest expenses developed in both groups. Because this development has been similar in both groups before the comparison period, differences during the period can be due to the firms' bond repurchases.

For firms that did not repurchase bonds during the period in question, interest expenses increased from on average 1.92 per cent during the years prior to the comparison period to 3.35 per cent during the comparison period (an increase of 1.43 percentage points). For the firms that repurchased bonds during the same period, the interest rate increased from on average 1.85 per cent to 2.99 per cent (an increase of 1.13 percentage points) (Diagram F8). The difference in how interest rates developed between the groups indicates that the bond repurchases could have contributed to dampening the increase to the average interest rate for the firms that repurchased bonds.

F8. Effect of repurchases on firms' average interest rates
Per cent



Source: SEDIS, Statistics Sweden and FI.
Note: Refers to the firms' average rates broken down by firms with repurchases in the period Q2 2022–Q1 2024 and firms with no repurchases during the same period. *Assumption* is the extrapolated development for the group Repurchases in the event their interest rate had developed in the same manner as for the group No repurchases. The grey area reflects the repurchase period, Q2 2022–Q1 2024.

We also estimated two models[39] where we consider other factors that could have impacted the firms' interest expenses and debt. The results indicate that the average interest expense for the firms that repurchased bonds increased by an average of around 35 basis points less than the group of firms that did not. At the same time, the results from the second model estimation show that the repurchases dampened the total interest-bearing debt by approximately 2 per cent.

[39] We estimate two panel data regressions with fixed firm effects where other explanatory variables include debt and property values.

Stability in the banking sector

The Swedish banks are still very profitable, but profitability is expected to decrease slightly due to policy rate cuts, which has an impact on net interest income. Significant credit risks have previously been associated with the banks' lending portfolios, in part related to CRE firms. The banks therefore need to continue to hold significant capital and liquidity buffers that can be drawn upon if economic conditions deteriorate.

	Level	Development
Concentration and interconnectivity	Yellow	→
Solvency and profitability	Green	↗
Asset quality and credit risk	Yellow	→
Financing and liquidity	Green	→

The colors indicate the current level of vulnerability. Green represents low vulnerability. Yellow, orange and red indicate differing degrees of elevated vulnerability. The arrows show how FI assesses that the vulnerability develops. An upward-pointing arrow means that the vulnerability is increasing and a downward-pointing arrow that it is shrinking. The assessment of vulnerabilities are based on a combination of quantitative measurements and expert assessments.

Banking sector concentrated and interconnected

The Swedish banking sector is largely concentrated to five major banks: the three major Swedish banks Svenska Handelsbanken (SHB), SEB and Swedbank, and Nordea's and Danske Bank's Swedish branches and mortgage companies.[40] These major banks are closely interconnected, both to one another and to other parts of the finance sector. This creates structural vulnerabilities in the financial system, and FI therefore places particularly high capital and liquidity requirements on the systemically important Swedish banks. In recent years, competition on the banking market has increased, and the major banks have been losing market shares on some submarkets, for example mortgages. The concentration in the banking sector has therefore decreased slightly over time. Despite this, the major banks still play a central role in the Swedish financial system, and if any of the major banks experience problems, these problems could spread quickly to other financial actors.

Large buffers and good profitability contribute to resilience

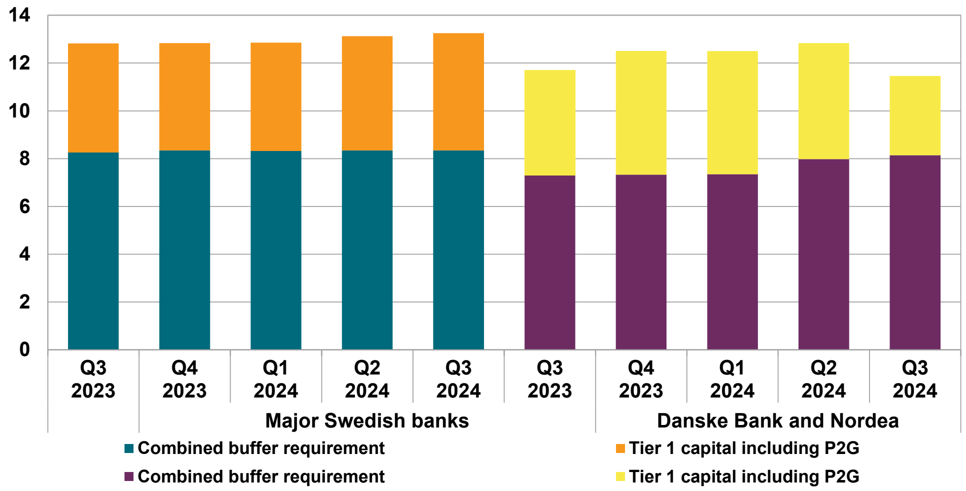
The major banks have substantial capital buffers, which equip them well for any future difficulties (Diagram 13). The major banks have been well above FI's

[40] For these five major banks, the figures refer to the consolidated situation unless otherwise specified. Together they represent around 75 per cent of deposits and lending to Swedish households and corporates and just under 70 per cent of domestic payments.

requirements and guidances for a long period of time. The buffer requirements include the countercyclical capital buffer, which aims to enable the banks to continue to lend even under poorer conditions. This buffer is currently at 2 per cent, and FI does not intend to change it during the fourth quarter (see In-depth review).

13. The major banks continue to have large capital buffers

Percentage of risk-weighted assets

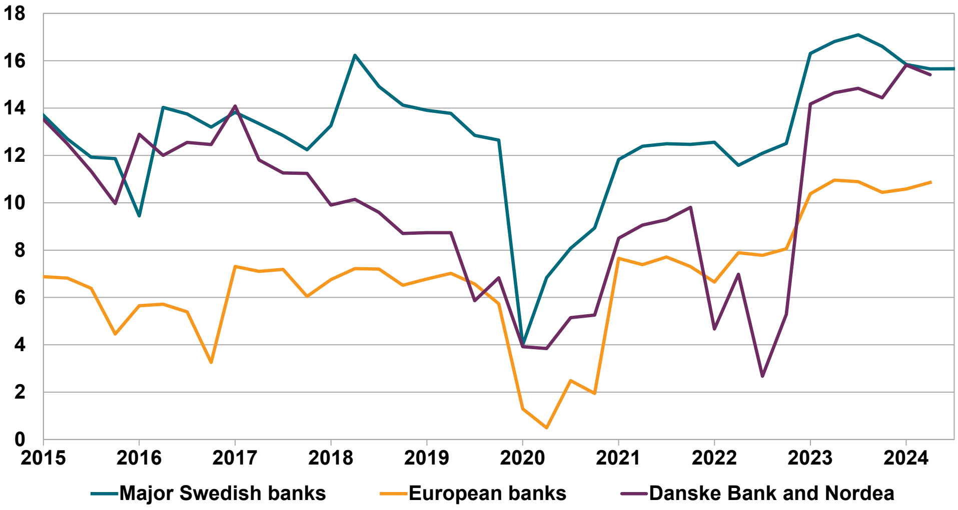


Source: FI and the banks' public reports.
Note: Capital requirements as a share of risk-weighted assets. Refers to buffers at the consolidated level. The CET1 headroom includes the so-called Pillar 2 guidance, which for the major Swedish banks is 0.5 per cent. Unweighted average.

Swedish banks have had higher profitability than their Nordic and European equivalents for a long time. It now appears that their Nordic competitors have more or less caught up, but their profitability is still high compared to European banks (Diagram 14).

14. Profitability drops but is still at high level

Return on equity, per cent



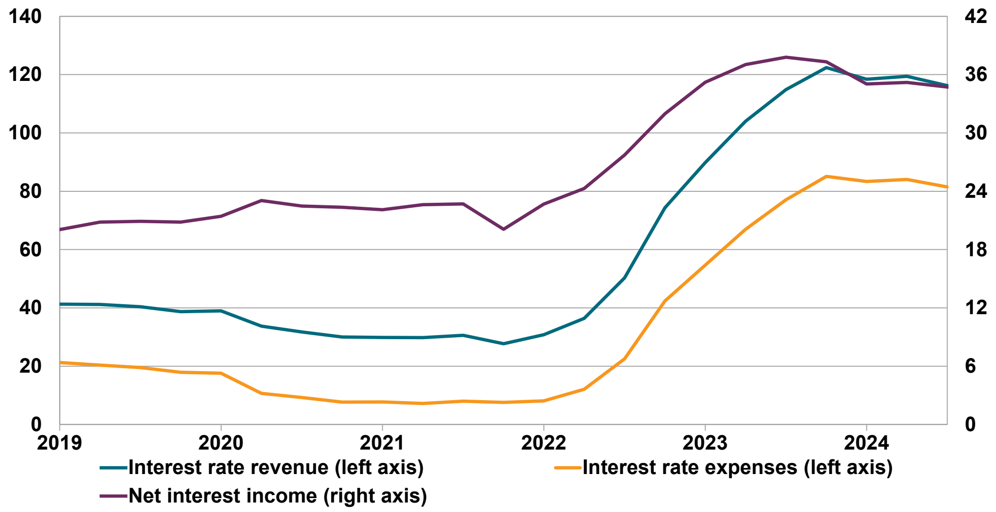
Source: FI and the EBA.

Note: Return on equity is calculated using the European Banking Authority's (EBA) method, the net income is extrapolated at an annual rate, and equity is calculated as an average of the current quarter and the fourth quarter the previous year. The ratios refer to weighted averages that have been weighted against equity. *European banks* refers to approximately 160 large European banks.

