Monetary Policy Report

November 2023

Monetary Policy Report

Regularly or upon request, the Riksbank shall submit an account of monetary policy operations to the Riksdag's Committee on Finance (Chapter 11, Section 1, Sveriges Riksbank Act [2022:1568]). These accounts are presented both in specific material for assessing monetary policy and in the Monetary Policy Reports.

The Riksbank's Monetary Policy Report is published five times a year. The purpose of the report is to summarise the basis for the monetary policy decisions and the assessments made by the Executive Board of the Riksbank. The report describes the deliberations made by the Executive Board when deciding on an appropriate monetary policy[1]. The report includes a description of the future prospects for inflation and economic activity based on the monetary policy that the Executive Board currently considers to be well-balanced.

Through the Monetary Policy Reports, the Riksbank also informs the general public about monetary policy, which makes it easier for external parties to follow, understand and evaluate the Riksbank's actions.

The Executive Board made a decision on the Monetary Policy Report on 22 November 2023. The report can be downloaded in PDF format from the Riksbank's website www.riksbank.se, where more information about the Riksbank can also be found.

[1] See "Monetary policy in Sweden – The Riksbank's strategy" on the next page for a description of the monetary policy strategy and what can be regarded as an appropriate monetary policy.

Monetary policy in Sweden – The Riksbank's strategy

- According to the Sveriges Riksbank Act, the overriding objective of monetary policy is to maintain permanently low and stable inflation. The Riksbank has defined the objective as a target of 2 per cent for the annual change in the consumer price index with a fixed interest rate (the CPIF). The inflation target should function as a benchmark for price- and wage-setting in the economy.
- Without neglecting the inflation target, the Riksbank shall moreover contribute to a balanced development of production and employment. The Riksbank thus conducts a policy of flexible inflation targeting. In connection with each monetary policy decision, the Executive Board assesses which monetary policy is well-balanced. If inflation deviates from the inflation target, it is normally a question of finding a balance between how rapidly it shall be brought back to target and the effects on real economic developments.
- It is neither possible nor desirable to conduct a monetary policy that always keeps inflation at exactly 2 per cent. Changes occur constantly in the economy that make inflation vary in a way that cannot be predicted with sufficient precision, or counteracted in the short term. The important thing is that households and companies have confidence in the target. Prolonged deviations from the target risk affecting expectations of the normal level of inflation in the economy.
- As it takes time for monetary policy to impact fully on inflation and the real economy, monetary policy is guided by economic forecasts. There is no general answer to the question of how quickly the Riksbank aims to bring inflation back to 2 per cent if it deviates from the target. Too rapid a return may in some situations have very negative effects on production and employment, while too slow a return may weaken the credibility of the inflation target.
- The Riksbank can weigh risks linked to developments in the financial markets into its monetary policy decisions as long as confidence in the inflation target is clearly anchored, and expected and overall target achievement regarding inflation, production and employment is improved when viewed over a longer horizon. With regard to preventing an unbalanced development of asset prices and indebtedness, however, it is of prime importance that there is an efficient financial regulatory framework and effective supervision.
- The Riksbank's main monetary policy tool is the policy rate. When necessary, this can be supplemented with other measures, including purchases or sales of government securities, for example to ensure that monetary policy impacts effectively on the interest rates faced by households and companies. The Riksbank may buy and sell assets other than government securities if there are exceptional grounds. Such exceptional grounds may arise during times of financial turmoil or crisis, for example.
- The Riksbank strives for open and clear communication. This makes it easier for economic agents to make sound economic decisions and monetary policy will also be easier to evaluate. The Riksdag's Committee on Finance, the National Audit Office and the General Council of the Riksbank monitor and evaluate the conducted monetary policy in different ways within their respective remits.
- The Executive Board normally holds five monetary policy meetings a year.[2] The monetary policy decision and Monetary Policy Report are presented together with a press release at 09.30 on the day following the monetary policy meeting. The Monetary Policy Report describes economic developments and justifies the monetary policy decision. The decision and press release make it clear how the individual Executive Board members voted and provide the main justification for any reservations entered. A press conference is held later the same day. Just under two weeks after each monetary policy meeting, minutes from the meeting are published, which set forth the reasoning of the different Executive Board members.

[2] With effect from 2024 the number of monetary policy meetings a year will increase from five to eight. See https://www.riksbank.se/en-gb/press-and-published/notices-and-press-releases/press-releases/2023/eight-monetary-policy-meetings-a-year--from-2024/

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Inflation is still too high and there are still risks that it will not continue falling fast enough and stabilise at the target. But inflation has fallen and inflationary pressures have clearly eased. The Executive Board has decided to hold the policy rate unchanged at 4 per cent. The Executive Board assesses that monetary policy needs to remain contractionary and is prepared to raise the policy rate further if inflation prospects deteriorate.

Monetary policy has contributed to inflationary pressures in the Swedish economy being on their way down: the short-term rate of increase in consumer prices is lower than before and companies are making downward adjustments to their plans to raise prices. However, inflation remains too high and there are still risks that it will not fall fast enough going forward. Prices for services are increasing at a rapid pace and contributing significantly to total inflation. In addition, the krona is still unjustifiably weak, which is holding up the rate of price increase for goods.

As a result of the implemented policy rate hikes, demand in the Swedish economy is slowing down. The slowdown of the economy is now also beginning to reach the labour market. GDP is expected to continue falling for some time to come, at the same time as developments in the labour market slow down somewhat further. The lower activity in the Swedish economy, together with an expected strengthening of the krona exchange rate, will contribute to inflation falling towards the target during the course of next year.

The forecast for the policy rate is that it may be raised further at the start of next year and that monetary policy needs to be contractionary for a relatively long period of time for inflation to fall back and stabilise close to the target of 2 per cent. New information and how it is assessed to affect the economic outlook and inflation prospects will be decisive in determining the monetary policy stance.

1 Inflation is approaching the target but is still too high

Tight monetary policy abroad is contributing to inflation continuing to fall back from last year's peak levels. Central banks are allowing monetary policy to act by holding their policy rates at contractionary levels but are at the same time keeping the door open for further rate rises.

Inflation is also falling in Sweden, roughly in line with the Riksbank's previous assessment. Monetary policy has dampened demand in the Swedish economy and is contributing to a slowdown in inflationary pressures. In recent months, consumer prices have increased at a slower pace than before and companies are adjusting their plans for price increases. The labour market is weakening from a strong starting point.

However, inflation is still too high and there are still risks that it will not fall fast enough going forward. Prices for services are increasing at a rapid pace and contributing significantly to total inflation. In addition, the krona is still unjustifiably weak, which is holding up the rate of price increase for goods. All in all, the Executive Board assesses that monetary policy needs to remain contractionary, but that it is appropriate now to hold the policy rate unchanged. The Executive Board has therefore decided to allow the policy rate to remain at 4 per cent, but is prepared to raise it further if the prospects for inflation deteriorate.

The forecast for the policy rate is that it may be raised further at the start of next year and that monetary policy needs to be contractionary for a relatively long period of time for inflation to fall back and stabilise close to the target of 2 per cent. New information and how it is assessed to affect the economic outlook and inflation prospects will be decisive in determining the monetary policy stance.

1.1 Increasingly clear signs that inflation is falling

Continued tight monetary policy abroad with door open for further rate rises

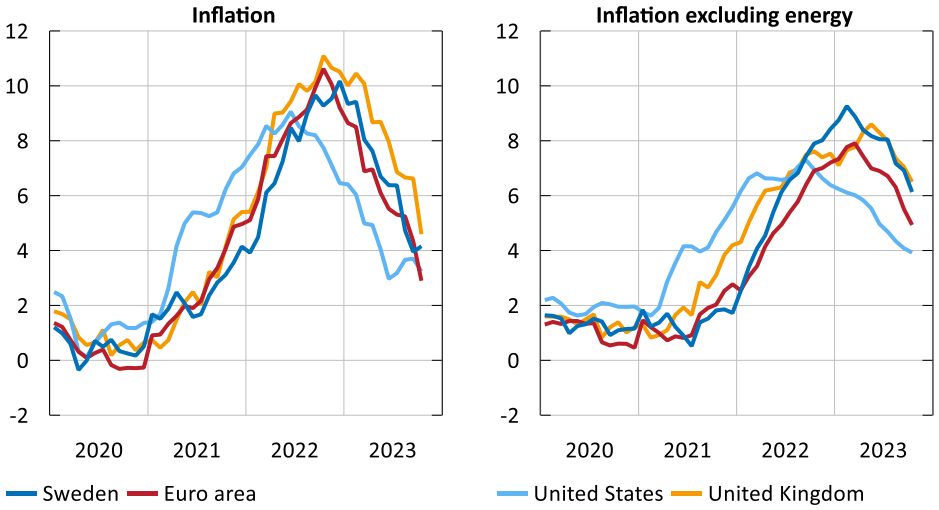
During the year, inflation abroad has fallen significantly from the peak levels in 2022 and is now approaching the central banks' targets. Not least, inflation has fallen substantially in the euro area, Sweden's most important trading partner. However,

just as earlier in the year, the decline in underlying inflation is significantly slower (see Figure 1).

After their rapid policy rate increases, central banks abroad are now, overall, in a position in which they are allowing the contractionary monetary policy to act. Many central banks deem that their rates may have been raised enough for inflation to fall to the target level within a reasonable period of time. In October, the European Central Bank held its policy rate unchanged after having raised it at ten meetings in a row and the Federal Reserve has held its policy rate unchanged at the two last monetary policy meetings (see Figure 2). At the same time, vigilance about inflation remains high, and the central banks regularly evaluate the effects of the monetary policy tightening as well as incoming data and indicators of economic developments. The door is left open for continued increases, and rate cuts are not being discussed (see Chapter 2 for a more detailed description).

Figure 1. Inflation

Annual percentage change

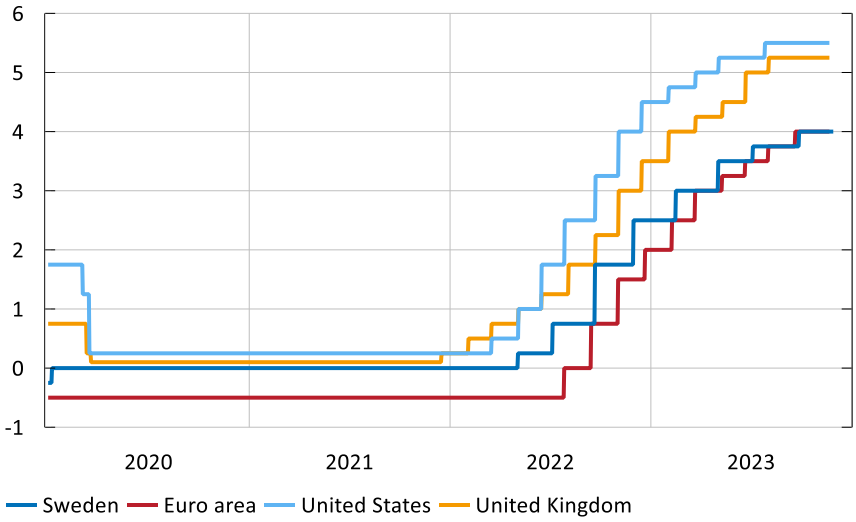


Note. Refers to the CPIF for Sweden, the HICP for the euro area and the CPI for the United Kingdom and United States.

Sources: Eurostat, Statistics Sweden, U.S. Bureau of Labor Statistics and UK Office for National Statistics.

Figure 2. Policy rates

Per cent



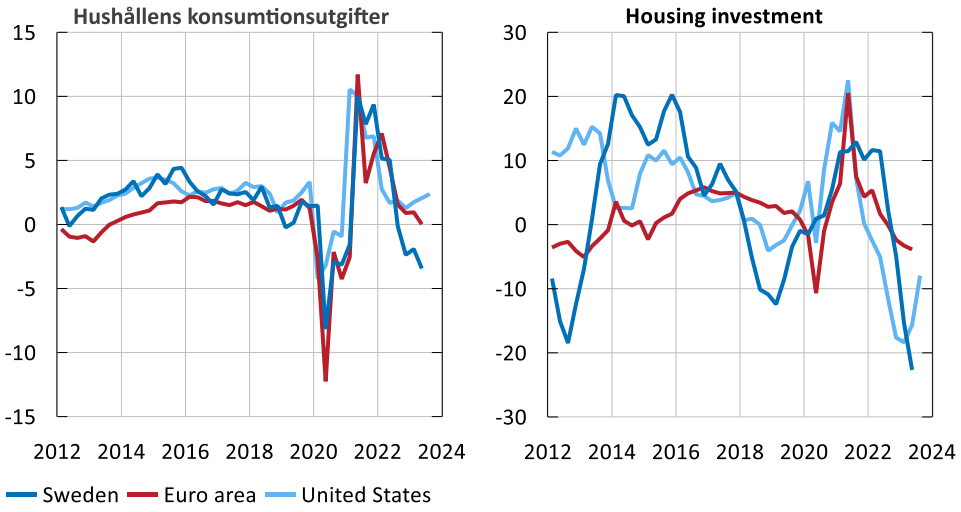
Sources: The Bank of England, the ECB, the Federal Reserve and the Riksbank.

Real economic developments abroad have followed the same pattern as earlier in the year, with stronger growth in the United States than the euro area. At the same time, the labour markets in both regions are still showing resilience, although there are signs of some slowdown. Overall, developments are in line with the Riksbank's forecast (see further description in Chapter 3).

Weak growth in Sweden is starting to make an impression on the labour market

In Sweden, too, developments in the real economy have been in line with the Riksbank's forecast. Growth is low, much due to demand being subdued by the parts of the economy that are sensitive to interest rates, such as household consumption and housing investment (see Figure 3). During the upturn in inflation, the Riksbank raised the policy rate to a slightly lesser extent than central banks in the euro area and United States. However, the Swedish household's demand has nevertheless slowed down much further (see left-hand image in Figure 3). This reflects their high sensitivity to interest rates. But in other parts of the economy, such as the export sector, demand is slowing down in the wake of weaker economic activity abroad.

Figure 3. Household consumption expenditure and housing investment
Annual percentage change



Sources: Statistics Sweden, Eurostat, the U.S. Bureau of Labor Statistics and the OECD.

As in the euro area and United States, the labour market in Sweden has long succeeded in withstanding the falling growth.[3] Employment has been stronger than forecasts by the Riksbank for some time. However, signs that the economic downturn is having an impact on the Swedish labour market are now becoming increasingly visible. Employment is still at a historically high level, but unemployment has started to rise at the same time as indicators are suggesting some further increase in the near term (see also the description in Chapter 3).

Inflationary pressures easing in the Swedish economy but still too high

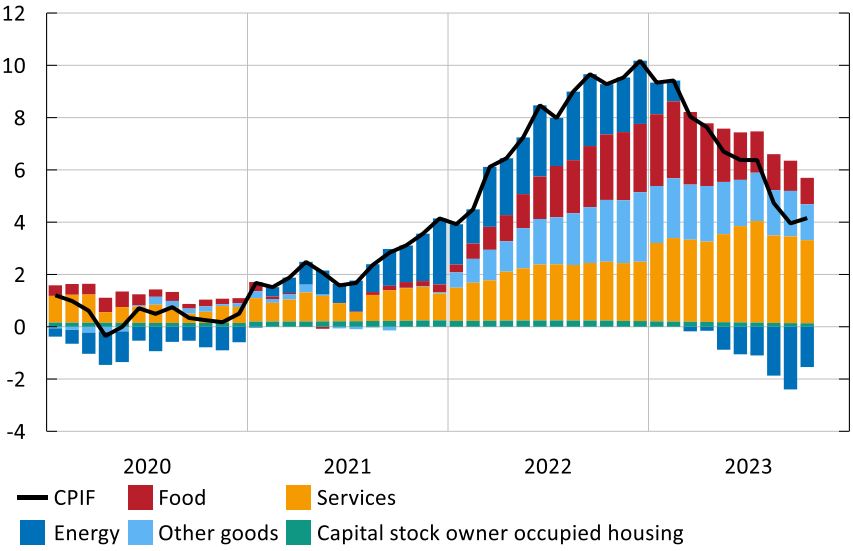
There are clear indications that inflationary pressures are easing in the Swedish economy. Measured as the CPIF excluding energy, inflation amounted to 6.1 per cent in October, which can be compared with 6.9 per cent in September and the peak levels of around 9 per cent at the start of the year.

CPIF inflation has fallen faster, from the peak levels of around 10 per cent at the end of 2022, to 4.2 per cent in October. The gap between the different measures of inflation becomes even clearer if we examine their contributions to the price increases (see Figure 4). This shows that, for some time, energy prices have made a significantly negative contribution, while other components continue to make large positive contribution to total inflation. This applies in particular to prices of services.

[3] See, for example, the article "Strong labour market in Sweden and abroad" in *Monetary Policy Report*, June 2023, Sveriges Riksbank.

Figure 4. Contributions to CPIF inflation

Annual percentage change (CPIF) and percentage points respectively

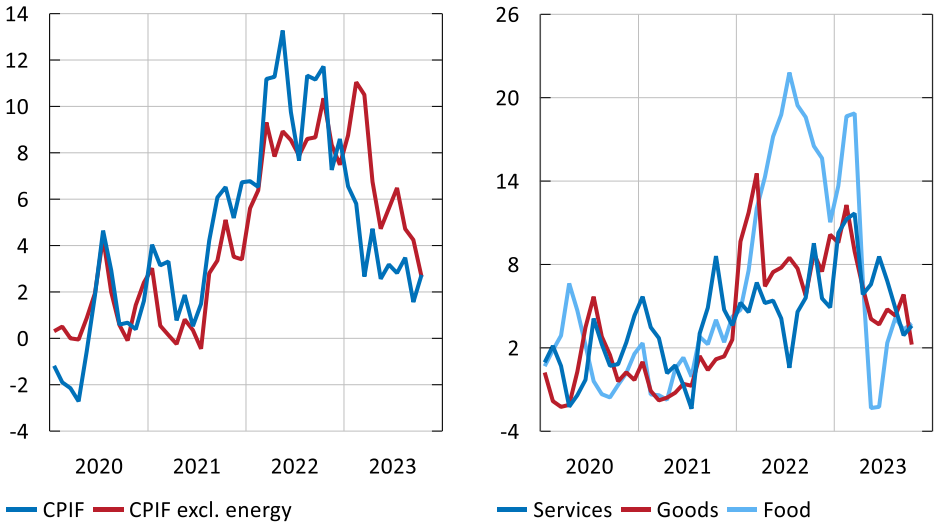


Sources: Statistics Sweden and the Riksbank.

