SVERIGES RIKSBANK

Financial Stability

2024:1

The Riksbank’s Financial Stability Report

The Riksbank’s Financial Stability Report is published twice a year. In the report, the Riksbank presents its overall assessment of the risks and threats to the financial system and evaluates the system’s resilience to them. The work on the stability analysis is thus directly linked to the Riksbank’s task to monitor the financial system and the objective of contributing to its stability and efficiency. By publishing the results of its analysis, the Riksbank aims to draw attention to, and warn of, risks and events that may pose a threat to the financial system, and to contribute to the debate on this subject.

The Executive Board of the Riksbank has discussed the report on two occasions – on 15 May and 27 May 2024. The report is available on Sveriges Riksbank’s website, www.riksbank.se. The Report uses data available up until 23 May.

The Riksbank and financial stability

A prerequisite for the economy to function and grow is a well-functioning financial system. The system must be able to mediate payments, convert savings into funding and manage risks, and also be resilient enough to be able to maintain these functions to the highest degree possible when shocks occur. But the system is sensitive, as its key elements are vulnerable. For example, banks fund their operations on a short-term basis, but lend on a longer-term basis, making them dependent on public and market confidence. If this is lost, serious problems can quickly arise. Moreover, the participants in the financial system are interconnected, for example because they borrow from each other, obtain funding on the same markets or have similar operations. Problems that arise at one participant, in a market, or in a system, can therefore quickly spread, both directly and due to concerns that other participants might also encounter problems.

A crisis in the financial system risks leading to significant economic costs. The importance of the financial system, combined with its vulnerability, means that the state has a particular interest in preventing threats to financial stability. Banks and other market participants do not themselves have an incentive to take full account of the stability risks they may pose. If a crisis, despite preventive measures, were to occur, the state might also need to intervene. This should be done at the lowest possible cost.

According to the Sveriges Riksbank Act, the Riksbank shall contribute to the stability and efficiency of the financial system. A core task is therefore to oversee the financial system. This includes identifying risks of serious disturbances or significant efficiency losses, assessing whether the financial system is stable and efficient, and reporting its assessments. The Riksbank also has the special task of overseeing the financial infrastructure and other operations that are of particular importance for it. In the Financial Stability Report, the Riksbank gives an account of its analyses and assessments of the stability and efficiency of the financial system twice a year.

The Riksbank also has important tasks related to the provision of liquidity in the event of a financial crisis. To counteract a serious shock to the financial system in Sweden, the Riksbank is able to offer liquidity support to one or more financial companies or markets. Oversight of the financial system is also essential for the Riksbank to be able to act quickly and efficiently in the event of a financial crisis.

The Riksbank shares responsibility for the stability and efficiency of the financial system with the Ministry of Finance, Finansinspektionen (the Swedish financial supervisory authority) and the Swedish National Debt Office. The interplay between the authorities is vital both in preventive measures and in any crisis management. Cooperation with authorities in other countries is also important as financial undertakings are often cross-border in nature.

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IN BRIEF – The Riksbank's stability assessment

The stability risks have declined in the near term, but there is considerable uncertainty. As a result of lower inflation, developments on the global financial markets have been characterised by expectations of interest rate cuts, contributing to less tight financial conditions. However, there is considerable uncertainty, and if policy rates remain high for a long time, this would increase the pressure on various participants in the financial system. In addition, geopolitical risks remain substantial, which also contributes to high cyber risks.

Measures are needed to strengthen confidence in the property sector. The situation for property companies has improved, but the higher interest rates has not yet had a full impact on their funding costs, and there is a risk that the rental market and property values will remain weak in the future. Vulnerable property companies therefore need to continue to strengthen their balance sheets and reduce their risk-taking. To strengthen confidence in the sector, it is also important that companies increase transparency around property valuations, and that rating agencies review their methodologies to make ratings more robust.

Structural reforms of the housing and mortgage markets would make the Swedish economy better equipped. Households' high indebtedness and short interest-rate fixation periods mean that interest rate changes have a major impact, not least on consumption, which has clearly declined. Macroprudential measures have contributed to a relatively high level of resilience among mortgagors, but reforms are needed to address the fundamental problems in the housing market.

The resilience of the major Swedish banks is good, but the risks are greater for consumer credit banks. For some of the consumer credit banks, loan losses are increasing. More and more of these banks are also joining so-called deposit platforms, where deposits can be more flighty. Although the consumer credit banks are smaller than the major banks, they can be systemically important as a group. In order to improve the credit assessment of consumer loans, it is urgent to implement the proposal for a register of all borrowers' loans.

A macroprudential framework should be introduced for non-banks. The non-banking sector is becoming increasingly complex, with greater interconnectedness between actors, but there is no macroprudential framework for the sector. Moreover, funds in particular can be sensitive to large outflows, thereby creating stress on the asset markets in which they invest. The Riksbank believes that funds should implement more liquidity management tools to reduce their liquidity risks. The actors who set the requirements for the funds offered to pension savers or as part of life insurance products should work in this direction.

1 Overall stability assessment

1.1 The stability risks have declined in the near term, but there is considerable uncertainty

Subdued inflation contributes to expectations of lower interest rates

Inflation has continued to slow down globally, but the development has become increasingly divided. In the United States, the expansionary fiscal policy has contributed to strong growth and the stalling of the decline in inflation in recent months. In the euro area, growth is much weaker, and inflation is slightly lower.

In the light of the more subdued inflation development, market participants' expectations of future policy rates have declined since the previous Financial Stability Report. In parallel, equity prices have risen and risk premiums for various types of high-risk bonds have fallen, contributing to less tight financial conditions. Overall, the risks to the financial system have decreased in the near term.

However, there is still considerable uncertainty about future interest rates, as evidenced by the high volatility in the fixed income market. High policy rates in the long term could put pressure on various actors and markets in the financial system, not least because valuations in several asset markets are high. Geopolitical tensions are an additional source of uncertainty and could trigger new global supply disruptions, leading to a resurgence in inflation and interest rates.

Financing conditions for property companies have improved, but operational risks have increased

So far, the participants in the Swedish financial system have managed the challenges posed by the rapid rise in inflation and interest rates, and the system is currently functioning well. But the challenges have been particularly acute in some sectors, as a result of vulnerabilities that have long characterised the Swedish economy – not least in the commercial property sector.

The Riksbank’s overall assessment is that the situation for property companies has improved since the previous Financial Stability Report. Financing conditions on the bond market are more advantageous and more property companies have been able to issue bonds. However, many property companies still have low financing costs compared to market rates and as they renew their bank loans, bonds and interest rate derivatives, their financing costs will rise. In addition, the economic downturn, combined with increased work-from-home and new ways of working, has contributed to higher vacancy rates among office properties. If vacancies continue to rise and interest rates remain at high levels, it may put pressure on both financial ratios and property values. It is therefore important that vulnerable property companies further strengthen their balance sheets and reduce their risk-taking.

Measures are needed to strengthen confidence in the property sector

It is currently difficult to assess whether property values have been adjusted downwards sufficiently in light of the changed economic situation. Property valuations need to be more transparent. On the one hand, companies need to explain more clearly the assumptions on which the valuations are based, and on the other hand, the information about the transactions needs to be more detailed. Against this backdrop, it is positive that Finansinspektionen has taken the initiative to improve the information base in connection with transactions.

The fact that a large proportion of property companies' loans are taken via the corporate bond market means that it is important for this to function well and for credit risks, among other things, to be valued correctly. Some of the behaviour of credit rating agencies in 2022 and 2023 has raised questions about the reliability of their assessments of companies' credit risks. Although property companies' vulnerabilities were well known, it took a long time for credit rating agencies to adjust their assessments. Several property companies that had previously been rated relatively highly were downgraded rapidly, sometimes in several steps in a short period of time. Rating agencies should therefore review their methodologies to make ratings more robust.

Households have had to make significant adjustments

The high level of household indebtedness and short interest-rate fixation periods have meant that policy rate increases have had a large and rapid impact on their interest expenditure. Based on previous policy rate increases and the forecast for the policy rate, the Riksbank estimates that almost all of the expected increase in mortgage rates has reached households. Households have reduced their consumption quite considerably, both in a historical perspective and compared to other countries. However, the resilience of mortgagors has been relatively strong and they remain well placed to service their loans. A contributing factor to this is the combination of amortisation requirements, mortgage caps and banks' credit assessments. The fact that the labour market has so far withstood the downturn relatively well has also helped households. For those mortgagors who suffer a loss of income and are having problems paying their loans, it is positive that the amortisation requirements are designed with a degree of flexibility whereby mortgagors can be granted exemptions for special reasons.

However, many households are struggling with their personal finances, and the number of households applying for debt restructuring increased significantly in 2023. Often the problems stem from various forms of consumer credit, rather than mortgages, and there are indications that credit assessments for these loans may be flawed. It is therefore important to proceed with the proposals in the Over-indebtedness Inquiry's report, especially the proposal for a register of all borrowers' credits.[1]

If the Swedish economy is to be better equipped to withstand shocks, structural reforms are needed on the housing and mortgage markets. First and foremost, a broad

[1] See *Ett förstärkt konsumentskydd mot riskfylld kreditgivning och överskuldsättning [Enhancing consumer protection against risky lending and over-indebtedness]*, July 2023.

review of housing and tax policy is needed, which could include a review of tax relief on interest payments, taxation of property and the regulatory framework for new housing production. The enquiry's proposal for a change in mortgage prepayment penalties would also give households greater incentives to choose loans with longer fixed-interest periods, and it is therefore important that it leads to a change.[2] Better statistical information on the distribution of household assets and liabilities would be of great benefit to both the Riksbank and Finansinspektionen. Firstly, it would be desirable to implement the enquiry's proposal for new statistics on household assets and liabilities.[3] However, even a less extensive collection from a representative sample of households would enable a better analysis.

Good resilience among the major Swedish banks, but increased risks for consumer credit banks

Profitability among the major Swedish banks is historically high. One contributing factor is that they have been able to increase their lending rates more than the cost of their financing has increased. However, going forward, the margin between banks' lending rates and the rates at which they fund their lending may narrow. Demand has increased for higher-interest savings accounts, which has contributed to an increase in banks' deposit costs. In addition, the Riksbank is reducing its asset holdings, which means that banks need to rely more on wholesale funding, which is usually more expensive (see the article "How does quantitative tightening affect the banks?"). Overall, the high profitability of the major banks may therefore be dampened in the future.

The Swedish banking system has a large exposure to property companies. The Riksbank has conducted stress tests to get an idea of how the major banks could be affected if the financial situation of property companies deteriorates. The stress tests indicate that losses on loans to property companies could be substantial, but the Riksbank's current assessment is that the major Swedish banks can manage a scenario in which the situation on the commercial property market worsens.

In contrast to the major banks, consumer credit banks have experienced increasing loan losses in recent years, which has contributed to their relatively low profitability. A new trend is that an increasing number of consumer credit banks have opted to join major deposit platforms, where savers can easily switch accounts, for example to get a higher savings rate. Such platforms can foster competition in the banking market but could also make deposits more flighty. Although these participants are smaller than the major banks, they can be systemically important as a group. The experience of the US banking turmoil in spring 2023 showed that problems of a more system-wide nature can easily arise if investors see that several banks have similar problems.

[2] See *Utredning om ändrade regler för beräkning av ränteskillnadsersättning [Report on revised rules for the calculation of interest compensation]*, October 2023.

[3] See *En ny statistik över hushållens tillgångar och skulder* [*New statistics on household assets and liabilities*], November 2022.

A macroprudential framework for non-banks is needed

Non-banks have come to form an increasingly large and important part of both the Swedish and global financial systems. This sector is made up of several different actors – including funds, insurance and pension companies, and venture capital firms (see the article “Private equity: a growing market in transition”) – and now accounts for a large share of the capital supply to the real economy. In many cases, these players are also linked to the banking sector. However, unlike the banking sector, there is no macroprudential framework for non-banks despite the fact that these players can disrupt both the financial system and the real economy. The Riksbank therefore welcomes the European Commission's consultation on the introduction of such a framework within the EU, and considers it important that it is put in place. Regulatory cooperation and reciprocity are also essential for its smooth functioning.[4]

Funds can be sensitive to large outflows, which can in turn create stress in the market for the assets in which the funds invest. There is therefore a need to reduce the liquidity risks of funds, especially for corporate bond funds. The Riksbank therefore advocates that they should implement swing pricing. The Riksbank also welcomes the forthcoming EU directive that will soon impose higher requirements on funds to use more liquidity management tools to reduce their liquidity risks.

Fund managers are responsible for managing liquidity risks in the funds they offer. For their funds to be offered to pension savers or as part of life insurance and occupational pension products, they must fulfil the requirements of life insurance and pension companies, the premium pension scheme (for premium pensions) and the social partners (for occupational pensions). In some cases, these requirements steer funds towards offering more liquid fund shares, even though this may have negative effects both for pension savers and for financial stability. It is therefore important that pension providers' requirements for the funds they offer to pension savers do not create incentives to switch funds under stress and encourage good liquidity management, for example by requiring liquidity management tools and/or lower trading frequency for funds with less liquid assets.

Efforts to strengthen cyber security need to be intensified

The cyber threat remains significant and is amplified by the heightened geopolitical risks. The simulated penetration tests led by the Riksbank within the framework of TIBER-SE indicate that financial actors have improved their ability to detect attempted or ongoing attacks. Even if this is the case, there is a risk that the improvements will not be done at the same pace as the tools and methods of threat actors evolve. Financial institutions therefore need to further strengthen their resilience, including by ensuring that they have the ability to restore their IT environments if an attack succeeds.

To create better conditions for preventing and managing cyber attacks, the governance of different functions and the division of responsibilities between different authorities need to be clarified. In this respect, the report’s proposal that the Swedish

[4] *Regulatory cooperation* means coordinating rules and their application across different jurisdictions. *Reciprocity,* in this context, means that countries recognise each other’s macroprudential measures.

National Defence Radio Establishment (FRA) should become the new principal of the National Cyber Security Centre (NCSC) is positive. The enquiry's proposal that the Riksbank should lead a crisis management function in the event of serious operational disruptions, such as a major cyber incident, is also an important step.

The DORA regulation will increase cyber security requirements for many organisations.[5] Requirements include the ability to manage IT risks, report IT incidents, test their IT systems and manage risks associated with third-party suppliers. However, it is of great importance that the actors that are important for the financial system, such as Getswish, Finansiell ID-Teknik, Bankgirot and RIX, but which are not covered by the regulation, also respond to the requirements of DORA and strive for the same level of resilience.[6]

The financial infrastructure needs to be modernised

The payments and securities area in Sweden and the rest of Europe is undergoing major changes. It is important that the Swedish financial infrastructure keeps up with the structural transformation that is taking place. RIX and Euroclear Sweden, which constitute the existing settlement infrastructure, therefore need to modernise their systems so that they do not diverge from the rest of Europe. This includes harmonising processes, enabling entry for new participants and introducing new technology, developing new services and further developing technical systems. In June 2024, the Riksbank plans to decide whether Sweden should connect the existing settlement infrastructure to the Eurosystem platforms. Regardless of what decision the Riksbank makes, both Euroclear Sweden and RIX need to plan to modernise their systems to meet future needs. This is necessary to ensure that the Swedish settlement infrastructure remains stable and efficient in the future.

The Riksbank has previously emphasised the need for a new and secure payment infrastructure in Sweden. Bankgirot is the infrastructure company that provides clearing of retail payments in Sweden and has been commissioned by its owner banks to develop a new infrastructure. The assignment poses a major challenge for Bankgirot, which needs to ensure that its existing systems are available and secure during the transition to the new infrastructure. Bankgirot's owners therefore need to continue to ensure that Bankgirot has sufficient resources to fulfil its mission and that the change process moves forward.

[5] DORA refers to the EU regulation Digital Operational Resilience Act that will enter into force in January 2025.

[6] The DORA regulation applies to most of the companies currently under the supervision of Finansinspektionen with the exception of clearing companies, Bankgirot is thereby excluded. Getswish AB, Finansiell ID-Teknik and RIX are examples of actors that are not under the supervision of Finansinspektionen, but are overseen by the Riksbank.

2 The macro-financial situation

The financial markets have developed strongly on expectations of a soft landing for the economy, with growth improving as interest rates have been cut, and inflation stabilising around targets. Falling risk premiums have reduced near-term stability risks and facilitated the economic recovery. At the same time, volatile market interest rates during the spring indicate that there is uncertainty about the future path of inflation and when interest rate cuts are possible, particularly in the United States. Debt levels remain high in parts of the economies, which increases vulnerabilities and the risk of a backlash with rising risk premiums unless interest rates fall in line with market expectations. In addition, geopolitical tension remains high and could further complicate the central banks' balancing act. In the longer term, rising public debt and large deficits in several major economies are also a problem that risks pushing up long-term market interest rates as the supply of government bonds increases.

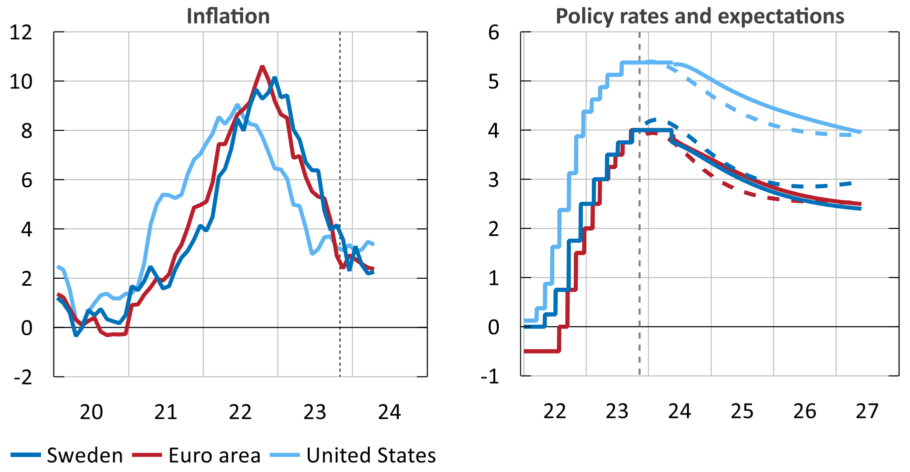
2.1 Lower inflation but uncertainty remains

Economic developments differ between Europe and the US

Central banks' tight monetary policy has contributed to inflation falling and approaching target levels in many parts of the world (see Chart 1). Since the previous Financial Stability Report, central banks in Europe and the United States have therefore begun to signal that the period of policy rate increases is over and that the next step will be cuts. Developments on the financial markets have been characterised by expectations of global interest rate cuts and a general increase in risk appetite. However, the most optimistic expectations of rapid interest rate cuts have been dampened, mainly as a result of stronger economic developments in the United States. Significantly weaker economic growth and more favourable inflation outcomes in the euro area in late spring have changed expectations that the European Central Bank (ECB) will cut its policy rate ahead of the US Federal Reserve, which is expected to delay cuts (see Chart 1). In Sweden, the policy rate was cut in May by 0.25 percentage points to 3.75 per cent and, according to market pricing, another two or so rate cuts are expected during the year, which is approximately the same interest rate path that is expected for the ECB.

Chart 1. Inflation and policy rates

Annual percentage change, per cent



Note. The chart on the left refers to the CPIF for Sweden, the HICP for the euro area and the CPI for the United States. The dashed vertical line marks the date of publication of the previous Financial Stability Report. The chart on the right shows central bank policy rates and policy rate expectations according to market pricing. Solid lines represent pricing on 23 May 2024. Dashed lines in the right-hand chart refer to pricing at the time of publication of the previous Financial Stability Report.

Sources: Eurostat, national central banks, Statistics Sweden, U.S. Bureau of Labor Statistics and the Riksbank.