The high profitability in recent years can be explained in large part by the banks' interest income from lending greatly exceeding the interest expenses from primarily deposits. However, this increase in net interest income has plateaued (Diagram 15). Several of the banks have compensated for this through an improvement in net commission income and net financial income, at least in recent quarters.

The banks' net interest income will probably continue to come down in the future compared to the high levels that were previously reported. The development in property prices, credit demand, interest rates and the geopolitical situation will be key for banks' profitability going forward.

15. The major Swedish banks' net interest income is levelling off
SEK billion



Source: FI.
Note: Refers to major Swedish banks.

Slightly better asset quality in an uncertain economy

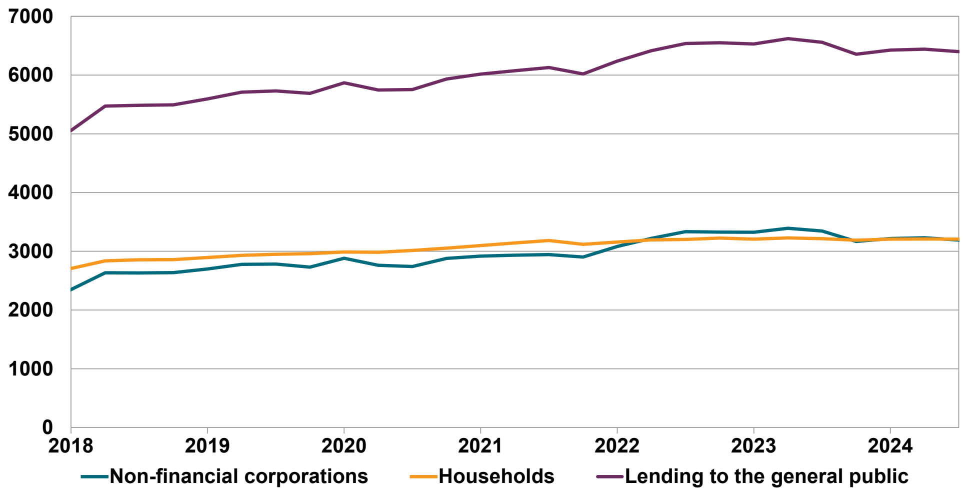
Despite decreasing inflation and cuts to the interest rate, the macroeconomic situation continues to present difficulties for Swedish households and some corporate sectors. During the third quarter, the major banks' lending to the general public decreased by 2.4 per cent on an annual basis. Corporate lending decreased by as much as 4.5 per cent.[41] The volumes for mortgages and consumer credit also decreased slightly in 2024. This is a trend reversal compared to the end of 2023, which was characterized by positive consumer credit growth on an annual basis despite a high level of interest rates (Diagram 16).

FI's discussions with the banks confirm that there continues to be low demand for credit from both households and corporates. However, unlike in 2022 and 2023, the banks have noted somewhat higher demand for loans to CRE firms, which is the corporate sector to which the banks have the highest exposure. The banks make the assessment that this development derives from expectations of lower interest rate levels.

[41] Refers to the major Swedish banks at the group level and Danske Bank's and Nordea's Swedish branches.

16. Lending from major banks is slowing

SEK billion



Source: FI.

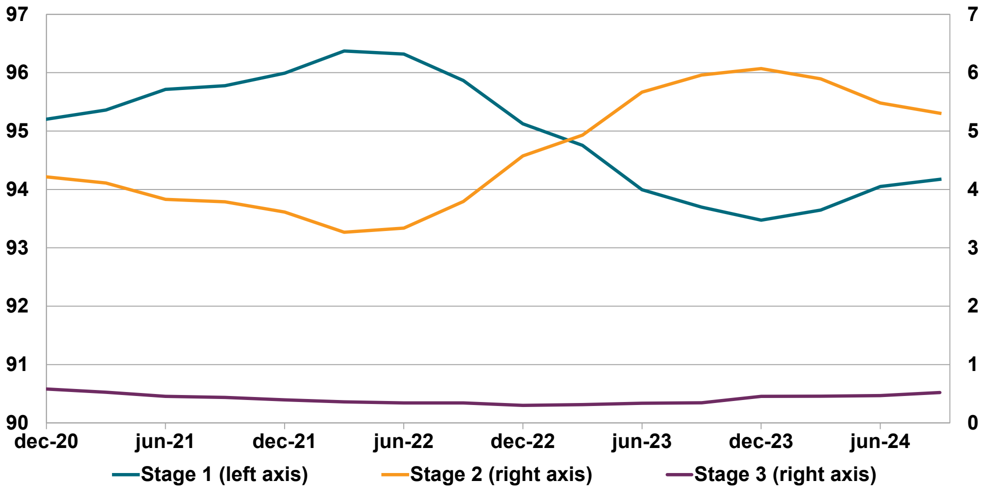
Note: Refers to the major Swedish banks and Nordea's and Danske Bank's Swedish branches.

Asset quality in the banks' lending portfolios has improved slightly since Q3 2023. The share of loans with no significant increase in the credit risk has increased, and the share of loans with a significant increase in the credit risk since the loan was issued has decreased (Diagram 17).[42] The latter amounted to 5.3 per cent, compared to 9.4 per cent in the EU/EEA. At the same time, the share of non-performing loans has increased and amounts to 0.5 per cent of the banks' lending portfolio, which is an increase from 0.3 per cent in Q2 2023. This share continues to be low from a European perspective, where the average is 1.9 per cent. Even if the volume of non-performing loans is low in Sweden, it has increased, in contrast to the total loan volume, which has decreased.

[42] Loans with a significant increase in credit risk are placed in IFRS 9, Stage 2.

17. Slightly improved asset quality

Per cent



Source: FI.

Note: Refers to the major Swedish banks and Nordea's and Danske Bank's Swedish branches. The breakdown in stages is based on IFRS 9, where Stage 1 entails no significant increase in credit risk. Stage 2 shows the percentage of loans where there has been a significant increase in credit risk since the loan was first issued. Stage 3 entails loans in distress. Stages 2 and 3 are shown on the right axis.

The major banks' credit losses in relation to total lending have decreased since the summer of 2023. This is part of a larger decline that has been ongoing since credit losses peaked during the pandemic. But the total reserve ratio[43] for expected credit losses has remained relatively unchanged. The share of reserves in relation to lending in Sweden is relatively low in a European context, which in part can be attributable to the large share of credit with collateral in Sweden. This is because the CRE sector accounts for 54 per cent of the major Swedish banks' loans to non-financial corporations at group level.

Even if the asset quality at the major banks has improved slightly and credit losses have decreased, there is still significant geopolitical and macroeconomic uncertainty that can have an adverse impact on the economy. A large number of bankruptcies and rising unemployment in a weak economy could – despite interest rate cuts – contribute to deterioration in the banks' asset quality. FI therefore will continue to view this as an elevated vulnerability.

[43] Provisions are amounts set aside in the banks' balance sheets to absorb losses in the future.

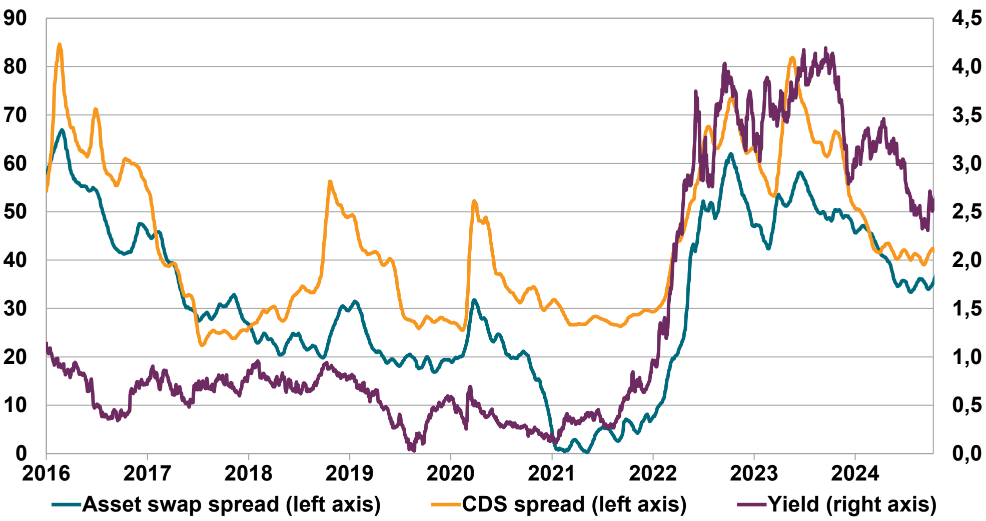
Banks' financing situation is stable and their liquidity margins are substantial

Swedish banks' financing consists of market funding, in the form of covered and uncovered bonds, and deposits from the public. Another growing source of deposits in recent years, primarily at smaller credit institutions, is deposit platforms. In the long run, deposit platforms could lead to increased risks to financial stability if a large share of the banking sector's deposits were to end up in this type of platform.[44] FI has therefore specified in a legal position that deposits via deposit platforms should be accounted for when institutions calculate their liquidity requirements. Going forward, the legal position should encourage institutions to be better at accounting for the flightiness of deposits originating from deposit platforms.