One way of obtaining a picture of current price developments is to look at changes over a shorter period of time than 12 months. Figure 5 shows the price changes over three months, calculated as an annual rate. The left-hand image shows a comparison of the CPIF and the CPIF excluding energy. The pattern is similar to that for the twelve-month figures, but also differs in some respects. The rate of increase in the CPIF had already peaked by the middle of last year, after which it dropped sharply to the current level of just above the inflation target. The rate of increase in the CPIF excluding energy is more sluggish and peaked at the beginning of the current year, after which it fell, to around the same level as CPIF inflation as a whole, that is just above 2 percent. The rate of increase on both services and goods has declined considerably from the peak levels (see right-hand image in Figure 5). This development gives cause for optimism, but needs to continue for inflation to fall back towards the target within a reasonable period of time. Further discussion of short-term rates of price increase can be found in Chapter 3.

Figure 5. CPIF and CPIF excluding energy as well as prices of services, goods and food

Three-month change in per cent, calculated as an annual rate, seasonally-adjusted data



Sources: Statistics Sweden and the Riksbank.

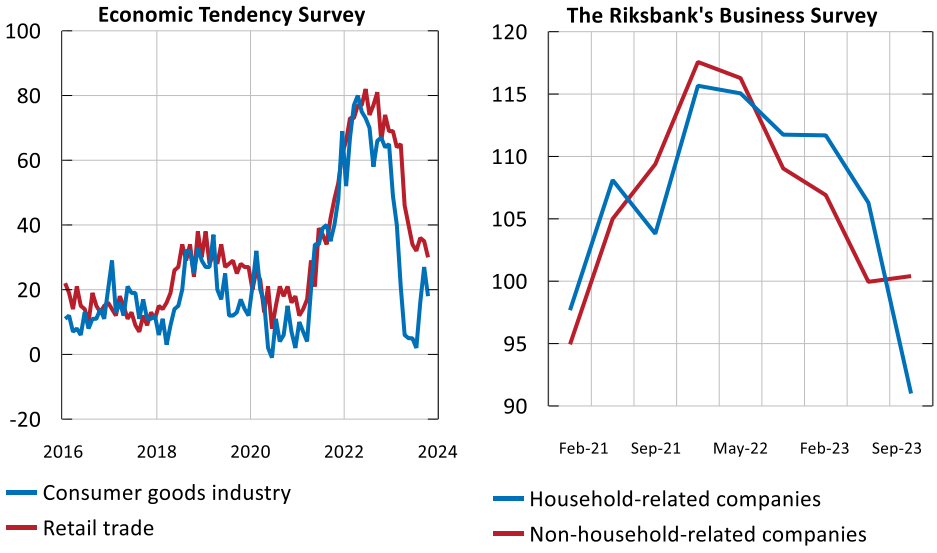
Companies' price plans are another important indicator of inflationary pressures in the economy. Measurements of these are made in both the National Institute of Economic Research's Economic Tendency Survey and the Riksbank's own Business Survey.

According to the Economic Tendency Survey, price plans among companies in the retail trade are somewhat higher than normal (see left-hand image in Figure 6). The Riksbank's Business Survey shows a more marked change in price plans among the household-related companies (see right-hand image in Figure 6). When inflation started to rise in Sweden, the proportion of household-related companies planning price rises also increased. But in the two latest surveys, this proportion has fallen substantially. In the most recent survey, the proportion of companies planning to raise prices over the next year is lower than the proportion of companies planning to cut them.

There are a couple of possible explanations for the differences between the Economic Tendency Survey and the Riksbank's Business Survey. Firstly, the Economic Tendency Survey refers to price plans three months ahead, while the Business survey refers to plans for the coming year. And secondly, the Economic Tendency Survey covers a lot more companies than the Business survey. Although the picture is not entirely unambiguous, it can be concluded that companies have now adjusted their price plans downwards quite significantly.

Figure 6. Companies' price plans in Sweden

Net figures (left), index, mean value = 100, and standard deviation = 10 (right)



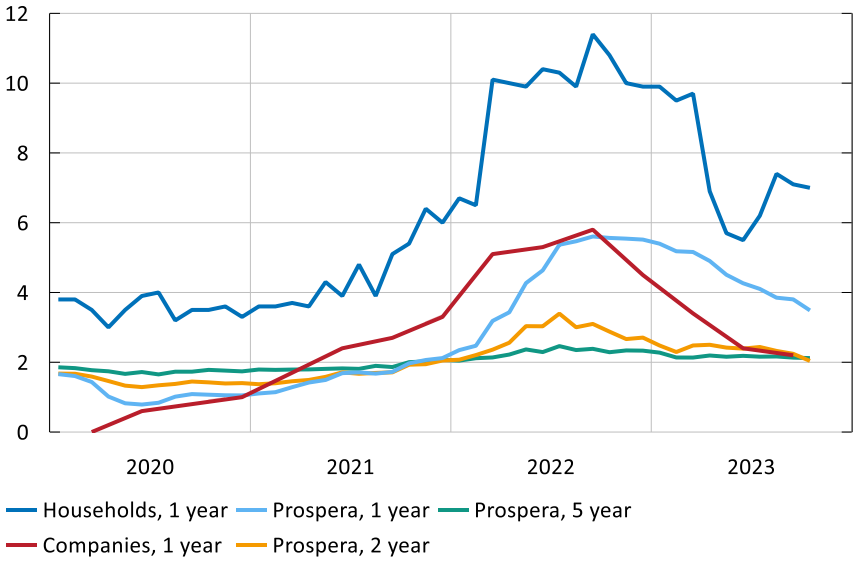
Note. The question concerns how companies plan to adjust prices over the next three months (left) and the next 12 months (right). The net figures show how many companies are planning to increase their prices minus how many are planning to reduce them. Standardised values (right). Non-household-related companies refer to manufacturing and construction companies and those companies that mainly sell services to companies. Household-related companies refers to the retail trade sector and those companies that mainly sell services to households.

Sources: The National Institute of Economic Research and the Riksbank.

Long-term inflation expectations have also been stable in recent years, too, when inflation has reached double figures (see Figure 7). This is a sign that the inflation target enjoys a high level of credibility. Short-term expectations rose in 2021 and 2022 in step with the measured rate of inflation, but have been falling for a while. One year ahead, expectations among both companies and money market participants are close to 2 per cent. Households' expectations tend to be higher than actual inflation, which may reflect the fact that they tend to focus more on prices that are rising than those that are unchanged or falling (see Figure 7).

Figure 7. Inflation expectations

Per cent



Note. Quarterly data for companies, monthly data for others. Prospera refers to money market participants.

Sources: Kantar Prospera and National Institute of Economic Research.

The krona's development is increasing uncertainty over the development of inflation

Since September, the krona exchange rate has strengthened considerably but it is still very weak from a historical point of view. The Riksbank assesses that, during the period of high inflation, companies have transferred cost increases from, for instance, electricity and input goods, to consumer prices to a greater extent than previously. This probably also applies to costs for imported goods related to the weak krona. In comparison with the euro area, underlying inflation is falling more slowly in Sweden, which is likely connected with the depreciation of the krona against the euro (see the article "The pass-through of the krona to inflation appears to be larger than usual").[4]

If the krona depreciates more than expected going forward, at the same time as the pass-through to inflation is large, this would increase the risk that inflation will not fall back in line with the Riksbank's forecast. This could justify a tighter monetary policy.[5] There is in general considerable uncertainty over the krona exchange rate and its effect on inflation.

[4] See also the fact box "Pass-through of the exchange rate when inflation is high" in *Monetary Policy Report*, June 2023, Sveriges Riksbank.

[5] See also section 1.4, "Alternative scenarios for inflation and monetary policy", in *Monetary Policy Report*, June 2023, Sveriges Riksbank.

1.2 Continued contractionary monetary policy

Policy rate held unchanged at 4 per cent

Inflation abroad has fallen further since September and is approaching the central banks' targets. However, underlying inflation is falling at a slower pace. Inflation is also falling in Sweden, roughly in line with the Riksbank's previous assessment. Monetary policy has dampened demand in the Swedish economy and is contributing to a slowdown in inflationary pressures. In recent months, consumer prices have increased at a slower pace than before, and companies no longer plan to raise prices as much. The labour market is weakening from a strong starting point.

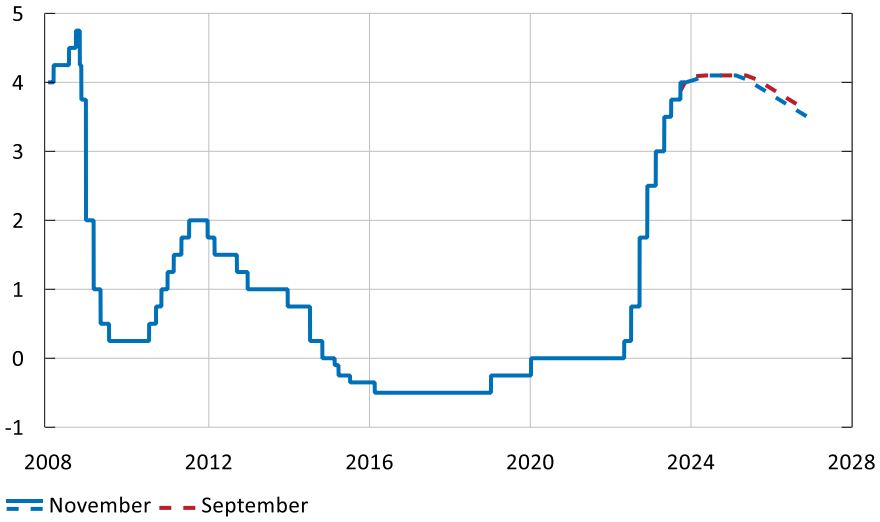
However, inflation is still too high and there are still risks that it will not fall fast enough going forward. Prices for services are increasing at a rapid pace and contributing significantly to total inflation. In addition, the krona is still unjustifiably weak, which is holding up the rate of price increase for goods.

All in all, the policy rate therefore needs to remain at contractionary level for inflation to continue falling. The Executive Board deems it appropriate now to hold the policy rate unchanged at 4 per cent, but is prepared to raise it further if the prospects for inflation deteriorate.

The forecast for the policy rate is that it may be raised further at the start of next year and that monetary policy needs to be contractionary for a relatively long period of time for inflation to fall back and stabilise close to the target of 2 per cent (see Figure 8). However, there is still considerable uncertainty, and new information and how it is assessed to affect the economic outlook and inflation prospects will be decisive in determining the monetary policy stance. The fact that inflation and monetary policy can develop in a different way than forecast is illustrated in the alternative scenarios in Section 1.4.

Figure 8. The Riksbank's policy rate

Per cent



Note. Solid line refers to outcome, dashed line represents the Riksbank's forecast. Outcomes are daily rates and the forecasts refer to quarterly averages.

Source: The Riksbank.

Over the past year, inflation has reached its highest level in over 30 years. High inflation has a negative effect on the whole economy, but is particularly problematic for households with small margins.[6] Consequently, the Riksbank attaches great weight to returning inflation to the target within a reasonable period of time. Low and stable inflation makes it easier for households and companies to plan ahead and creates good conditions for social partners to continue using the inflation target as anchor in wage formation. The fact that inflation is falling towards the target enables a return to real wage growth and increases households' purchasing power.

Sales of government bonds continuing

As a supplement to the policy rate increases, and a step towards normalising the Riksbank's balance sheet, the Riksbank is continuing to sell government bonds in accordance with the decision from June. An increased volume of safe and easily tradeable assets on the Swedish market can make it easier for foreign agents to invest in Swedish assets and also improve the functionality of the financial markets. Altogether, this may contribute to a stronger krona and improve the Riksbank's capacity to reduce inflation.

The sales have so far functioned well, with high demand from market participants. Swedish government bond yields at the same time remain low in relation to the expected policy rate. Given this, the Riksbank is considering further increasing the pace of the sales. A decision on this could be made at the monetary policy meeting in January.

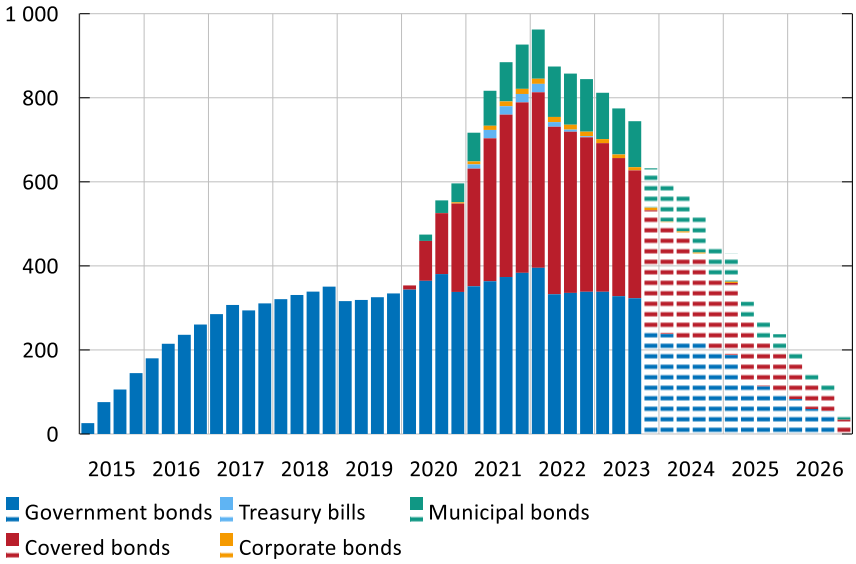
[6] See A. Breman (2023), "Households are affected in different ways when inflation is high – but all are negatively affected and therefore it must be brought down", contribution at the conference "Aggregate and distributional effects of high and volatile inflation", arranged by the European Central Bank.

The Riksbank has no plans to begin selling its holdings of non-government bonds. If monetary policy were to need to be adjustment going forward, changes in the policy rate are assessed to be the most appropriate tool.

Maturities and sales will mean that the Riksbank's holdings of securities fall rapidly in the coming years (see Figure 9). Next year, the Riksbank is planning to return to the topic of what comprises a reasonable level for its asset holdings in the long term and describe in more detail how such a portfolio should be composed.

Figure 9. The Riksbank's asset holdings

Nominal amounts, SEK billion



Note. The striped bars represent a projection of the Riksbank's asset holdings based on maturities and decisions that no asset purchases will be made after 2022 and that government bonds will be sold at a nominal value of SEK 5 billion per month.

Source: The Riksbank.

Inflation falls towards the target when economic activity slows down

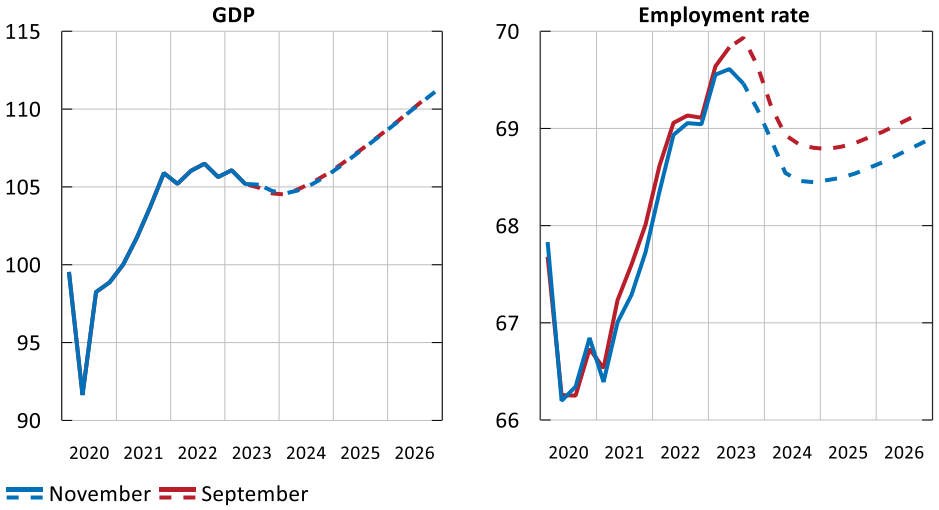
There are clear signs that demand is slowing down in the Swedish economy as a result of the implemented policy rate increases. GDP is expected to continue falling for some time to come (see Figure 10). As mentioned earlier, signs that the economic slowdown has reached the labour market have become clearer and the employment rate is assessed to be slightly lower than in the most recent forecast from September. However, it is important to bear in mind that the downturn on the labour market is modest and taking place from a strong starting point.

In addition to the effect of the rising interest rates, demand is also held back by a very weak development in real wages this year. The lower activity in the Swedish economy, together with an expected strengthening of the krona exchange rate, will contribute to inflation falling towards the target during the course of next year (see Figure 11). As in previous forecasts, inflation measured as the target variable CPIF is expected to

come close to the target slightly sooner than underlying inflation measured as the CPIF excluding energy. The forecasts are described in more detail in Chapter 3.