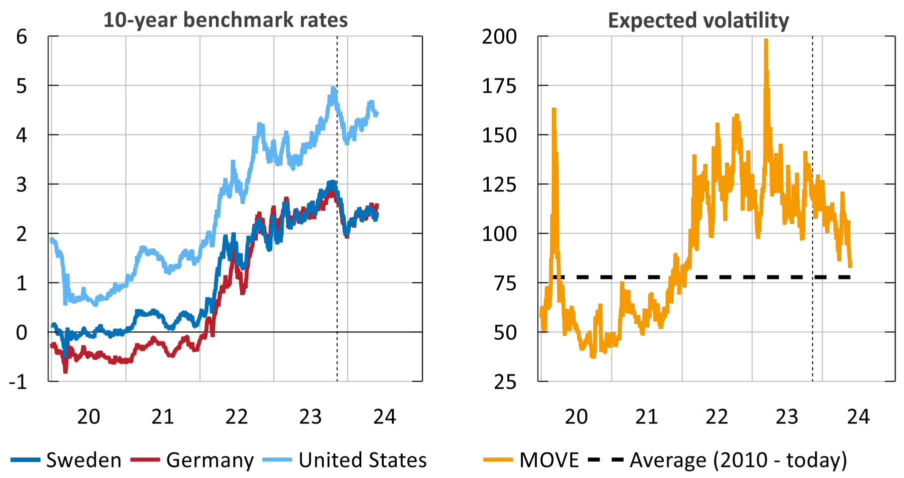
A widening interest rate differential between the United States and other countries could lead to an overall strengthening of the US dollar, which would increase the risk of inflation in those currency areas where the currency is weakening and make it more difficult for central banks to lower interest rates, despite weak economic performance. The United States has often led the way in monetary policy shifts, but this time the conditions are different, creating additional uncertainty about how much the ECB and other central banks can cut policy rates while the Federal Reserve may be forced to wait. Continued high policy rates in the United States also risk cooling off global financial markets and increasing risk premiums.

Geopolitical risks remain high due to Russia's ongoing invasion of Ukraine and the conflict in the Middle East. This contributes to increased uncertainty about, for example, how world market prices for commodities and transport costs will develop. Further escalation of these conflicts could therefore lead to negative effects on the global real economy and increased risk premiums in financial markets.

Major movements in longer market rates

Long-term market rates started to fall after the market in November 2023 began to really hope that the Federal Reserve was finished with rate hikes and that rate cuts in 2024 were the next step. Ten-year government bond yields fell by just over one percentage point up until the end of the year in the United States, Germany and Sweden (see Chart 2, left). A significant part of that decline in interest rates has been erased in 2024 as expectations of policy rate cuts have diminished. The volatility in long-term market interest rates has not yet had a major impact on other financial assets, which have continued to perform better over the same period (see Chart 2, right).

Chart 2. Government bond yields and expected bond market volatility
Per cent, index



Note. The chart on the right shows expected volatility in the US bond market based on option pricing. The dashed vertical line marks the date of publication of the previous Financial Stability Report.

Sources: Macrobond, U.S. Department of Treasury and the Riksbank.

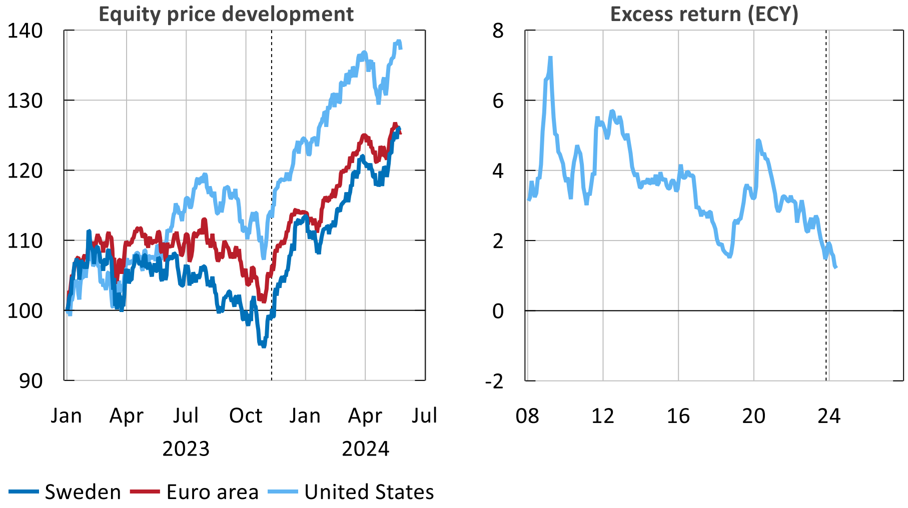
High equity valuations can increase the risk of significant price falls

Virtually all leading stock market indices have risen sharply since the previous report (see Chart 3, left). This development is driven both by expectations of a successful soft landing for the economies but also hopes of better earnings growth, partly driven by an expected technological leap thanks to the rapid development and increased use of AI technology in several industries. Crypto-assets, including Bitcoin, have also performed strongly in early 2024.[7] Common measures of stock market valuations such as earnings per share relative to market rates and generally low volatility indicate that valuations in some areas are now high, particularly in the United States and especially in the technology sector (see Chart 3, right). High valuations can increase the risk of significant price falls. Further postponements of interest rate cuts or geopolitical events are concrete near-term risks. And in the longer term, there is a risk that the market has overestimated the growth in profits and the positive effects of AI technology. Larger price falls risk spreading to other asset markets and increasing financial stability risks.

[7] Exchange Traded Funds (ETFs) track the performance of the underlying asset, such as an index or a currency. In January, US authorities authorised eleven ETFs that allow investors to have financial exposure to Bitcoin. Single-asset ETFs are not allowed in Europe, but Swedish investors can buy diversified ETFs that include Bitcoin, as well as more risky exchange-traded notes (ETNs) and trackers.

Chart 3. Equity price developments and share valuation measures

Index, 2 January 2023 = 100, percentage points



Note. The chart on the left refers to the equity indices for OMX Stockholm PI for Sweden, EURO STOXX for the euro area and S&P 500 for the United States. The chart on the right refers to the Excess CAPE Yield (ECY), which is a stock valuation measure based on the US S&P 500. It is calculated as the inverse of Robert Shiller's cyclically adjusted P/E ratio (CAPE), i.e. the so-called earnings yield, minus the 10-year real government bond yield. The dashed vertical line marks the date of publication of the previous Financial Stability Report.

Sources: Macrobond and Robert Shiller's website.

Strong credit market despite elevated credit risks

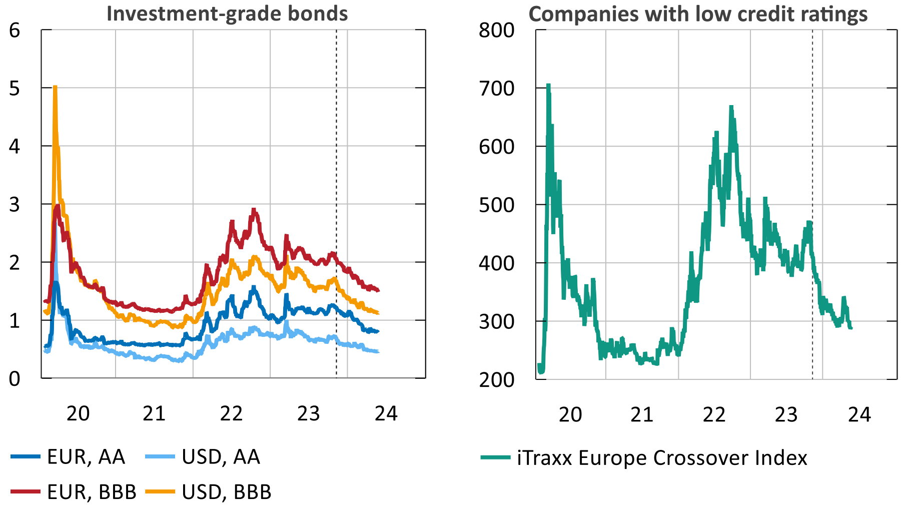
Credit markets, like stock markets, have performed strongly in anticipation of a soft landing in economies. Risk premiums have fallen for most borrower categories, including for higher credit risk bonds, and issuance volumes have been high (see Chart 4). This was also the case during the spring upturn in government bond yields. There has also been a similar development in the Swedish market for corporate bonds, where risk premiums for property companies under pressure have fallen during the spring.

At the same time, credit risks in many companies have increased during the period of interest rate hikes and weak growth. This is especially true for companies with weaker credit ratings in vulnerable sectors. In Europe, for example, more credit ratings have been downgraded than upgraded for borrowers with high credit risk over the last four quarters.[8] If the period of high interest rates becomes more prolonged and the economic outlook deteriorates, such a development could be amplified, resulting in higher risk premiums. The commercial property sector has come under pressure in several countries as a result of higher interest rates. In countries where demand for office space has also been weak, the pressure has been even more pronounced (see the fact box "Challenges for property companies globally").

[8] Refers to high yield, i.e. companies with a credit rating of BB+/Ba1 or lower, according to S&P. The ratio of downgrades to upgrades was approximately 2.1 in the second quarter of 2024 (Bloomberg).

Chart 4. Risk premiums for European and US corporate bonds

Percentage points, basis points



Note. The chart on the left shows the yield spread between 5-year investment grade corporate bonds and the corresponding government bond yields. The chart on the right is an equal-weighted index showing the yield spread between the 5-year credit default swaps of 75 European companies rated lower than investment grade and the corresponding swap rate. The dashed vertical line marks the date of publication of the previous Financial Stability Report.

Sources: Bloomberg, Macrobond, U.S. Department of Treasury and the Riksbank.

FACT BOX – Challenges for property companies globally

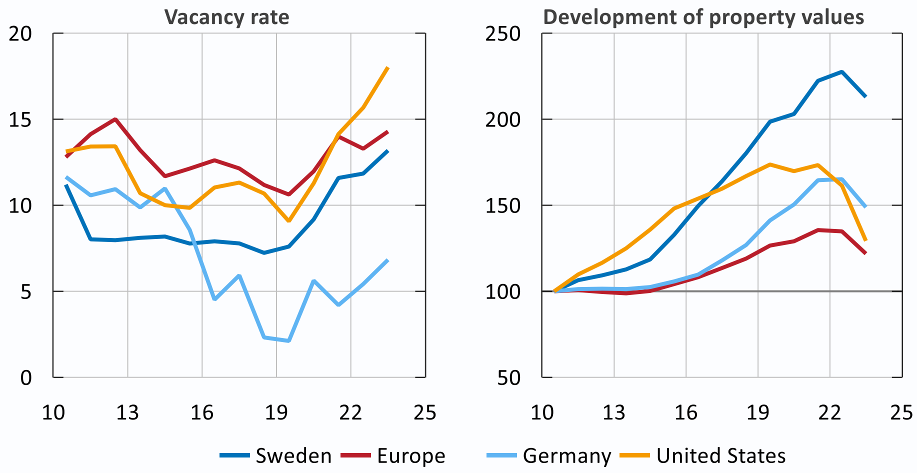
Since market interest rates started to rise in early 2022, property companies in many parts of the world have faced higher interest costs and many have made large write-downs of their property values.

In addition, vacancy rates, especially for office properties, have been increasing for several years. This is partly because the demand for offices has decreased as a result of increased teleworking. In much of Europe, work-from-home was relatively common before the pandemic, while in the United States it was relatively uncommon. As a result, demand for office space has declined, particularly in the United States and especially in major cities where office workers have long travelling times. The vacancy rate in the United States is thus significantly higher than in Europe.

The level of rent plays an important role in the value of a property. In Sweden and Germany, large parts of office rental contracts are indexed, for example with the consumer price index. This means that property companies are to some extent compensated for the rising costs of recent years. In the United States, contracts are usually not indexed in the same way. Moreover, they often run for a longer period of time, and rent levels are therefore less frequently renegotiated. Together with the increase in vacancies, this may have contributed to the fact that office property values have depreciated more in the United States than in Europe (see Chart 5). Overall, the values of office properties have been written down more than in other segments, such as retail, rental housing and hotels.

Chart 5. Development of vacancies and property values for office buildings

Per cent, index, 31 December 2010 = 100



Note. Europe does not include the UK for property values but it does for vacancies. The vacancies show a financial vacancy rate for Germany and Sweden. For the United States and Europe, vacancies are based on floor space. Vacancies have increased more in larger cities than in the countries as a whole, as there is usually a higher natural vacancy rate in smaller cities and in rural areas.

Source: MSCI.

Developments have led to a deterioration in the financial position of many property companies. This also affects the banking sector, as lending to property companies often accounts for a significant share of bank lending. For example, almost one quarter of total lending by US banks goes to property companies. In Sweden and Germany, the corresponding figures are 17 and 10 per cent respectively, which is relatively high compared to other European countries.[9]

In the United States, regional banks in particular have had to write down the values of the properties they have accepted as collateral. This has contributed to several of these banks tightening their conditions for lending to property companies, which in turn has further worsened the situation for these companies. Some German banks have lent to companies that own office buildings in the United States, and they have also needed to write down the value of their collateral and make provisions for potential loan losses. Swedish banks have so far reported limited loan loss provisions related to their lending to property companies.

The impact on the US banking sector is so far relatively limited. Should market rates remain high and the office rental market continue to be weak, the challenges for banks in the United States and elsewhere could increase. If US banks were to run into trouble, there could be spillover effects on financial markets.

[9] See *Global Financial Stability Report*, October 2023, International Monetary Fund.

2.2 Uncertainty about market rates increases risks

Rising public debt and large supply of government bonds

The question of whether increased public debt and the risk of increased government borrowing may raise long-term market interest rates is not new. However, higher market interest rates and further fiscal expansion during the coronavirus pandemic have increased vulnerabilities. In many advanced economies, public debt was already high before the pandemic but quantitative easing meant that a significant share of government issuance volumes was purchased by central banks. The current significantly higher interest rates and reduction of central bank government bond holdings through quantitative tightening entail greater risks that the increased supply of government bonds could create more volatility and require a higher level of interest rates for investors to absorb the increasing volumes. New marginal buyers such as hedge funds have become more important, but these are often highly leveraged and thus more price sensitive. This means that, in a situation where funding costs are rising, they may be forced to sell government bonds, thereby amplifying market movements.[10]

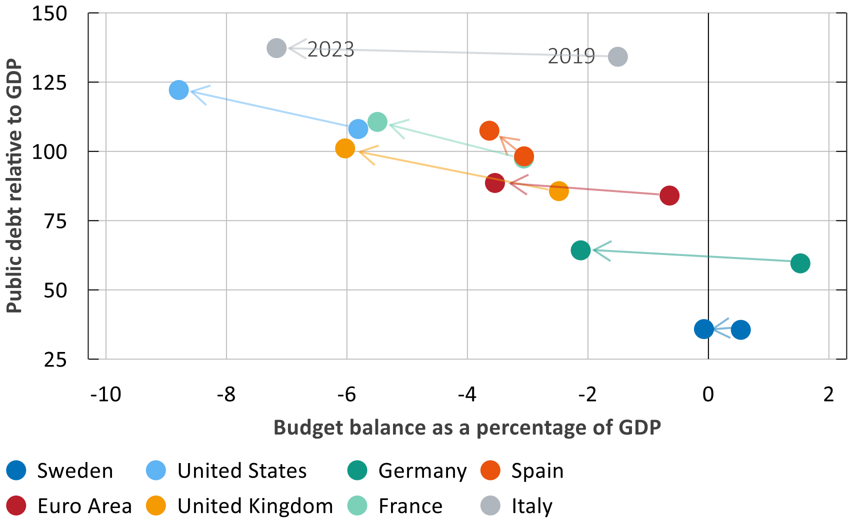
US public gross debt has been growing at an accelerating pace in recent years, reaching a historically high 122 per cent of GDP in 2023 (see Chart 6). At the same time, the US budget deficit reached 8.8 per cent of GDP.[11] Several other countries, including some of Europe's larger economies, have also significantly increased their debt during the pandemic years and deficits remain high. In Europe, heightened concerns about the financing of public debt tend to drive up market rates for countries with the highest levels of debt relative to Germany. However, yield spreads across euro area countries have decreased since the last Financial Stability Report, in line with a general increase in risk appetite. Even so, the increased focus on the debt issue and higher market interest rates, which make both refinancing maturing debt and financing current deficits more costly, risk reversing this development (see Chart 7). Countries with debt problems are particularly vulnerable unless there are clear plans to return to long-term sustainable budgetary policies. It is also imperative that countries reduce their debt to allow them instead to build up a buffer to deal with future crises. However, structural factors may make it difficult to implement fiscal tightening. For example, countries are expected to need to invest heavily in defence and infrastructure upgrades and measures to tackle climate change. Such measures can be difficult to postpone, as it can be more costly than taking them in the near term.

[10] See Higher interest rates are challenging business models, in Chapter 2.2 *Financial Stability Report 2023:2*, Sveriges Riksbank.

[11] See *Fiscal Monitor,* April 2024, International Monetary Fund.

Chart 6. Public debt and budget balance in relation to GDP

Per cent

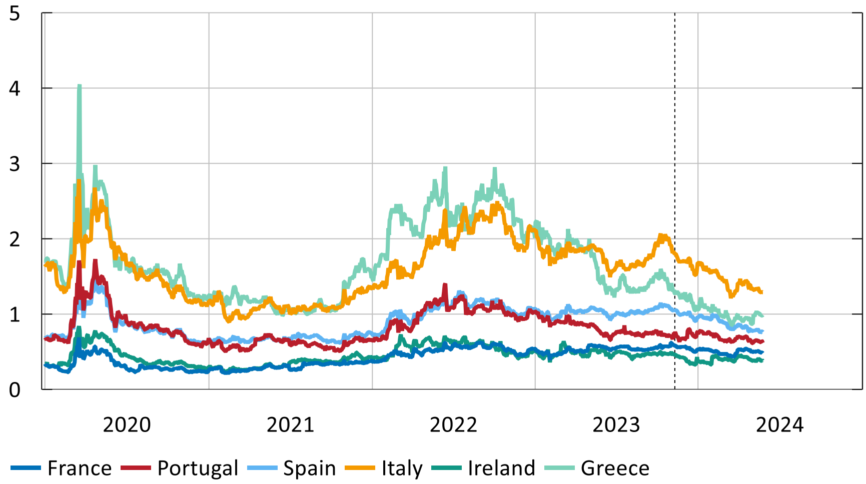


Note. Figures refer to gross debt for 2019 and 2023 respectively, with the arrow pointing to the value for 2023.

Sources: International Monetary Fund, Macrobond and the Riksbank.

Chart 7. EU countries' yield spreads in relation to Germany

Percentage points



Note. Refers to 10-year benchmark rates. The dashed vertical line marks the date of publication of the previous Financial Stability Report. Sweden has a low level of public debt and the 10-year benchmark interest rate has been quoted at roughly the same levels as the German rate for the past two years or so (see Chart 2 above).

Sources: Macrobond and the Riksbank.

3 Household and corporate sector

Resilience among mortgagors has been good on the whole, but many households have experienced strained personal finances and the number of orders for payment has increased. Consumption has also clearly declined, which, together with higher costs, is putting pressure on the earnings of household-related businesses. As a result, bankruptcies are increasing, especially in construction, retail, restaurants and domestic services. The higher interest rates have been particularly challenging for highly indebted property companies, which have been forced to take steps to improve their financial situation. The increased bankruptcies and challenges faced by the property companies have so far had limited impact on the companies' lenders. Although the financial conditions of property companies have improved, there remain challenges linked to rising funding costs and lower demand for premises.

3.1 Households are resilient but consumption has fallen

Households have had to make major adjustments

High inflation and higher interest rates have weighed on the household sector in recent years. Consumption has fallen significantly since the Riksbank started to raise the policy rate in 2022 and is weak both in historical terms and in comparison with other countries.[12] One important explanation for this is that Swedish households are highly indebted. Household debt has slowed down in recent years but it has been growing faster than income for a long time. Debts as a share of disposable income, i.e. the debt-to-income ratio, was 186 per cent at the end of 2023. Mortgages in particular have contributed to this – by the end of 2023, just over 2.3 million households had mortgages.[13] Almost 65 per cent of the mortgage volume had interest-rate periods of three months or less. The large proportion of mortgages with short interest-rate fixation periods means that the Riksbank's policy rate increases have had a large and rapid impact on household cash flows. Based on previous policy rate increases and the forecast for the policy rate, the Riksbank estimates that almost all of the expected increase in mortgage rates has reached households.