One thing that could impact uncertainty on the market and thus the banks' financing costs and potentially their access to borrowing is an escalation in geopolitical conflicts. However, the banks currently have good and stable access to funding via the capital markets, and credit premiums have decreased slightly in recent years (Diagram 18). FI will continue to monitor the market development and conduct a continuous risk assessment of the market situation.

18. Credit risk premiums have decreased recently

Basis points (left axis) and per cent (right axis)



Source: Refinitiv.

Note: Asset swap spread: credit spread for Swedish covered bonds with an estimated fixed duration of a five-year effective maturity; refers to one-month rolling average for the three major Swedish banks and Nordea. CDS spread: credit spread for senior unsecured bonds;

[44] For more information, see the report "Ökad inlåning via inlåningsplattformar", FI Ref. 24-26638, and FI's legal position "Inlåning genom digitala inlåningsplattformar", September 2024, FI. English versions are available at www.fi.se.

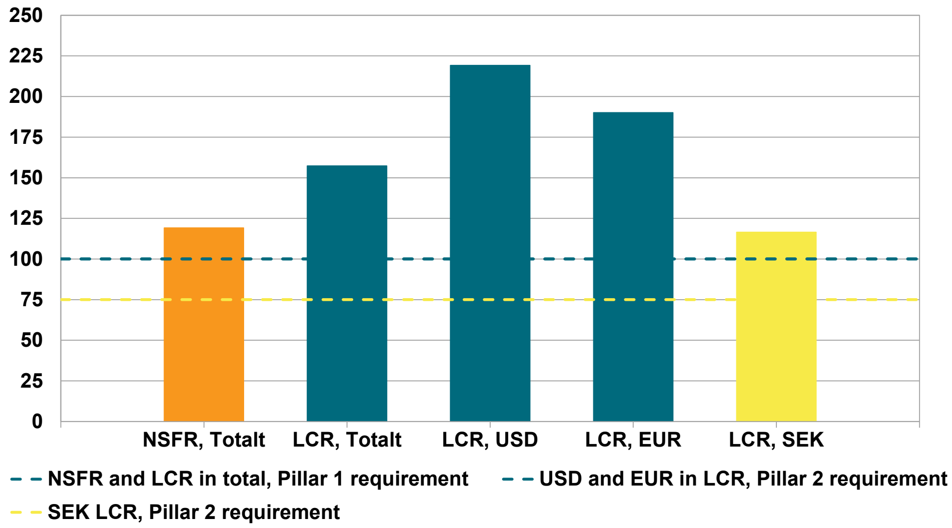
refers to one-month rolling average for the five major Swedish banks. Yield: interpolated market yield for Swedish covered bonds with estimated fixed duration of five-year effective maturity. Refers to the average for the three major Swedish banks and Nordea.

In order to reduce liquidity and refinancing risks, FI imposes requirements on the banks to ensure they hold sufficient liquidity buffers and that their financing is sufficiently stable. Thus, the banks can manage both short- and long-term liquidity stress.

The major Swedish banks still have considerable liquidity and meet the margin requirements on the liquidity coverage ratio (LCR) for total currency and individual currencies as well as the requirement on the net stable funding ratio (NSFR) (Diagram 19).[45] In recent years the banks have also strengthened their liquidity reserves and therefore have sizeable liquidity margins that can be used in an impaired scenario (see In-depth review – Resilience in the banks' liquidity reserves). FI makes the assessment that the resilience of the major Swedish banks to liquidity disruptions in general is satisfactory.

19. Major Swedish banks meet liquidity requirements by large margin

Per cent



Source: FI.

Note: Only major Swedish banks. Unweighted average. Data for September 2024.

[45] LCR – ratio between high-quality assets held by the bank and the total outflow during a 30-day stress test scenario. NSFR – ratio between available stable financing and the need for stable financing during a one-year period.

In-depth review – Resilience in the banks' liquidity reserves

In order to withstand funding shocks, it is important for banks to have sufficient liquidity reserves of good quality. In this in-depth review, we look more closely at how the value of the Swedish banks' liquidity reserves change in different stressed scenarios. This in-depth review is based on a report[46] that aims to provide a clearer overview of how resilience in the banks' liquidity reserves could change if the market is stressed. This stress is linked to one or several factors, such as rising interest rates and impaired market values on assets in the liquidity reserve.

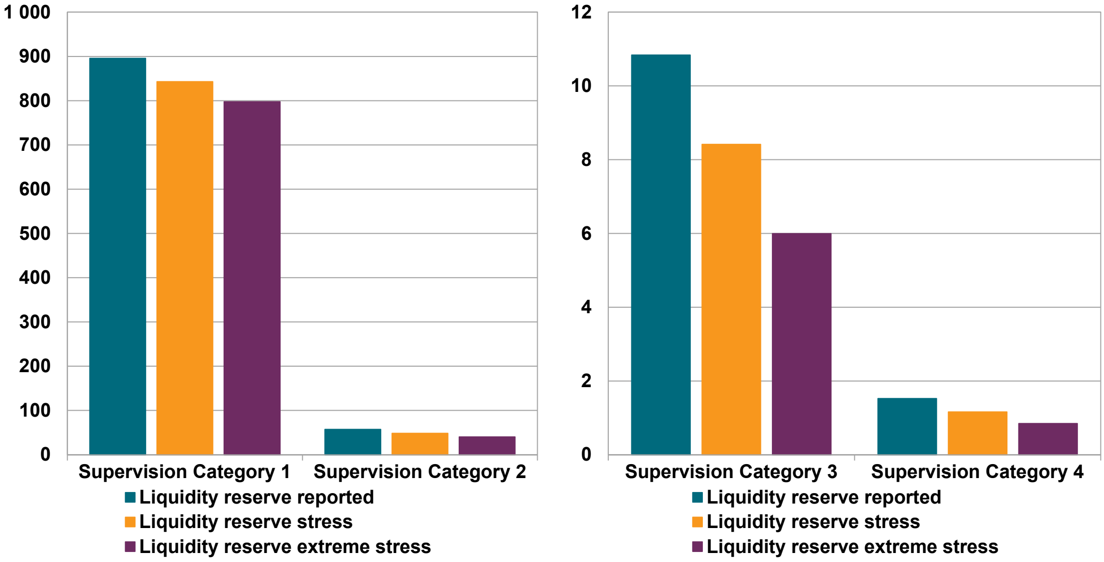
The focus of the stress tests in the analysis has been on whether the banks can still meet the LCR requirements when the market value of assets in their liquidity reserve falls. The tests have thus not taken into consideration other causes of financial stress that could conceivably occur in conjunction with large movements in interest rates.

FI's two stress tests show that all banks in supervision categories[47] 1 to 4 meet the LCR requirement of 100 per cent under "stress". Overall, the banks' liquidity reserves decrease by around SEK 240 billion (approximately 8 per cent) in this stress. Given an additional increase in stress, a drop in prices labelled "extreme stress", four banks in supervision category 4 fail to meet the LCR requirement. [48] Average LCR in total currency for these four banks amounts to 87 per cent after stress and varies between 76 and 96 per cent. The total decrease in value in the liquidity reserve for these four banks overall amounts to approximately SEK 800 million in the extreme stress scenario, which corresponds to 50 per cent of these four banks' total liquidity reserves. Under the increased stress, the banks' liquidity reserves decrease overall by approximately SEK 460 billion (approximately 14 per cent) (Diagram F9).

[46] This in-depth review is based on the report "Motståndskraft i bankernas likviditetsreserver och säkerhetsmassor", FI Ref. 24-28749. Available in Swedish. This in-depth review describes only the resilience in banks' liquidity reserves.
[47] Finansinspektionen's categorisation of credit institutions broken down into large (Category 1), mid-size (Category 2), and small (Categories 3 and 4) banks.
[48] Under the EU Capital Requirements Regulation, banks must maintain a certain minimum LCR. However, this minimum is flexible to some extent since banks must also be able to use their liquid assets during stressed periods to cover net liquidity outflows, even if this means that the minimum level is temporarily breached.

F9. Impact on the banks' liquidity reserves under stress and extreme stress

SEK billion



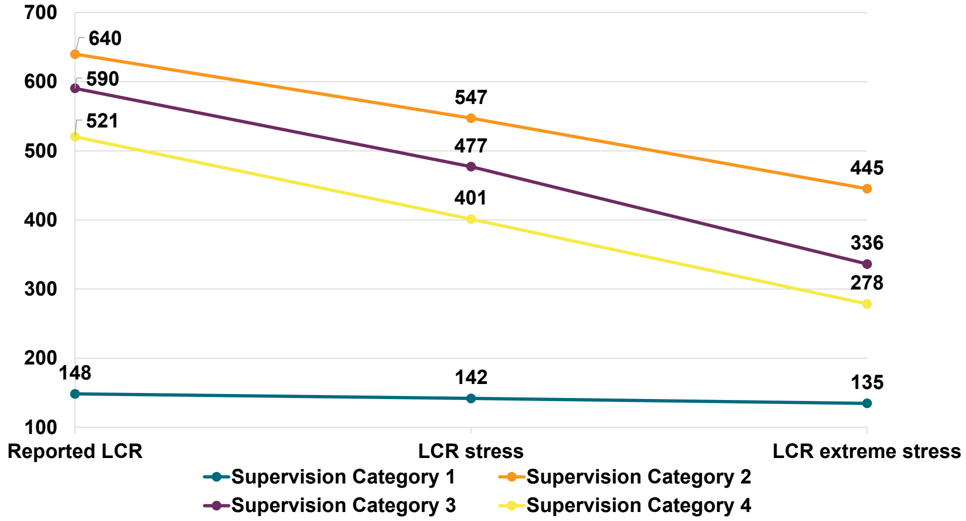
Source: FI.
Note: The amounts in the liquidity reserve are a calculated average of the banks' total liquidity reserves in each supervisory category.