Figure 10. GDP and the employment rate in Sweden

Index, 2019 Q4 = 100, seasonally adjusted data (left) and percentage of population, 15–74 years, seasonally adjusted data (right)

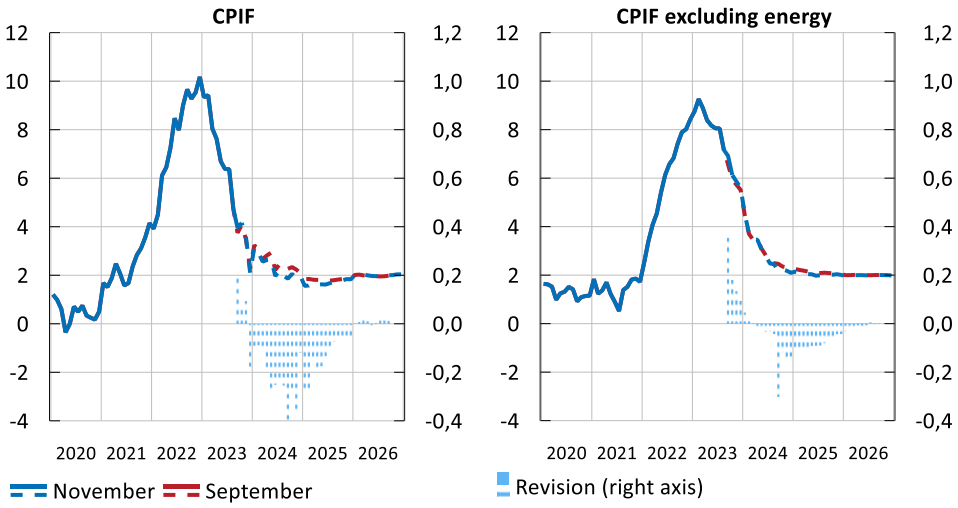


Note. Solid line refers to outcome, dashed line represents the Riksbank's forecast.
The employment rate have been relinked and revised by Statistics Sweden for the time series break that occurred in the LFS in January 2021 for the period 2005-December 2020. The outcomes after 2021 have also been revised as a result of some compilations of the statistics.

Sources: Statistics Sweden and the Riksbank.

Figure 11. The CPIF and the CPIF excluding energy

Annual percentage change (left axis) and percentage points (right axis)



Note. Solid line refers to outcome, dashed line represents the Riksbank's forecast.

Sources: Statistics Sweden and the Riksbank.

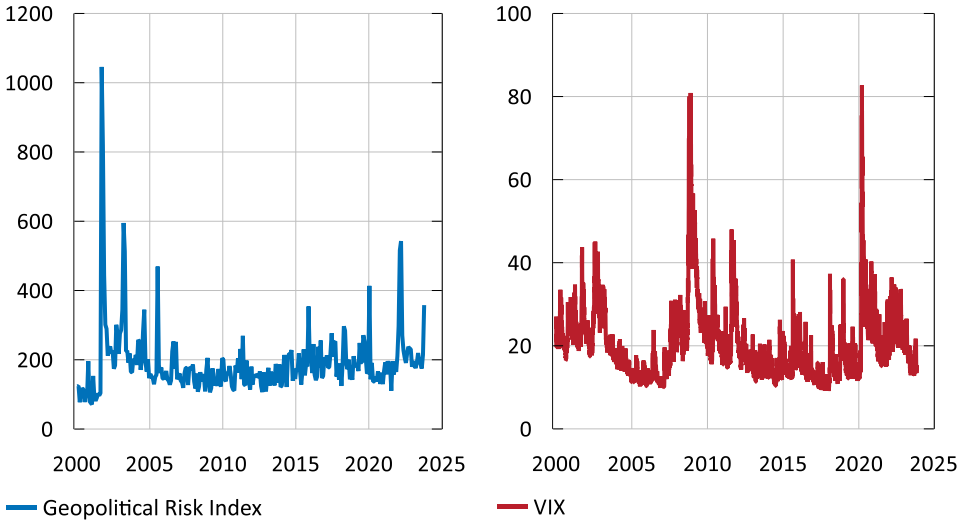
1.3 The economic outlook remains uncertain

Several factors make economic developments abroad and in Sweden uncertain. Ultimately, these factors can also affect Swedish inflation prospects and the Riksbank's monetary policy.

There is a considerable risk of new supply shocks in the global economy. Such shocks could occur as a result of, for instance, increased geopolitical unease as well as climate and weather problems. Since September, the war between Israel and Hamas has contributed to increasing the geopolitical risks in the global economy. Various measures of such risks have consequently risen (see left-hand image Figure 12). The humanitarian effects are horrible, but the effects on the economy have been limited so far. Measures of financial turmoil in terms of, for example, the VIX index for the equity market have not yet been much affected so much (see right-hand image in Figure 12). Nor has the price of oil been affected so far. However, if the conflict were to escalate and include more countries, the economic consequences could become more significant. For example, the price of oil could rise sharply, which could increase inflation worldwide. An expanded conflict could also affect critical transport routes in the region such as the Suez Canal. The effects on financial markets could also be greater in such a situation.

Figure 12. Measures of global risk

Index



Note. Converted to monthly data (left), daily data (right).

Sources: Matteo Iaccovello and Chicago Board Options Exchange.[7]

One geopolitical uncertainty factor that has already has major consequences for the global economy is Russia's illegal invasion of Ukraine at the end of February last year. One clear effect was a sharp rise in prices for energy and food. Since then, prices for these goods have fallen back. However, they could rise again sharply if the conflict

[7] See https://www.matteoiacoviello.com/gpr.htm

intensifies and the transportation problems from Ukraine to the rest of Europe are exacerbated.

One risk that has gradually intensified in recent years concerns the sustainability of public finances abroad. Major fiscal policy support measures were launched in conjunction with the pandemic which, in turn, led to large budget deficits and rising government debt in many countries. At the same time, the global level of interest rates has risen sharply in recent years, making it more difficult to fund government debt. Recently, the international discussion has mostly focused on the United States but several countries in the euro area could also encounter challenges in funding their government debt in the period ahead. This could pose risks to growth abroad for two main reasons. Firstly, the need for fiscal policy tightening could increase, and secondly confidence among economic agents could be affected, which would further make borrowing difficult. In this context, it is worth noting that public finances in Sweden are very strong, which reduces the need for fiscal policy tightening and also improves the conditions for the Riksbank's monetary policy.

The Swedish economic outlook is also surrounded by a number of uncertainty factors. One of these concerns demand for consumption among Swedish households. As described earlier, consumption has already been affected quite significantly by the rising interest rates. However, despite their short interest-rate fixation periods, households' mortgage rates in the stock of borrowers have not yet been fully affected by the rate rises implemented so far, and households are also indirectly affected by the debts of tenant-owner housing associations which have a longer interest-rate fixation period (see Chapter 2 for a more detailed description). If households have not accounted for this, there is a risk that consumption will be weaker than expected going forward. On the other hand, households built up savings during the pandemic that they can now use to maintain their consumption to some extent.[8] However, as there is a lack of current data on the allocation of households' assets and savings it is difficult to assess the size of this effect.

Households' propensity to use their savings for consumption is also affected by developments in the labour market. The Swedish labour market has long resisted the downturn in demand well. One conceivable explanation for this is that companies have retained their labour, with the lessons learned from the recovery after the pandemic, when it was difficult to find staff, fresh in their minds. However, it may also be connected with the economic downturn not expected to be particularly deep or long-lasting. However, signs of a weakening labour market are now becoming visible. Admittedly the Riksbank's forecast is that the weakening will be relatively small, but if demand falls more than expected, companies could rapidly change their behaviour and instead rapidly start laying staff off. This could in turn slow down demand even further, by households increasing their precautionary savings, due to concern they could lose their jobs. In this eventuality, economic activity and the labour market in Sweden could develop less favourably than in the Riksbank's forecast.

[8] See the article "Household savings increased significantly during the pandemic" in *Monetary Policy Report*, September 2023, Sveriges Riksbank.

The rising interest rates have also created considerable uncertainty on the housing market. After the sharp fall last year, prices have not changed as much this year, but they have fallen somewhat in recent months. The Riksbank's forecast is that prices will fall somewhat further in the coming period, and thereafter stabilise and then gradually begin rising again. However, developments are very difficult to assess. It is primarily household consumption and housing investment that could be affected if housing prices develop differently from the Riksbank's forecast.

One risk that the Riksbank has long warned about concerns the commercial property sector, where some highly-leveraged companies have encountered problems in the wake of rising interest rates. However, there are major differences between companies in the sector: some have strong balance sheets and are in a relatively good position to manage rising interest rates, while other, highly indebted companies are more vulnerable. The Riksbank's analyses indicate that the Swedish banks have sufficient capital to deal with significant problems in the property sector. But if even more property companies experience difficulties, confidence in the banking system could deteriorate and impact the banks' funding conditions, which could affect their ability and willingness to supply credit. In such a scenario, the real economy could also be adversely affected. The Riksbank therefore considers that the major Swedish banks should aim to have a satisfactory margin down to the formal capital requirements.[9]

As mentioned earlier, the development of the future krona exchange rate is very uncertain. Some of the factors that could cause the krona to deviate from the Riksbank's forecast are linked to the risks regarding the economic prospects discussed in this section. For instance, both an increase in geopolitical tension abroad and poorer economic prospects in Sweden could cause the krona to depreciate more than expected going forward.

1.4 Alternative scenarios for inflation and monetary policy

The scenarios in this section aim to describe how monetary policy can be affected if inflationary pressures are higher or lower than in the Riksbank's forecast. Over the past year, the Riksbank has published several scenarios where inflation becomes higher or lower than expected for various reasons, for example, exchange rate developments, changes in commodity prices or company pricing. The purpose of the scenarios is to illustrate that developments are uncertain, to point to uncertainty factors that the Riksbank is currently focussing on and to try to indicate how the monetary policy plan may need to be changed if the uncertainty factors materialise.

This section discusses two scenarios for inflation: one where it is higher and one where it is lower than in the main scenario.[10] The first scenario, where inflation becomes higher than expected, is based on companies' pricing. There it is assumed that companies increase their margins to maintain their profitability. This means that inflation becomes higher than expected, but GDP is weaker than expected.

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

[10] The scenarios are based on simulations in the Riksbank's macroeconomic model MAJA, like those published in the April, June and September Monetary Policy Reports.

The second scenario is linked to the risks of weaker demand as discussed in Section 1.3. In this scenario both GDP and inflation are lower than in the main scenario.

Unlike the scenarios previously published over the past year, we only show here the development when monetary policy adapts to the new conditions in the scenarios and try to bring inflation back to the target within a reasonable period of time.

Companies increase their margins and inflation becomes higher than expected – monetary policy is further tightened

At present we seen signs that companies' costs are increasing at a slower pace than before. As described earlier, companies' price plans do not have the same focus on price increases as when inflation was at its peak at the end of last year. But it is difficult to know what will happen going forward. In this scenario it is assumed that companies do not adapt their prices in accordance with their costs, but instead increase their margins. This means that inflation becomes higher than expected in the coming period.

The higher inflationary pressures in the scenario are to some extent illustrated by the red line in the left-hand image in Figure 13, where inflation becomes higher despite tighter monetary policy. However, the higher inflationary pressures are reflected not only in higher inflation than expected, but also in that indicators, such as companies' price plans, show an unexpected upturn.

There are strong reasons for monetary policy to react with a higher policy rate if inflationary pressures prove to be higher than expected. A possible monetary policy response is shown in the red line in the right-hand image in Figure 13. By beginning interest rate increases at an early stage during the first half of next year, the Riksbank is trying to both soften demand so that companies cannot raise their prices as planned, and to avoid the higher inflation giving rise to so-called secondary effects that raise inflation expectations. In this way, one also avoids wage formation being affected to any significant extent, and inflation can approach the target during the forecast period. This is illustrated by the red line in the left-hand image in Figure 13.

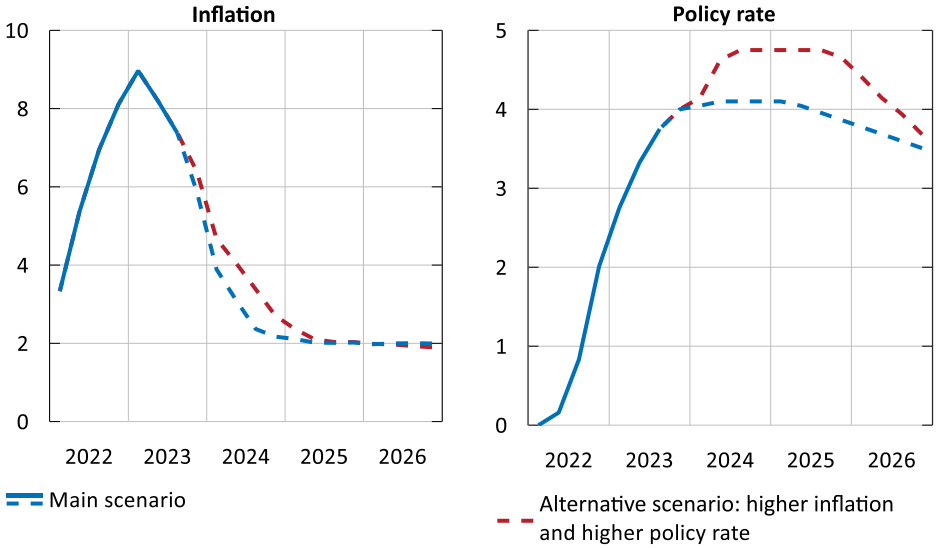
GDP develops somewhat weaker when companies' margins become higher than expected. This is because the companies make an active choice to produce smaller volumes at higher prices. In this way, higher margins can be said to be a type of supply shock.[11] If the Riksbank raises the policy rate, it dampens the real economy further, so that the GDP level is lower and unemployment is higher. The lower GDP level compared with the main scenario is shown in the red line in Figure 14. However, compared with monetary policy not reacting quickly and instead needing to raise the policy rate at a later stage, the long-term real economic costs are small.[12]

[11] In the scenario with higher inflation in the September Monetary Policy Report, there was a discussion of the effects of global supply shocks, which can stem from geopolitical tension or climate and weather-related factors.

[12] This was illustrated in the scenario with higher inflation in the September Monetary Policy Report.

Figure 13. Scenario with higher inflation than in the main scenario

Annual percentage change (left) and per cent (right)

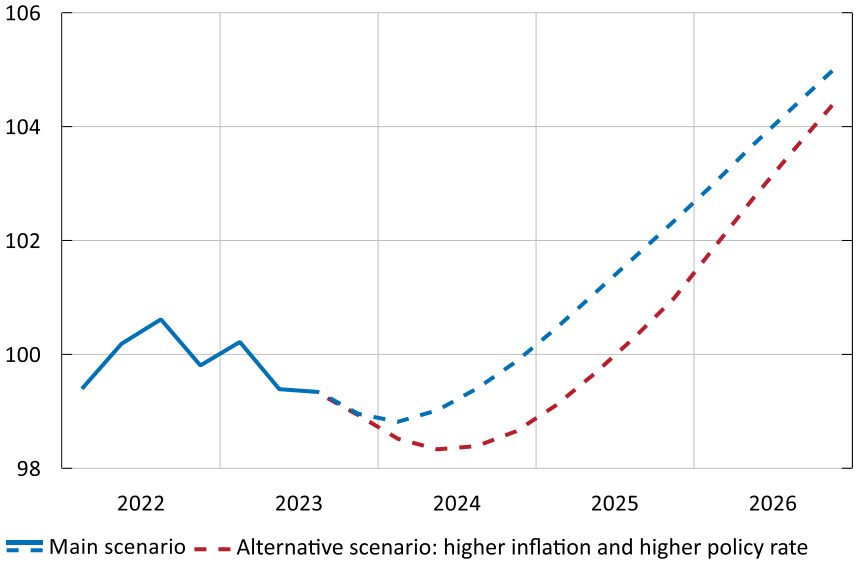


Note. Inflation refers to the CPIF excluding energy. Solid lines refer to outcomes, dashed lines to scenarios.

Sources: Statistics Sweden and the Riksbank.

Figure 14. GDP in the scenario with higher inflation

Index, 2019 Q4 = 100, seasonally adjusted data



Note. Solid lines refer to outcomes, dashed lines to scenarios.

Sources: Statistics Sweden and the Riksbank.

Lower demand pushes down inflation faster – interest rate cuts begin earlier

One possible reason why inflation could become lower than in the main scenario is that the development of demand is weaker than expected. Section 1.3 described

some possible reasons why this could happen, which could stem both from abroad and from domestic conditions. If demand becomes lower than expected, it could mean both that the development of the real economy is weaker and that inflation becomes lower than in the main scenario. This is partly because it would be more difficult for companies to raise their prices when demand weakens.

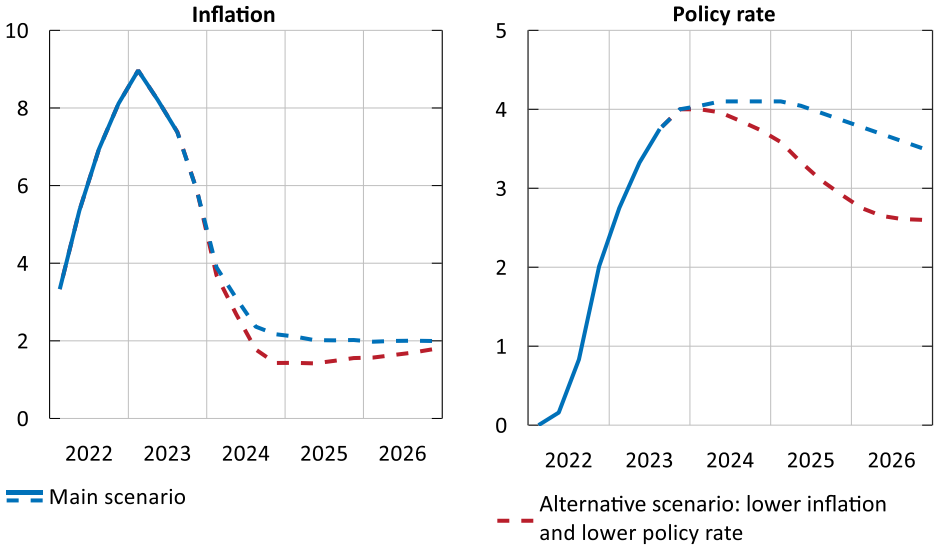
The red line in the right-hand image in Figure 15 shows a possible monetary policy reaction to the weaker demand and lower inflation. The fact that the real economy and inflation are changing in the same direction, which is normal in disturbances to demand, in some way simplifies the monetary policy trade-off: it clearly indicates a less contractionary monetary policy than in the main scenario.