Since January 2022, households' average mortgage rate has increased from around 1.5 per cent to 4.8 per cent. Over the same period, the average household interest rate for consumption loans has increased from just under 7.2 per cent to 9.4 per

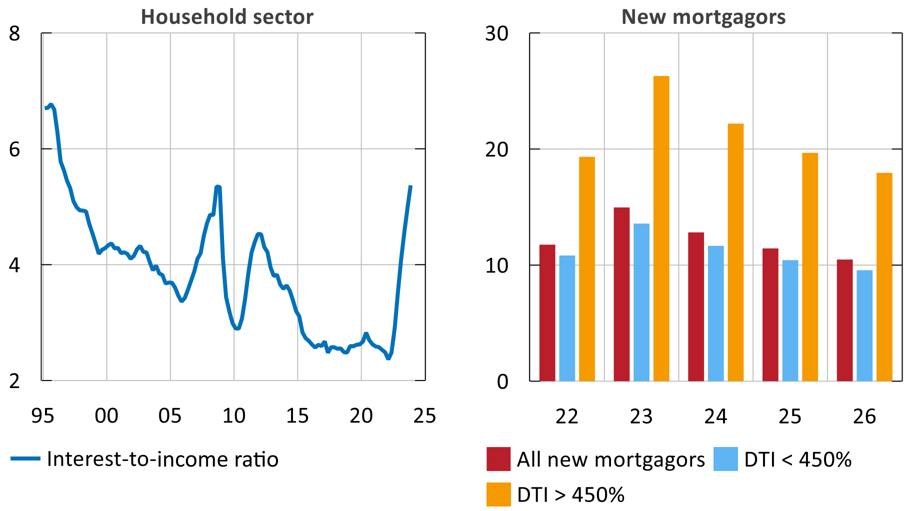
[12] See Chart A.1 in the Chart Appendix.

[13] The number of households with mortgages comes from the aggregated data Finansinspektionen collects in connection with its in-depth analysis of mortgages.

cent.[14] This has led to a rapid increase in the so-called interest-to-income ratio, which measures household interest expenditure in relation to disposable income. At the end of 2023, the interest-to-income ratio was three percentage points higher than at the beginning of 2022 (see Chart 8). The Riksbank has also calculated how the interest-to-income ratio of new mortgagors may develop in the coming years, based on the forecast for the policy rate in March and data from Finansinspektionen. The results show that households that took out a new mortgage in the autumn of 2022 will have a slightly lower interest-to-income ratio in 2026, even though mortgage rates are then expected to be slightly higher than in 2022 given the current forecast for the policy rate (see Chart 8).[15] This is because households are amortising and their disposable income is expected to increase over the period.

Chart 8. Interest-to-income ratios of the household sector and of new mortgagors

Per cent



Note. The image on the left refers to total household interest expenditure as a percentage of seasonally-adjusted disposable income. The calculation is based on everyone being able to use the 30 per cent tax relief on interest payments. The interest-to-income ratio is calculated as households' interest expenses as a percentage of their disposable income. The chart to the right shows the development of the interest-to-income ratio over time for households that were new mortgagors (excluding those increasing existing mortgages) in Finansinspektionen's sample from 2022. The bars show projections to December each year. The calculation takes into account interest rates, amortisation, interest rate periods and wage increases. DTI stands for debt-to-income.

Sources: Statistics Sweden and the Riksbank.

The higher interest rates also affect tenant-owner associations, which have had to or may have to raise fees for their members. For associations that have not taken account of higher interest rates, this may mean relatively large fee increases (see fact box "Higher interest rates affect tenant-owner association fees").

[14] The average interest rate for all loans faced by households has increased from around 3.4 per cent to 6.6 per cent over the same period according to SCB:s Financial Market Statistics.

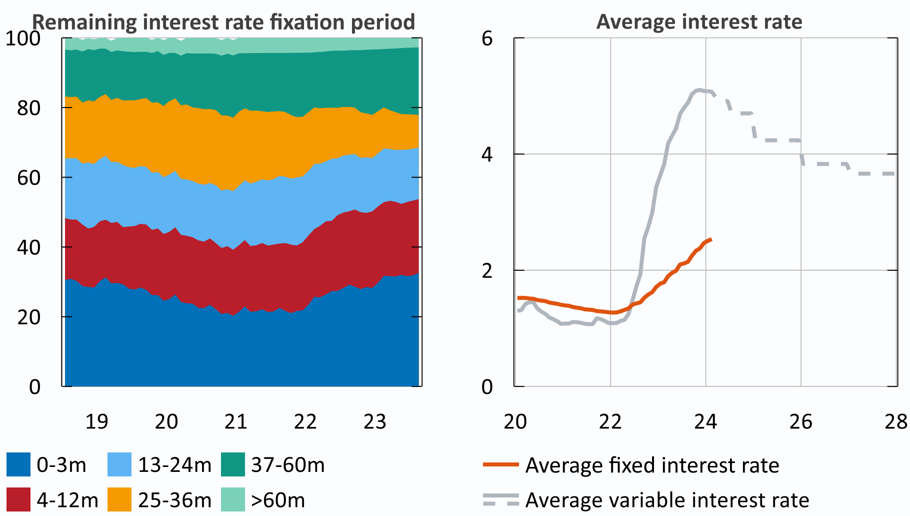
[15] See *Monetary Policy Report*, March 2024, Sveriges Riksbank.

FACT BOX - Higher interest rates affect tenant-owner association fees [16]

Tenant-owner associations generally have longer interest-rate fixation periods for mortgage rates than households, which means that they have not yet been fully affected by recent years' policy rate increases. Almost 70 per cent of the total loan volume of tenant-owner associations is tied to fixed interest rates and around 45 per cent will need to be renegotiated over the next three years (see Chart 9, left). The majority of these loans were signed before 2022, when the average fixed interest rate was 1.5 per cent. From Chart 9 (right), it can be seen that the average variable interest rate faced by tenant-owner associations in the coming years is expected to be significantly higher than 1.5 per cent, even if the policy rate is lowered. Consequently, when loans are renegotiated, the interest cost will in many cases increase. The extent to which the higher interest costs will be reflected in higher fees partly depends on whether the associations have already made provisions for higher interest costs. The rapid increase in fees in recent years may be a sign that this is the case for many associations. But for those that have not done so, fees may need to be increased as loans need to be renegotiated.

Chart 9. Remaining interest rate fixation periods and average interest rates for tenant-owner housing associations

Per cent



Note. The chart on the left refers to the share of contractual loan volume, where "m" stands for month. The chart on the right shows the average variable and fixed interest rates of tenant-owner associations. The dashed blue line refers to a forecast of the average variable interest rate for tenant-owner associations based on the historical relationship between the policy rate and the average floating interest rate for tenant-owner housing associations, and the Riksbank's forecast in the March Monetary Policy Report.

Sources: Booli Pro and the Riksbank (KRITA).

[16] In the *Financial Stability Report 2023:2*, a fact box on tenant-owner associations' fees was published with an estimate of the associations' future interest costs. The analysis here is instead based on data from Booli Pro, which includes the size of associations, their loans, interest-rate fixation periods and savings data.

Chart 10 (left) shows an example calculation of how much the fee may increase for a 50 square metre apartment, depending on when the tenant-owner association negotiates most of its loans. An association that needs to renegotiate most of its loans before the end of 2026 would, on average, have to increase the fees for a 50 square metre apartment from SEK 2,892 a month in 2022 to SEK 3,411. This corresponds to a percentage increase of 18 per cent.[17] If we look only at the associations with a high level of debt, the effect is greater.[18] In such a case, the rent for a 50 square metre apartment may need to be increased from SEK 3,002 a month to SEK 4,443, corresponding to 46 per cent (see Chart 10, right). This can be compared with an association with low indebtedness, which, according to the same calculation example, would have to increase its fee by seven per cent.[19] However, relatively few associations have a high level of debt according to our classification, that is to say a debt of more than SEK 15,000 per square metre. There are significantly more housing associations that have a debt of between SEK 10,000 – 15,000 per square metre. For these, the fees would increase by SEK 1,213 per month. For an average new mortgagor living in a tenant-owner association with that level of debt, such an increase could mean a reduction in disposable income of two per cent.[20]

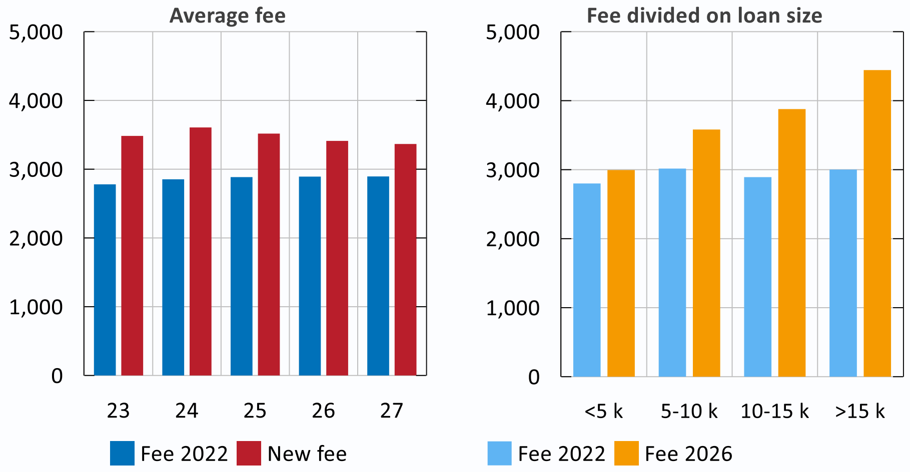
[17] The calculation assumes that the entire increase in interest costs is passed on to the fee paid by tenant-owners and that loans are renegotiated at variable interest rates.

[18] In this example, high indebtedness is assumed to be a debt of over SEK 15,000 per square metre. In our sample, only 2.9 per cent of tenant-owner associations have a high level of indebtedness; see Chart A.2 in the chart appendix.

[19] In this example, low indebtedness is assumed to be a debt of less than SEK 5,000 per square metre.

[20] Disposable income is based on data from Finansinspektionen’s in-depth analysis of mortgages and has been projected using the Riksbank’s forecast.

Chart 10. Increase in fees for a 50 square metre tenant-owned apartment
SEK



Note. The chart on the left shows how the average fee for a tenant-owned apartment of 50 square metres changes for associations with an average volume-weighted interest-rate fixation period expiring between 2022 and the respective year, i.e. those associations that have renegotiated most of their loans before the end of that year. When loans are renegotiated, they are assumed to do so at a variable rate. The loans that have been renegotiated remain in the calculation for the following year as they are affected by the variable rate. The calculation also assumes that the entire increase in the interest cost is transferred to the fee. The chart on the right shows how the fee changes between 2022 and 2026 under the same assumptions, but broken down by loan size in thousands (k) of kronor per square meters.

Sources: Booli Pro and the Riksbank (KRITA).

Other costs may also affect fees in the future

Another factor that may affect fees is how much the tenant-owner associations have saved for maintenance. One guideline is that they should save SEK 250 per square metre per year for future maintenance. However, according to statistics based on annual reports from 2022, only 28 per cent of all associations save this much. Associations with debt levels above SEK 15,000 per square metre save less on average for maintenance than those with lower debt levels (see Chart A.3 in the appendix), which may be due to the fact that just over half of these associations are newly built and are therefore likely to have lower maintenance costs in the near future compared to associations with older buildings.

Continued good resilience among mortgagors

Although consumption has declined significantly, the debt-servicing ability of households with mortgages has remained good. A contributing factor to this is the combination of amortisation requirements, mortgage caps and banks' credit assessments. The fact that the labour market has so far withstood the downturn relatively well has also helped households. For those mortgagors who have suffered a loss of income and are having problems paying their loans, it is positive that the amortisation requirements are designed with a degree of flexibility whereby mortgagors can be granted exemptions for special reasons.

Many households have also been able to use the savings buffers they built up during the pandemic.[21] However, in the absence of up-to-date data on the distribution of household assets, it is difficult to assess which households used their savings to cover their increased expenditure and how much savings different households have left. With inflation expected to fall back, interest rates to gradually decline and real disposable income to increase, household consumption is expected to recover from the first half of 2024 onwards.

Nevertheless, personal finances have been strained for many households. Approximately 38,500 temporary mortgage repayment exemptions have been granted between January 2022 and September 2023, and the number of people with, and applications for, payment orders has increased.[22] [23] In addition, 22 per cent more people applied for debt restructuring in 2023 than in the previous year. According to the Swedish Enforcement Authority, consumer loans account for a large share of the increase in payment orders, and are increasingly the reason behind applications for debt restructuring. One contributory reason why more and more households with consumer loans are experiencing payment problems may be that there are shortcomings in credit assessment. There are indications that many households have been granted unsecured loans despite the fact that they may have had cash flow deficits.[24] Since the summer of 2023, consumer credit has started to grow faster again (see Chart 11). There are probably several reasons for this development. For example, more restrictive lending for mortgages may have contributed. If households with small margins are taking out new consumer loans, both payment orders and debt restructuring may increase even more in the future, which, in turn, may lead to even higher loan losses among consumer credit banks.

Subdued house prices are leading to lower demand for mortgages

The housing market has also been affected by high inflation and higher interest rates. Fewer transactions have been taking place and compared to the peak in early 2022, housing prices are about 13 per cent lower (see Chart 11). This is reflected in the decline in household demand for mortgages – fewer households are taking out new mortgages and they are also taking out smaller loans than before.[25] Mortgages have thus only grown by just over 0.5 per cent at an annual rate in recent months, which is low by historical standards (see Chart 11). More stringent credit assessments, together with the higher cost environment, may also have contributed to the low credit growth as fewer households are being granted mortgages. However, an increasing

[21] Household savings increased significantly during the pandemic. Article in *Monetary Policy Report*, September 2023. Sveriges Riksbank.

[22] Fler ansöker om skuldsanering (More people applying for debt restructuring), February 2024. Swedish Enforcement Authority

[23] Antalet amorteringsundantag har stabiliserats (Number of amortisation exemptions has stabilised), November 2023. Finansinspektionen

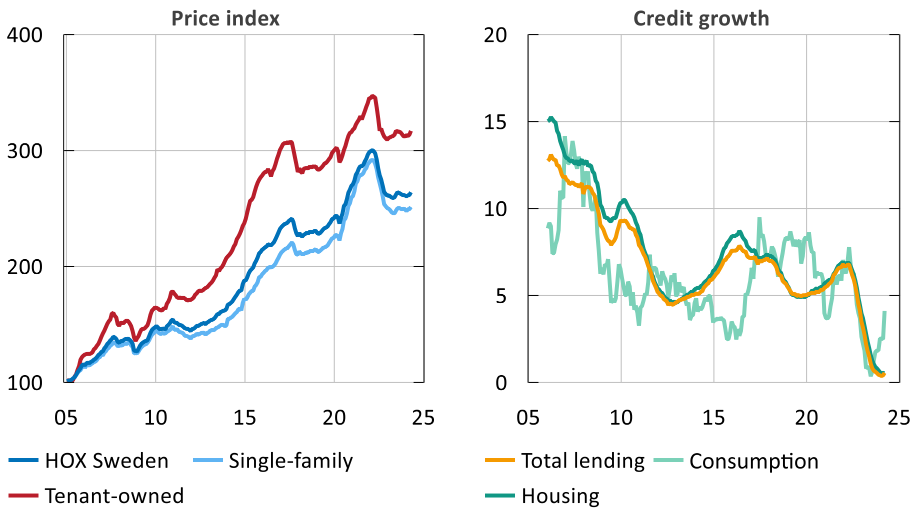
[24] Swedish consumer credit, December 2022. Finansinspektionen

[25] The Swedish Mortgage Market, March 2024. Finansinspektionen

share of households expect higher housing prices in the future. As inflation and interest rates are expected to fall, the Riksbank also expects housing prices to rise in the coming years and thus also household demand for mortgages.

Chart 11. House price index and credit growth

Index, 1 January 2005 = 100, annual percentage change



Note. The chart on the left refers to seasonally adjusted house prices. The chart on the right refers to loans from monetary financial institutions (MFI) to households expressed as an annual percentage change.

Sources: Valueguard and Statistics Sweden.

3.2 Financial challenges facing property companies have decreased

Household-related businesses have been the hardest hit by the lower demand

Economic activity in Sweden has declined slightly and is largely at the same level as in the fourth quarter of 2021. Business sentiment remains low but has generally improved over the past year or so, as reflected in indicators such as the Purchasing Managers' Index and the Economic Tendency Survey.

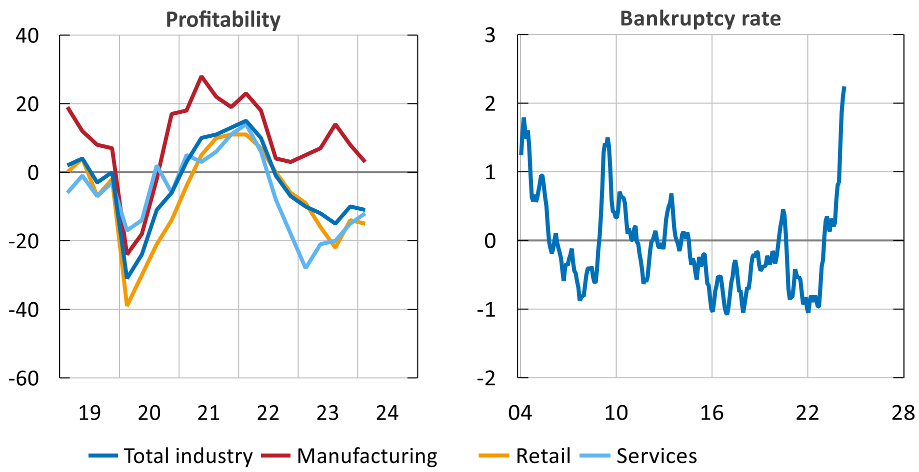
Profitability is good among both export companies and the corporate services sector. This can partly be explained by strong demand in these sectors, which has allowed these companies to pass on their increased costs to customers, something they intend to continue to do.[26]. In contrast, companies that primarily sell goods and services to households continue to face major challenges, as demand is subdued and costs is high resulting in low profitability (see Chart 12). Higher funding costs have also posed chal-

[26] See *The Riksbank's Business Survey*, March 2024, Sveriges Riksbank.

lenges for companies with loans. Since the third quarter of 2022, the aggregate corporate interest-to-income ratio has increased from 4.6 per cent to about 11 per cent at the end of 2023.

Chart 12. Corporate profitability and bankruptcy rate

Net figures, standard deviation



Note. The left-hand chart refers to various sectors' assessment of current profitability from the National Institute of Economic Research, seasonally adjusted. The right-hand chart shows the normalised bankruptcy rate calculated as the number of corporate bankruptcies among limited companies in relation to the number of active companies with mean value 0 and standard deviation 1, 6-month moving average. The number of active companies in 2024 is assumed to be the same as in 2023.

Sources: National Institute of Economic Research and Statistics Sweden.

According to the Riksbank's Business Survey in February 2024, household-related businesses clearly expect interest rates to be cut in the future and that this will lead to demand for their goods and services rising anew. However, it may take longer than companies expect for demand and profitability to rise. One reason could be that the decline in inflation stalls and policy rates cannot be cut at the pace expected by the market. Moreover, it takes some time for higher interest rates and an economic downturn to make an impact.

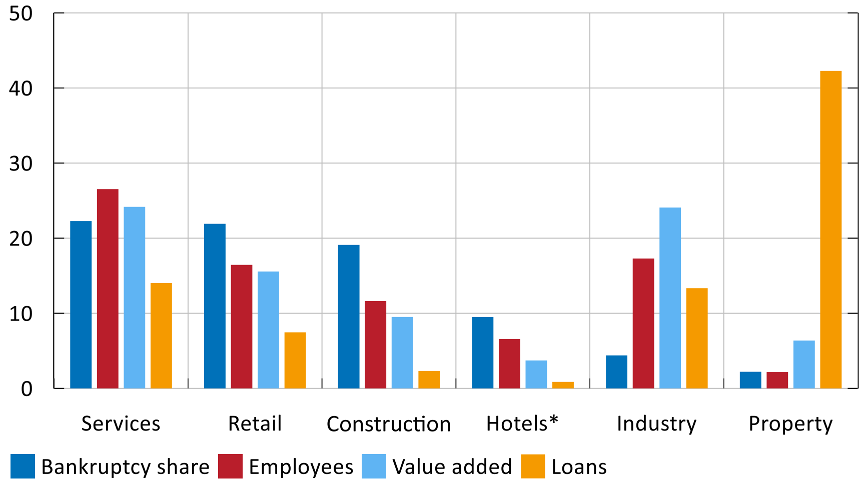
High bankruptcy rate but limited impact on lenders so far

Bankruptcy rates continue to rise and are higher than during the 2008 global financial crisis (see Chart 12). However, it is primarily companies with few or no employees that are going bankrupt, which can partly be explained by the weak economic development they have long experienced, during which they have gradually reduced their number of employees.[27]

[27] See the article "Company bankruptcies on the rise" in *Financial Stability Report*, 2023:2, Sveriges Riksbank.