The primary reason that all banks successfully maintain the LCR requirement is that they have large margins to the requirement at the outset. Another reason is that the banks have a large share of assets with high credit quality and short fixed interest rate periods in their credit reserves. A third reason is that the banks – primarily the major banks and category 2 banks – hold a relatively large share of central bank assets[49] in their liquidity reserves, and these assets are not impacted at all in the stress tests.[50] In general, the banks in supervision categories 2, 3 and 4 are impacted more by the stress tests than the banks in supervision category 1, but most banks in categories 2–4 have large margins to the LCR requirement (Diagram F10).

[49] The banks' investments at central banks and in central bank certificates.
[50] The share of the central bank's assets in the liquidity reserve is on average around 80 per cent for the major banks, 40 per cent for category 2, 8 per cent for category 3 and 16 per cent for category 4.

F10. Banks' LCR ratios are high even under stress

Per cent



Source: FI.

Note: LCR is shows as a weighted average of the banks' total LCR levels in each supervision category.

Our analysis shows in summary that the banks have substantial resilience to large decreases in value in their liquidity reserves. By holding sufficiently large liquidity reserves of high credit quality, the ability of Swedish banks to handle economic shocks and market volatility is good.

At the same time, it is important to note that the analysis targets specific factors and therefore does not highlight other types of effects that arise following large movements in interest rates. FI, as part of its supervision, will continue to follow the development of the banks' liquidity reserves.

In-depth review – FI intends to leave the countercyclical buffer rate unchanged in the fourth quarter

The countercyclical buffer rate has been at 2 per cent since June 2022. This corresponds to the positive neutral level that FI applies to the countercyclical buffer rate during periods in which FI assesses that cyclical systemic risks are neither accruing nor elevated. FI intends to leave the countercyclical buffer rate unchanged in Q4 2024.

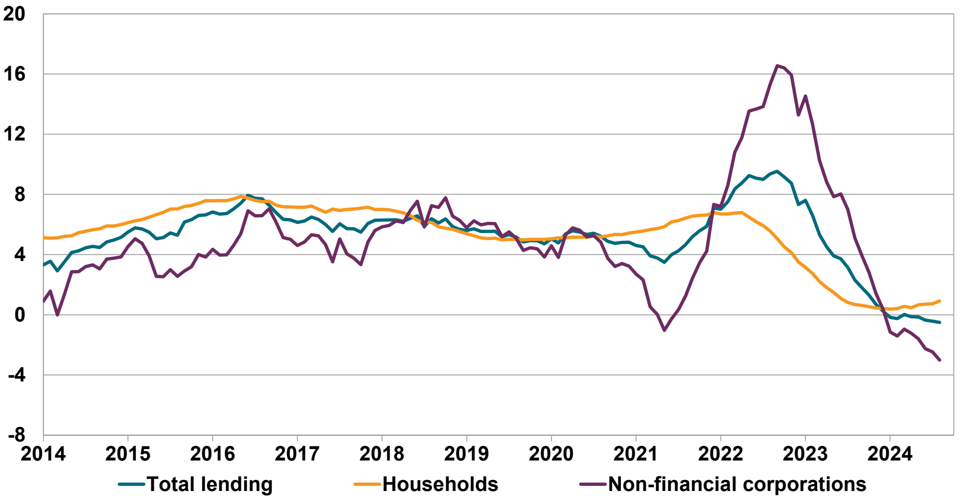
Sweden is in the middle of a recession. The general price level and interest rates continue to be higher than before. Many non-financial corporations and households are therefore still under pressure (see the chapters Households and Non-financial Corporations). The growth rate for banks' lending to households and non-financial corporations is low (Diagram F11). During Q2 2024, GDP grew more than lending to households and corporates. Therefore, the credit-to-GDP gap shrunk slightly, and the buffer guide remains at 0 per cent (Diagrams B1 and B2 in the diagram appendix).

The systemic risk indicator (d-SRI) describes the overall risk build-up.[51] Low credit growth and weak development in assets prices has led to a decrease in d-SRI in recent quarters. This indicates that cyclical systemic risks are currently not accruing (Diagram F12).

It is important that the banking sector can provide households and corporates with loans. A deterioration in real economic development or impaired access to market financing could mean that households and firms will turn to the banking sector for financing to an even larger extent. FI makes the assessment that the current low growth rate in lending is primarily driven by lower demand from borrowers rather than a limited supply of credit from the banking sector. If FI were to make the assessment that the supply of credit from the banking sector is limited, we can lower the buffer rate to free up room for the banks to loan more. However, the banks have good profitability and large management buffers (Diagrams 13 and 14). This implies that they have good capacity to maintain the supply of credit. FI therefore intends to leave the countercyclical buffer rate unchanged in Q4 2024.

F11. Total lending is decreasing

Per cent



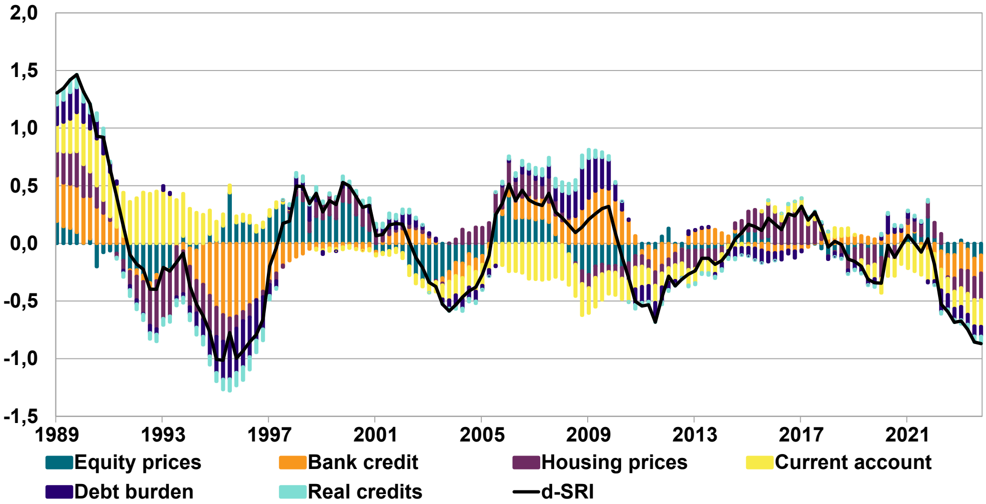
Source: Statistics Sweden.

Note: Total lending from monetary financial institutions at annual growth rate.

[51] For more information, see Sandström, C. (2023), “En systemriskindikator för Sverige”, FI Analysis 43, FI Ref. 23-34670, Finansinspektionen. An English translation is available at www.fi.se.

F12. System risk indicator d-SRI shows low risk accumulation

Normalised value



Source: FI.

Note: Normalised value means subtracting the median from the observation and dividing by the standard deviation.

Stability in the insurance and fund sector

Life insurance undertakings and occupational pension undertakings continue to hold a large percentage of risky assets. At the same time, these firms have buffers and can withstand downturns in the financial markets. It can be a challenge for the fund market to manage the large capital flows that occur in conjunction with new funds being added to the fund marketplace. Overall, the vulnerabilities for both the insurance and the fund sectors are considered to be unchanged.

	Level	Development
Investment risk in the insurance sector	Orange	→
Financial position in the insurance sector	Green	→
Concentration of assets in the insurance sector	Yellow	→
Liquidity risk on the fund market	Yellow	→

The colors indicate the current level of vulnerability. Green represents low vulnerability. Yellow, orange and red indicate differing degrees of elevated vulnerability. The arrows show how FI assesses that the vulnerability develops. An upward-pointing arrow means that the vulnerability is increasing and a downward-pointing arrow that it is shrinking. The assessment of vulnerabilities are based on a combination of quantitative measurements and expert assessments.

Risky investments continue to dominate

Life insurance undertakings and occupational pension undertakings[52] have increased their share of risky shares and unlisted assets over a long period of time (Diagram 20). During the period of very low interest rates, these undertakings needed to find alternatives to interest-bearing securities to cover their financial commitments and customers' expectations on returns. Now that interest rates are higher than before the upswing in inflation, this could lead to a return to more interest-bearing investments and, by extension, lower risk in investment portfolios.