But in today's situation, the trade-off is nevertheless complicated by inflation having been much higher than the target level for a period of time and remaining so. The Riksbank has on several occasions over the past year communicated that lower-than-expected inflation is much less of a problem than higher-than-expected inflation. Although the scenario means that the real economy and inflation "pull monetary policy in the same direction", it is likely that the Riksbank would not immediately begin to cut the interest rate. It is therefore assumed that interest rate cuts will instead begin in the middle of next year. The alternative monetary policy is illustrated by the red line in the right-hand image in Figure 15.

The fact that the interest rate is set at a lower level than in the main scenario means that inflation is held up and comes close to the target, which is shown in the red line in the left-hand image in Figure 15. The lower interest rate also softens the fall in demand, and the GDP level approaches the main scenario during the forecast period. This is illustrated by the red line in Figure 16.

Figure 15. Scenario with lower inflation than in the main scenario

Annual percentage change (left) and per cent (right)

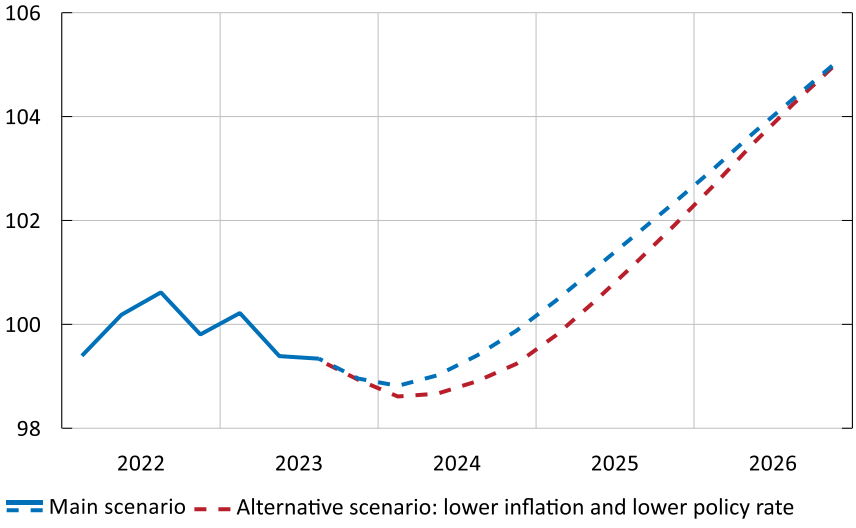


Note. Inflation refers to the CPIF excluding energy. Solid lines refer to outcomes, dashed lines to scenarios.

Sources: Statistics Sweden and the Riksbank.

Figure 16. GDP in the scenario with lower inflation

Index, 2019 Q4 = 100, seasonally adjusted data



Note. Solid lines refer to outcomes, dashed lines to scenarios.

Sources: Statistics Sweden and the Riksbank.

2 Higher interest rates are holding back lending

After a period of policy rate rises, many central banks are now letting monetary policy act by maintaining their policy rates at current levels. Market participants do not expect any further increases from the ECB or Federal Reserve. Instead, market participants expect policy rates to be cut over the next year. However, the central banks have communicated that their vigilance about inflation remains high, that cuts should not be expected in the near future and that further increases cannot be ruled out. The krona has appreciated and is presently slightly stronger than it was at the monetary policy decision in September but remains weaker than normal.

The policy rate rises in Sweden have had a relatively rapid and powerful impact on households as many households are highly indebted and have short interest-rate fixation periods. The higher level of interest rates is also being felt by companies but the lending rates faced by companies vary quite considerably from sector to sector. The higher interest rates have also led to very low demand for credit among households and companies. The transmission of the Riksbank's monetary policy to the interest rates faced by households and companies is considered to be working well.

2.1 Major fluctuations in interest rates and the krona

Many central banks are holding their policy rates on the current levels

Most central banks, like the Riksbank, have raised their policy rates quickly since the start of last year (see Figure 17 and Table 1).[13] Policy rates are at restrictive levels and the pace of the policy rate increases has slowed down since last spring. Many central banks are now allowing monetary policy to act by holding their policy rates on the current levels and they are communicating that vigilance over inflation remains high. The door is being left open for continued raises, while rate cuts are not being discussed at all in their communication.

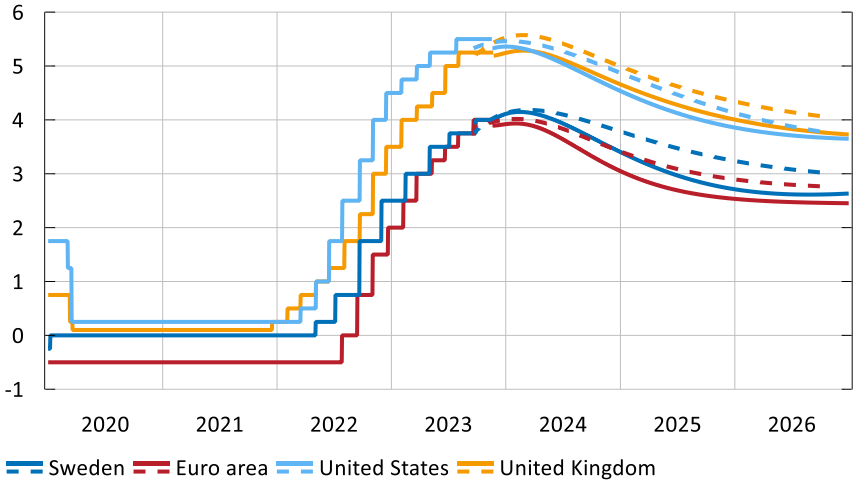
[13] One exception among leading international central banks is the People's Bank of China, which, in contrast, is easing monetary policy at present. The reason for this lies in the domestic economic and financial developments. In addition, representatives of the Bank of Japan have signalled that monetary policy may be tightened in the period ahead.

After ten meetings in a row with raises, the European Central Bank (ECB) decided to hold its policy rate unchanged in October. The motive given for the decision was that the current level of policy rates, if held on the current level long enough, was considered tight enough to reach the inflation target. The Federal Reserve (Fed) also decided at its meeting in early November to keep the interval for the policy rate unchanged. At the press conference, Chair Powell communicated that the Fed is in a position where it needs to proceed carefully and closely assess the outlook for economic activity and inflation based on incoming data. The Norwegian and British central banks also held their policy rates unchanged at their meetings in early November. Norges Bank has continued to communicate that a further rate rise may be appropriate at its next meeting in December. Neither the ECB nor the Fed made any changes to the way they manage the decrease of their asset holdings (see Table 1). However, the Bank of England has increased the pace of reducing its securities holdings (see the Fact Box "Quantitative tightening" for a description of the Riksbank's reduction of the asset holdings).

According to the pricing of forward contracts for short-term money market rates, market participants have lowered their expectations of policy rates since the September monetary policy meeting. In many cases, policy rate peaks are expected to be close and market participants are expecting to see lower policy rates within one year (see Figure 17).

Figure 17. Policy rates and policy rate expectations according to market pricing

Per cent



Note. The figure shows policy rates and market-based expectations of future policy rates. Solid lines represent expectations 21 November 2023. Dashed lines represent expectations immediately prior to the monetary policy meeting in September.

Sources: National central banks and the Riksbank.

Table 1. Monetary policy abroad

	Policy rate at start of 2022	Current policy rate	Expected policy rate at end of June 2024	Status of asset holdings
ECB	−0.50	4.00	3.7	Compensates for principal repayments in one of the asset portfolios[14]
Federal Reserve	0–0.25	5.25–5.50	5.0	Partly compensating for principal repayments
Bank of England	0.25	5.25	5.0	Sales initiated in autumn 2022
Norges Bank	0.50	4.25	4.4	Has not purchased assets for monetary policy purposes
Bank of Canada	0.25	5.00	4.7	Tapering in step with assets maturing
Riksbank	0	4.00	3.9	Sales initiated in April 2023

Note. Per cent. The policy rate at the start of 2022 refers to the effective policy rate on 31 December 2021. Expected policy rate at the end of June 2024 according to market pricing on 21 November 2023, rounded to the closest tenth of a percentage point. Norges Bank's latest published Monetary Policy Report from 21 September 2023 is used for the expected policy rate in Norway.

Sources: Bloomberg, national central banks and the Riksbank.

Major movements in longer term market rates

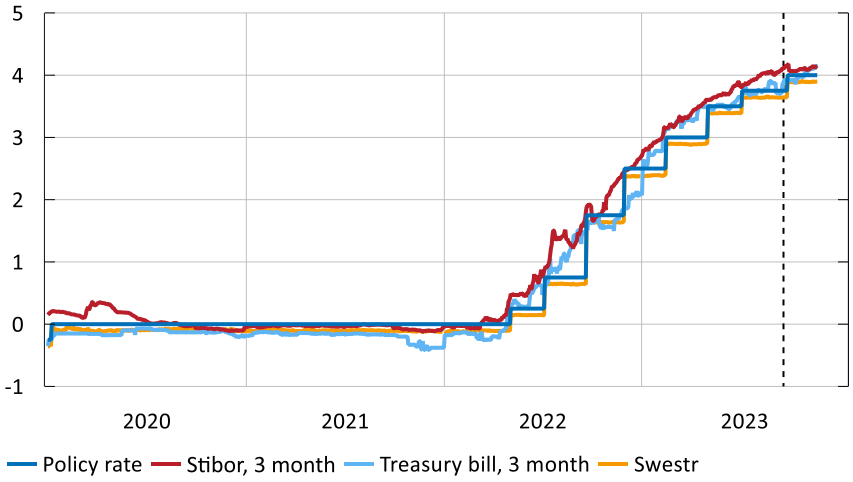
Since the central banks started to raise their policy rates, the hikes have had an impact on short-term and long-term market rates. In Sweden too, short-term and long-term market rates have risen as a consequence of the contractionary monetary policy (see Figure 18 and Figure 19).

Long-term market rates continued to rise in the United States and several other countries during the summer and autumn (see Figure 19). The rise in interest rates has generally been greater in the United States than in Europe. Since the monetary policy meeting in September, movements in long-term market rates have overall been large. Interest rates rose clearly in the period following the meeting but, in recent weeks, they have fallen in several countries. The reasons behind the development of US long-term rates are analysed in the fact box "Major movements in US long-term interest rates".

[14] The ECB terminated compensatory purchases for the asset portfolio APP (Asset Purchase Programme) as of July 2023. Compensatory purchases for the central bank's other asset portfolio PEPP (Pandemic Emergency Purchase Programme) are planned to continue until at least the end of 2024.

Figure 18. The Riksbank's policy rate and short-term market rates

Per cent

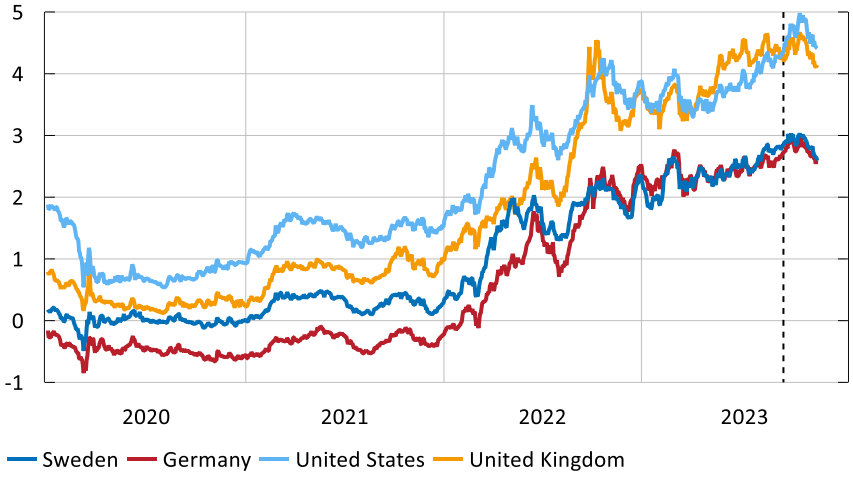


Note. SWESTR became available for actual use as a reference rate as from 1 September 2021. Prior to that, data is used for the historical estimates for SWESTR which the Riksbank has produced and published. SWESTR falls very sharply on the last banking day of each year, values that have been omitted from this figure. The dashed line marks the date of the monetary policy meeting in September.

Sources: SFBF, Refinitiv and the Riksbank.

Figure 19. Yields on 10-year government bonds

Per cent



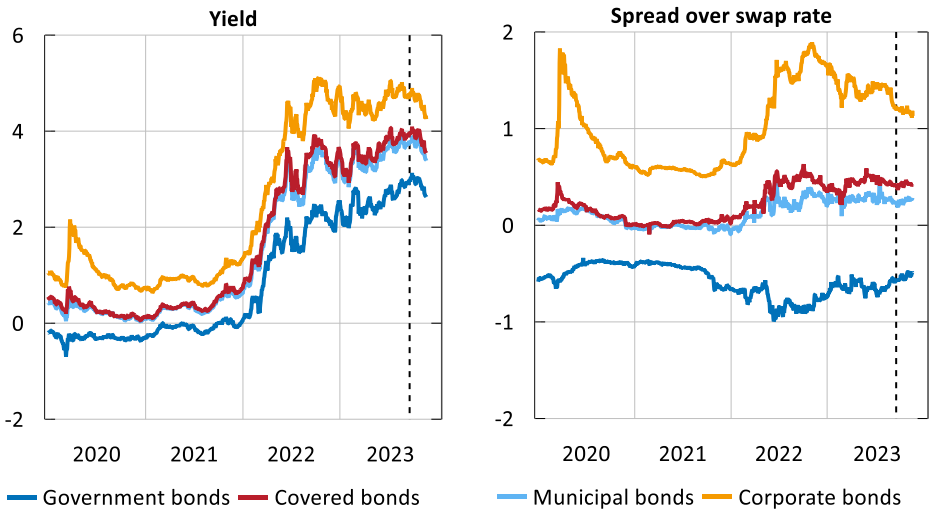
Note. Yields refer to zero coupon rates for Sweden, Germany and the United Kingdom, as well as benchmark rates for the United States. The dashed line marks the date of the monetary policy meeting in September.

Sources: Bank of England, Deutsche Bundesbank, Refinitiv, U.S. Treasury and the Riksbank.

Yields on longer maturities have also risen in Sweden this year, partly due to rising expectations of future policy rates in the medium term (see Figure 19). Yields on bonds with maturities of 5 years have also risen clearly over the year, although these rates too have also fallen slightly in recent weeks (see Figure 20). The spread between yields on bonds with a higher credit risk than government bonds and so-called swap rates increased in 2022 (see Figure 20).[15,16] These yield spreads have remained in varying degrees since then. In recent months, the spread for corporate bonds has decreased significantly.

Figure 20. Swedish yields for various types of bond, 5-year maturity

Per cent (left) and percentage points (right)



Note. Calculated zero coupon rate. Corporate bonds refer to bonds for companies with credit ratings corresponding to investment grade. Covered bonds refer to covered bonds issued by Stadshypotek and municipal bonds are issued by Kommuninvest i Sverige AB. The dashed line marks the date of the monetary policy meeting in September.

Sources: Bloomberg, Refinitiv and the Riksbank.

The higher market rates have also put pressure on global equity markets. When the interest rate increases began at the beginning of 2022, stock markets initially fell and then began to recover again towards the end of the year. There have been substantial movements on the stock market since the summer. The stock market fell up to the end of October, and then began to rise clearly. The stock markets in the United States and the euro area have fallen by a good five per cent since 1 January 2022.
The Swedish stock exchange has generally shown even weaker development, and, during the same period, has lost about one-fifth of its value.

[15] The Riksbank also uses the term risky bonds to refer to bonds with higher credit risk than government bonds. This refers to covered bonds, municipal bonds and corporate bonds, for example.

[16] Interest-rate swaps normally refer to the expected average level of STIBOR with a 3-month maturity, which is usually very close to the policy rate when risks are low in the banking system. See the article "What is a swap rate?" in *Monetary Policy Report*, February 2023, Sveriges Riksbank.

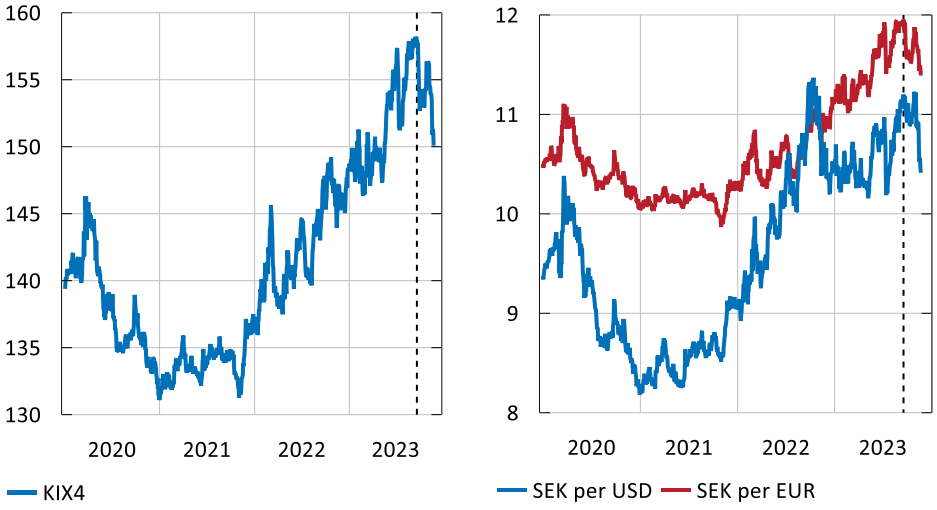
The krona has somewhat but is still at weak levels

Since the start of 2022, the krona has depreciated by about 10 per cent, measured as the KIX4 (see figure 21). Over the corresponding period, the overall development of the krona exchange rate has also been weaker than in the Riksbank's forecasts (see the article "The krona will strengthen in the medium term" in the September *Monetary Policy Report* for possible reasons for this).