Chart 13. Share of bankruptcies, employees, value added and loans by sector

Per cent



Note. Bankruptcies refer to total bankruptcies of limited liability companies between 2022 and March 2024. Value added refers to contribution to GDP. Not all sectors are represented in the chart and therefore the bars do not add up to 100. Hotels* refers to enterprises in the hotel, travel and leisure industry. Loans refers to loans from Swedish monetary financial institutions (MFIs) and outstanding commercial paper and bonds as of March 2024. The data on the number of employees and value added refer to the end of 2022.

Sources: Statistics Sweden and the Riksbank (KRITA).

Most corporate bankruptcies are taking place in those sectors most affected by subdued household demand, such as domestic services, retail, construction and restaurants (see Chart 13). For some companies, bankruptcy has also been a consequence of their inability to repay the tax deferrals granted to them in conjunction with the coronavirus pandemic. Few companies in the sectors where bankruptcies are now most common have loans from credit institutions and existing loans are usually relatively small.[28] Consequently bankruptcies have had a limited impact so far on banks in terms of their loan loss provisions. As long as bankruptcies continue to mainly affect companies with small or no loans, the Riksbank deems that there will be no direct consequences that could threaten financial stability. On the other hand, there may be consequences in the form of higher unemployment, lower economic activity and even lower demand for property companies' commercial premises.

Business loans are decreasing

The annual growth rate of total corporate borrowing has been negative over the year, declining by just under two per cent in March 2024. Corporate borrowing via the corporate bond market has decreased more than corporate borrowing via banks. Companies' loans have declined in relation both to their aggregate earnings and to macroeconomic variables such as GDP, suggesting that the risks associated with the loans have been mitigated.

[28] However, they may have other debts such as tax liabilities and trade creditors, meaning that non-payment may lead creditors to file bankruptcy petitions.

Corporate bank borrowing tends to covary with both business sentiment and business investment growth. These have been subdued for some time, which suggests that companies' demand for loans has fallen. But there are also signs that the lower rate of borrowing is due to a somewhat lower supply from lenders. For example, eight per cent of companies are finding it difficult to fund their operations with bank loans, which is a slightly higher proportion than normal.[29] Another sign of a lower supply of loans may be that the number of companies that do not have a bank loan but have applied for a bank loan has increased slightly, while the share among these that have been granted a bank loan has decreased slightly in the last six months.[30] The reduced supply of loans may be due to banks being more cautious about lending to companies that normally face more difficulties in a weaker economy.

Measures by property companies have led to reduced loans

Within the corporate sector, highly indebted property companies pose the greatest threat to financial stability. Although their financial position and debt-servicing ability have been affected by higher interest rates, the impact on banks and other lenders has been limited so far. This is partly because many property companies have taken measures to strengthen their balance sheets. For example, financially weak property companies have managed to sell properties to stronger property actors despite the subdued turnover in the transaction market.[31]

Property companies have also issued new equity to reduce their indebtedness. By the first quarter of 2024, more than 20 property companies had raised SEK 30 billion in new equity. In addition, many property companies have reduced investment in their existing properties by just over 20 per cent. They have also sharply reduced new construction of rental housing, for example.

These measures have helped struggling property companies to cope with tighter financial conditions. For example, a sample of weaker property companies have reduced their loans by more than 9 per cent since the beginning of 2023.[32] However, other property companies have increased their borrowing, often to finance the purchase of properties from weaker companies. Overall, therefore, property sector loans have only decreased by three per cent since the beginning of 2023. At the same time, operating profits have increased in the sector, and the debt-to-income ratio has thus declined. For example, the net debt ratio among larger property companies has fallen from just over 17 to just under 14 since the beginning of 2022.[33] From a financial stability perspective, it is positive that measures are being taken and that vulnerable

[29] See NIER Economic Tendency Survey, April 2024. Moreover, according to the Deloitte/SEB CFO survey, in both 2022 and 2023, many CFOs across industries have experienced a gradual decline in their willingness to lend. In spring 2024, the willingness to lend has improved somewhat, but remains at a slightly lower level than normal.

[30] Based on the number of business and credit information enquiries made by banks at a major credit reference agency.

[31] In a sample of 34 property companies, property sales for approximately SEK 130 billion have been made since the third quarter of 2022. Almost 90 per cent of these have been attributable to weaker property companies with a credit rating equivalent to BBB- or less.

[32] Refers to a sample of property companies that have a credit rating equivalent to BBB- or less.

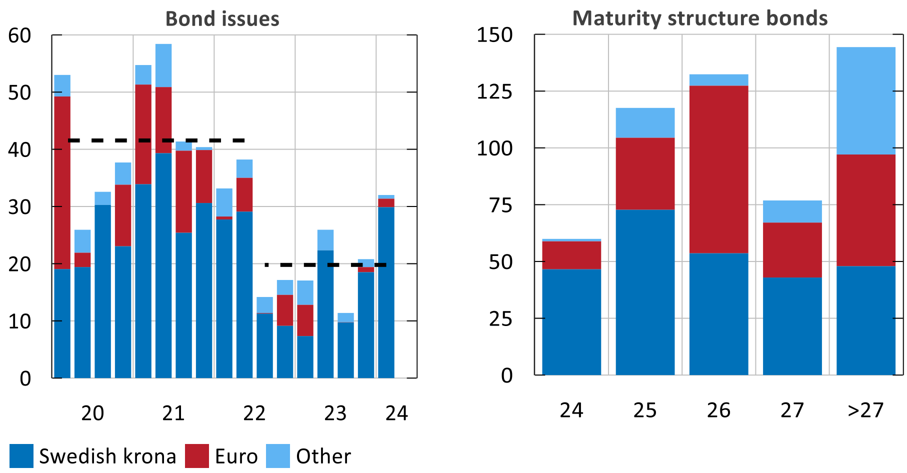
[33] The debt ratio is defined as the net debt (interest-bearing liabilities less cash and cash equivalents) of property companies in relation to operating profit.

property companies are reducing their loans, even though some measures are having negative effects on the real economy, such as falling housing investment and rising unemployment in the construction sector.

Lower risk premiums and more corporate bond issues

As a result of market expectations of lower policy rates, risk premiums for property company bonds have been declining since the end of 2023. This has made it more attractive for many property companies to finance their operations via the bond market, which has resulted in slightly lower refinancing risks. Since October 2023, Swedish property companies have issued bonds of just over SEK 50 billion, while issuance in foreign currency has been very limited (see Chart 14).

Chart 14. Bond issuance and maturity structure of property companies
SEK billion



Note. The left-hand chart refers to bond issuance by Swedish property companies and the dashed lines refer to the average issuance volume between the first quarter of 2020 and the second quarter of 2022, and the third quarter of 2022 and the first quarter of 2024, respectively. The right-hand chart refers to the maturity structure of their outstanding bonds as of March 2024.

Source: The Riksbank (SVDB).

Moving forward, however, there will be large maturities of bonds in both Swedish kronor and foreign currency (see Chart 14). Many property companies will probably be able to refinance a large part of their maturities in Swedish kronor on the bond market. However, their prospects could deteriorate if the current economic outlook and interest rate prospects were not to materialise. At the same time, the possibilities for property companies to refinance foreign currency bonds are more uncertain. So far, it has been both more difficult and more expensive for most Swedish property companies to issue bonds in euros than for property companies in other countries. Some property companies are likely to have to deal with bond maturities with a combination of new bank loans and property sales. To increase the likelihood of the bond market in euros being available when refinancing needs arise, it is important for property companies to continue to take measures and strengthen their balance sheets.

Uncertainty persists over current property values

Property companies have continued to write down their property values. A sample of 34 large property companies has written down property values by an average of just over 10 per cent compared to the summer of 2022.[34] But there are major differences between companies, with some having written down values by around 20 per cent and others by only two per cent. According to property companies, the main contribution to the write-downs comes from higher yield requirements as a result of higher interest rates. Vacancies, rent levels and investment needs also affect property values. However, there is a lack of transparency when it comes to assumptions about these and how they have changed. Even so, individual valuations made before interest rates started to rise suggest that the assumptions have been optimistic. It is likely that several other property companies have also made optimistic assumptions in their valuations.

On the basis of the information available, property values may continue to be adjusted downwards somewhat in the short term, especially as the earlier rise in interest rates has probably not had a full impact on yield requirements. In addition, other earlier optimistic assumptions affecting property values may also need to be adjusted. Stock market pricing of property companies relative to their net asset values indicates that property values, on average, should be adjusted downwards by a further almost six per cent. The pricing suggests that the adjustment should be larger for property companies focused on residential and office space.

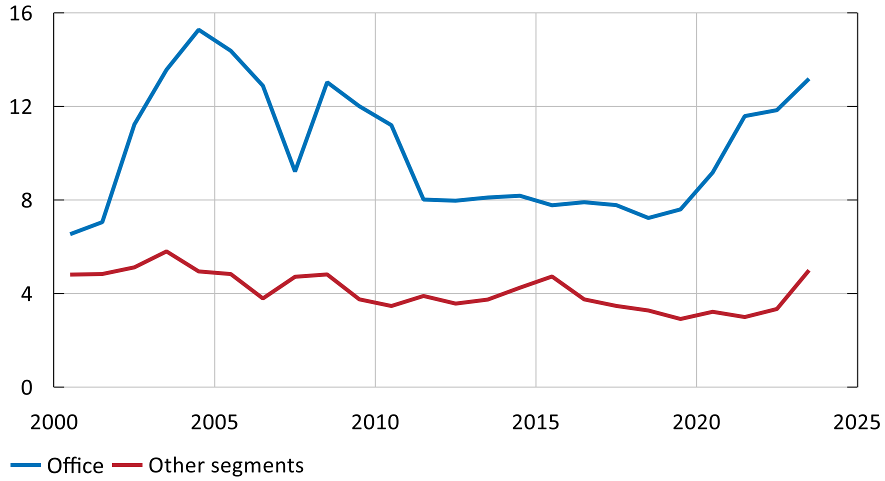
Since last autumn, the rental market for offices and some retailers in particular has been somewhat weaker. For example, vacancy rates have continued to rise from already elevated levels and amounted to just over 13 per cent in the office segment in Sweden at the end of the fourth quarter of 2023 (see Chart 15).[35] Overall, vacancies have risen most in office properties in poorer geographical locations. The higher vacancy rates have contributed to an improvement in the negotiating position of tenants in relation to property companies. This may in turn have contributed to rent levels in the renegotiation of existing leases occasionally being lower and to more temporary rent discounts. All in all, rent increases have been somewhat lower than would be justified by the indexation of rent levels that normally takes place at the beginning of the year. If rent levels continue to be weak or even fall, this will have a negative impact on property values and result in even greater write-down requirements.

[34] According to the Swedish property index MSCI, which is another broad sample of Swedish commercial properties, the value of commercial properties decreased by just over 6 per cent on average up to the end of 2023.

[35] The vacancy rate refers to the financial vacancy rate according to MSCI (MSCI Data Notice). According to Citymark, which measures vacancy rates as unlet space for office properties in metropolitan areas, office vacancy rates have continued to rise in 2024.

Chart 15. Vacancies in offices and other property segments

Per cent



Note. Refers to vacancies throughout Sweden. Other property segments include retail, hotels, residential and logistics, weighted by the market value of each segment.

Source: MSCI.

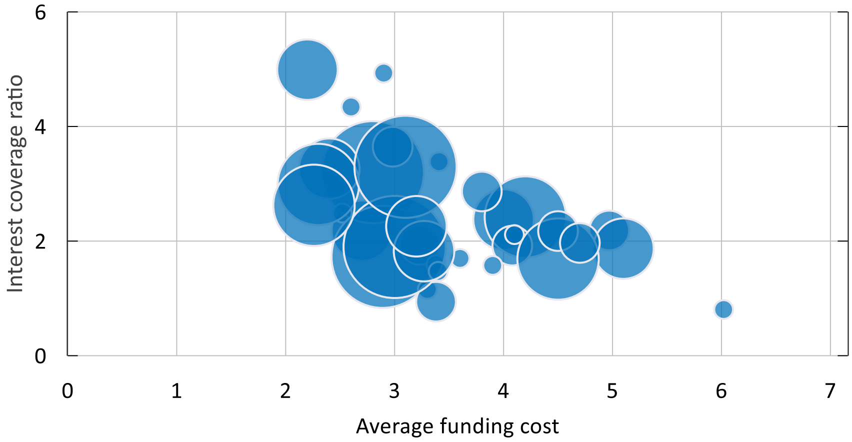
Property companies' interest coverage ratios expected to stabilise

Several of the property companies subscribed to new interest derivatives at the end of last year when long-term market rates were relatively low, which has resulted in longer interest-rate fixation periods and, at least in the short term, lower interest costs.[36] For many companies, this, combined with the measures taken, has led to an improved financial situation and better-than-expected developments in their interest coverage ratios. However, several companies already have low average funding costs compared to prevailing market rates. At the end of the first quarter of 2024, the average volume-weighted funding cost was 3.2 per cent among the 34 larger property companies. Consequently, as loans are renewed, the funding costs of many property companies will rise. Property companies with low interest coverage ratios are particularly vulnerable (see Chart 16).

[36] The derivatives this concerns are interest-rate swaps, financial contracts that make it possible for two parties to exchange interest payments during a fixed period. One party pays a variable interest rate (usually STIBOR with a three-month maturity) to the other party, in this case the property company, which in turn pays a fixed interest rate.

Chart 16. Wide variation in property companies' key financial indicators

Ratio, per cent



Note. Refers to a sample of 34 larger property companies as of the first quarter of 2024. The interest coverage ratio is defined as the ratio of operating income to interest expense. The interest coverage ratio is expressed on a rolling 12-month basis. Average funding cost according to property companies' quarterly reports. The size of the bubbles reflects the size of the companies' total interest-bearing liabilities.

Sources: Sedis and the Riksbank.

However, in a base scenario where the policy rate is cut according to the Riksbank's latest forecast and the rental market allows rent increases, interest coverage ratios will stabilise for many property companies.[37] A lower policy rate will limit the increase in corporate interest costs rather than leading to lower interest costs for many. Chart 17 illustrates this for a sample of 34 larger property companies. On the other hand, even in such a scenario, the interest coverage ratios of some companies may develop weakly unless they take measures to improve their financial situation.

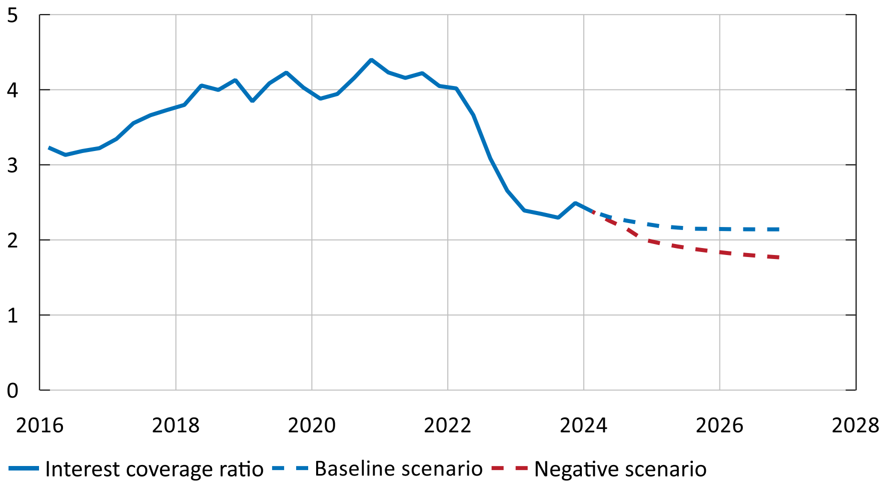
In a much worse scenario, where vacancies increase and rental income decreases while the policy rate is cut by less than the Riksbank's latest forecast, property companies' interest coverage ratios would gradually continue to deteriorate (see red line in Chart 17).[38] On average, it would be just over 1.8 at the end of 2025 for these 34 property companies. In such a scenario, some of them would not fulfil lenders' financial conditions or the credit rating agencies' interest coverage ratio requirements for

[37] In the baseline scenario, the policy rate is cut by 1.25 percentage points until the end of 2025, in line with the Riksbank's forecast in March 2024, which includes the Riksbank's decision to cut the policy rate to 3.75 per cent in May 2024. During 2024, rental income is assumed to increase by 4, 4.5 and 5 per cent for companies with commercial properties, companies with both commercial and residential properties and companies with residential properties only, respectively. In 2025, rental income is assumed to increase by 1.5, 3 and 5 per cent respectively, and in 2026 rental income will increase by 2 per cent for all property segments.

[38] In the worse scenario, the policy rate is cut once in 2024 to 3.75 per cent and is assumed to remain at this level thereafter. If this scenario were to occur, it is likely that the risk premiums faced by property companies would increase. However, in the scenario they are assumed to remain unchanged throughout the period. During 2024, rental income is assumed to decrease by 10 per cent for property companies with only commercial premises, to decrease by 5 per cent for those with both commercial and residential properties and to increase by 5 per cent for those with only residential properties. In 2025, rents will increase by 1, 3 and 5 per cent for companies with only commercial properties, for companies with both commercial and residential properties and for companies with only residential properties, respectively.

an investment grade credit rating. This could lead to higher costs for new loans and affect the ability of property companies to issue new bonds.

Chart 17. Interest coverage ratio scenarios for larger property companies
Ratio



Note. Refers to volume-weighted interest coverage ratio for 34 property companies expressed as rolling 12 months. The dashed blue line refers to a base scenario and a situation where the policy rate continues to be lowered in line with the Riksbank's forecast in March 2024 and property companies' rental income increases throughout the period. The red dashed line represents a negative scenario and a situation where the policy rate remains at 3.75 per cent and the rental market weakens, with rental income for commercial premises declining in 2024 and then developing weakly.

Sources: Sedis and the Riksbank.

At the end of 2022, many smaller property companies had a lower interest coverage ratio than many of the 34 larger property companies. They may thus find it more difficult to maintain an interest coverage ratio above one and to fulfil their obligations to lenders.[39] It is uncertain to what extent some of these smaller property companies can cope with current interest rate levels, and they would face particular difficulties in the negative scenario.

Although the financial conditions for property companies have generally improved since last autumn, there remain challenges linked to some companies' balance sheets. In a situation where the rental market continues to weaken and interest rates remain at higher levels, this could put pressure on financial ratios as well as property values, which could cause problems for vulnerable property companies. There is therefore reason for property companies to continue taking measures to strengthen their balance sheets. This is particularly important if many property companies are to avoid ending up in a situation in which they have taken on too much risk.

[39] At the beginning of 2023, about 70 per cent of Swedish banks' exposures to commercial property companies in Sweden were to smaller property companies.

4 The Swedish financial system

The Swedish financial system is working well overall and the availability of the infrastructure systems is high. The major banks have good profitability and low loan losses, and are expected to be able to handle a much weaker development in the property sector, for example. The situation is worse for some consumer credit banks where loan losses are increasing. Although these participants are smaller than the major banks, they can be systemically important as a group. The Riksbank has previously pointed out risks linked to funds allowing rapid withdrawals while investing in assets that are not liquid, such as corporate bonds. The pension, insurance and fund sectors in Sweden are becoming increasingly interlinked, mainly due to the growth of unit-linked insurance and the premium pension scheme. Therefore, financial stability may be affected by both pension savers' incentives to switch funds under stress and pension providers' requirements for the funds they offer to pension savers. The deteriorating security situation means that the risk of cyber attacks remains high, and attacks are becoming increasingly sophisticated. This requires all participants in the financial system to be highly prepared.

4.1 Major banks resilient, but increased risks for consumer credit banks

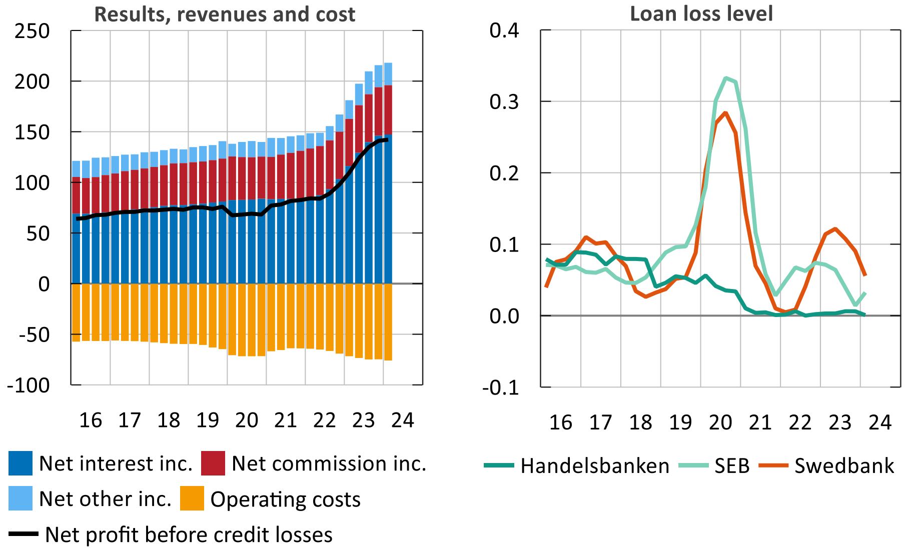
Resilience comes from historically high profitability

The profitability of the major Swedish banks has long been high, even compared with their European peers (see Chart 18, left).[40] They also have capital ratios well above the regulatory requirements as well as the banks' own internal target levels corresponding to 1-3 percentage points above the requirements. The banks' good profitability is partly due to very low loan losses (see Chart 18, right). However, the main reason is that their net interest income is high because they have been able to increase lending rates above the increased cost of their funding. Net interest income in relation to interest-bearing assets, the so-called net interest margin, has increased significantly since the Riksbank started raising the policy rate. The rapid increase in net interest margins has also been observed among banks in other countries where variable interest rates on loans predominate.