The high percentage of shares in Swedish life insurance undertakings' and occupational pension undertakings' asset portfolios make them sensitive to shocks in the stock markets. At the same time, the undertakings have benefited from these holdings as the stock market has risen. Holdings in unlisted assets often consist of property since such an investment normally generates known cash flows that to some extent match the pension liability. In addition to properties, the undertakings are also investing in other unlisted securities, for example private equity and infrastructure. Unlisted assets have increased over time even if they still constitute

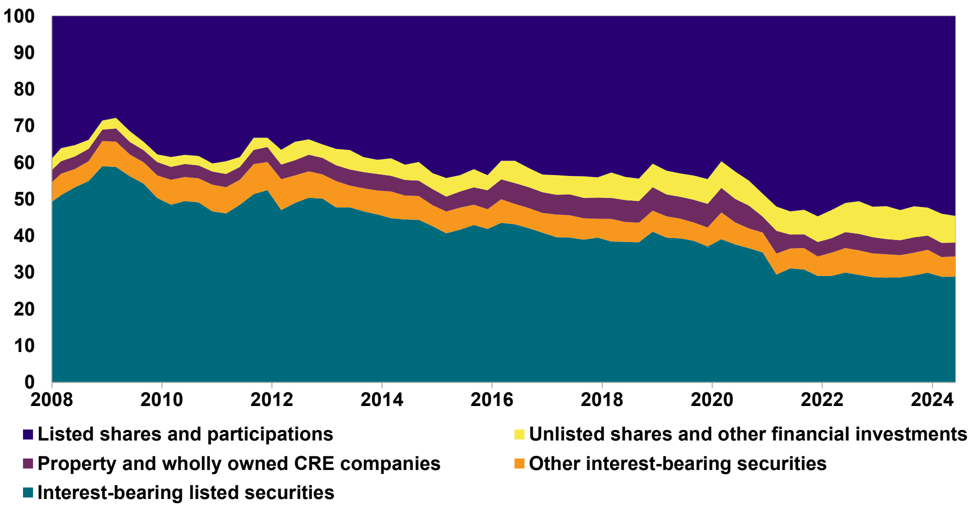
[52] From a financial stability perspective, these undertakings are more interesting due to the long-term commitments associated with their business. These undertakings are large investors on the financial markets, and given financial stress there is a risk that their behaviour could amplify a downward trend.

a relatively small share of the total assets. This share varies between undertakings. These investments lead to risks but are expected at the same time to result in a higher expected return (see In-depth review – Unlisted assets present both opportunities and risks).

At the same time as life insurance undertakings and occupational pension undertakings are sensitive to the development on the financial markets, this vulnerability is dampened by a long-term investment horizon and large buffers. This counteracts the risk that firms need to take action in the short term in times of elevated financial stress. This decreases the risk that the behaviour of life insurance undertakings and occupational pension undertakings would impact market fluctuations in a manner that would have a negative impact on financial stability.

20. Distribution between asset classes has stabilised

Per cent



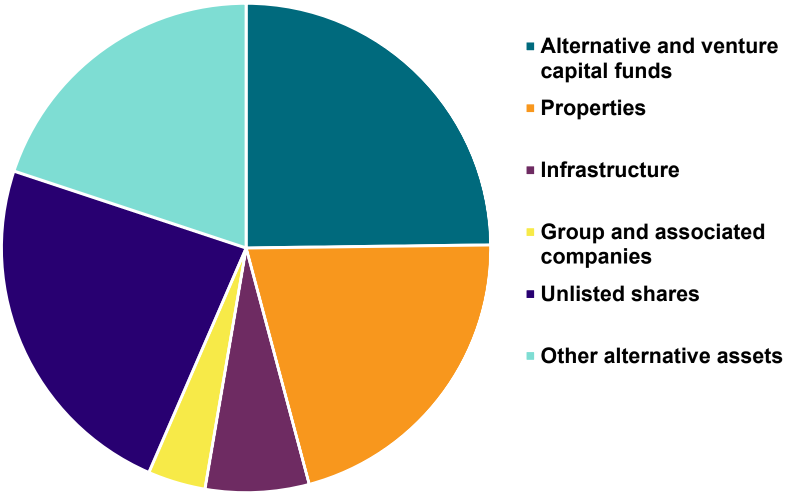
Source: Statistics Sweden.

Note: Riskier asset classes include shares, unlisted shares and other financial investments, properties and wholly owned CRE companies. Interest-bearing, and in this context less risky, assets include listed interest-bearing securities and other interest-bearing securities. The diagram refers to life insurance undertakings and occupational pension undertakings through 30 June 2024.

In-depth review – Unlisted assets present both opportunities and risks

Swedish life insurance undertakings and occupational pension undertakings hold a significant amount of assets that are not traded on regulated markets or corresponding trading venues. Unlisted assets correspond to approximately one-fourth of total investment assets, but this varies significantly between various undertakings. Unlisted assets include, among other things, investments in property, private equity, and infrastructure (Diagram F13). Investments in unlisted assets contribute to increased diversity, the possibility of higher returns, and, for some asset classes, known cash flows, which can be suitable for undertakings with long-term commitments. Investments in properties, for example, could generate known cash flows that can be matched to parts of the pension liability.

F13. Distribution of unlisted assets
Per cent



Source: FI.
Note: Refers to reporting as per 30 September 2024.

At the same time, there are multiple risks associated with assets that are not traded on a regulated market. These assets are more difficult to value since their pricing is often not transparent; similar assets that could be used as a benchmark are rarely traded or do not exist. The valuation can also occur with less frequency and often be dependent on the issuer, for example funds that determine the value of their assets under management (NAV). If the valuation occurs with the assistance of a third party, this entails a cost that probably also leads to such a valuation being conducted less frequently.

Unlisted assets often have a more complex structure and in general are less liquid than listed assets. As a result, the share of potential investors is limited, which impacts opportunities to dispose of assets, primarily in a stressed market when demand can fall sharply. This means that the unlisted assets only can be sold at a hefty discount, which in turn could have a negative impact on the investment portfolio value. In general, firms that invest in these assets have liquid asset buffers that are able to meet commitments to policyholders even in stressed market conditions.

Investments in unlisted assets give rise to investment risks that place special competence requirements on the management of these assets. A lack of available data can make it difficult to regularly measure the risk in the investment portfolios. The investing firm may need to estimate and assess unknown parameters, which creates considerable uncertainty in the valuation. The investing firm thus risks incorrectly assessing the total risk profile and not following adopted investment strategies, which in the end could have a negative impact on the policy holders.

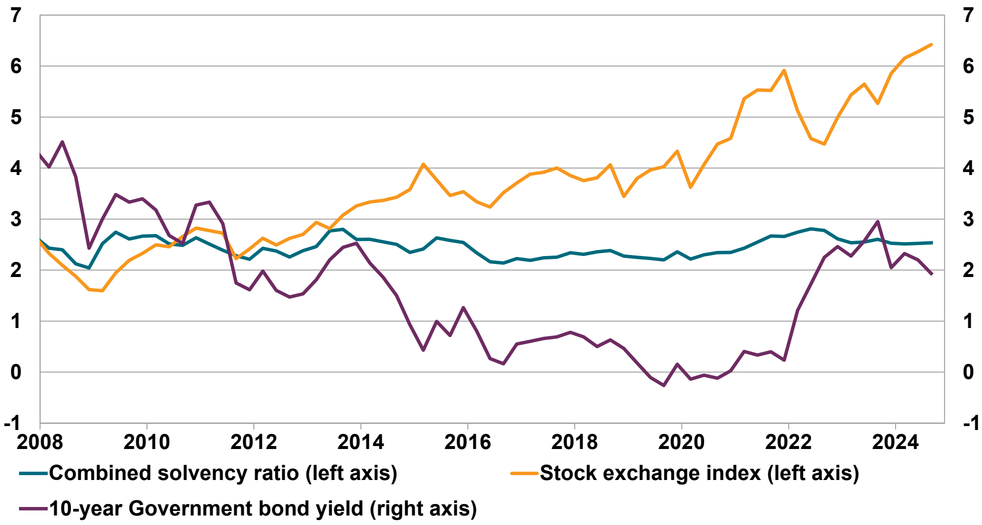
In order to limit vulnerabilities that can arise in conjunction with investments in unlisted assets, firms should hold sufficient resources to manage these assets. Firms should also have buffers of other, more liquid assets to meet commitment to policyholders even during periods of uncertainty on the financial markets.

Financial position continues to be stable

After a slight downturn in the solvency[53] of life insurance undertakings and occupational pension undertakings in Q3 2023, this metric has remained largely unchanged (Diagram 21). The development on the fixed-income market has a major impact on the undertakings' financial position. Lower market rates lead to a higher estimated pension liability, which impacts own funds negatively and weakens solvency. At the same time, the lower interest rates could lead to increased demand and a higher value on more risky assets, which in turn strengthens own funds. The firms in general have a large share of risky assets that are heavily stressed when calculating the capital requirement. A higher capital requirement decreases the own funds buffer, and solvency is thus lower.

21. Solvency is unchanged

Ratio (left axis) and per cent (right axis)



Source: FI, Nasdaq OMX and Sveriges Riksbank.

Note: Up through 31 December 2021, the diagram shows the traffic-light ratio for life insurance undertakings that applied the Solvency I regulations before they were converted to occupational pension undertakings. Since 31 March 2022, solvency is shown in

[53] Own funds in relation to capital requirements.

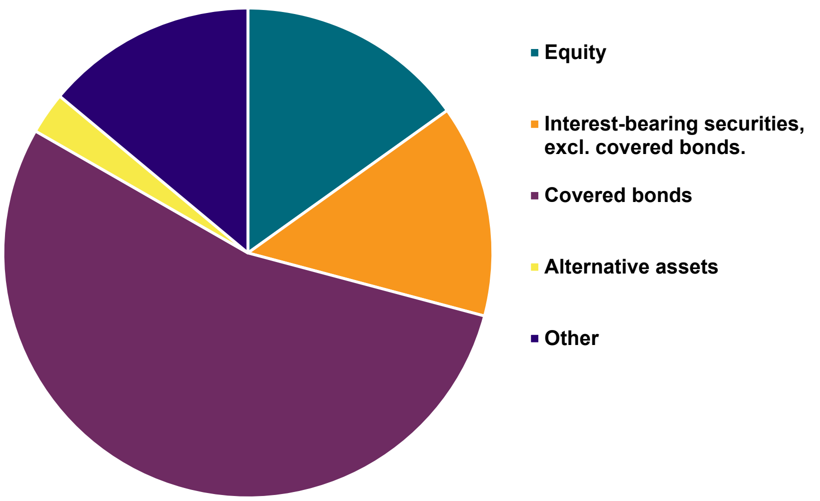
accordance with the new occupational pension regulation. The series is a mix of two measurements that FI has chosen to call a combined solvency ratio.