In conjunction with the monetary policy meeting in September, the krona appreciated clearly against the euro and the dollar and, since then, there have been substantial movements in the krona exchange rate. The krona appreciated significantly in conjunction with the publication of outcomes for the US labour market and inflation in November. The major fluctuations in conjunction with these events illustrate the great significance that events abroad have for the krona exchange rate. All in all, the krona has appreciated during this period by just shy of 5 per cent measured as the KIX4, although it remains at weak levels.

Figure 21. Nominal exchange rate against KIX4 index, as well as against the US dollar and euro

Index, 18 November 1992 = 100 (left), and daily values (right)

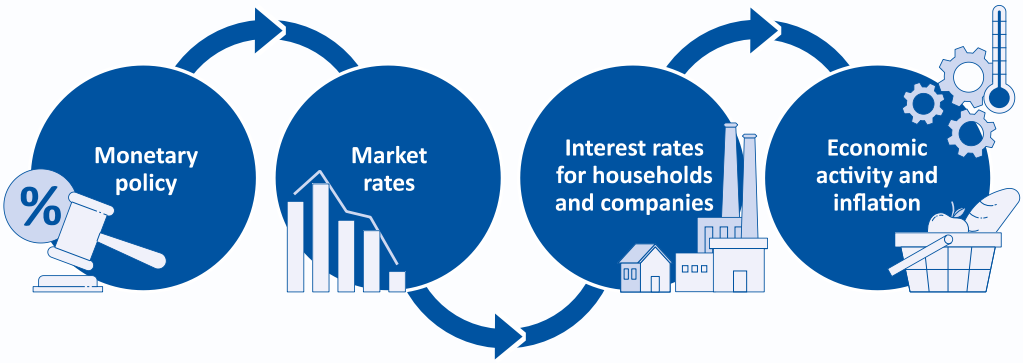


Note. The KIX4 (krona index) is a weighted average against the US dollar, euro, pound sterling and Norwegian krone. A higher value indicates a weaker exchange rate. The dashed line marks the date of the monetary policy meeting in September.

Sources: Macrobond Financial AB and the Riksbank.

Transmission – from monetary policy to inflation[17]

The policy rate has a direct effect on short-term market rates, such as the rates on interbank loans and treasury bills. However, expectations for the future policy rate also affect the development of longer-term market rates, such as the rates on government bonds, covered bonds and corporate bonds. Some market rates affect the banks' funding costs and, through that, the interest rates faced by households and companies too. In turn, these interest rates affect consumption, investment and, ultimately, inflation.



2.2 Low demand for credit among households and companies

Deposit and lending rates have continued to rise

The banks obtain funding by issuing bonds and other securities, through deposits from the general public and by using equity. Deposits from households and non-financial companies make up almost 40 per cent of the major Swedish banks' total funding.[18] The remainder consists in particular of covered bonds, which are the largest source of financing for Swedish mortgages. Which interest rates the banks offer on loans to households and companies largely depend on the costs of funding the loans. Over the year, yields on covered bonds and deposit rates have continued to rise and contributed to an increase in the bank's funding costs (see Figure 20 and Figure 22). All in all, this has contributed to lending rates to houses and companies increasing rapidly.

However, deposit rates for current accounts, for example, have been raised significantly more slowly than the policy rate. This has resulted in households starting to move money to savings accounts, either with the same bank or with a competitor, as

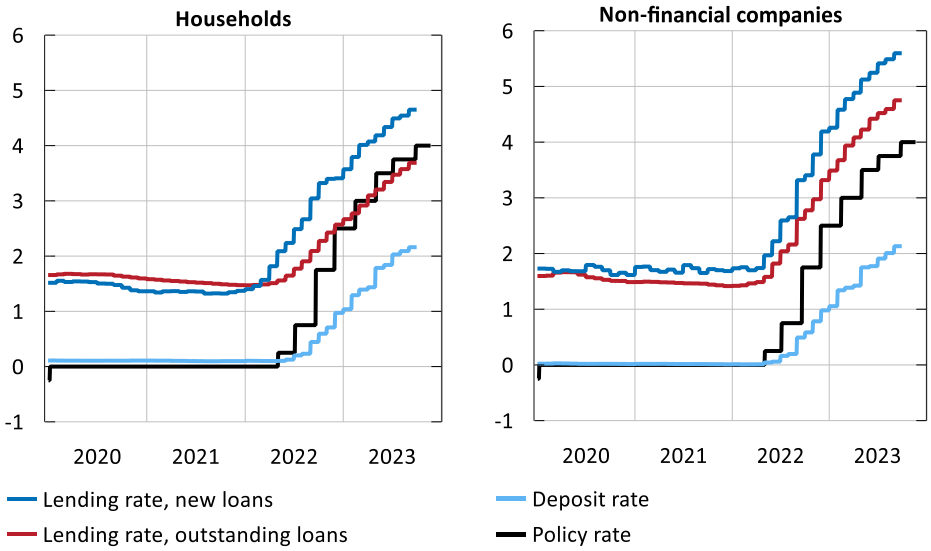
[17] The fact box briefly describes how monetary policy affects inflation via the interest rates faced by households and companies. However, monetary policy also acts via other channels. One important such channel is the effect monetary policy has on inflation expectations, which, in turn, affect price- and wage-setting. Examples of other channels include the exchange rate and household wealth. See: https://www.riksbank.se/en-gb/monetary-policy/what-is-monetary-policy/how-monetary-policy-affects-inflation/ for a more detailed description of the transmission mechanism.

[18] See the article "Flightiness of deposits varies across Swedish banks" in *Financial Stability Report*, 2023:2, Sveriges Riksbank.

these offer a higher interest rate than most on-demand deposit accounts.[19] This behaviour could increase competition between banks for the general public's deposits and contribute to the banks raising deposit rates more.

Figure 22. Policy rate and average deposit and lending rates for new loans and outstanding loans, respectively

Per cent



Note. Volume-weighted averages of deposit and lending rates at all maturities. For households, this refers to interest rates on loans from monetary financial institutions, mortgage credit institutions and alternative investment funds. Household lending rate refers to loans for housing purposes. For companies, this refers to loans from monetary financial institutions. New loans also includes renegotiated loans.

Sources: Statistics Sweden and the Riksbank.

Swedish households' borrowing is growing at a historically slow rate

Compared with many other countries, Swedish households have relatively short interest-rate fixation periods on their mortgages. [20] Around 90 per cent of the loan volume has a remaining interest-fixation period of two years or less. The percentage of households with variable-rate loans has also increased recently, which can probably be explained by the unusually small interest rate differences between loans with short and long interest-rate fixation periods.[21] This means that policy rate increases affect households in Sweden more quickly than is the case in many other countries.

[19] On-demand deposit accounts refer to accounts with no agreed maturity, period of notice or significant restrictions on withdrawal. This includes, for example, salary accounts and savings accounts with free withdrawals. This group of accounts also includes investment savings accounts (ISK), custody accounts and other accounts.

[20] See the Fact Box "The impact of monetary policy on interest-sensitive sectors in a European perspective" in *Monetary Policy Report*, September 2023, Sveriges Riksbank.

[21] See the article "More households choosing variable interest rates", in *Financial Stability Report* 2023:1, Sveriges Riksbank.

The average interest rate on new and renegotiated mortgages has risen from around 1.4 per cent in January 2022 to just over 4.7 per cent in September 2023. This corresponds to a pass-through from policy rate increases of around 80 per cent, which is in line with the historical average. The monetary policy transmission to households' mortgage rates is therefore assessed to be functioning well. For the total stock of outstanding mortgages, the average rate has risen from about 1.5 per cent to around 3.7 per cent in the same period. This interest rate has not increased to the same extent as the policy rate due to there still being households that have not needed to renegotiate their mortgage rates and therefore have not yet been affected by the higher interest rates. As mortgages are renegotiated, the full expected effect of the policy rate increases will not become visible in the total mortgage stock until 2025.[22]

As the policy rate and mortgage rates have been raised, the growth rate in households' bank borrowing has declined to historically low levels (see Figure 23). The turnover on the housing market has also fallen, which means that there are fewer households taking out new mortgages. In addition, the price fall in the housing market means that the loans taken out by households have tended to be smaller (see Chapter 3).

Credit growth among companies continuing to slow down

Swedish companies mainly obtain funding through bank loans. The percentage of bank loans with interest-rate fixation periods of one year or less is greater for companies than for households, which means that companies are also quickly affected by policy rate changes.[23] The average interest rate on new and renegotiated loans has risen from about 1.7 per cent to around 5.6 per cent, which means that the interest rate has risen to about the same extent as the policy rate (see Figure 22). The transmission to corporate interest rates is thus good and in line with historical patterns.

Since the start of 2022, companies' average interest rate on outstanding loans has risen from about 1.4 per cent to about 4.7 per cent. However, there are differences between corporate sectors. For example, the average interest rate paid by tenant-owner housing associations has increased by a relatively small degree since 2022, as their loans have a longer interest-rate fixation period than many other companies. Average interest rates have increased more rapidly in the property sector (see Figure 24). However, differences in the property sector, where both interest-rate fixation periods on existing loans and terms for new loans vary.[24] This also means that the range for lending rates companies are now paying varies considerably.

Over the last year, the increase in total corporate borrowing has slowed down significantly. The slowdown is broad-based and applies to all sectors. The annual rate of increase in bank borrowing amounted to 4.0 per cent in September. Corporate

[22] This assessment is contingent on the policy rate remaining on the current level.

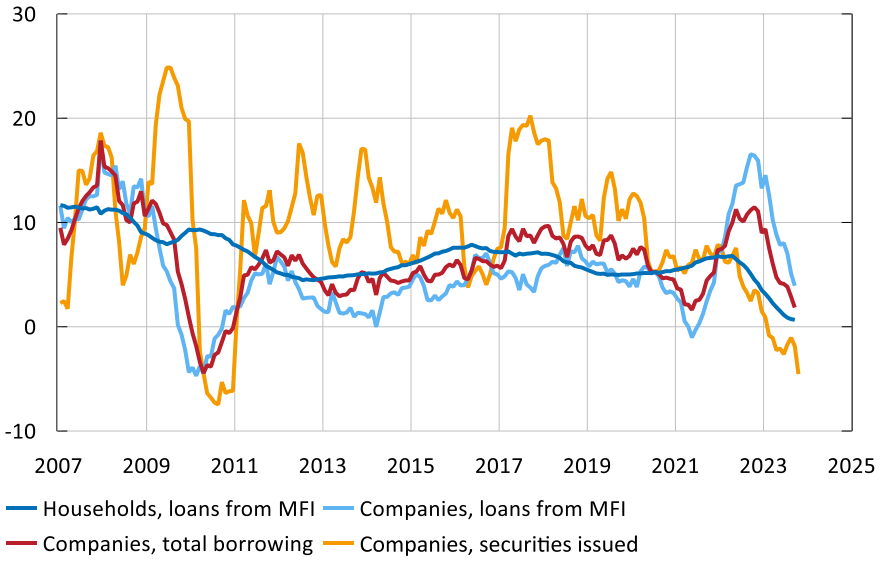
[23] The percentage of non-financial companies that have an outstanding interest-rate fixation period of one year or less has been around 83 per cent during 2023, *Financial Market Statistics*, September 2023, Statistics Sweden.

[24] See the fact box "The division in the commercial real estate sector" in *Monetary Policy Report*, September 2023, Sveriges Riksbank.

funding via the issuance of interest-bearing securities is continuing to decrease (see Figure 23). Higher interest costs and falling investment are contributing to the lower credit growth.[25]

Figure 23. Household and corporate borrowing

Annual percentage change



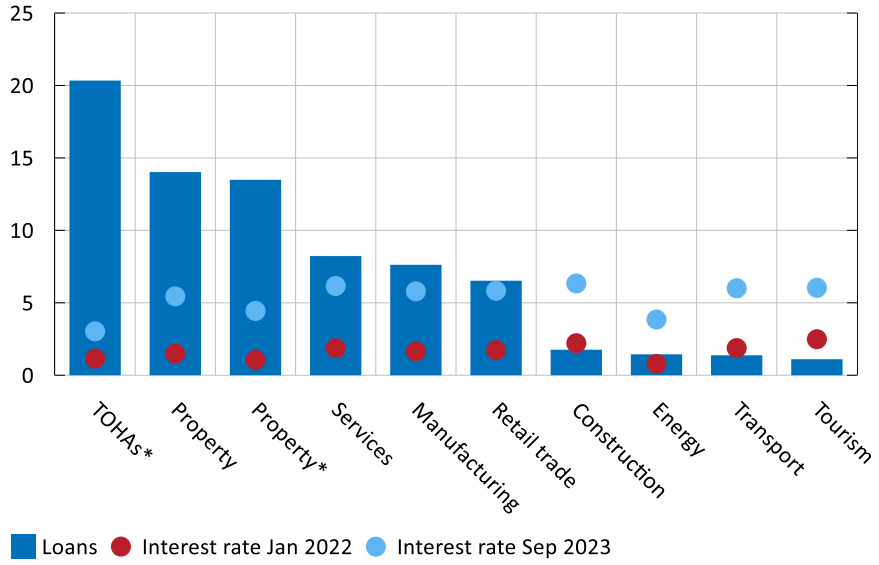
Note. Lending by monetary financial institutions (MFIs) to households and non-financial companies adjusted for reclassifications and bought and sold loans. Securities issued by non-financial companies have been adjusted for currency impact. Loans from MFIs constitute about two thirds of total lending to companies, while issued securities constitute around a third.

Source: Statistics Sweden.

[25] See *Financial Stability Report*, 2023:1, Sveriges Riksbank.

Figure 24. Bank loans and interest rates on bank loans in different sectors

Per cent and percentage share of banks' corporate loans respectively



Note. The figure shows the average interest rate for all outstanding bank loans as at January 2022 and September 2023. TOHAs* refers to Tenant-owner housing associations. Property* refers to commercial properties that manage rental housing.

Sources: Statistics Sweden and the Riksbank.

FACT BOX – The Riksbank's quantitative tightening

Many central banks' balance sheets have expanded substantially following the financial crisis. One important cause of this is the extensive asset purchases. These have been an important complement to low policy rates when monetary policy has needed to become more expansionary.[26] Now, when monetary policy instead needs to be contractionary, central banks have raised their policy rates and gradually started to reduce their asset holdings. The process of reducing asset holdings is often referred to as 'quantitative tightening', QT. This can be done either passively through the bonds maturing of bonds or in combination with active sales. For a summary of how different central banks reduce their assets holdings, see Table 2.[27]

Table 2. Summary of central banks' changes to assets holdings

	Concluded net purchases	Passive decrease via maturing bonds	Active sales
ECB*	July 2022	Partly from March 2023, completely from July 2023	-
Federal Reserve	March 2022	Partly from June 2022	-
Bank of England	December 2021**	Completely from March 2022	Initiated October 2022
Bank of Canada	November 2021	Completely from April 2022	-
Reserve Bank of Australia	February 2022	Completely from May 2022	-
Reserve Bank of New Zealand	July 2021	Completely from July 2022	Initiated July 2022
Riksbank	December 2021	Partly from July 2023***, completely from January 2023	Initiated April 2023

Note: *Refers to APP portfolio. Net purchases to the PEPP portfolio were concluded in March 2022 and the size of the holding will be kept intact until the end of 2024. **The Bank of England temporarily purchased government bonds due to the market situation in September 2022 with sharply rising interest rates which led to UK occupational pension companies being hit by liquidity stress. ***The Riksbank stopped purchasing treasury bills to replace maturities as of the end of April 2022.

Sources: National central banks and the Riksbank.

The Riksbank executed relatively large asset purchases, partly during the period of low inflation 2015-2017, partly in conjunction with the pandemic 2020-2021 (see

[26] See B. Andersson, M. Beechey Österholm and P. Gustafsson (2022), "The Riksbank's asset purchases 2015–2022", Riksbank Study no. 2, for a discussion of this.