[40] The major Swedish banks are Handelsbanken, SEB and Swedbank.

Chart 18. Operating profit and loan loss level for major Swedish banks

SEK billion, per cent



Note. Data for operating profit refer to Handelsbanken, SEB and Swedbank. Both charts show data rolled over four quarters.

Sources: Banks' interim reports and the Riksbank.

Banks' earnings expected to decline going forward

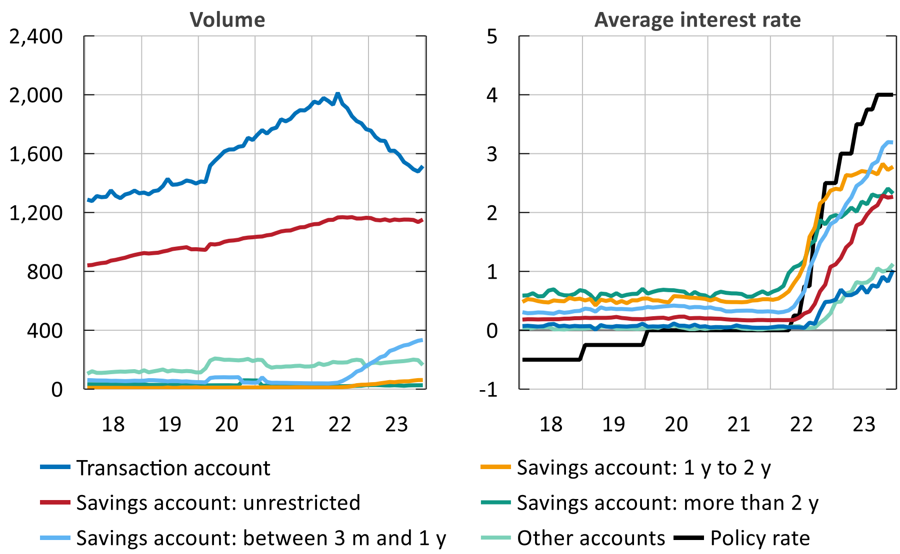
The increased competition between banks for deposits and the growing demand for higher-interest savings accounts result in a decline in the banks' margins on deposits. In addition, the Riksbank's sales of securities will, among other things, result in a decrease in the total amount of deposits (see the article "How does quantitative tightening affect banks?"). This means that banks will have to rely more on market funding, for example by issuing more covered bonds. This likely means that their funding costs will increase, compared to if they had a higher proportion of funding through deposits, as the interest rate on covered bonds is usually higher than the interest rate on deposits. Reduced deposits and more expensive funding will negatively affect their margins. At the same time, there are signs that competition for lending to households and firms is increasing, which may further reduce margins. However, the major Swedish banks are in a good starting position and are expected to continue to have good profitability.

Households more likely to choose fixed-term accounts

Since 2022, deposits in transaction accounts at the banks have decreased, while deposits in fixed-term savings accounts with withdrawal limits have increased (see Chart 19, left). This is particularly the case for household deposits, while the decline in non-financial corporations' deposits in transaction accounts has not been offset by an increase in other accounts. Banks have gradually been raising deposit rates since the policy rate started to be raised in 2022. However, interest rates on transaction accounts have not increased at the same rate as on savings accounts (see Chart 19, right), which probably explains why many depositors have chosen to shift their deposits to fixed-term savings accounts.

Chart 19. Deposit volume and interest rates by account type

SEK billion, per cent



Note. The charts show deposit volumes and interest rates where the deposits are in Swedish kronor.

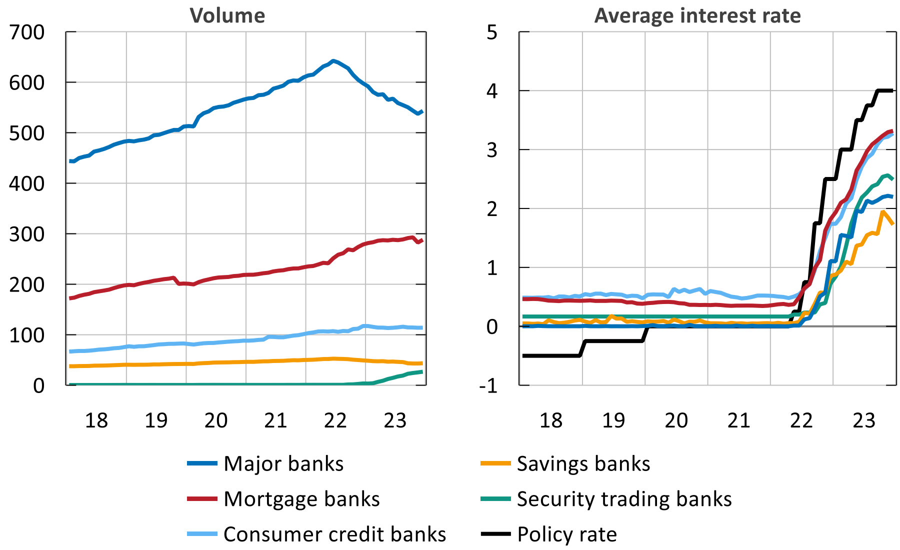
Source: The Riksbank.

The major banks have also lost some household deposits to smaller banks (see Chart 20, left) that offer higher interest rates, especially mortgage banks and consumer credit banks (see Chart 20, right). In a previous analysis, the Riksbank has shown that deposits may be more flighty at some smaller banks. During the period observed by the Riksbank, consumer credit banks had larger monthly outflows of uninsured deposits than other bank types. Some consumer credit banks and security trading banks also experienced larger deposit outflows during the outbreak of the coronavirus pandemic.[41] The increased use of deposit platforms by consumer credit banks may contribute to an increase in deposit volatility (see the Fact Box "Saving via platforms")

[41] See *Financial Stability Report 2023:2*, Sveriges Riksbank.

Chart 20. Deposit volumes and interest rates in different types of banks

SEK billion, per cent



Note. The charts show deposit volumes and interest rates on unrestricted savings accounts where the deposits are from households and in Swedish kronor.

Source: The Riksbank.

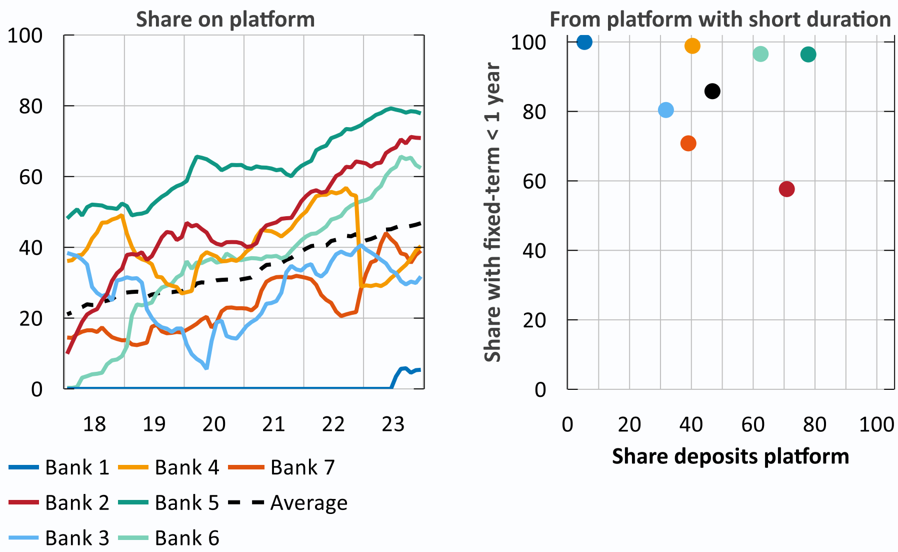
FACT BOX – Saving via platforms

Several consumer credit banks currently obtain deposits through deposit platforms. A deposit platform is a digital marketplace where depositors can move their money from one bank to another with relative ease. This is done by the platform owner acting as intermediary and setting up accounts with the banks on behalf of the depositor. The most common form of platform allows a depositor to actively choose to move funds between savings accounts with different maturities at different banks. There are also firms offering different types of automated solutions, which do not require active choices. Instead, the savings are automatically moved between different accounts and banks to chase the highest possible interest rate for the customer – however, these firms generally have small volumes.

The share of consumer credit banks' deposits channelled through platforms has increased in recent years (see Chart 21, left), and represents a very large share for some of the banks (see Chart 21, right). The majority of these deposits are held in unrestricted or fixed-term savings accounts with maturities of up to one year, allowing depositors to move their money relatively quickly.

Chart 21. Share of deposits from platform over time and share with a fixation period less than one year

Per cent



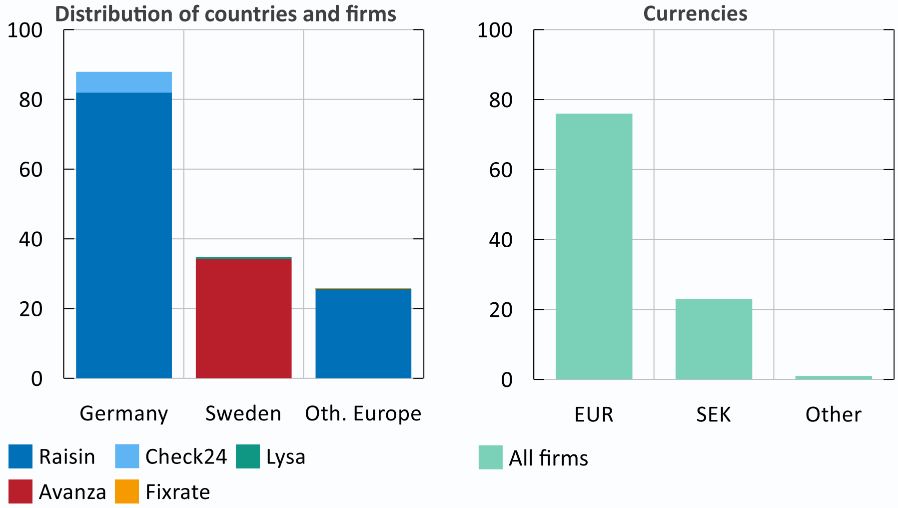
Note. The chart shows banks with deposits via platforms, the majority of which are consumer credit banks.

Source: The Riksbank.

For the Swedish banks using deposit platforms, most of the volumes are on the platform provided by the German operator Raisin (see Chart 22, left). Raisin is mainly active in the German market but significant volumes are also linked to the platform from other major European countries such as the UK, the Netherlands and Spain. As a result, a large share of the deposits received by Swedish banks through the platforms are denominated in euro (see Chart 22, right). The next largest player is Avanza, which, like Raisin, enables depositors to move savings between savings accounts at affiliated partner banks.

Chart 22. Platform deposits by country, agent and currency

SEK billion, per cent



Note. The charts show banks with deposits via platforms. The majority of these are consumer credit banks.

Source: The Riksbank.

Many of the banks that receive a large share of their foreign currency deposits through platforms also have a large asset side in the form of foreign currency loans. However, for some, the currency allocation between the liability and asset side differs. Furthermore, these banks operate outside Sweden exclusively through branches, which means that it is the Swedish deposit guarantee scheme that covers the deposits that the banks receive from abroad.

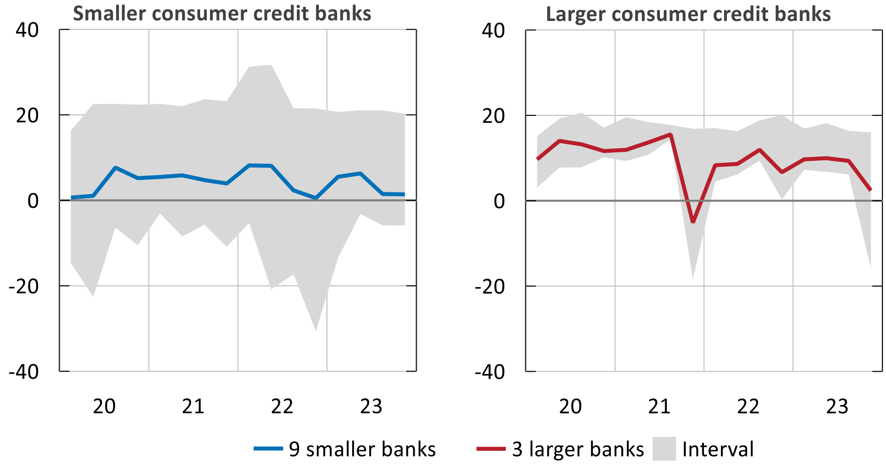
The Riksbank's analysis shows that for those consumer credit banks that had elevated deposit outflows when the coronavirus pandemic broke out, deposits from platforms accounted for a larger share of the outflows than deposits in more conventional accounts. This could suggest that platform deposits are more flighty than regular deposits and could therefore pose risks to banks that hold a lot of such deposits. If a larger share of the banking sector's deposits were to be on such platforms, this could increase risks to financial stability.

Increased risks for consumer credit banks

As a group, consumer credit banks are less profitable than the major Swedish banks, but the variation is large, especially with regard to the smaller consumer credit banks (see Chart 23).

Chart 23. Return on equity for different types of banks

Per cent



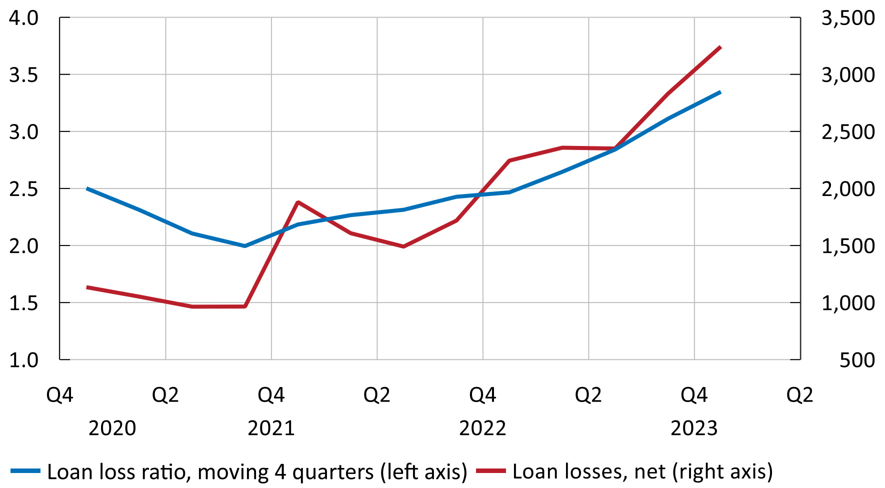
Note. The chart shows equity-weighted averages, and the grey range shows the spread. Smaller consumer credit banks in the sample include Avida Finans, ICA Banken, Ikano Bank, Marginalen Bank, Medmera Bank, Northmill Bank, Qliro, Svea Bank and TF Bank. Larger consumer credit banks in the sample include NOBA Bank Group, Norion Bank and Resurs Bank.

Sources: Banks' interim reports and S&P CapIQ Global.

One factor that has contributed to the relatively low profitability of consumer credit banks is their large loan losses, which have also increased over the past two years (see Chart 24). This is probably because interest rates and inflation have risen and households have found it more difficult to make interest payments.

Chart 24. Loan losses at consumer credit banks

Per cent, SEK million



Note. Consumer credit banks in the sample include Avida finans, ICA banken, Ikano Bank, Marginalen Bank, Medmera Bank, Northmill Bank, Qliro, Svea Bank,TF Bank, NOBA Bank Group, Norion Bank and Resurs Bank.

Sources: Banks' interim reports and S&P CapIQ Global.

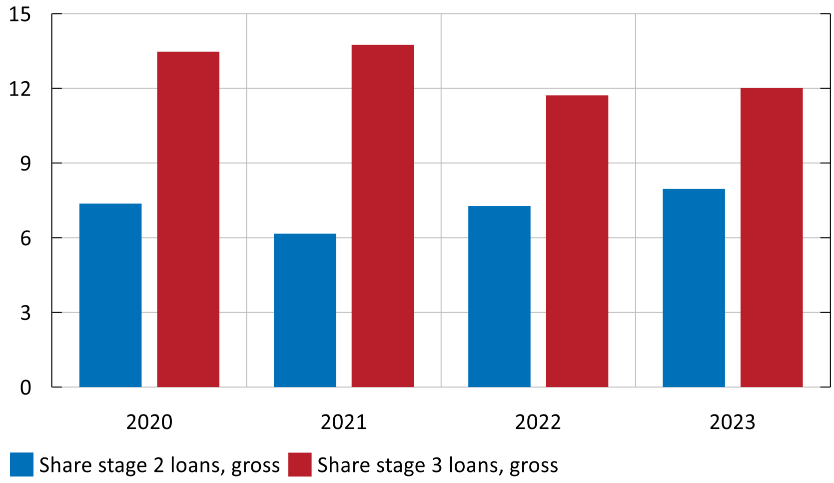
The share of risky loans is increasing

The share of risky loans is increasing among consumer credit banks. This is illustrated by the fact that the share of stage 2 loans, which is often seen as an early sign of deteriorating credit quality, has increased over the past two years (see Chart 25).[42] In 2023, there was also a slight increase in stage 3 loans.

Consumer credit banks have low profitability and are incurring increasing loan losses. As a group, they are therefore relatively vulnerable. If a single one of these banks gets into trouble, it is unlikely to pose a major risk to the financial system. But if the problems spread to more banks, there is a risk that the market will lose confidence in the whole industry, which could threaten financial stability.

Chart 25. Share of stage 2 and 3 loans for consumer credit banks

Per cent



Note. Consumer credit banks in the sample include Avida finans, ICA banken, Ikano Bank, Marginalen Bank, Medmera Bank, Northmill Bank, Qliro, Svea Bank,TF Bank, NOBA Bank Group, Norion Bank and Resurs Bank.

Sources: Banks' interim reports and S&P CapIQ Global.

Stress test reveals significant losses

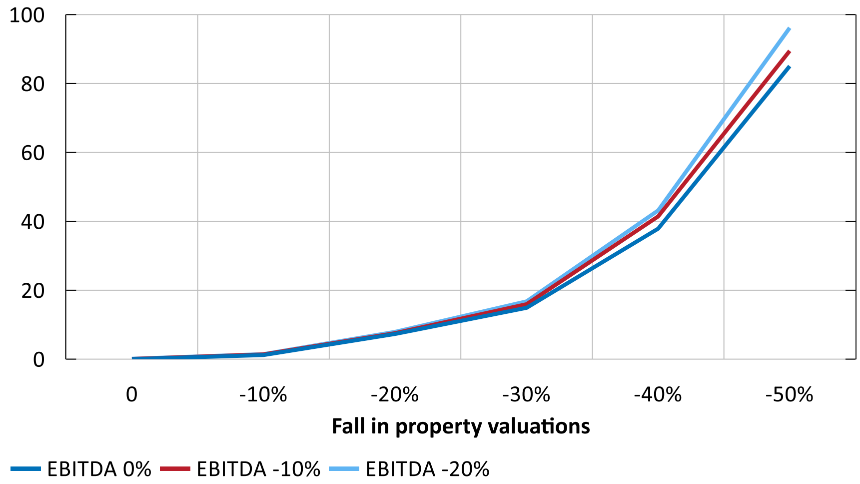
The property sector has experienced problems due to higher interest rates and lower demand for office space, and several property companies are still facing challenges. To get an idea of how the major banks might be affected if the property companies' financial situation were to sharply deteriorate, the Riksbank has implemented stress tests similar to those in the previous Financial Stability Report.[43] Now, however, all of the property companies to which banks are exposed are stressed, instead of a sample of 34 companies. The stress tests indicate that if property valuations fall by around 30 per cent and corporate earnings deteriorate sharply, the banks could suffer loan

[42] IFRS 9 requires banks to classify their loans into three risk classes, known as stages. Stage one (performing) is for loans that have not shown any signs of increased credit risk, stage two (under-performing) is for loans with increased credit risk and stage three (non-performing) is the highest risk class for loans.