High interconnectivity with other sectors

Life insurance undertakings and occupational pension undertakings account for approximately one-third of the assets invested in the banking sector. The exposures consist primarily of covered bonds issued by Swedish banks[54] followed by share holdings in these banks (Diagram 22). The distribution of bank-related assets has been relatively stable over time. The concentration to the banking sector leads to a risk of large losses if problems were to arise in the banking sector.

As previously noted, the banking sector in turn is connected to the commercial real estate market through its lending to commercial real estate companies. Through the exposure of life insurance undertakings and occupational pension undertakings to the banking sector – together with shares in commercial real estate companies, direct property ownership, shares in commercial real estate funds, and holdings of corporate bonds issued by commercial real estate companies – the undertakings' overall exposure to the commercial real estate sector is high, both indirectly and directly.

22. Covered bonds are dominant in exposure to the banking sector
Per cent



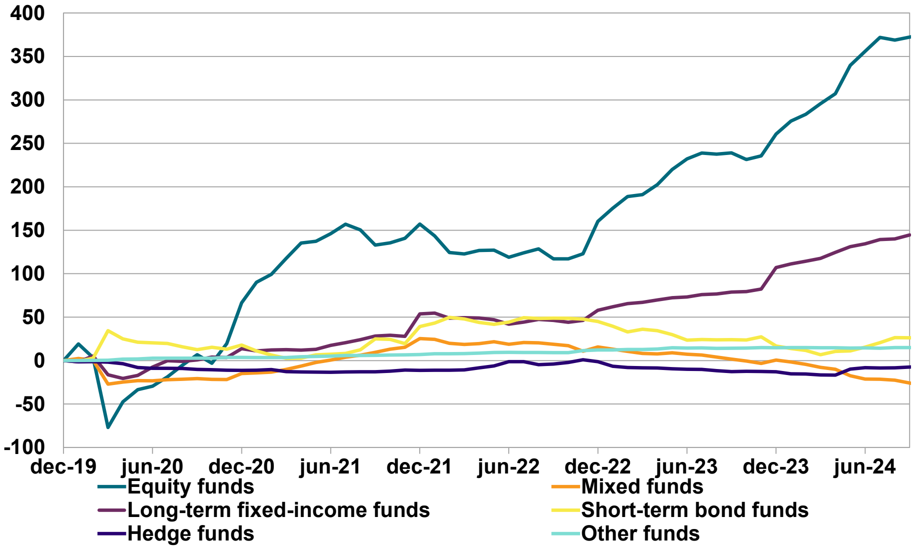
Source: FI.
Note: Life insurance undertakings' and occupational pension undertakings' exposure to the banking sector, excluding unit-linked and deposit insurance as per 30 September 2024. The distribution differs compared to previous reports due to a change in methodology. The sample of counterparties has been changed to better correspond to the banking sector.

[54] These include securities that Nordea and Danske Bank issued in Sweden.

Still some liquidity risks on the Swedish fund market

There have been significant net inflows into equity funds during the year. This is evidence of the improved confidence among households and supports the indications that risk appetite is rising. These inflows are following the trend from last year. There have also been net inflows into long-term fixed-income funds in the past two years as a result of the higher interest rates. In contrast, though, there have been net outflows from mixed funds, and to some extent short-term fixed-income funds, during the year (Diagram 23).

23. Continued inflows in equity funds and long-term fixed-income funds.
SEK billion



Source: Swedish Investment Fund Association.
Note: Accumulated net flows (difference between deposits – withdrawals) for different categories of funds since December 2019.

The risks on the Swedish fund market are basically the same as they were before. FI continues to see some liquidity risk if market volatility were to increase and it becomes difficult for funds to value their assets.

It is fundamental that fund managers are able to maintain trading and valuation in their funds. Problems with valuation combined with large outflows from investors could lead to fund managers having to delay sales and redemptions. It is therefore important that fund managers ensure the matching of the funds' assets and liabilities and have processes that to the greatest extent possible ensure continuous trading.

Even if there are some fund segments that are still estimated to have an elevated liquidity risk, such as high-yield funds, FI makes the assessment that fund managers are currently able to manage these risks. The largest liquidity risk going forward for the Swedish fund market is probably the restructuring of the premium pension system (see In-depth review – Important to plan for the procurement of the new premium pension fund platform).

In-depth review – Important to plan for the procurement of the new premium pension fund platform

In order to raise the quality of and lower the fees on the elective funds in the premium pension system, it was decided that the entire selection of funds should consist of procured funds, with the exception of the two Sjunde AP-fonden's funds. [55] The procurement will be largely based on the current fund categories in the premium pension fund platform, and it will vary in size. If an existing fund in the premium pension system is not awarded a mandate in the procurement, it will be phased out from the premium pension fund platform and the pension savers will be distributed among the funds that win the mandate. This means that large volumes of premium pension capital may need to be reallocated among various funds.

The procurement should benefit pension savers over time through improved and less expensive pension fund management. However, FI has also identified two risks related to large volumes of capital that will need to be reallocated between funds during a relatively short period of time[56]:

Liquidity risks: The procurement could result in large capital reallocations between funds during a short period of time. The size of these flows could exceed what a fund can handle on any given day. This could result in funds needing to postpone the sale and redemption of fund units in order to be able to pay out the premium pension capital.

Market impact on individual instruments: If a fund manager needs to sell or buy large positions in a short period of time due to large capital out- or inflows, this could have a significant impact on the price of individual instruments. There can be additional reinforcing negative effects on prices if market actors profit from the large flows through derivative positions. This could lead to lower returns for pension savers and other investors in the funds.

Using FI's stress tests of funds' liquidity risks as a starting point, we developed a scenario analysis of the liquidity risks that could arise in conjunction with the procurement of equity funds.[57] The procurement decisions will be announced in the next few months for several equity fund categories. The scenario is based on the

[55] For more information, see "Ett bättre premiepensionssystem", Bill 2021/22:179, https://www.regeringen.se/rattsliga-dokument/proposition/2022/03/prop.-202122179
[56] For a more in-depth review, see Fördjupning – "Möjligheter och risker genom upphandling av Premiepensionsfonder", Stabiliteten i det finansiella systemet 2023:2, FI Ref. 23-30156. An English translation is available at www.fi.se.
[57] The premium pension capital in mixed and generation funds is not included in this scenario.

127 Swedish equity funds that are under FI's supervision and that have premium pension capital invested in the funds.[58]

We then calculate time-to-liquidation (TTL) for each fund. The liquidity metric TTL shows how many trading days would be required to sell a holding. The metric is calculated by comparing the size of a fund's holdings in a given share with the turnover of that share during a representative trading day. We define *turnover during a representative trading day* as the median of the daily turnover during the past six months. We assume that the fund could account at most for 20 per cent of the daily turnover of the share without creating a material adverse impact on the market. Therefore, we limit the individual fund's share of the daily turnover in each share to 20 per cent. The threshold of 20 per cent of the turnover has no empirical basis, but rather is an assumption to determine the maximum size that can be sold for each fund in a specific share.

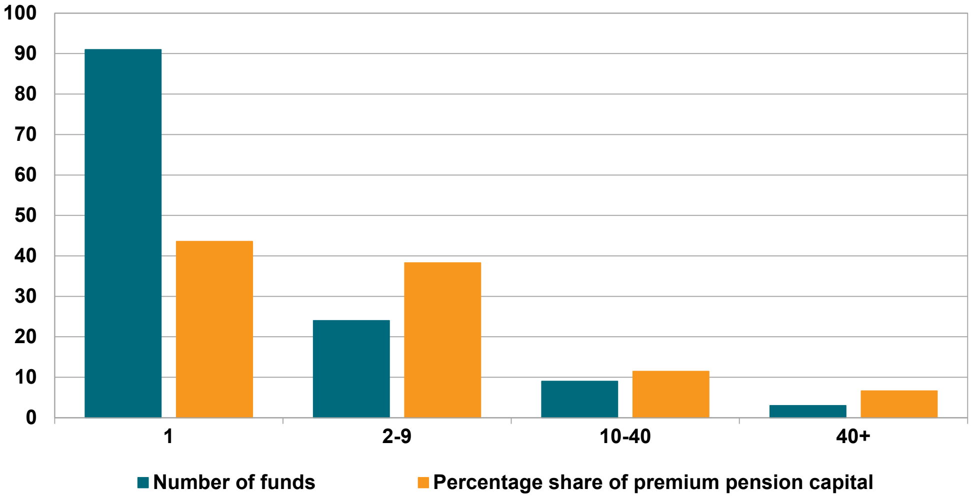
We take the sum of the TTL for all of the fund's holdings to determine the share of a fund's NAV that could be sold during a trading day. We then compare it to the share of the fund's NAV that is in the premium pension system. This allows us to estimate how many trading days it would take for funds to meet redemption in the event they lose the procurement in their category.[59]

The TTL method assumes that a fund liquidates up to 20 per cent of daily turnover for each share during a trading day. This means that the portfolio composition of some funds could change after they have paid out the premium pension capital. In other words, our scenario does not consider additional restrictions on how the funds could sell their assets, for example the fund rules or the requirements on equal treatment of the fund's unit holders. Diagram F14 shows the outcome of the scenario for the 127 funds.