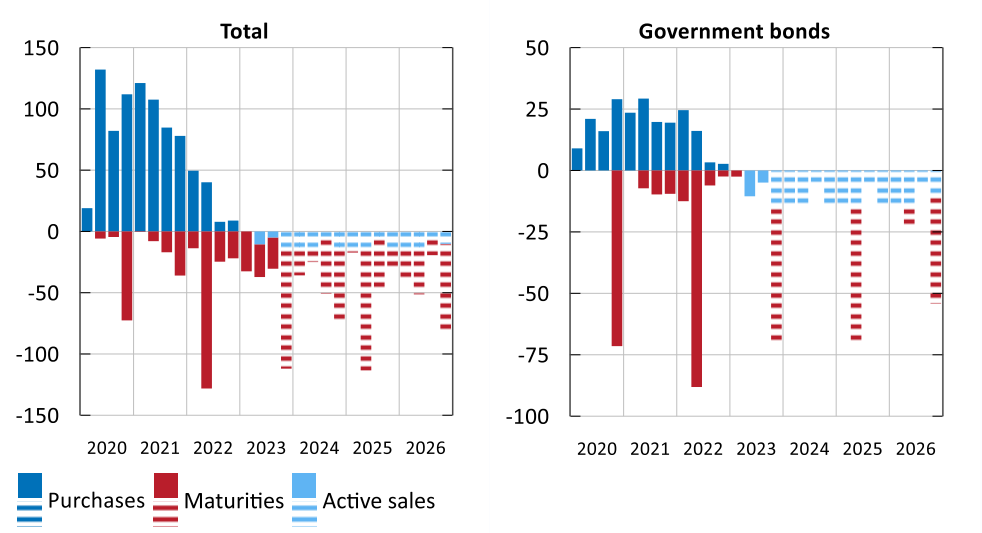
[27] The rate at which securities holdings decrease mainly depends on the average maturity of the assets and whether, and to which extent, purchases are being made to compensate for maturing bonds. Active sales contribute to hastening the process by selling off bonds before they mature. The strategy for how to reduce assets and at which speed differs between central banks.

Figure 9).[28] The expansion of the holdings was concluded at year-end 2021. In November 2021, the Riksbank decided that purchases in 2022 would be focused on compensating for coming maturities so that the holding would remain approximately unchanged over the year. As inflation increased sharply at the start of 2022, the Riksbank started raising its policy rate in April. At the same time, the Executive Board also decided to reduce reinvestments of maturities so that the holdings decreased over the year.[29] A further reduction was agreed in June 2022. Reinvestments of principle payments ceased completely at year-end 2022, which meant that the holdings began to decline in line with maturities.

In February 2023, the Executive Board decided on active sales of government bonds with longer maturities at a nominal value of SEK 3.5 billion per month. This decision meant a faster tapering of the holdings. In June 2023, the Executive Board decided to expand the monthly sales of government bonds to SEK 5 billion. Figure 25 illustrates the normalisation of the securities portfolio in detail and shows that the tapering of the total holdings mainly takes place through maturities. However, active sales make up a significant proportion of the reduction of government bonds. If the normalisation continues at the pace now decided, the holdings of securities are calculated to amount to SEK 45 billion at the end of the forecast period (see Figure 9).

Figure 25. Change in the Riksbank's asset holdings divided into purchases, maturities and active sales

SEK billion



Source: The Riksbank.

[28] In 2018–2019, the asset holdings were approximately unchanged as purchases in this period compensated for maturing bonds. At year-end 2021, which is to say the point at which net purchases were concluded, the Riksbank's asset holdings amounted to about 17 per cent of GDP. This is in line with other central banks in small, open economies as specified in Table 2, whose securities portfolios amounted to about 15–20 per cent of each country's GDP when the net purchases were concluded. The equivalent figure was 35–40 per cent for the major central banks specified in table 2.

[29] One of the effects of this decision was that the holding of treasury bills was liquidated entirely through maturity from 28 April 2022.

The central banks are reducing their asset portfolios for several reasons. First, it is natural that the holdings will change over time, depending on the monetary policy stance. Securities purchases tend to push down market rates, while active sales can entail higher market rates. Changes in the securities portfolio can thereby complement the monetary policy stance. However, it should be noted that tapering is taking place at a slower rate when compared to the previous purchases in the period in question. Second, QT means that exposure to various types of financial risk can be reduced. In addition, a decreased holding could help to increase liquidity in the securities market. Lastly, QT creates scope to increase the holdings again further ahead, if necessary.

There are few earlier experiences of QT. The few studies that investigate this issue point to the reduction of assets holdings having an impact partly through other channels than net asset purchases and that the effects on market rates are estimated to be small.[30] One important explanation for this is that the purchases contained a 'signal' about the future level of the policy rates. The reduction of holdings, on the other hand, is a normalisation that does not include such a signal. It is also taking place more slowly and under more favourable market conditions. Overall, the effects of QT on the deposit and lending rates faced by households and non-financial companies are expected to be negligible. As experiences are so limited, the Riksbank conducts regular evaluations and, when necessary, adjusts both volumes and conditions for the continued normalisation of the balance sheet.

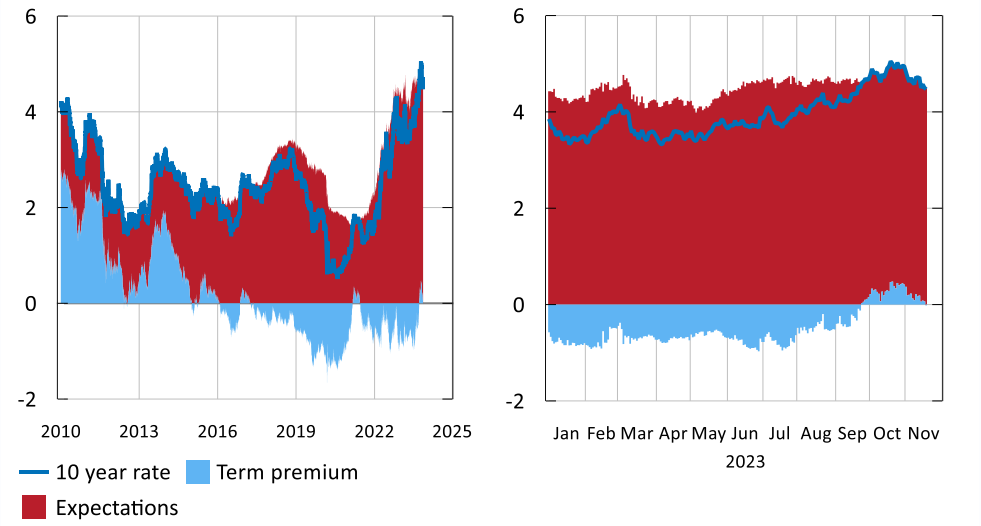
[30] See A.L. Smith and V.J. Valcarcel (2022), "The Financial Market Effects of Unwinding the Federal Reserve's Balance Sheet", *Research Working Paper* RWP 20-23, Federal Reserve Bank of Kansas City. In an empirical study of the US central bank's QT during the years 2017-2019, the authors show that there are considerable asymmetries compared with the purchases, as they have different properties. B. Wei (2022), "Quantifying "Quantitative Tightening" (QT): How Many Rate Hikes Is QT Equivalent To?", *Working Paper* 2022-08, Federal Reserve Bank of Atlanta, estimates in a number of scenarios how QT affects government bonds with long maturities. The effect varies, depending on market conditions, how the reduction of assets holdings occurs and finally changes in the supply of government bonds.

FACT BOX – Major movements in US long-term interest rates

Over the year, long-term market rates have shown major movements. In October, the yield on US 10-year nominal government bonds increased to over 5 per cent (see Figure 19).[31] This was the highest level since 2007. Even if part of this upturn has been reversed recently, US long-term interest rates have remained at significantly higher levels than has been the case in recent years. It is not only in the United States that long-term market rates have risen; to varying extents, increases have also taken place in other countries.

Figure 26. US 10-year nominal government bond yield and decomposition in expectations and maturity premiums

Per cent



Note. The model shows the US 10-year government bond yield and its decomposition in expectation of short-term interest rates in the future and the term premium, both in percentage points. See T. Adrian, R. Crump and E. Moench (2013), "Pricing the term structure with linear regressions", Journal of Financial Economics 110(1).

Source: Federal Reserve Bank of New York

Several factors can be identified as driving forces behind this development.
The central banks' communication that interest rates need to be higher for longer has had a clear impact on the market. In addition, the term premium, the additional return associated with investing in long-term securities, has increased. This is often a sign of increased uncertainty on the market. Developments in recent months suggest that it is the term premium rather than expectations of a higher policy rate that has been the main driver of the upturn. The fact that it is the term premium driving the upturn in longer market rates is a conclusion that is also supported by the model results, for instance the model made by the Federal Reserve Bank of New York.[32]

[31] For an earlier analysis, see also J. Alsterlind (2021), "Why have US long-term yields risen?", *Economic Commentaries*, No. 6, Sveriges Riksbank.

[32] See Federal Reserve Bank of New York: Treasury Term Premia and T. Adrian, R. Crump and E. Moench (2013), "Pricing the term structure with linear regressions", *Journal of Financial Economics* 110(1).

According to the model, the term premium for a 10-year government bond amounted to about 0.5 per cent in October, from having been negative during a longer period (see Figure 26). The term premium has fallen somewhat again in recent weeks.

In general, the term premium tends to rise in times of economic uncertainty, when factors that usually affect a bond's yield, such as inflation, economic growth or central bank actions, are more difficult to predict. There is also research showing that the term premium for a government bond yield is countercyclical and tends to increase when the economy goes into recession.[33] Seen from a longer historical perspective, however, the term premium has been positive. It was not until the end of the 2010s that it became negative or close to zero. The rise in long-term yields, in parallel with a rising term premium, may therefore also indicate a normalisation of the term premium to a positive level in line with its historical pattern.

Factors that affect the supply and demand for various fixed income securities can also contribute to increasing or reducing the term premium.[34] The downgrading of the US government's credit rating and expectations of a higher supply of long-dated government bonds may have had a negative impact on willingness to invest, leading it to decrease. Additionally, the Federal Reserve, together with other central banks, has reduced or entirely ceased asset purchases and is instead shrinking its holdings. When the supply of bonds increases, the price of bonds tends to fall and investors therefore demand higher yields to make them willing to hold further bonds in their portfolios.

In addition, since the central banks started to tighten their economies and raise interest rates, the correlation between return on bonds and equities has increased and become positive. Otherwise, this correlation is usually negative. This can mean that investors are now requiring higher compensation for investing in bonds than they did before, to compensate for the higher correlation and thereby increased risk.

[33] See T. Adrian, R.K. Crump and E. Moench (2013), "Pricing the term structure with linear regressions", *Journal of Financial Economics 110(1).*

[34] See D. Vayanos and J.-L. Vila (2021), "A preferred-habitat model of the term structure of interest rates", *Econometrica* 89(1).

3 Inflation is falling and economic activity in Sweden and abroad is slowing down

The contractionary monetary policy has contributed to a clear decline in inflation in Sweden and abroad. However, the rate of increase in the prices of many goods and services is still higher than normal in Sweden. In addition, the decline in underlying inflation compared with abroad has been somewhat slower here. At the same time, price changes measured over shorter periods than one year have fallen rapidly. This suggests that inflationary pressures are lower, and different indicators point to it slowing further in the period ahead.

At the same time, the slowdown in the Swedish economy is becoming increasingly clear. This also applies to growth in the euro area, which has slowed down as monetary policy has been tightened over the last year. However, the US economy remains strong. In many countries, there are increasingly clear signs of the labour market cooling. The Riksbank's assessment is nevertheless that the economic slowdown will be relatively short-lived and that both output and employment will gradually strengthen from the second half of next year onwards.

3.1 Inflation continuing to fall in Sweden and abroad

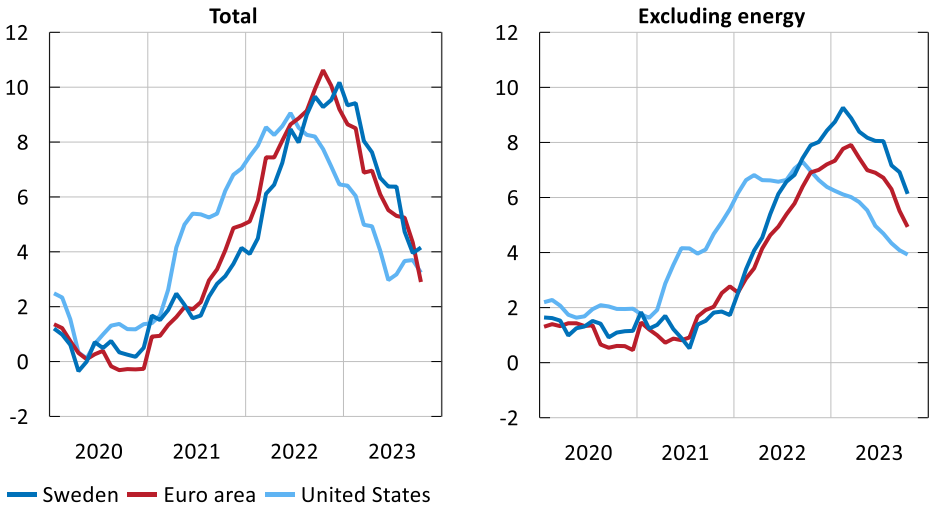
Successively lower inflation outcomes

In Sweden, CPIF inflation amounted to 4.2 per cent in October. Similar measures for the euro area and the United States amounted to 2.9 and 3.2 per cent respectively (see the left-hand image in Figure 27). Lower energy prices are an important reason for the decline in price increases but, even if the direct effects of energy prices are excluded, inflation has fallen, albeit not as rapidly.[35] The rate of increase in the CPIF excluding energy was 6.1 per cent in October. The development of corresponding measures for the euro area and the United States resembles that of Sweden except that inflation has fallen further there. This applies for the United States in particular, where the rate of price increase rose earlier and inflation was already high towards the end of 2021 (see the right-hand image in Figure 27).

[35] Adjusting for the direct effects involves excluding indices that measure the development of prices for fuel and electricity in particular. In the medium term, lower energy prices also lead to a lower rate of increase in the prices of other goods and services.

Figure 27. Inflation in various countries and regions

Annual percentage change



Note. Refers to the CPIF for Sweden, the HICP for the euro area and the CPI for the United States.

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

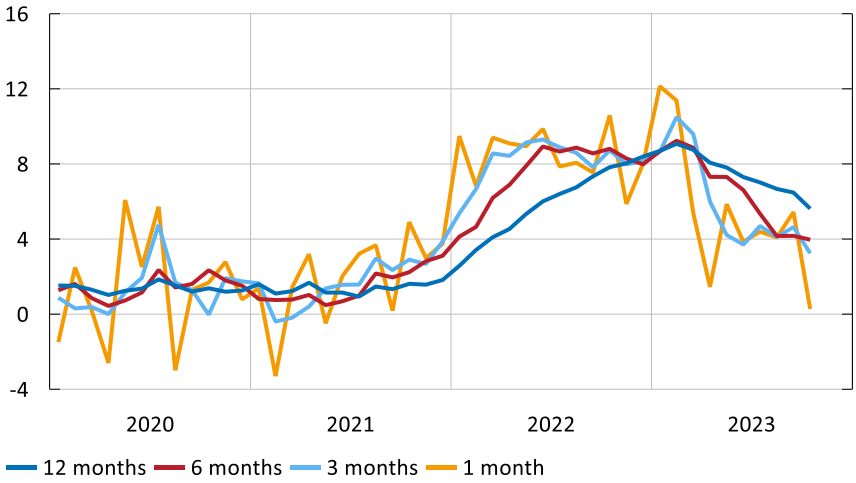
The fall in inflation becomes even clearer if we study price changes measured over time periods shorter than one year. Figure 28 shows seasonally adjusted price changes 1, 3, 6 and 12 months ahead calculated in annualised terms for the CPIF excluding energy and foreign travel. The rate of price increase over 12 months is the highest, but has fallen gradually during the year. Price changes over shorter periods have come down more rapidly and are now at lower levels. Inflation has also slowed regardless of the time horizon studied and if this development continues, the 12-monthly figures will also start to decline gradually.[36] In the euro area and the United States as well, the three-monthly change in inflation excluding energy is now clearly lower than during the spring of 2023 (see Figure 29). In Sweden, the rate of price increase according to this measure has been higher than the corresponding measures in the euro area and the United States in 2022 and 2023. Recently, however, developments in Sweden have come close to those abroad and are now also relatively close to a level that is compatible with the inflation target.[37]

[36] Seasonally adjusted data shall be interpreted with caution as they can be misleading when trying to interpret historical developments. This is particularly true of the last observations in the time series.

[37] In the United States, the rate of price increase is also being maintained by previous rises in housing costs. The Riksbank's assessment is that the effects of these will continue to subside.

Figure 28. CPIF excluding energy and international travel

Annual percentage change and 1-, 3- and 6-monthly change respectively, calculated as an annual rate

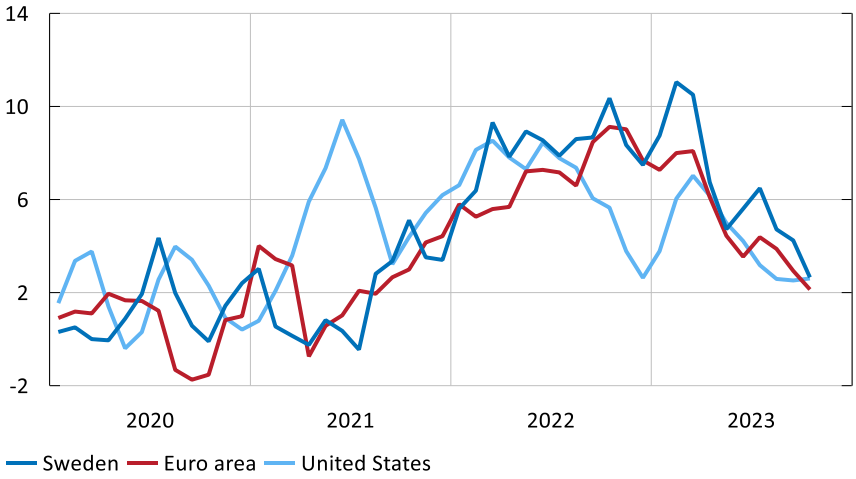


Note. Seasonally adjusted data.

Sources: Statistics Sweden and the Riksbank.

Figure 29. Inflation excluding energy

Three-monthly change calculated as an annual rate, seasonally adjusted data



Note. Refers to the CPIF for Sweden, the HICP for the euro area and the CPI for the United States.