[43] See *Financial Stability Report 2023:2*, Sveriges Riksbank.

losses of almost 2 per cent of lending to commercial property companies, which is in line with previous findings.

Chart 26. Loan loss provisions in the stress test
SEK billion



Note. The three lines show the loan loss provisions in the stress test on the vertical axis given different drops in earnings (earnings before interests, taxes, depreciation, and amortisation: EBITDA) at the property companies and at different large drops in property valuations (the horizontal axis).

Sources: Bisnode/Serrano and the Riksbank.

The major banks can handle the losses arising from the stress test

The strong profitability of the major Swedish banks means that they have CET1 capital ratios that are around 4 percentage points above the requirements. Even if there are indications that banks' profitability may deteriorate, the banks will still be able to maintain a high level of capital adequacy. The major Swedish banks fulfil the requirements for liquidity buffers (LCR) and net stable funding (NSFR) with a good margin. The Riksbank's current assessment is that the major Swedish banks can cope with a significantly weaker economic outcome.

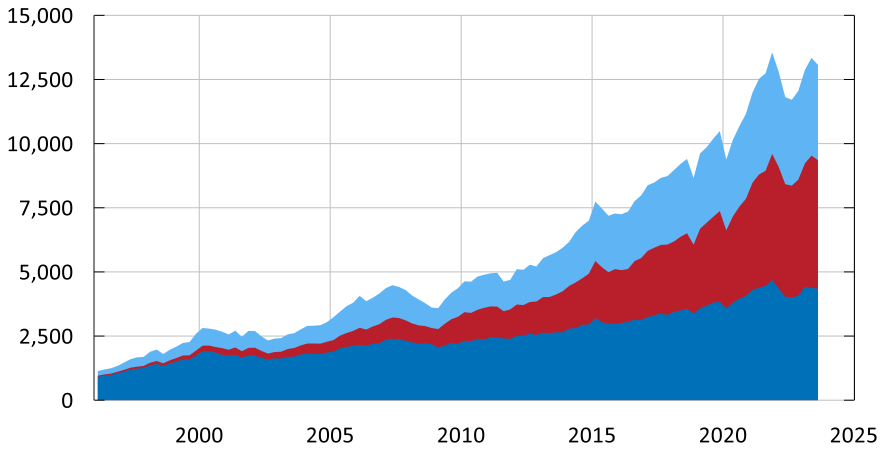
4.2 Non-banks are more interconnected than before

Increased interconnectedness creates risks

The non-banking sector is becoming increasingly complex, with increased interconnectedness between different agents. In Sweden, the largest interconnectedness between non-bank financial intermediates are between the insurance and pension sector and the fund sector. Insurance companies and pension funds now own more than half of the shares in investment funds, and this also represents more than half of their own assets (see Chart 27, dark blue area in relation to red).[44] The Riksbank has previously highlighted the problem of rapid redemptions from funds that invest in less liquid assets, particularly for corporate bond funds. Given the increasing interconnectedness of these sectors, it is also important to analyse this vulnerability in the context of insurance and pension savings.

Chart 27. Fund units of Swedish insurance companies and pension funds in relation to their other financial assets and other agents' fund units

SEK billion



Assets, excluding fund units, of insurance companies and pension funds
Fund units of insurance companies and pension funds
Fund units of other investors

Source: Statistics Sweden.

The increased interconnectedness is due to unit-linked insurance

The increased share of funds among the insurance and pension sector's assets is a result of the transition from traditional insurance policies to the unit-linked and custodial insurance policies that these companies offer their customers. Life insurance and occupational pension companies have doubled their share of assets belonging to unit-linked and custodial insurance policies compared to the previous decade. This corresponds to just over 40 per cent of their total assets – one of the highest shares in the EU.[45]

In traditional insurance, the life insurance or occupational pension company chooses how to manage the capital and bears the financial risk. In contrast, with unit-linked

[44] The First to Sixth National Pension Insurance Funds (AP Funds) are excluded here because they are part of the public sector, even though they conduct similar activities to other pension providers.

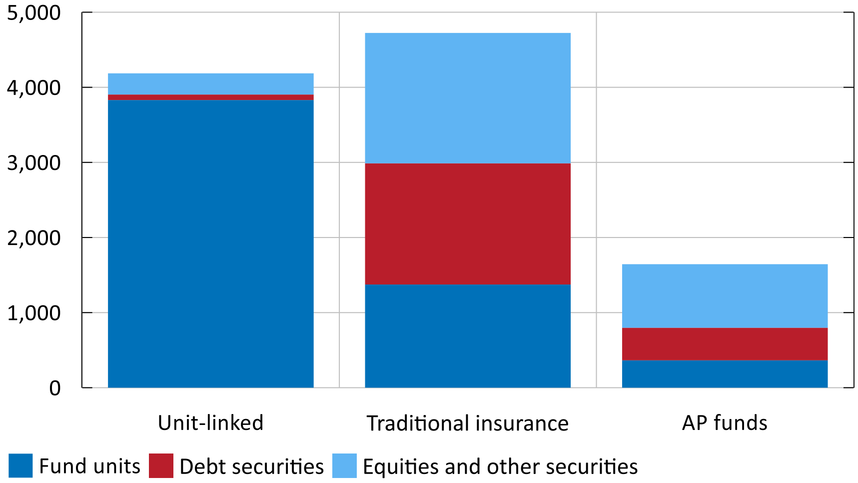
[45] See Chart A.4 in the Chart Appendix. For insurance companies alone, this figure is around 65 per cent, see https://www.svenskforsakring.se/globalassets/rapporter/omvarldstrender/2023-omvarldstrender.pdf/ p. 27.

and custodial insurance, customers can choose the funds or other securities in which to invest their savings from a selection made by the company.[46]

Insurance companies and pension funds own fund units through both their traditional management and their unit-linked and deposit insurance (see Chart 28). However, in their traditional management, they tend to invest directly in debt securities and equities to a large extent. However, the biggest links to funds are via unit-linked and deposit insurance. The risks associated with unit-linked and deposit insurance are therefore different from those within traditional insurance.

Chart 28. Securities of the insurance and pension funding sector

SEK billion



Note. Data as of 31 December 2023. “Unit-linked” refers to securities owned by companies whose assets belong mainly to unit-linked insurance policies, deposit insurance policies or both, and to the fund units in the premium pension system. "Traditional insurance" includes non-life insurance companies that manage their own funds on the securities market.

Source: The Riksbank.

Incentives for pension savers to switch funds may exacerbate financial stress

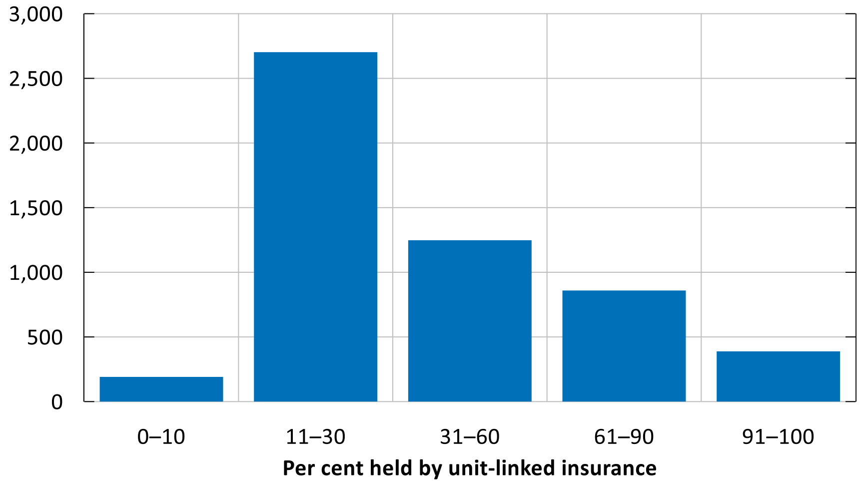
Investment funds can sometimes be hit by deposit runs, which are somewhat similar to bank runs. This risk is greater when there is uncertainty in the market for the fund’s assets or when the value of the assets falls suddenly. The unit-holders who sell their fund units first may benefit from the fact that the fund sometimes values these units at a higher price than it can get when it sells the underlying assets to cover redemptions. Those who choose to remain in the fund will be responsible for any costs arising from the difference paid to those who choose to leave. This is known as "first-mover advantage" and risks amplifying already high selling pressure in underlying markets, such as corporate bond markets, in a stressed environment.

[46] In unit-linked insurance, the customer can only choose funds, whereas in deposit insurance the customer can also choose other assets.

Unit-linked insurance policies allow the policyholder to switch funds but not sell units in exchange for cash. As it is possible to switch funds quickly, there is still an advantage to being the first to act. This creates incentives for long-term pension savers to act short-term and may increase pressure on funds in a situation where they are already under pressure from redemptions. Moreover, the funds offered in unit-linked insurance are usually the same as those owned by other investors – including households saving outside the pension system and foreign investors – who can sell their fund units for cash. Chart 29 shows that a large share of total fund assets is made up of funds with relatively few units held in unit-linked or custodial insurance policies. Approximately SEK 2,700 billion comes from funds where between 11 and 30 per cent of fund units are held in such insurance policies. If people outside the pension system try to leave the funds, and if the fund has not taken measures to deal with large outflows, this could have a negative impact on pension savers in the funds.

Chart 29. Fund assets broken down based on the share of each fund held in unit-linked and deposit insurance policies

SEK billion



Note. The chart refers to 31 December 2023. Refers to securities owned by companies whose assets belong mainly to unit-linked insurance policies, custodial insurance policies or both, and to the fund units in the premium pension system. The Seventh AP Fund's investment funds are excluded because these can only be selected within the premium pension system.

Sources: Statistics Sweden and the Riksbank.

Pension providers' fund rules can affect financial stability

Fund legislation sets the framework for fund managers and, within this framework, they can take measures to protect their funds against liquidity risk. For example, funds can hold more liquid assets, offer less frequent redemption possibilities, or implement liquidity management tools such as swing pricing. However, some fund managers could be better at managing this type of risk. For example, as the Riksbank has previously noted, corporate bond funds do not have sufficient liquid assets and their uptake of swing pricing has been inadequate.[47]

The measures taken by fund managers to manage liquidity risks are also affected by the requirements that life insurance and occupational pension companies impose so that the fund may be offered to their unit-linked customers. In order to be eligible for the premium pension, funds must fulfil the requirements of the Swedish Pensions Agency and the Swedish Fund Selection Agency in addition to fund legislation. For collectively agreed occupational pensions, certain requirements are not imposed directly on the funds but on the life insurance and occupational pension companies by the social partners, which is to say the trade unions and employers' organisations.

The premium pension system and many occupational pension systems require funds to offer daily trading. Moreover, their requirements may make the use of certain liquidity management tools more difficult rather than encouraging their use. At the same time, due to the size of pension system and unit-linked insurance in general, there is an increasingly strong incentive to offer funds in unit-linked insurance, even if this limits their choice of ways to manage liquidity risk. This is an example of how interconnectedness in the non-banking sector can create risks to financial stability, as the incentives and rules of some agents can affect the ability and willingness of others to adequately manage their risks.

4.3 The financial infrastructure is working well but there are operational risks

Availability is high in the financial market infrastructures (FMIs)

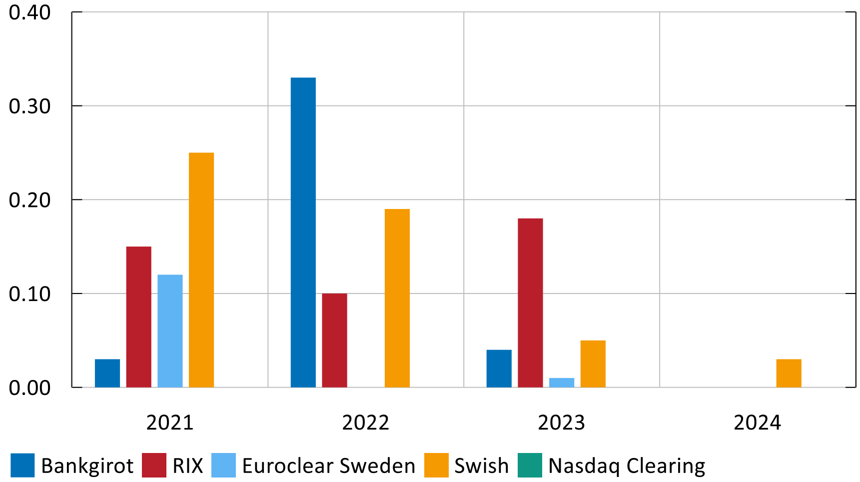
Availability remains high in the FMIs Nasdaq Clearing, Bankgirot, Euroclear Sweden and RIX, and the majority of all payments and securities transactions can be executed on time (see Chart 30). In 2023 and the first quarter of 2024, disruptions to Swish payments due to interruptions at Bankgirot, Getswish and BankID also decreased.[48] Chart 30 does not capture the disruptions to Swish payments originating from the banks, despite them comprising a significant share of the interruptions. The ease of making Swish payments has therefore varied depending on the user's bank.

[47] See Chart A.5 in the Chart Appendix.

[48] Since February 2024, Swish payments in central bank money have been settled via the Riksbank's settlement service for instant payments, RIX-INST. Previously, Swish payments were settled via Bankgirot's Payments in Real Time platform, which has now been discontinued.

Chart 30. Interruptions in FMIs

Per cent



Note. 0 per cent shows that the system has been available the entire time without interruption. 0.2 per cent corresponds to an interruption of five hours over a period of one year. 0.2 per cent over a four-month period corresponds to about 1 hour and 40 minutes. Corresponding interruption times for Swish are about 17.5 hours and 6 hours respectively, as the service is available around the clock, every day of the year. The interruptions in Swish are calculated as the total interruption time for BankID, Getswish and Bankgirot's platform Betalningar i Realtid (Payments in Real Time). Data for 2024 refer to the first quarter, i.e. January-March.

Sources: BankID, Bankgirot, Euroclear Sweden, Getswish, Nasdaq Clearing and the Riksbank.

Change is necessary to maintain a stable infrastructure

The area of payments and securities in Sweden and Europe is undergoing structural change. To maintain the efficiency of FMIs and to ensure that Sweden can best participate in the EU single market, Swedish FMIs and their participants need to keep pace with international developments. In June 2024, the Riksbank plans to decide whether to move the settlement of payments and securities transactions to the Eurosystem platforms, which would affect RIX and Euroclear Sweden.[49] Whatever decision the Riksbank takes, they need to plan to modernise their systems. In the longer term, change is necessary. One example of an ongoing change is Bankgirot's work on developing the future infrastructure for retail payments, which needs to be done without jeopardising the stability of existing systems. The banks' technical systems also need to keep up with developments so as not to delay Bankgirot's work or the possibility of using the new retail payment infrastructure.

The Riksbank assesses the risk of serious disruptions in FMIs as low at present. However, operational risks may temporarily increase during the implementation of the change process. In order to minimise the risk of disruptions during the change process, the FMIs need to have good risk management in place. They need to have long-term funding to secure critical personnel and invest in new technological solutions

[49] The Executive Board of the Riksbank has taken a policy decision to use the Eurosystem's payment and securities settlement platforms, T2 and TARGET2-Securities (T2S) respectively, for payments in Swedish kronor. See also Sveriges Riksbank (2021): [The Riksbank wants to use the Eurosystem's T2 and TARGET2-Securities platforms](#)(press release).

that strengthen the resilience of the systems. At present, the Riksbank assesses that the private FMIs (Bankgirot, Nasdaq Clearing and Euroclear Sweden) have sufficient equity to manage their operational costs. For example, their net liquid assets funded by equity could currently cover approximately two years of their average operating costs.[50] As the costs of implementing the change process will increase in the coming years, the infrastructure companies' equity will need to increase by the same amount.

New legislation is affecting financial infrastructure systems

There has been an agreement in the EU on amendments to EMIR, the regulation on OTC derivatives, central counterparties (CCPs) and trade repositories.[51] If these changes enter into force, EU participants will be affected in several ways. For example, more stringent requirements are imposed on CCPs when it comes to take account of both their own and their participants' liquidity risks. In addition, they will need to ensure that participants that are non-financial companies have the capacity to meet their margin requirements, even under stressed market conditions. As non-financial companies are not subject to the same regulatory liquidity requirements as banks, for example, this will reduce risks for CCPs. EU participants active in euro and zloty interest derivatives markets will also be required to have a so-called active account with an EU CCP. For Swedish participants, this means that they need to open an account for clearing with an EU CCP if they do not already have one, such as Nasdaq Clearing or Eurex Clearing. Swedish banks, which have significant exposures in euro to the UK CCP LCH Ltd, are also expected to need to clear a representative share of their derivatives transactions in such an account. Although active accounts reduce the EU's systemic risks to third-country CCPs, the Riksbank notes that the ability of Swedish and other EU participants to manage their risks effectively may be reduced as a result.

In addition, the act on clearing and settlement will enter into force on 1 July, meaning that large parts of CPMI-IOSCO's international principles, PFMI, will become Swedish law. This means new and stricter requirements for Bankgirot and Getswish, including for risk management, governance, cybersecurity, preparedness and capital. The Riksbank considers that this may contribute to increasing the resilience of the retail payment infrastructure.

[50] Chart A.6 in the Chart Appendix presents the FMIs' Orderly-Wind-Down ratio, that is, the ratio of companies' net liquid assets to average semi-annual operating expenses, as of 31 December 2023. According to the PFMI, the capital should correspond to at least six months of costs, i.e. a ratio equal to 1. For more information, see *Financial Infrastructure*, June 2016, Sveriges Riksbank.

[51] European Council (2024): Capital markets Union: Council and Parliament agree on improvements to EU clearing services (press release).

4.4 More sophisticated cyber attacks are increasing requirements for preparedness

Continued high risk of cyber attacks against Swedish targets

As the international security situation has deteriorated, the number of cyber attacks within the EU has increased (see Chart 31).[52] The International Monetary Fund (IMF) also sees cyber risk as a growing concern for macro-financial stability.[53] Events such as Sweden's entry into NATO, Koran burnings and the international high-profile disinformation campaign against Swedish social services have also increased the threat to Sweden.[54] Serious cyber attacks are mainly carried out by state actors and organised criminal groups. The most common cyber attacks are carried out using known and simpler methods such as distributed denial of service (DDoS) attacks. However, the methods and tools used by threat actors are constantly evolving and cyber attacks against financial agents are becoming more sophisticated. The threat analyses carried out in the context of the TIBER tests indicate that there are threat actors that are both advanced and capable.[55]

A recent example of a cyber attack is the incident at IT provider Tietoevry that affected several organisations.[56] Although the incident did not affect services critical to financial system participants, it highlights a concentration risk when multiple organisations rely on the same third-party provider for system management and operations. A more successful cyber attack on a third-party provider could have affected services critical to the financial system. The dependence of many organisations on a single third-party provider is therefore a systemic risk for the entire Swedish financial system.

[52] There are no corresponding statistics on the number of cyber incidents against specifically Swedish organisations.

[53] See "Cyber risk: A growing concern for macrofinancial stability", Global Financial Stability Report, April 2024, International Monetary Fund.

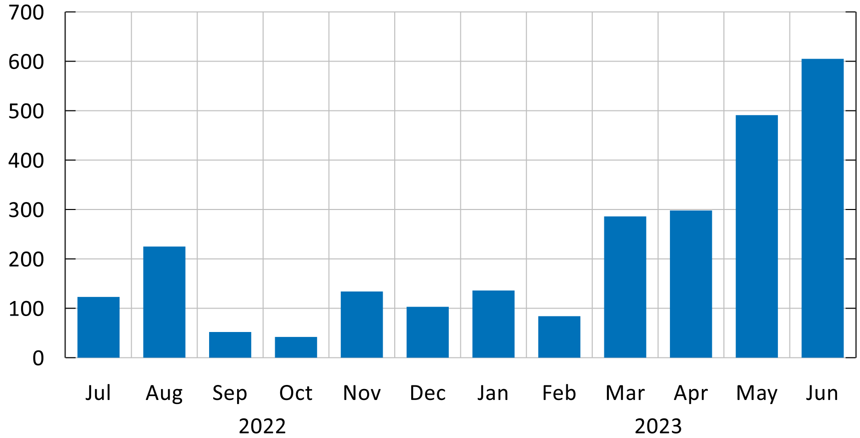
[54] See the Swedish Security Service's assessment of the security situation in Sweden: Serious international situation characterises threats to Sweden - Swedish Security Service (sakerhetspolisen.se), February 2024.