[58] The premium pension capital in these 127 funds corresponds to 75 per cent of the premium pension capital in equity funds.
[59] For a more detailed description of the methodology, see "Metod för stresstest av fonders likviditetsrisker", FI Ref. 24-28749. Available in Swedish.

F14. Most funds are able to meet redemption within one trading day

Number of funds and percentage of premium pension capital (Y axis), number of trading days to liquidate the premium pension capital (X axis)

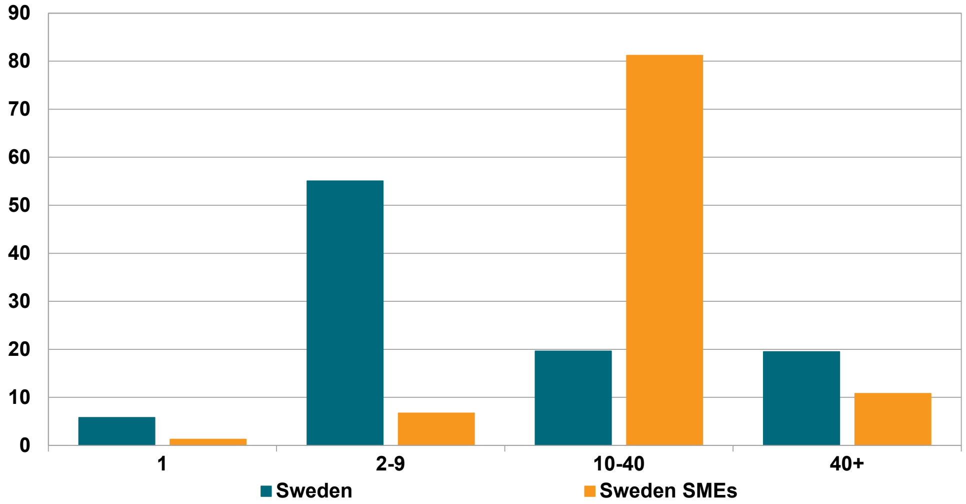


Source: FI's fund holdings data, Morningstar, Swedish Pensions Agency and Refinitiv.
Note: *Percentage share of premium pension capital* refers to the percentage of premium pension capital invested in equity funds that are under FI's supervision.

In our scenario, the majority of the funds would be able to successfully sell enough of their assets to pay out the premium pension capital within one trading day. However, 24 funds need 2–9 trading days, 9 funds need 10–40 trading days, and 3 funds need more than 40 trading days to liquidate enough assets to meet redemption. However, 56 per cent of the premium pension capital would require more than one trading day to be liquidated in order to meet the redemption request. This means that the funds that tend to have higher liquidity risks are larger. Most funds that need more than one trading day are funds in the categories Sweden and Sweden SMEs. A high percentage of the premium pension capital in these categories is allocated in funds that need more than one trading day to meet the redemption request (Diagram F15).

F15. Significant liquidity risks for Swedish SME funds

Percentage of premium pension capital within the funds category (Y axis), number of trading days to liquidate the premium pension capital (X axis)



Source: FI's fund holdings data, Morningstar, Swedish Pensions Agency and Refinitiv.
Note: The fund category Sweden consists of equity funds that invest in Swedish firms but that does not have an investment strategy towards Swedish SMEs.

According to our scenario, liquidity risk is largest for the fund category Swedish SMEs. Of the premium pension capital in this category, 81 per cent is in funds that need 10–40 trading days to meet the redemption request if they lose the procurement. Of the premium pension capital in the category Sweden, 20 per cent needs more than 40 trading days to be liquidated. In addition to liquidity risk, there is also a risk that a high percentage of the premium pension capital in a category will need to be reallocated at the same time, particularly if the outflow in some shares is not met by a corresponding inflow from another actor.

Our scenario is based on certain assumptions that could both overestimate and underestimate the liquidity risk. When a fund category is procured, the funds that lose the procurement will sell shares that could potentially be purchased by funds that won the procurement. This means that it could potentially be easier to liquidate these shares, which it turn means that we might underestimate the available liquidity on the market in our scenario. However, it is likely that multiple funds in the same category will lose the procurement and need to sell the same shares at the same time. This means that we also overestimate the available liquidity on the market. Furthermore, the funds need to keep their portfolio composition intact. This means that our scenario likely overestimates how much it is possible to liquidate for a specific share during a trading day.

Even if from a liquidity perspective most funds appear to be able to meet redemption if they lose the procurement, there are funds that may need a long time to liquidate their holdings. This is the case primarily for funds that invest in SMEs and the commercial real estate sector, but also for some of the larger Sweden funds. In addition, liquidity could be adversely impacted if large shares of several funds in the same category need to be liquidated simultaneously under a short period of time. There could also be liquidity risks when other fund categories are procured, for instance funds that invest in less liquid instruments. It is important that reallocation of pension capital is carried out in an orderly manner to avoid the risk of some funds experiencing problems when meeting the redemption request, and to avoid the risk of severe price impact due to large sales. It is therefore important for all market participants involved in the process to work proactively and to plan for the forthcoming capital reallocations. Pension savers, large institutional investors and small savers could all be adversely impacted by severe price fluctuations in individual securities, or if funds are forced to postpone their sales to manage the flows.

Operational stability risks

The serious geopolitical situation and the increasing digitalisation of the financial market place higher requirements on stable systems and procedures for managing cyber risks. It is therefore highly relevant for firms to continue the work they have initiated to increase their digital resilience. A key part of this work is to continuously analyse and evaluate vulnerabilities to ensure sufficient resilience.

Geopolitical situation places higher demands on firms' resilience

According to the Swedish Security Service[60], several nations are conducting systematic, extensive intelligence and security-threatening operations against Sweden and Swedish interests. The risk of attacks needs to be viewed today in a geopolitical context where major policy decisions and the general state of security are circumstances that by extension could impact the willingness to perform an attack. Such attacks can occur in different ways, for example as cyber attacks, disinformation, infiltration and sabotage.

FI has observed in its supervision that different types of attacks against companies are occurring regularly in the financial sector, primarily so-called ransomware attacks[61] and overload attacks[62], and the risk of experiencing an attack has increased. The attacks vary over time in both intensity and methodology. They are often coordinated. In terms of overload attacks, the general assessment is that most of them are event driven, which means they are motivated by a global event of some kind.

Resilience to technical disruptions, in other words the capacity to ensure good security in the operation's network and information systems, is central for reducing the risk of disruptions to critical financial services. Firms in the financial sector need to have good capacity for protecting their operations from disruptions. In its supervision, FI has observed that the resilience of financial firms has not been built up at the same rate as the operations have been digitalised. The link between systems and the interdependence between different actors in the financial sector are examples of vulnerabilities that also mean operational disruptions could have an impact on the stability of the financial system more generally. As resilience builds,

[60] See the Swedish Security Service's status report, "Säkerhetspolisen 2023–2024", ISBN: 978-91-86661-25-0.
[61] Ransomware attacks utilise harmful software that locks and encrypts a victim's data, files, devices or systems, which makes them unavailable and unusable until the attacker receives a ransom payment.
[62] Overload attacks are also called DDoS attacks and entail that an attacker overloads a website, server or network with so many requests that availability is restricted for legitimate users.

financial firms could prevent the realisation of risks or at least limit the impact of them.

The EU's Digital Operational Resilience Act (DORA or DORA regulation), will go into effect in January 2025. A key component of DORA is that firms must report information and communication technology (ICT) incidents and that such reporting must be submitted to national supervisory authorities using established templates. This reporting will enable authorities to gain an overview of the incidents' nature, frequency, significance and impact. It also provides FI with better conditions than it has today to conduct comparisons and analyses and also entails that firms probably will be able to identify and manage vulnerabilities more easily.

A widespread disruption to any part of the financial system could threaten financial stability more generally, which in turn could have an impact on Sweden's security. Financial corporations conducting business crucial for Sweden's security are subject to FI's security protection supervision. These firms need to, among other things, identify what in their own operations is worth protecting, but also assess dependencies on other companies and their processes, or on society at large. This type of analysis is complex, can take a long time to carry out, and needs to be followed up regularly. These firms must also implement relevant protection measures, which requires that the firm has identified the threats for which the firm needs protection. Thus, deficiencies in these respects could have consequences from a stability perspective. As part of our supervision, we monitor how firms work with this.

For the past two years, FI has been the emergency response authority and the sector responsible authority for the preparedness sector Financial Services. A key assignment for this sector is to ensure that crucial operations are maintained to the greatest extent possible even during a peacetime crisis or heightened states of alert (see In-depth review – Strengthened preparedness in the financial sector).

In-depth review – Strengthened preparedness in the financial sector

The financial sector is highly digitalised and interconnected, and it is highly dependent on a high degree of confidence. The state of the world is already leading today to a large and growing need for stable systems and procedures for managing various risks. FI makes the assessment that it is particularly important for financial firms to consider in their risk management the risk of cyber attacks and other cyber risks as well as infiltration and disinformation. In addition to this, it may be necessary to identify in more detail different types of concentration risks.