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

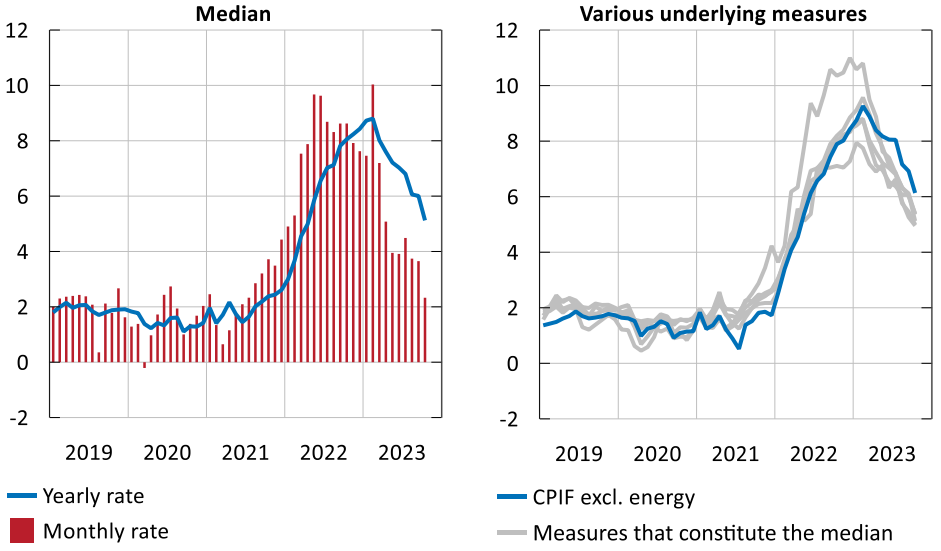
One way of calculating measures of underlying inflation is to exclude certain predetermined components in the CPIF in which the price variations are considered to be more temporary than in other components. The CPIF excluding energy is an example of such a measure. Another way is to use statistical methods to try to lessen the significance of components in the CPIF whose prices fluctuate sharply.

Like the CPIF excluding energy, other measures of underlying inflation also show that the rate of price increase has slowed down. The median of five different measures has

recently turned down (see left-hand image in Figure 30).[38] Here too, it can be see that price changes over periods shorter than one year, red bars, have gradually slowed down in Sweden over the last year and the median amounted to just over 2 per cent in October. Of the different measures included in the calculation of the median, CPIF excluding energy has been the highest for some time (see right-hand image in Figure 30).

Figure 30. Measures of underlying inflation in Sweden

Annual percentage change and monthly change, respectively, calculated as an annual rate



Note. Red bars refer to a three-monthly mean value of seasonally adjusted monthly changes, calculated as an annual rate. Lines in both images refer to annual percentage change.

Sources: Statistics Sweden and the Riksbank.

Lower rate of increase in prices of food and other goods ...

Monetary policy has contributed to a recent slowdown in Inflation in Sweden but there are differences in price development between various components. The rate of price increase for food has fallen in Sweden and abroad, although levels remain high (see Figure 31). The decline is due to lower demand, which has contributed to increased competition. This in turn has made it more difficult for companies to continue to raise the prices substantially. In addition, commodity prices are now lower and production costs have declined.

The imbalances between supply and demand have eased and this, together with the same factors that explain the downturn in the rates of increase in food prices, can also explain why the rate of price increase for other goods prices in Sweden and abroad has slowed down. In Sweden, the decline in inflation has been somewhat slower than

[38] The calculation of the median includes Trim85, Trim1 (or weighted mean inflation), UND24, CPIFPC and CPIPV. Read more about these measures on the Riksbank's website: https://www.riksbank.se/en-gb/statistics/macro-indicators/underlying-inflation/.

abroad, which is probably connected with the depreciation of the krona and with imported goods and services having become more expensive (see the article “The pass-through of the krona to inflation appears to be larger than usual” in this report).

... at the same time as services prices continue to rise relatively rapidly

Services prices are the component that has made the biggest contribution to the continued high CPIF inflation in Sweden (see Figure 4).[39] In the United States, where the rate of increase in services prices has fallen gradually, large rent increases are contributing to the rate of price increase, while the rate of increase in other services prices has fallen more substantially. In Sweden and the euro area, where the rate of increase in services prices has not fallen so much yet, it is instead prices for other services that have continued to rise.[40] Strong demand as a probable explanation for developments in Sweden can be seen, for instance, in the relatively rapid price increases in those services sectors that have coped well since the pandemic. One example is the hotel and restaurant sector. In Sweden, the effect of large, pandemic-related weight adjustments in the services price aggregate, especially for foreign travel, have pushed up the annual rate of price increase in 2023. The effect has now started to fade, but stripped of this weight adjustment, the rate of increase in services prices will nevertheless be a whole percentage point lower (see Figure 35).[41]

Companies’ price rises can be due to either their marginal costs having increased or them raising the price mark-up in excess of the costs. [42] According to the Economic Tendency Survey, the main contribution to higher sales prices in the service sector in 2021-2023 was made by factors that can be itemised under the term costs. Domestic costs explain most of the rise in services prices, although higher import costs have also made a contribution. Factors that can be itemised under the term price mark-ups, i.e. demand and other factors, are now making a small negative contribution, according to companies’ responses in the Tendency Survey. However, these factors have played a much smaller role in price changes in recent years according to this survey (see Figure 32).

[39] Comparing services prices, it should be noted that both the content and the weight in the price aggregate differ between countries and regions, which can explain the differences in development.

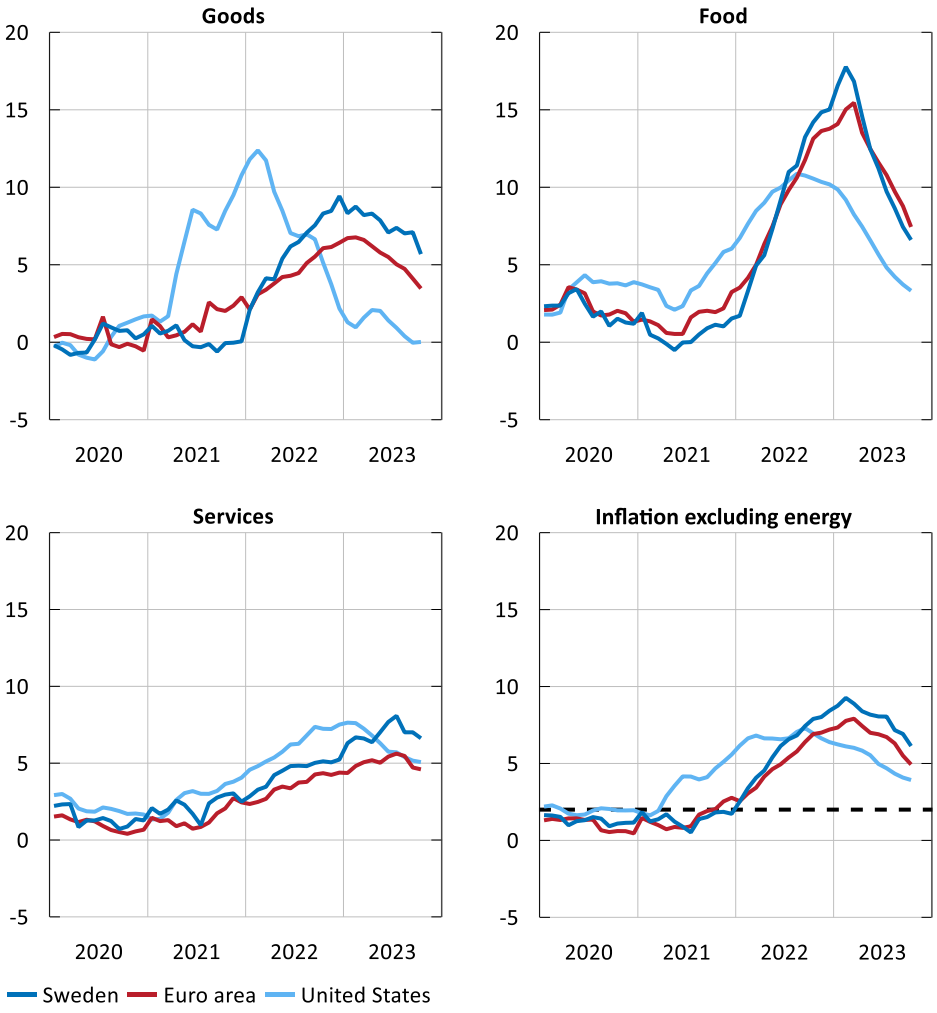
[40] In Sweden and the euro area, housing costs carry a lower weight than in the United States and have not risen as much.

[41] The weight adjustments can in turn be explained by changed consumption behaviour during the pandemic. One example is foreign travel, where clear seasonal variations in prices over the year, combined with changes in weighting, have contributed to a higher calculated rate of price increase in the services aggregate over the summer.

[42] For a discussion of this simple theoretical framework, see the article “Price rises are spreading in the economy”, *Monetary Policy Report*, June 2023, Sveriges Riksbank.

Figure 31. Price developments in Sweden and abroad

Annual percentage change

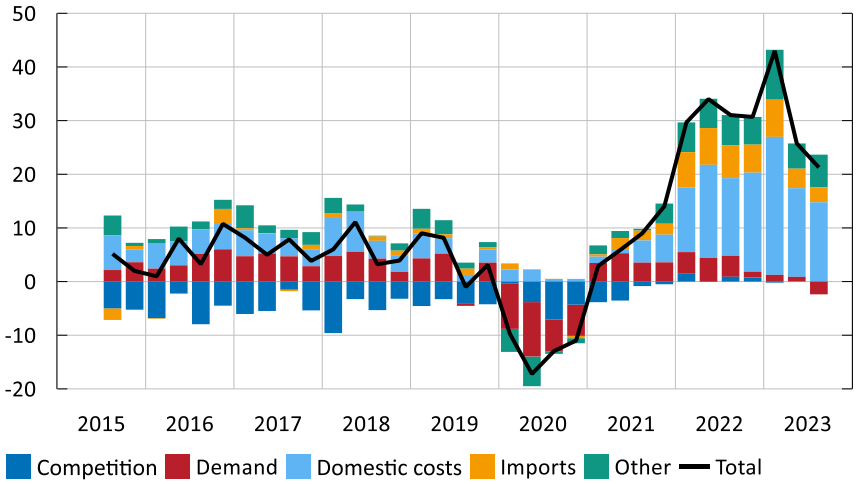


Note. Refers to the CPIF for Sweden, the HICP for the euro area and the CPI and United States. The dashed black line indicates 2 per cent.

Sources: Statistics Sweden, Eurostat and U.S. Bureau of Labor Statistics.

Figure 32. The driving forces behind price changes among companies in the service sector

Net figures



Note. Companies in the services sector answer whether prices have risen or fallen in the most recent quarter and which factor has been the most significant price development driver.

Sources: The National Institute of Economic Research and the Riksbank.

Inflation slowing further in Sweden and abroad

Inflation is expected to continue falling this year. The disruptions to world trade eased off some time ago according to various indicators.[43] Several commodity prices are now also substantially lower than in the pandemic in 2021 and after Russia's invasion of Ukraine in the spring of 2022. Another contributory cause of the falling inflation is the downturn in energy prices, which are lower today than a year ago.[44] This has also presumably helped to ease cost and price pressures in earlier stages of production, which should have indirectly affected other consumer prices, for example within the food industry.[45]

The rate of increase in producer prices for consumer goods has slowed in several countries. This also applies to Sweden, where it is primarily prices for imported consumer goods that have created a certain volatility in producer prices recently. In addition, survey responses from the retail trade indicate that the percentage of companies planning to raise prices is gradually falling, even though the percentage is still higher than it was before inflation picked up (see Figure 33).

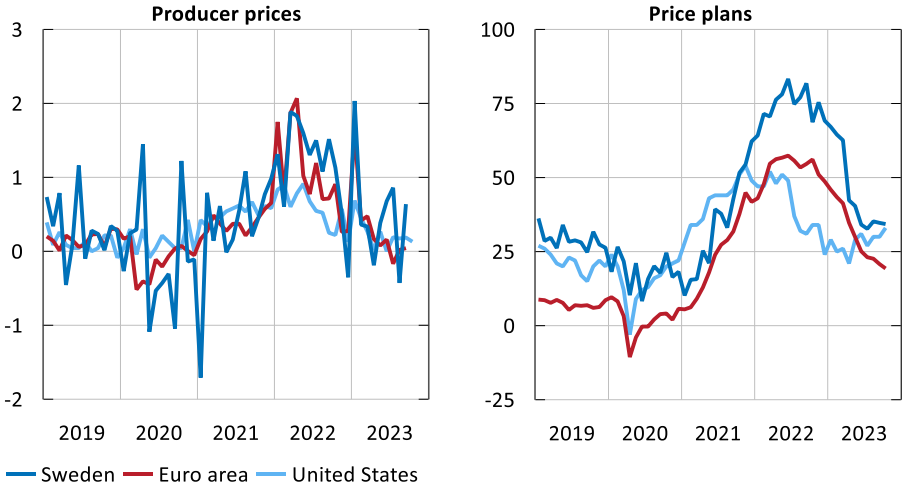
[43] This refers to different indicators that reflect how well the global supply chains are working.

[44] In particular, this applies to electricity prices.

[45] Fluctuations in energy prices normally affect the entire supply chain in the food industry, from farming to transport and processing, storage and sale.

In the Riksbank's latest business survey, several companies, particularly those within the trade sector, report that they are no longer planning to continue to raise sales prices. Uncertainty is higher among other companies but, in general, they state that cost pressures overall have eased since the spring.[46]

Figure 33. Producer prices for consumer goods and price plans
Monthly percentage change (left) and net figure (right)



Note. Seasonally adjusted data (left). The net figures show how many companies are planning to increase their prices minus how many are planning to reduce them (right).

Sources: Statistics Sweden, National Institute of Economic Research, European Commission, Eurostat and U.S. Bureau of Labor Statistics.

Monetary policy causing inflation to fall and approach the target next year

Demand is now slowing down in Sweden and abroad, due to rapid monetary policy tightening, and this is contributing to gradually lower inflation. The Riksbank projects resource utilisation in Sweden to fall and be lower than normal in 2024 and 2025. In addition, wage agreements and wage increases outside the scope of the agreements indicate that wages and unit labour costs will rise at a rate that, given economic developments in general, is compatible with inflation falling back towards the target (see section 3.2 in this chapter for a more detailed description of the development of the real economy in Sweden and abroad).

[46] See "Sharper competition putting pressure on prices", *Riksbank Business Survey,* September 2023, Sveriges Riksbank.

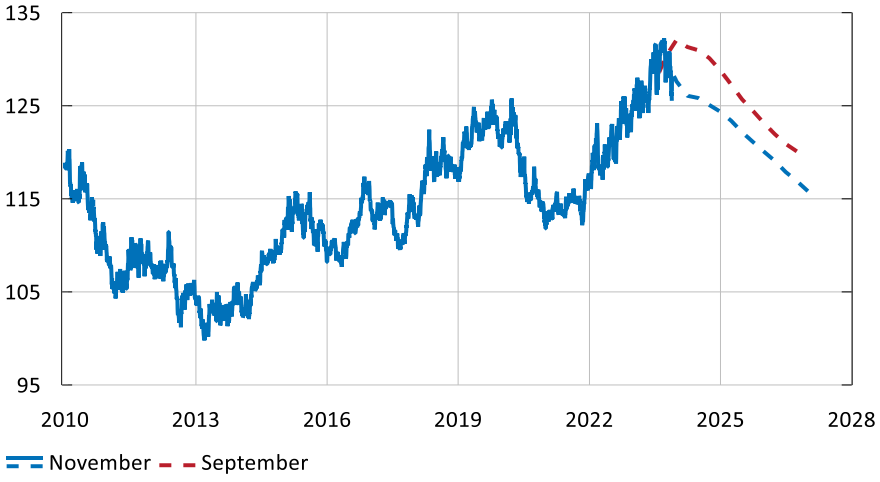
As cost increases decline, demand weakens and inflation abroad falls rapidly, companies are not expected to continue to raise prices as much as previously. In addition, long-term inflation expectations are well anchored close to 2 per cent, which suggests that economic agents still have high confidence in the inflation target. The Riksbank also assesses that the krona is undervalued and will appreciate gradually in the coming years, which will also help cool inflation (see Figure 34).[47]

However, rents and tenant-owner housing association fees are expected to increase unusually rapidly in the coming years, which will have the opposite effect on the rate of price increase for services. The rate of increase in services prices is nevertheless expected to decline as monetary policy tightening and continued low real incomes restrain demand among households (see Figure 35).

All in all, this is expected to mean that inflation measured both as the CPIF and the CPIF excluding energy will continue to fall and be close to 2 per cent in the second half of 2024 (see Figure 36). The monthly percentage change in the CPIF excluding energy is expected to be somewhat higher than normal for a few more months (see Figure 35). On the other hand, CPIF inflation is expected to fall rapidly, as energy prices will make a negative contribution over most of the forecast period. CPIF inflation will be higher than the other inflation measures in 2024 and 2025 as mortgage interest payments will make a positive contribution.