[55] TIBER is a framework for conducting threat-led penetration tests that exists for both the EU and Sweden. The Riksbank coordinates the TIBER tests in Sweden.

[56] See Tietoevry (2024): Tietoevry: Conclusions on the ransomware attack (press release)

Chart 31. Number of observed cyber incidents in the EU

Number



Note. Data refer to self-reported observed incidents from the following sectors in the European Member States: public administration, medical care, business, media, digital infrastructure, digital service providers, financial agents and private individuals. The number of incidents at financial agents and digital service providers accounted for 12 per cent of the total.

Source: European Union Agency for Cybersecurity (ENISA).

DORA regulation increases demands on operators' capabilities

Financial system participants are continuously working to improve their resilience to cyber attacks. The detection capability of financial agents has improved in recent years, which has become evident during the time that the Riksbank's TIBER tests have been conducted. This means that it has become more difficult for a simulated attacker to succeed in a cyber attack. On the other hand, there is a risk that agents do not enhance their ability to recover from a cyber attack that has succeeded in disrupting critical systems at the same rapid pace as the threat landscape deteriorates. However, the DORA regulation, which will start to apply next year, will require most financial agents to both increase their resilience to cyber incidents and strengthen their ability to manage disruptions.[57] In addition, agents will need to set higher standards when outsourcing to third party providers. Beyond that, threat-led penetration testing is becoming a requirement for many organisations. Today, the Riksbank conducts threat-led penetration tests as part of the TIBER programme and it has been proposed that the Riksbank shall continue leading testing under DORA.[58]

Ability to withstand cyber attacks is a preparedness issue

Given the high degree of digitalisation and globalisation in the payment system, the ability to withstand cyber attacks is very much a preparedness issue. The Riksbank has a statutory responsibility for ensuring that the public can continue to make payments

[57] DORA refers to the EU Digital Operational Resilience Act. The Ministry of Finance has proposed the Riksbank as the responsible authority for the coordination and implementation of the threat-led penetration tests that are part of DORA. In practice, this would involve the Riksbank adapting TIBER-SE and more participants being tested.

[58] See *Digital operational resilience for the financial sector (Fi2024/00073),* January 2024, Finansinspektionen.

during peacetime crisis situations and states of heightened alert. Within the framework of this responsibility, the Riksbank has the task of specifying requirements, coordinating and supervising aimed at strengthening the joint preparedness capacity. In the event of a peacetime crisis or state of heightened alert, the Riksbank is also responsible for a management function to coordinate and inform. An inquiry has also proposed that the Riksbank should lead a crisis management function in the event of serious operational disruptions, such as a major cyber incident.[59] The Riksbank has previously pointed out the need for increased coordination from a systemic perspective in the financial sector to strengthen resilience to cyber attacks.[60]

[59] See Ministry of Finance (2024): The inquiry proposes operational crisis management in the event of cyber attacks and other serious disruptions in the payment system - Regeringen.se (press release)

[60] See also "Cyber risks and financial stability", article in *Financial Stability Report* 2023:1, Sveriges Riksbank.

ARTICLE – How does quantitative tightening affect banks?

In recent years, the Riksbank has implemented both quantitative easing and quantitative tightening. Quantitative easing has involved the Riksbank buying assets, such as government bonds, over a period of time, thereby increasing liquidity in the banking system. Quantitative tightening involves the Riksbank allowing the assets to mature and selling some of them off. In this article, we discuss how the Riksbank's bond purchases have affected the major Swedish banks in recent years and the likely consequences of the Riksbank reducing its bond holdings. One conclusion is that banks need to adjust their balance sheets, including by issuing larger volumes of covered bonds. They may also need to balance liquidity in the interbank market.

The Riksbank's quantitative easing and tightening affect banks' balance sheets

In February 2015, when inflation and inflation expectations were low, the Riksbank started quantitative easing. Quantitative easing (QE) involves the Riksbank buying securities - in this case government bonds - to stimulate the economy. When the coronavirus pandemic broke out in spring 2020, there was considerable turmoil on several financial markets. The Riksbank then increased its bond purchases. From a portfolio of SEK 10 billion at the beginning of 2015, the Riksbank's holdings grew to more than SEK 900 billion at the end of 2021. In the second quarter of 2022, however, the Riksbank began quantitative tightening (QT) by allowing bonds to mature. In April 2023, the Riksbank also began selling government bonds. Since the second quarter of 2022, the bond portfolio has declined to around SEK 600 billion.

When the Riksbank buys securities, banks' claims on the Riksbank and their deposits increase.[61] This is because, during QE, the Riksbank buys a bond from a market counterparty, for example a government bond from a company. The Riksbank then receives a government bond on its asset side and pays by depositing money, known as central bank reserves, in the company's bank's account at the Riksbank (see Table 1).[62] The bank has then received an asset in the form of reserves and, since it acts as an intermediary, creates money equivalent to the purchase price of the government bond in the deposit account of the selling company. Table 1 also shows that deposits

[61] An exception is if the seller were to be a bank, which would involve the banking sector exchanging one asset for another. For further reasoning, see E. Andersson and P. Kaplan (2024) "What drove the major fluctuations in deposits between 2020 and 2023?" *Economic Commentary* no. 6, 2024, Sveriges Riksbank.

[62] Central bank reserves are a claim on a central bank whose primary function is the settlement of payments. Central bank reserves are banks' deposits with the central bank.

have increased on the asset side of the company while the bonds have decreased. In this way, the Riksbank's QE has increased deposits in the banking sector.

Table 1. Agents' balance sheets in QE

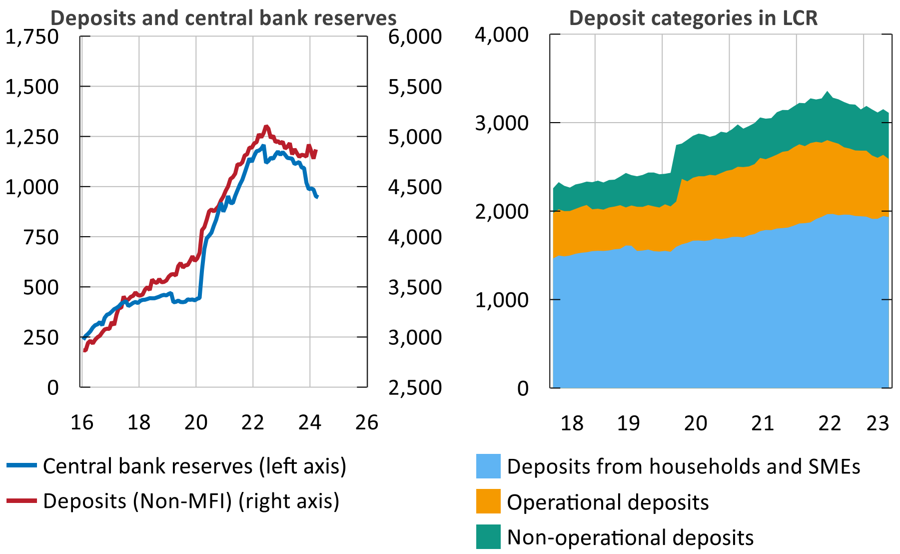
The Riksbank		The banking sector		Counterparty (e.g. financial and non-financial companies)	
Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
+ Bonds	+ Reserves	+ Reserves	+ Deposits	+ Deposits - Bonds	

Note. When the Riksbank buys a bond from a company, it pays the banking sector in central bank reserves. The banking sector pays an equivalent amount in deposits to the seller. The result for the company is that its assets change from a value in bonds to an equivalent value in deposits.

Chart 32 (Left) shows that the banking sector's deposits and central bank reserves increased during the period of QE. The larger increase in deposits relative to central bank reserves is because deposits are also influenced by other factors, such as bank lending and choice of funding.

Chart 32. Development of the major banks' central bank reserves and deposits in Swedish kronor

SEK billion



Note. The chart on the right shows the sum of the deposits from Nordea, Handelsbanken, SEB, Swedbank in Swedish kronor according to categories specified in the Liquidity Coverage Ratio (LCR) regulations. Operational deposits refer to deposits linked to a company's operational activities, such as wage disbursements, cash management and clearing. Non-operational deposits refer to other corporate deposits. "SMEs" are small and medium-sized enterprises.

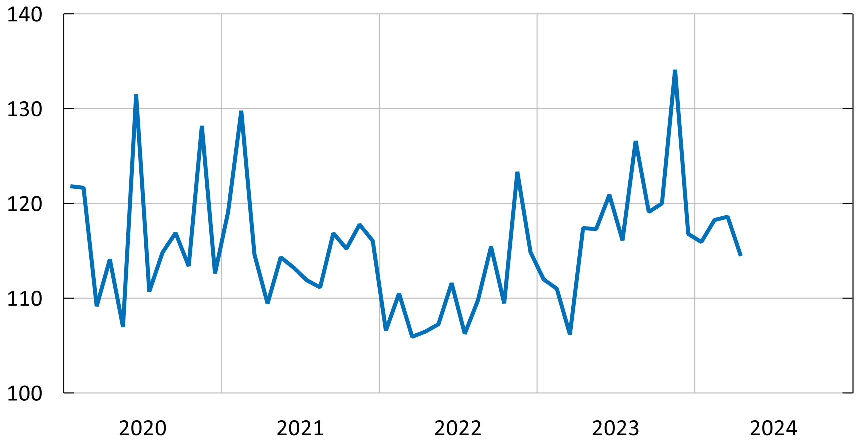
Sources: COREP and Statistics Sweden.

Increased central bank reserves, considered the most liquid asset available, increase banks' liquid assets. At the same time, deposits are considered a relatively stable source of funding. This is particularly true for operational deposits, which are considered less flighty than non-operational deposits. Operational deposits also increased the most in the context of quantitative easing (see Chart 33, right). This has made it easier for banks to fulfil the liquidity requirement (LCR) in Swedish kronor, which is calculated as liquid assets in relation to stressed net outflows where assumptions on deposit flightiness play a role. [63] [64]

However, Chart 33 shows that the LCRs of the major banks have not increased significantly over the period. As banks' liquid assets increased over the period, this suggests that banks have adjusted their funding composition, including by issuing securities with shorter maturities. In LCR terms, they can be said to have increased their net outflows.

Chart 33. The major Swedish banks' liquidity coverage ratio in SEK

Per cent



Note. Refers to liquidity coverage ratio (LCR) in SEK for Nordea, Handelsbanken, SEB and Swedbank. The regulatory requirement for the LCR in Swedish kronor is 75 per cent.

Source: Banks' reporting to the Riksbank.

Banks have adjusted their funding composition

During the QE period, the three major Swedish banks have increased their volume of short-term securities, such as commercial paper, while long-term securities, such as covered and unsecured bonds, have decreased or remained fairly constant in volume (see Chart 34). One explanation for this may be that they had less incentive to obtain funding at longer maturities when the Riksbank implemented QE. Banks primarily used the large inflow of deposits that came via the Riksbank's bond purchases and

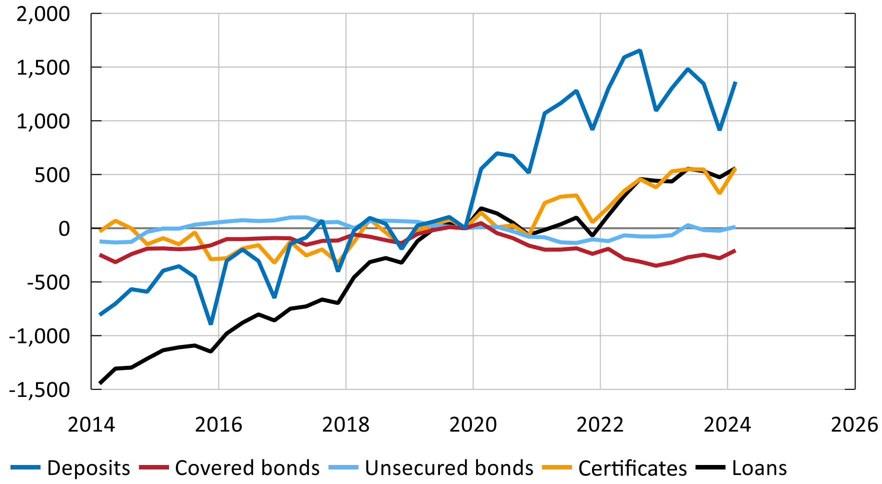
[63] All else equal, an increase in central bank reserves entails an increase in the bank's liquid assets, which constitute the numerator of the LCR. The denominator depends on a so-called outflow assumption for how much of the deposits disappear during a stressed period. For operational deposits, this is 25 per cent. Assume that quantitative easing is 100, which leads to an increase in central bank reserves of 100. We also assume that operational deposits increase by 100. Liquid assets then increase by 100, but net outflows increase by only 25 given the outflow assumption.

[64] In March and April 2020, central bank reserves increased by around SEK 250 billion, as a result of the Riksbank's loans to banks to support corporate lending totalling around SEK 170 billion and QE of SEK 80 billion. Both of these contributed to increased deposits. However, the majority of loans to banks were repaid in May 2021.

chose to cover their remaining funding requirement with the cheapest market funding, i.e. certificates. This was possible because quantitative easing had made it easier for banks to fulfil the liquidity requirements.

Chart 34. The major Swedish banks' funding

SEK billion



Note. The series are normalised to zero at 2019 Q4.

Sources: Quarterly reports from Handelsbanken, SEB and Swedbank.

Quantitative tightening requires banks to increase the maturity of their funding

Since the second quarter of 2022, the Riksbank has initiated quantitative tightening (QT) by reducing its asset holdings, and plans to continue to do so until further notice. During QT, banks' central bank claims and deposits decrease, but it is not certain that they will decrease as much as the central bank reserves.[65] The difference depends in part on how much of the Riksbank's bond portfolio the banks choose to buy for their own account, which does not affect their deposits.[66] In addition, there are other factors affecting deposit volumes, such as credit growth in the banking sector, which may make the impact of QT on the banking sector's balance sheet less clear. Overall, however, QT means that it will be more expensive for the banks to meet their liquidity requirements, and that they will need to adjust both the asset and liability side of their balance sheets.

[65] The opposite result to the one described in Table 1 occurs in QT. When the Riksbank sells a bond to a company, the company will use deposits to pay for the bond. The company thus exchanges deposits for a bond on its asset side. The central bank holds less bonds and has reduced its liability to the banking sector. The banking sector holds less central bank claims and less deposits. The same outcome occurs when bonds mature. On the other hand, if the issuer were a bank that chose not to refinance the bond, deposits would be unaffected.

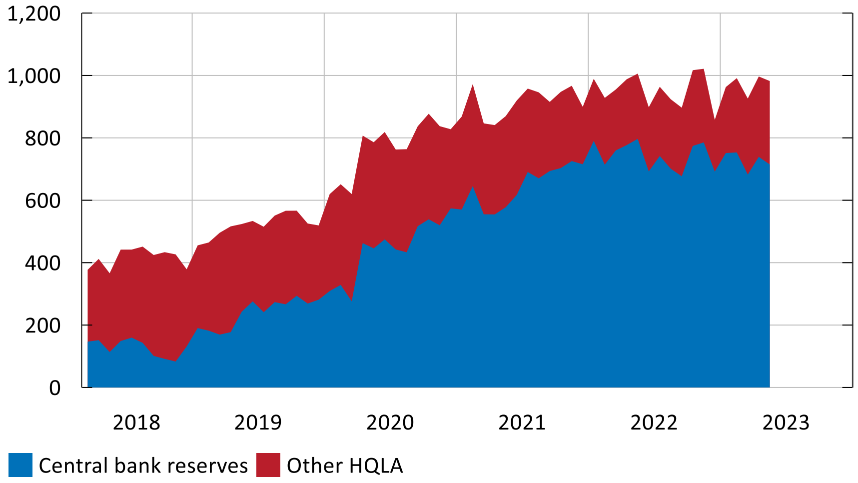
[66] If a bank buys a security from the Riksbank, the bank's account with the Riksbank is debited, reducing the bank's central bank reserves. However, the bank's own deposits are not affected as the bank does not act as intermediary in the transaction.

Banks will need other liquid assets

The banking sector's claims on the Riksbank, which amount to around 70 per cent of their liquid assets in SEK (see Chart 35), will thus decline as the Riksbank sells off and allows its bond holdings to mature. To compensate, banks need to buy other types of liquid assets, such as government bonds, municipal bonds or covered bonds. However, the Riksbank assesses that banks will also reduce their volumes of liquid assets during the QT period (normalise them), as the QE contributed to excess liquidity.

Chart 35. The major banks' liquid assets in SEK

SEK billion



Note. Refers to liquid assets in SEK from Handelsbanken, SEB and Swedbank. HQLA refers to high-quality liquid assets such as government bonds and covered bonds.

Source: COREP.

Maturity of banks' market funding will be longer

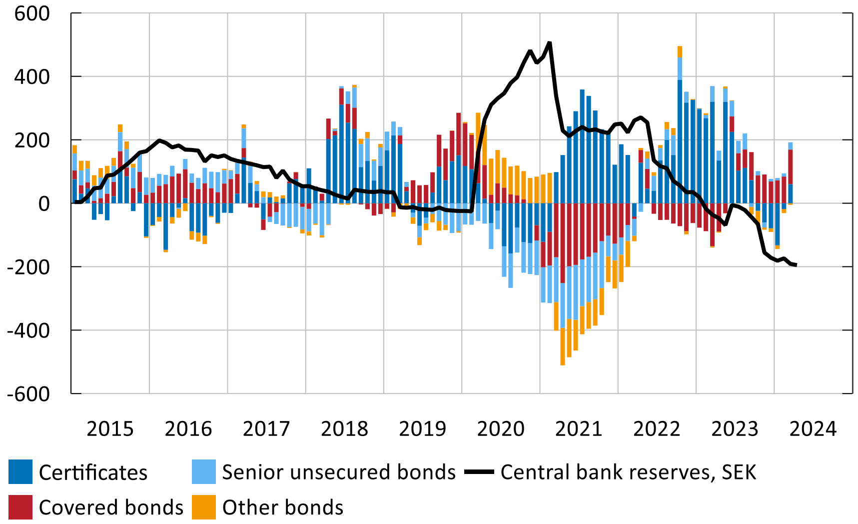
To compensate for the decrease in the total volume of liquid assets, banks will also need to adjust their liability side. For example, banks can extend the maturity of their short-term market funding or extend the maturity of their deposits. The Riksbank also expects the banks to issue larger volumes of covered bonds.

Under a simplified assumption that the banking system would return to funding itself with the same share of covered bonds as before quantitative easing, the banks' need to issue covered bonds would amount to 500-700 billion in addition to their regular refunding needs. It is also possible to estimate what banks' issuance needs would be to fulfil the LCR requirement under different assumptions. Such calculations also suggest that, depending on the change in central bank reserves, banks would need to compensate for the outflow of deposits by issuing more long-term bonds to reduce the impact of QT on liquid assets.

In Chart 36, adjustments as a result of the Riksbank's QT are already visible. Since February 2023, central bank claims in Swedish kronor have decreased significantly, while the major banks have increased the volume of covered bonds.

Chart 36. Banks' market funding and central bank reserves

Annual change, SEK billion



Note. Data refer to the major Swedish banks, which are Handelsbanken, SEB and Swedbank.

Source: Banks' reporting to the Riksbank.