However, global conditions can change quickly. This means that the financial sector also needs to build up resilience and an ability for elevated preparedness and, ultimately, war. This includes not only robust solutions and improved capabilities but also development of new capabilities.

Planning for greater preparedness and, ultimately, war, means also considering a number of external risks where the financial sector is not necessarily the primary target. The situation in Ukraine, for example, shows that energy and transport supply chains are targets. This has an impact on the financial sector and clarifies the need to be aware of external dependencies and plan for losses of a greater dimension than that considered during peacetime. A war is also not easily categorised as a financial or an operating risk but rather has both a direct and indirect impact from both perspectives.

Another major transition is the shift in perspective towards total defence. Business regulation in the financial sector is not currently based on risk assessments from a total defence perspective. In the total defence planning, it is the needs of society and the population that are the starting point rather than an individual firm.

The ability to maintain crucial functions during heightened states of alert and, ultimately, war is not dependent on a single measure since the risks are multifaceted and different. In its role as sector responsible for the preparedness sector Financial Services, FI, among other things, must lead the work to coordinate measures in this sector both prior to and during heightened states of alert. At FI, we are currently working with several activities that aim to raise the capacity of the financial system in general, including alternative channels for the provision of financial services, need and dependency analyses, and robust back-up solutions for energy supply and communications. This work occurs in dialogue with affected authorities and firms where appropriate. We are also reviewing how to impose total defence requirements on financial corporations and what such requirements would look like to increase the capacity in the financial system.

This work has begun, and it is our assessment that the capacity of financial corporations to handle heightened states of alert and, ultimately, war needs to develop.

Firms are strengthening their digital resilience

The DORA regulation targets most of the firms that are currently under FI's supervision. This means, for example, that it places stricter requirements on firms to manage risks in ICT, report ICT-related incidents, test digital operational resilience, and manage ICT-related third-party risks (also see below). The regulation also raises and unifies the requirements on how financial corporations manage cyber risks.

FI has sent out a survey to a number of firms to determine how their adjustment to DORA is progressing.[63] The survey has provided us with a general overview of the progress within the firms and the challenges they are facing. Even if the sample

[63] For more information, see "De finansiella företagens förberedelser inför Dora-regelverket", September 2024, FI. Available in Swedish.

size is limited, the responses that have been submitted show that extensive preparatory work is under way and most of the firms in the sample make the assessment that they are for the most part on schedule with their preparations. The responses also indicate that different types of firms have progressed to varying extents in their preparations, which probably is related to the rules that currently apply to the different firms. Banks represent the group of firms that largely consider themselves to be on schedule. The responses also show that many of the firms perceive the requirement to manage third-party risks to be particularly challenging and that there is a strong dependence on third-party providers in the ICT area.

The requirements set forth by DORA will strengthen resilience to disruptions, but it is important that firms continuously ensure that they have the right skills for making necessary adjustments. When firms have adapted their operations to the new rules, the operational stability risks should decrease compared to today. As part of our supervision, we will follow how firms are adapting to the new requirements.

Outsourcing poses concentration risks

Financial corporations are outsourcing a considerable share of critical operations to third-party suppliers.[64] This is fundamentally good in that this provides the firms with access to specialists, for example IT competence, without needing to build up corresponding competence internally. It can be more efficient, safer and cheaper. However, it also contributes to an increased concentration of critical services to a small number of suppliers. This – combined with the interconnectedness of the financial sector – entails a risk that disruptions could quickly impact large parts of the financial system. There is also a risk that the disruptions will spread in such a manner as to have a serious impact on the entire financial sector, which thus could threaten financial stability.

DORA will introduce special rules that apply to the management of ICT-related third-party risks that could arise during outsourcing. In the new rules, financial corporations are required to prepare a register of all outsourcing, which must be shared with concerned supervisory authorities. This reporting will provide FI with a better overview of the outsourcing. We can thus more easily identify risks and place clearer demands in our supervision.

Outsourcing also places high demands on the firms' governance and control of how they are managing their risks. Where third-party suppliers in turn outsource parts of

[64] *Third-party suppliers* refers in this context to another firm that provides services to the financial corporation, i.e., the financial corporation outsources parts of its operations to another firm.

their operations, this can introduce a risk of insufficient transparency and lead to impaired control of the supply chain.

Due to DORA, so-called critical third-party suppliers will fall under the supervision of the European supervisory authorities. The determination of whether a third-party supplier is considered critical or not is based on the impact on stability, continuity or quality of the provision of financial services that would arise if the third-party supplier in question were to experience an extensive operational disruption. This assessment should be based on, among other things, the number of financial corporations and the total value of the assets at these corporations to which the third-party supplier in question provides services. That critical third-party suppliers will be under supervision entails increased requirements on firms that in many cases were not previously under supervision.

Important modernisation of payment infrastructure

The capacity to make payments is central for a functional society, financial stability, and thus society's resilience. The payment system is not subject to DORA's requirements. However, a new act on payment clearing has recently entered into force and will be supplemented with regulations from FI.[65] The new rules entail, among other things, the expansion of the definition of clearing activities and higher requirements than before on such activities related to IT, information security and risk management.

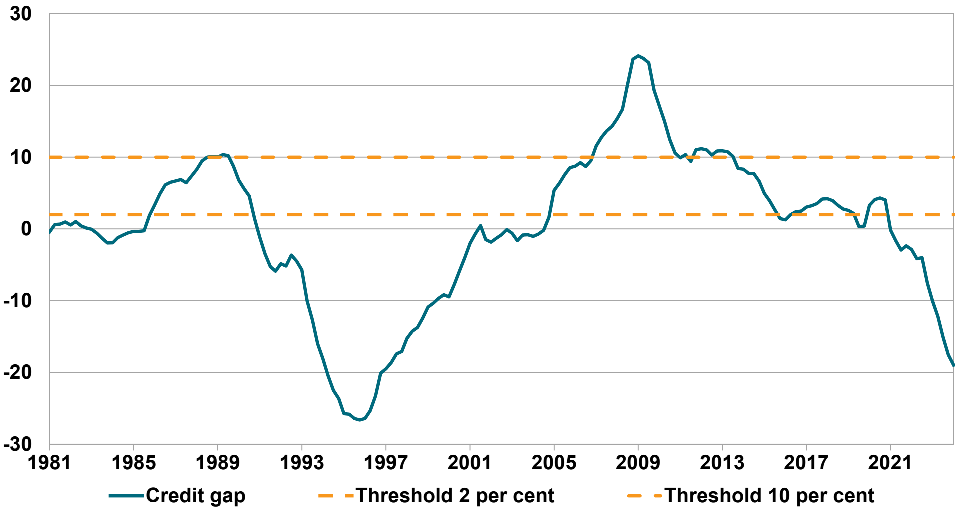
Extensive efforts are currently under way to modernise existing IT platforms and develop a new system for so-called batch payments. High resilience and a good ability to manage risks are particularly important aspects when new systems are being developed. In this work, it is also important that actors who are affected take responsibility for ensuring the stability of the Swedish payment infrastructure. FI is following this work on an ongoing basis as part of its supervision.

[65] Clearing and Settlement of Payments Act (2024:114) and Finansinspektionen's regulations (FFFS 2024:5) on clearing and settlement of payments, which entered into force on 1 July 2024.

Appendix of diagrams

B1. Credit-to-GDP gap dropped in Q2

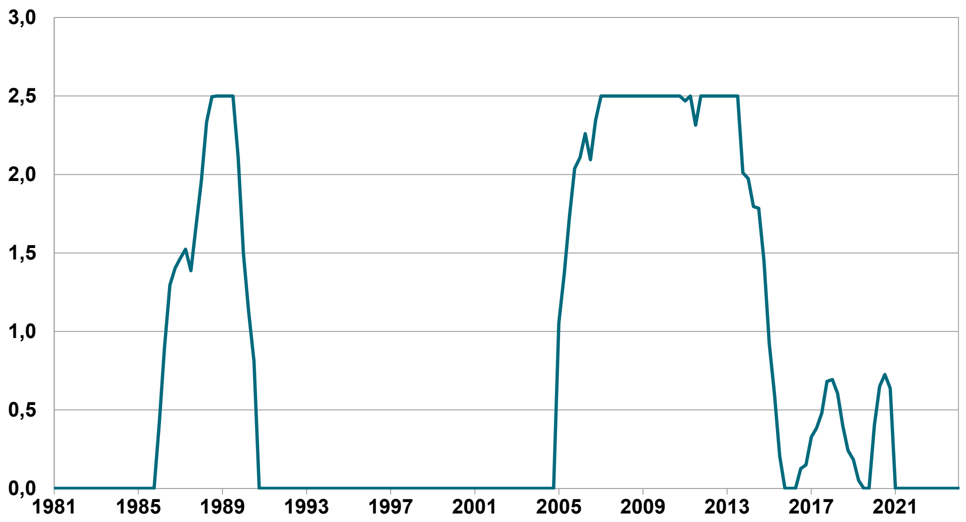
Deviation from trend, ppts



Source: FI and the SCB.
Note: Credit-to-GDP gap according to the standardised approach. The dashed lines show the thresholds (2 and 10 per cent, respectively) that according to the standardised approach are to be used to transform the credit-to-GDP gap into a buffer guide.

B2. Buffer guide remains at 0 per cent

Per cent



Source: FI and the SCB.
Note: Buffer guide according to the standardised approach.