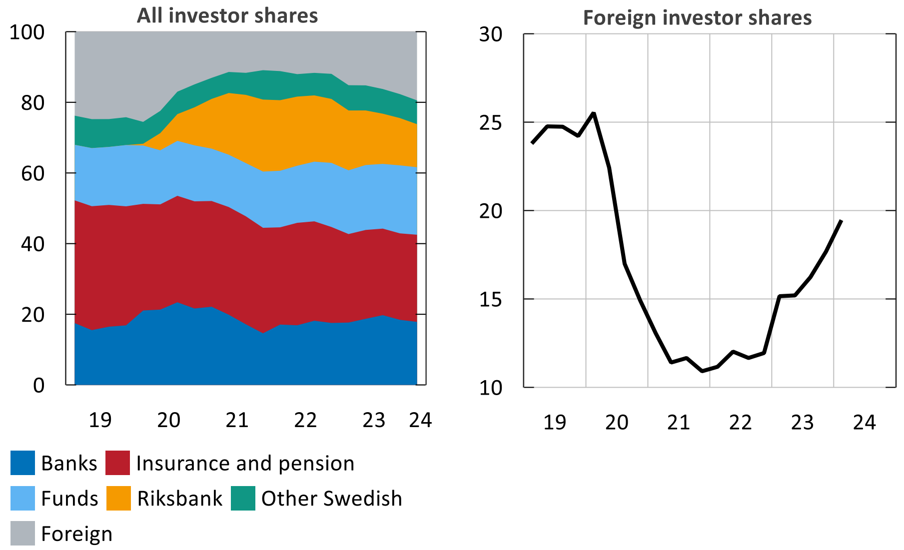
Increased issuance volumes may pose challenges

The banking sector is thus expected to issue relatively large volumes of covered bonds in the coming years. The composition of investors in covered bonds also changes as the Riksbank reduces its holdings. Other investor groups need to absorb larger volumes of the banks' issues for this reason. For these two reasons, a stable investor community is needed both in Sweden and abroad. Historically, demand for covered bonds has been high and banks have so far had no problems issuing new bonds since the start of QT. It is mainly foreign investors that have now increased their holdings again (see Chart 37), but also Swedish investors such as mutual funds and the banks themselves. As long as long-term funds continue to receive net inflows and long-term real interest rates remain positive, there appears to be incentive and capacity among Swedish non-banks to buy the bonds issued by the banks. [67] Investors' demand for covered bonds can be volatile, however, especially during periods of financial stress. In such a situation, banks may find it difficult to issue large amounts of bonds, which could increase their liquidity risks, at least in the short term. Who invests in the bonds is also important for the volatility of market financing. Short-term investors, who often leverage their purchases of covered bonds, can provide some liquidity to the market. There are signs that this type of investor has increased as foreign investors have returned to the market during the QT period. But banks becoming too dependent on them as investors risks contributing to volatility in the demand for bank funding.

[67] See M. Andersson (2024) "Investor behaviour in Swedish bond markets", *Staff memo*, Sveriges Riksbank.

Chart 37. Holders of covered bonds denominated in SEK

Per cent



Note. The final observation refers to 2024 Q1. The charts show nominal values of bonds. Insurance and pension includes the national AP funds.

Sources: Statistics Sweden and the Riksbank.

Banks may have greater need to balance liquidity in the interbank market

There is an ongoing debate in several countries about the role of central bank reserves in the financial system. [68] As the Riksbank's quantitative tightening measures are implemented, central bank reserves in the banking system will decrease. While this could be sufficient for the banking system's overall need for central bank reserves, they can be unevenly distributed across banks. Individual banks could have a liquidity deficit and need to borrow from other banks or directly from the Riksbank. Activity in the interbank market could therefore increase, as banks have largely not needed to engage in liquidity balancing in this way during the QE period. There is a risk that banks no longer have the necessary expertise and experience to carry out this type of transaction and that internal limits against other banks are not in place when needed. Banks need to ensure this to avoid unnecessary volatility in short-term market rates. It is important that banks ensure they have the right knowledge and tools to be active in the interbank market if needed.

[68] Most central banks, including the Riksbank, have also conducted or are currently discussing a review of their monetary policy operational frameworks. For more information on the Riksbank's framework and its latest review, see, for example The monetary policy operational framework | Sveriges Riksbank.

ARTICLE – Private equity: a growing market in transition

In recent decades, private equity firms have increasingly been investing in and acquiring companies in many countries, particularly in the United States. Slightly simplified, they can be referred to as private equity firms. Sweden is also home to large, internationally active private equity firms with significant investments in companies. Private equity firms provide companies with an alternative way of financing their operations, as well as effective corporate governance that has historically helped companies grow and generate returns. Private equity firms are often highly leveraged and need good access to credit. This makes the sector vulnerable to higher interest costs. The business is associated with risks that are difficult to assess for both the investors in private equity firms and the acquired companies as the business adapts to a changed interest rate environment. The fact that the sector is largely international in scope makes it difficult to assess how great the risks are from a Swedish perspective.

Private equity: an investment strategy

Private equity, often called 'riskkapital´(risk capital) in Swedish, is an umbrella term for various ways of investing in companies that are not listed on the stock exchange and not a specific type of company.[69] The business model is that a private equity firm acquires companies, takes steps to make them more profitable, and then sells the companies, either to another larger company or by listing it on the stock exchange. The companies acquired become portfolio companies of the private equity firm. Sweden has a large private equity industry - private equity firms own around 1,200 companies in Sweden that employ around 260,000 people.[70] Private equity investments can be roughly divided into two categories: investments in relatively new companies (venture capital) and acquisitions of more mature companies (buyouts). In this article, we focus on the latter.

Private equity firms often have their own strategies and invest in different companies and develop their portfolio companies in different ways. For example, some acquire companies that are already doing well but could be even better. Others seek out companies with problems that the private equity firm believes it can solve. The latter is a riskier strategy, but also means that companies are cheaper to acquire. In general, private equity firms are keen to invest in sectors that are not particularly cyclical and where there is high growth potential. Because their targets are time-limited, private

[69] The Swedish term 'riskkapital' is often used broadly without distinguishing between different types of operations.

[70] According to information from the industry organisation SVCA.

equity firms want to be sure that they get a good return regardless of the prevailing economic conditions when the portfolio company is sold.

The business model of private equity firms typically involves more direct governance of companies when compared with listed companies owned by large institutional investors, such as mutual funds. Such investors are rarely able to fully familiarise themselves with the actual operations of the companies they own, which can lead to ineffective corporate governance. They also seldom own a large share of the company, which makes it difficult to make decisions on their own. Private equity firms have a more limited portfolio of companies that they can control, and can therefore, for example, decide on the company's strategy or replace management teams that they think are underperforming. This is how private equity firms can implement growth-enhancing measures, which can have positive effects on the real economy.

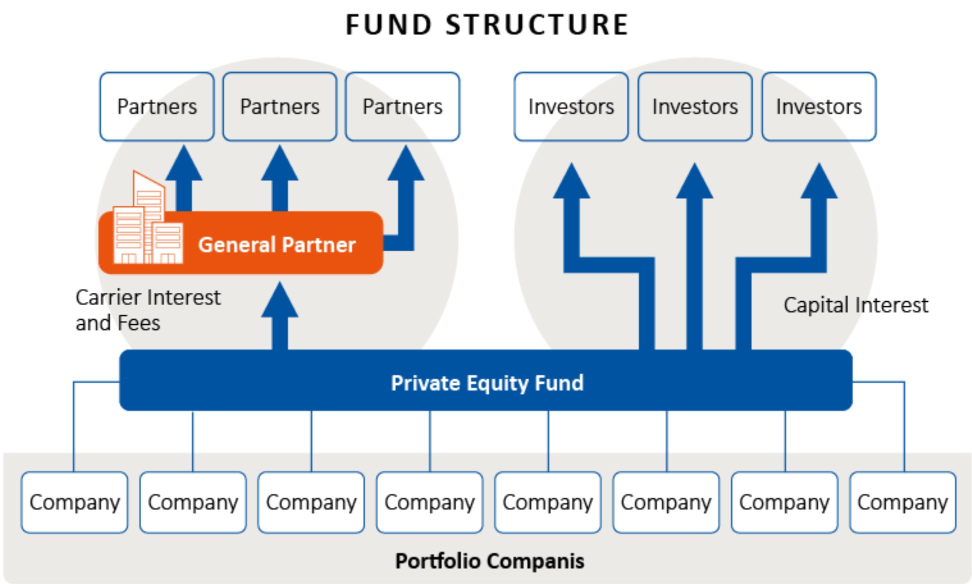
Private equity firms companies receive their capital from investors who invest in a private equity fund. The partners of the private equity firm normally invest in the same fund, which gives them strong incentives to increase the value of the fund's holdings. The private equity firm then uses the money in the fund to acquire and invest in private companies. The money that investors have agreed to invest is used as they find suitable companies to invest in. The difference between the amount an investor has committed to invest and what investors have actually invested is called 'dry powder', as it is a measure of the fund's ability to make further investments.

Private equity firms investing in new companies mainly use capital from their fund. Private equity firms that acquire more mature companies instead often use a combination of the fund's money and loans from one or more creditors. This method is known as a leveraged buyout (LBO). The loans are charged to the balance sheet of the portfolio company, resulting in higher interest and amortisation costs for the portfolio company. Companies owned by private equity firms are typically more indebted than other companies, which can increase the risk of bankruptcy and creditor losses. Research based on US data has shown that private equity-owned companies are adept at managing their high levels of debt and therefore do not need to be liquidated to the same extent as other highly indebted companies.[71] However, that research was based on data from a period of low interest rates and good access to capital. The higher interest rates of recent years may have made it more difficult for highly indebted portfolio companies to service their debt, which could lead to an increase in bankruptcies. This, in turn, could cause losses for creditors and investors in private equity funds. This business model has been profitable for private equity firms during this period, with low interest rates and good opportunities to list companies at high valuations. With higher interest rates and lower valuations on new listings of portfolio companies, it is likely that their business model is less profitable than before.

[71] Hotchkiss, E. S., Smith, D. C., & Strömberg, P. (2021). Private equity and the resolution of financial distress. The Review of Corporate Finance Studies, 10(4), 694-747.

Figure 1 shows a typical relationship between investors, private equity firms and portfolio companies.[72] Private equity firms charge their investors a fee, often two per cent of their invested capital, and they receive a share of the profits when the fund is wound up, usually 20 per cent (carried interest).

Figure 1: Typical structure of a private equity firm



Note. Investors, or limited partners, invest together with the private equity company, the general partner, in a fund. This fund, in turn, buys a number of portfolio companies governed by the private equity firm. Portfolio companies receive additional investments to improve their productivity and pay a regular fee to the fund. After a set period of time, the fund is wound up, the portfolio companies are sold and the surplus is distributed to investors.

The financing of private equity firms has changed and diversified

Private equity firms have historically borrowed primarily from banks to finance their portfolio companies. However, in recent years, they have also increasingly borrowed from other financial actors, so-called non-banks such as private credit funds.[73] Market funding is also common, where the portfolio company itself issues bonds, for example.[74] Chart 38 shows both how the number of European private credit funds and the

[72] A private equity firm uses capital from the fund for its investments. However, it does not contain cash and investors need to inject these when they receive a request, which poses a liquidity risk for the fund and thus for the portfolio companies. Here, banks often offer the funds bridging loans, which are a kind of standing credit facility, that the funds can draw on to get the cash they need. Investors who do not pay in the contracted capital may lose their entire stake in the fund, and thus have strong incentives to pay. According to PE actors, it is very unusual for investors not to deliver as agreed.

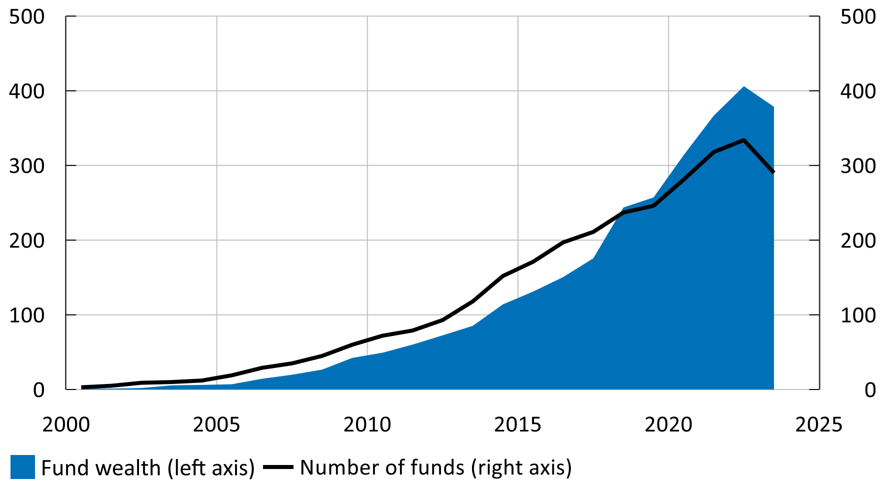
[73] Private credit funds can lend directly to private companies or buy loans for these companies that other actors, such as banks, have securitised. Unlike private equity, private credit funds do not take control of the companies they lend to.

[74] Funds sometimes also take loans with all portfolio companies as security, known as net asset value (NAV) loans. These are often used to make additional investments in portfolio companies when there is not enough capital in the fund. They can also be used to deliver returns to investors if selling the portfolio companies is considered unfavourable.

size of their funds have increased in recent years[75]. There are several reasons why private equity firms have increasingly borrowed from non-banks or via the bond market in recent years, even though this is often more expensive than borrowing from banks. Non-banks can often offer larger loans than an individual bank can, and for the private equity firm, it is desirable to have a larger credit from one lender rather than several smaller ones that need to be negotiated with different banks. It also seems that non-banks are more willing to relax loan conditions linked to the performance of the portfolio company (covenants) in return for being able to charge more for the loans. At the same time, banks have become somewhat less willing to lend to private equity firms as banks have been required to have higher capital adequacy for risky loans. Non-banks have not been subject to any such requirements.

Chart 38. European private credit funds

USD billion, number



Note. Fund wealth includes capital that has not yet been used, known as dry powder. Based on the domicile of the fund manager.

Source: PitchBook Data, Inc.

Swedish private equity firms have a significant international presence

Private equity firms in Sweden are major international players in terms of both how they are financed and the portfolio companies they invest in. For example, the Swedish private equity firm EQT is the world's third largest in terms of the size of assets under management in its funds, approximately EUR 119 billion. Other major Swedish private equity firms include Nordic Capital, which manages EUR 25 billion, and Altor, which manages EUR 4.5 billion.[76] A private equity firm based in Sweden typically has its investment and advisory activities here. However, private equity funds themselves are rarely legally based in Sweden, but are often located in countries such as Malta,

[75] Private credit funds lend money not only to portfolio companies but also to other companies, primarily medium-sized enterprises.

[76] However, not all of the capital managed is necessarily in the funds, but instead represents claims on the investors, known as dry powder. The private equity firm calls on this capital as it has projects to invest in. Usually, not 100 per cent of all capital is invested, but a small reserve is kept to be used if crises arise in a portfolio company.

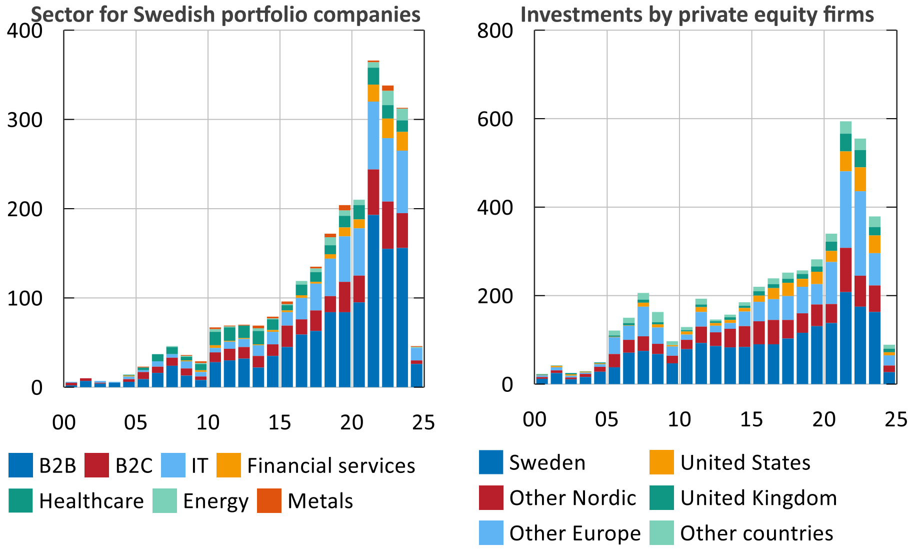
Ireland and Luxembourg. Investors in private equity funds are often drawn from a global market. For example, pension funds in other countries are common investors in the private equity funds managed by Swedish private equity firms. Other major investors include sovereign wealth funds and large institutional managers. The portfolio companies in which Swedish private equity firms invest are also located in several different countries, although Swedish private equity firms invest in Nordic companies to a greater extent than might be expected given the economic size of the Nordic countries.

The fact that large private equity firms are based in Sweden does not necessarily mean that there are large Swedish exposures in the funds. Investors in the funds and lenders to the portfolio companies, as well as the portfolio companies themselves, can be and often are foreign. In these cases, the link to Sweden is mainly that the investment decisions and the subsequent corporate governance of the portfolio companies take place from here.

The left-hand side of Chart 39 shows the Swedish sectors in which private equity firms invest. The most common category is business services (B2B), followed by IT and consumer services. The right-hand side of Chart 39 shows the number of investments made by Swedish private equity firms broken down by the geographies in which they have invested. It shows that Swedish private equity firms usually invest in the Nordic countries and the rest of Europe.

Chart 39. Investments in Swedish portfolio companies by company sector and investments by Swedish private equity firms by geographical area

Number



Note. Investments include acquisitions and additional investments. B2B menas business-to-business services, B2C means business-to-consumer services.

Source: PitchBook Data, Inc.

Private equity poses various risks to the financial system

There is an ongoing international debate on the risks associated with private equity and their potential impact on the financial system. For example, the increased role of non-banks as creditors to private equity firms, and the resulting reduction in the role of banks, makes it more difficult to assess the credit risks. Non-banks, such as private credit funds, are less transparent and not as strictly supervised as banks. However, a potential benefit of the increased role of private credit funds is that credit risks will be less concentrated than if banks had been responsible for all lending. In a situation where many companies go bankrupt, both private equity-owned and others, loan losses are spread over more actors, which can be positive for financial stability. Investors in private credit funds, like those in private equity funds, agree to lock in their capital for a longer period. This means that, unlike banks, private credit funds run a small risk of being exposed to liquidity crises, as investors typically cannot recover their investments early.

Private credit funds have similar investors to private equity funds, which means that bankruptcies among portfolio companies would concentrate losses in the same type of investors. If the portfolio companies had been financed by bank loans instead, investors would share the losses with the banks. However, the lack of available information from the private credit funds makes it difficult to assess the risks in Sweden. As private credit funds are a relatively new form of corporate lending, there is also no previous experience that can be used to assess risks.

Private equity firms may face problems if several of their portfolio companies go bankrupt, or if it becomes difficult to sell them without making a loss. Moreover, as it has not been financially favourable to list companies on the stock exchange in recent years, many private equity firms have several companies that need to be sold to generate a profit. The European Central Bank notes that it is not obvious that the historically high profits of private equity firms are possible with today's high interest rates and difficulties in selling companies. For example, if private equity firms are unable to deliver the returns investors expect, this could, for example, make it difficult for pension funds to pay out the high pensions they have promised. This has been recognised in the United States, where large pension funds have invested in private equity funds. In Sweden, pension funds invest significantly less in private equity funds as a proportion of their total assets: just over 4 per cent. Therefore, these risks are lower here than in other countries.[77]

The business model of private equity firms has benefited from low interest rates and high valuations of the stock prices of those companies that have gone public. With higher interest rates and lower IPO valuations, it is not likely that private equity firms will be able to deliver the same returns and thus not attract the same volume of investment. As a result, portfolio companies may not be able to obtain the capital injection they need to develop in a desirable direction.

[77] They also invest in funds that focus on other alternative asset classes, such as property and infrastructure funds. The size of their holdings of alternative fund assets amounts to almost 10 per cent of their total assets, according to data from the European Insurance and Occupational Pensions Authority (EIOPA).

Another aspect is that the holdings of private equity funds are not constantly marked-to-market, which distinguishes them from equities and bonds. Their book value is therefore relatively stable and has been one reason why institutional investors, such as pension funds, have favoured investing in private equity funds. But it also means that it is harder for investors to know what the actual market value of their assets is.

Important to continue to analyse the private equity market

Sweden has both large private equity firms and many private equity-owned portfolio companies. That said, the financing for private equity firms comes largely from foreign investors. Swedish banks also have substantial lending to private equity firms, but this has declined over time. The fact that such a large proportion of the Swedish private equity industry's financing comes from abroad means that any crisis for private equity firms should have limited direct effects on the Swedish financial system, but the indirect effects are difficult to assess. The increasing importance of private credit funds in the provision of credit to companies, both private equity-owned ones and others, needs to be further analysed. Therefore, greater access to data from international non-banks is needed to better analyse whether they pose a stability risk to Sweden.

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