Figure 34. Nominal exchange rate

Index, 18 November 1992 = 100



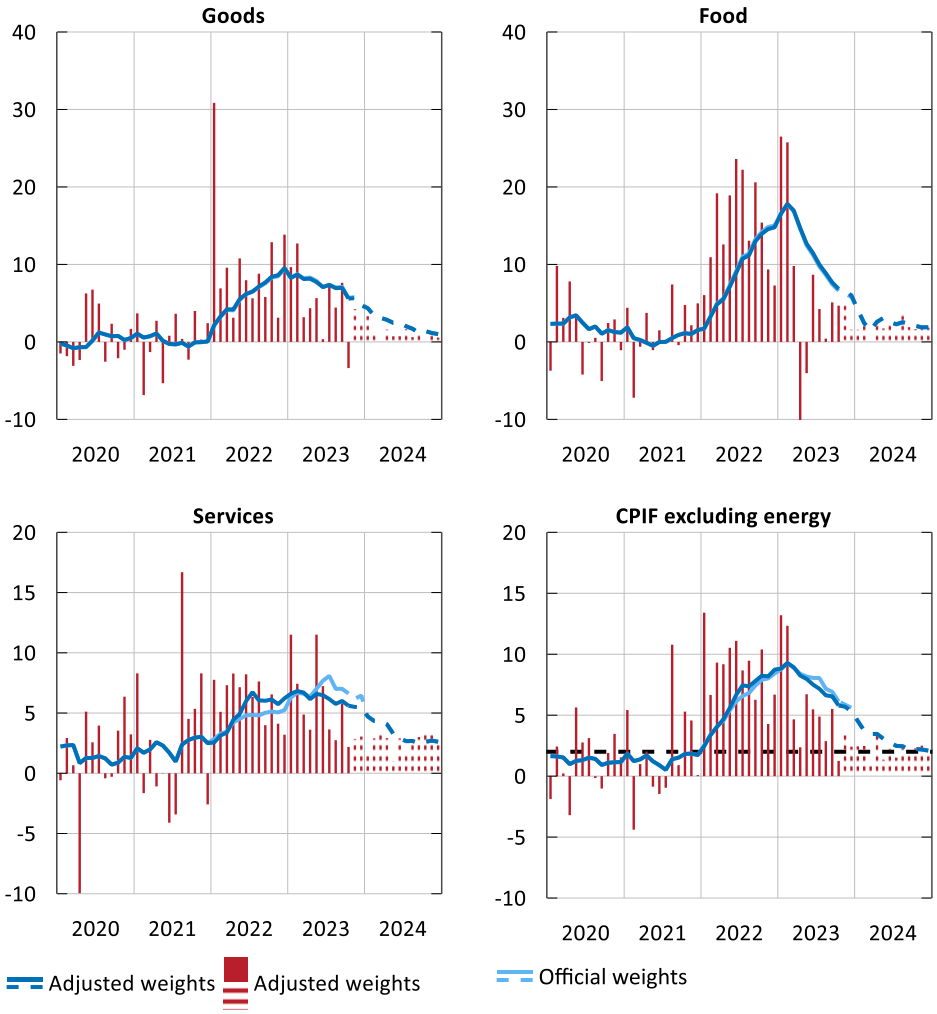
Note. The KIX (krona index) is a weighted average of the currencies in 32 countries that are important for Sweden's international trade. Since 28 March 2022, the index has been calculated against 31 countries as the Russian rouble has been excluded from it. A higher value indicates a weaker exchange rate. Solid lines refer to outcomes, dashed lines to forecasts.

Source: The Riksbank.

[47] See the article "The krona will strengthen in the medium term", *Monetary Policy Report,* September 2023, Sveriges Riksbank.

Figure 35. CPIF excluding energy and sub-groups

Annual percentage change (line) and monthly percentage change in seasonally adjusted indices calculated as an annual rate (bar)

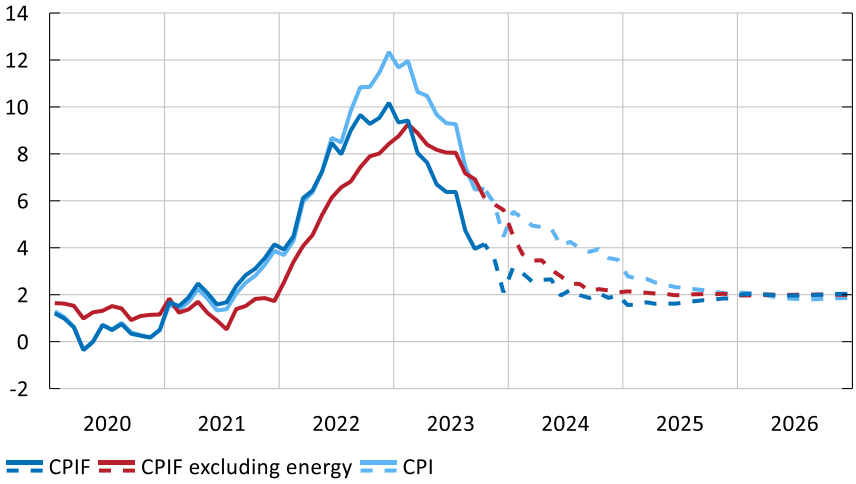


Note. To better be able to distinguish how indices are affected purely by price changes and changes in indices that occur due to the so-called basket effect, an adjusted index is also shown in the images (dark blue lines). So-called year-to-month weights from 2023 are used in the adjusted index for the entire period 2022-2024. The dashed black line in the lower right-hand image shows 2 percentage points.

Sources: Statistics Sweden and the Riksbank.

Figure 36. CPIF, CPIF excluding energy and CPI

Annual percentage change



Note. Heldragen linje avser utfall, streckad linje avser Riksbankens prognos.

Sources: Statistics Sweden and the Riksbank.

3.2 Economic activity has slowed down in Sweden

The slowdown seems to be proceeding more rapidly in Sweden and the euro area than in the United States

Economic developments have recently been weaker in Sweden and the euro area than in the United States. In Sweden, which had a strong recovery after the pandemic, GDP growth had already fallen by mid-2022 while it slowed somewhat later in the euro area. In the United States, on the other hand, the economy has continued to grow strongly (see Figure 37).

One important reason for this is that parts of the Swedish economy are more interest-rate sensitive. Households and, to an extent, companies, primarily some property companies, are highly indebted and have a high proportion of variable-rate loans, which means they are rapidly affected by interest-rate adjustments (see Section 2.2 in Chapter 2). Household consumption has fallen significantly in Sweden since the rate rises started in 2022 and development is weak both from a historical perspective and compared with other countries.[48] In addition, housing investment has fallen noticeably as interest rate rises have both gradually restrained demand for new housing and increased housing companies' funding costs (see Figure 3). On the other hand, Swedish exports have developed relatively well and have contributed to maintaining growth.

[48] However, some of the savings will be used this year, like last year, which will help maintaining consumption despite weak income growth. The assessment is that the buffer created by the excess savings is still relatively intact.

Sweden's GDP was unchanged in the third quarter of this year, seasonally adjusted and compared to the previous quarter, according to preliminary outcomes. Indicators show that household consumption developed slightly more strongly than in the previous quarter and thereby made a positive contribution to GDP. According to preliminary figures, GDP fell in the euro area by 0.1 per cent in the third quarter at the same time as the corresponding figure in the United States was an upswing of 1.2 per cent. Not least household consumption contributed to the strong development in the United States.

There are signs that the labour market in Sweden has cooled

Similar to GDP, the recovery in the Swedish labour market was strong after the pandemic. And the labour market has remained strong up to the end of the first half of this year despite the rapid monetary policy tightening. There are several explanations for this. One is that real wages have fallen in step with the rising inflation. In turn, this has meant that the cost for labour has become lower in relation to the cost of capital, and this may have contributed to a stronger demand for labour. Another explanation could be that more companies are choosing to retain their labour, despite expecting lower demand and production. The explanation could be because companies want to avoid the situation that arose after the pandemic when it was difficult to recruit staff with the right skills. In addition, the employment-intensive services sector has had a strong recovery after the pandemic and demographic factors mean that the demand for labour is high in the public sector, for example in health and social care.[49]

But there are now signs that the labour market in Sweden has cooled. According to Statistics Sweden's labour force surveys (LFS), unemployment has risen, even if development is volatile and relatively difficult to interpret (see Figure 38). Unemployment according to the Swedish Public Employment Service also rose slightly further in October and now amounts to 6.5 per cent. Redundancy notices were more in October than in September and the trend has been faintly rising for a while. Other indicators, such as the number of newly registered job openings, fell relatively sharply in October and also suggest that the strong demand for labour has declined. Furthermore, bankruptcies have increased, although the number of employees affected by these remains relatively small.[50]

There are now also signs in the United States and the euro area that it has begun to cool. In the United States, unemployment remains low, although it rose slightly in the outcome for October at the same time as the increase in employment was slightly lower than in the preceding months. In the euro area, however, unemployment remains on the low levels seen at the start of 2023, very much due to the healthy development in employment (see Figure 38). While the number of vacancies has

[49] See the article "Strong labour market in Sweden and abroad" in *Monetary Policy Report*, June 2023, Sveriges Riksbank. Indicators in the Economic Tendency Survey and responses to surveys from the Confederation of Swedish Enterprise and the trade union Unionen also suggest that there are elements of staff hoarding in the Swedish labour market at present.

[50] During the pandemic, several companies were granted tax deferments and there are still companies that have not repaid this debt. Total liabilities have also increased this year. This could lead to a rise in the number of bankruptcies.

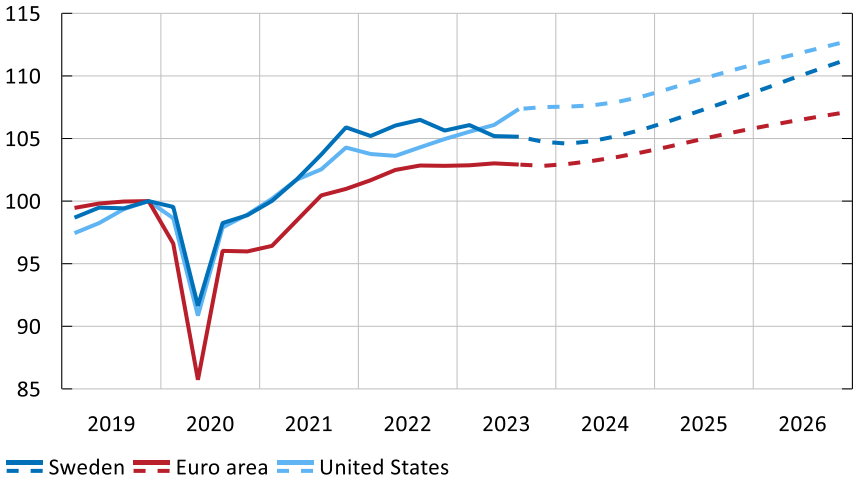
continued to fall in both the United States and the euro area over the year, it remains at historically high levels. This indicates that labour demand, despite some cooling, remains high. However, the overall employment index according to S&P Global fell below 50 for the euro area in October, the first time since the start of 2021. However, developments in the euro area differs between countries. In Germany, for example, where the industrial sector is significantly worse than in Sweden, developments in the labour market are much cooler, with rising unemployment for example, than in the euro area as a whole. In France too, unemployment has also risen recently.

In Sweden, wage growth rose over the first six months of the year but it is still significantly lower than in the euro area and United States. According to some indicators, wage growth has gradually slowed down in the euro area despite the continued strong labour market. This also applies to the United States, where the downturn in wages is more clear-cut, according to several sources.

Measured using the GDP gap, resource utilisation is lower than normal in Sweden, while the employment gap indicates that resource utilisation remains higher than normal (see Figure 39). Taken together, various indicators suggest that resource utilisation has fallen and that it is now close to normal levels.[51]

Figure 37. GDP in Sweden and abroad

Index, 2019 Q4 = 100, seasonally adjusted data



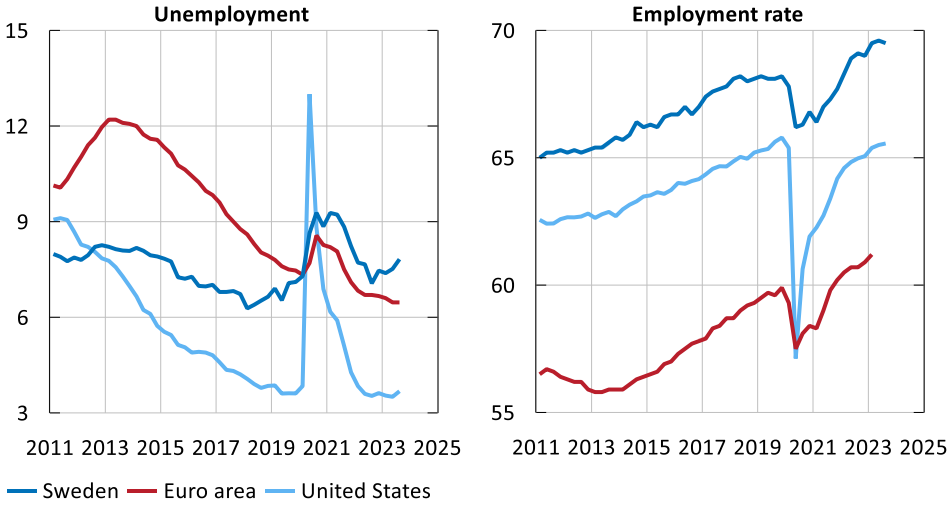
Note. Solid line refers to outcome, dashed line represents the Riksbank's forecast. The final outcome for Sweden (Q3 2023) is based on the monthly outcome for Statistics Sweden's GDP indicator until the end of September.

Sources: Eurostat, Statistics Sweden, U.S. Bureau of Economic Analysis and the Riksbank.

[51] The aggregation of indicators refers to the Riksbank's resource utilisation indicator.

Figure 38. Unemployment and employment rate in Sweden, the euro area and the United States

Percentage of the labour force (left) and percentage of the population 15-74 years (right)

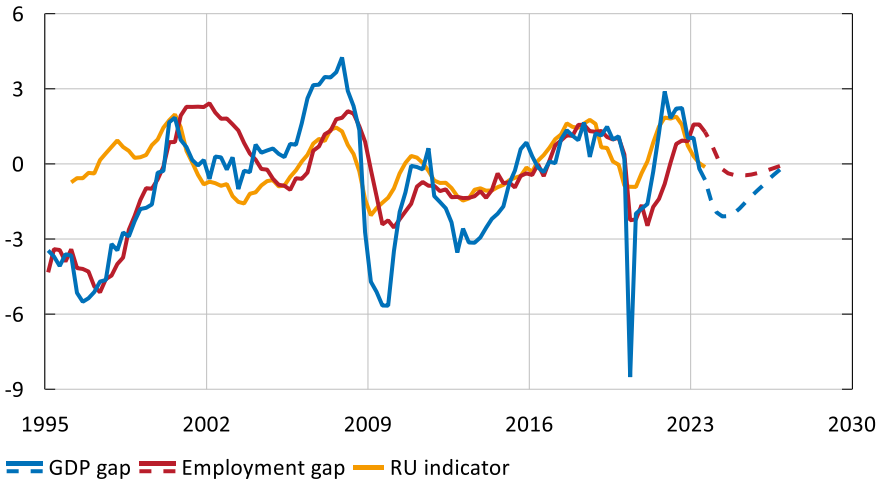


Note. Unemployment and employment rate among persons aged 15-74 years for Sweden and the euro area and among persons 16 years or older for the United States.

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

Figure 39. Measures of resource utilisation in Sweden

Standard deviation and per cent



Note. The gaps refer to the deviation in GDP and employment from the Riksbank's projected trends. The RU indicator is a statistical measure of resource utilisation; from Q1 1996 to Q3 2023, it has been normalised so that the mean value is 0 and the standard deviation is 1. Solid line refers to outcome, dashed line represents the Riksbank's forecast.

Sources: Statistics Sweden and the Riksbank.

Indicators point to weaker economic activity in the coming quarters

Economic activity is expected to slow down at the end of 2023 in both Sweden and the euro area and at the start of 2024 in the United States as the tighter monetary policy has an increasing impact and demand declines.

Forward-looking confidence indicators in Sweden, such as the Economic Tendency Survey, are on low levels and indicate that companies in the trade sector and service sector are taking a relatively gloomy view of development in the approaching quarter (see Figure 40). Household confidence indicators are at a low level but are still above the lowest point from October 2022.

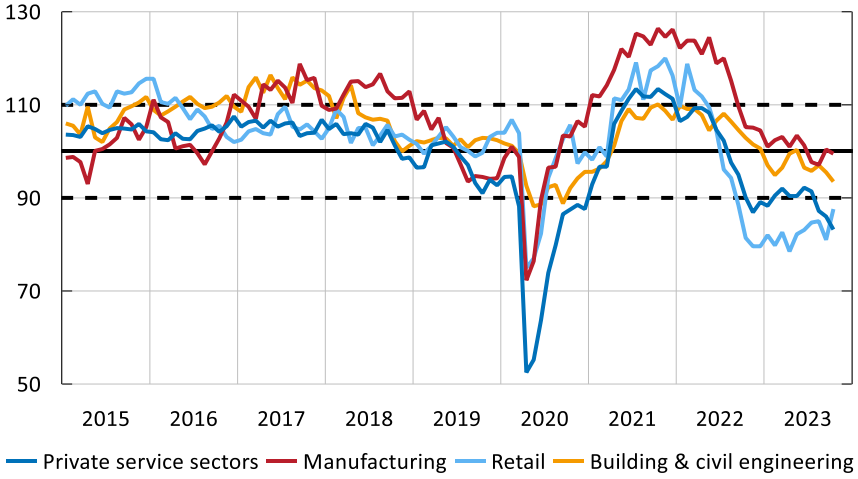
Business sector recruitment plans are now also suggesting workforce cutbacks over the next few months. Combined with other labour market indicators that are deemed to have forward-looking characteristics, this indicates that unemployment will rise in the next few quarters and that employment will fall.

In the Riksbank's latest business survey, companies also assess that activity in the economy will continue to slow down and the weak economic situation will continue over the next six months. According to companies' responses, the split in the business sector will persist, with companies selling directly to households continuing to experience very weak demand while export companies will experience conditions as better.[52]

In the United States and euro area, forward-looking confidence indicators among households and companies are also on low levels. As demand is now falling, growth in the labour market is expected to slow down further abroad over the next few quarters.

Figure 40. Confidence indicators in the business sector

Index, average = 100, standard deviation = 10



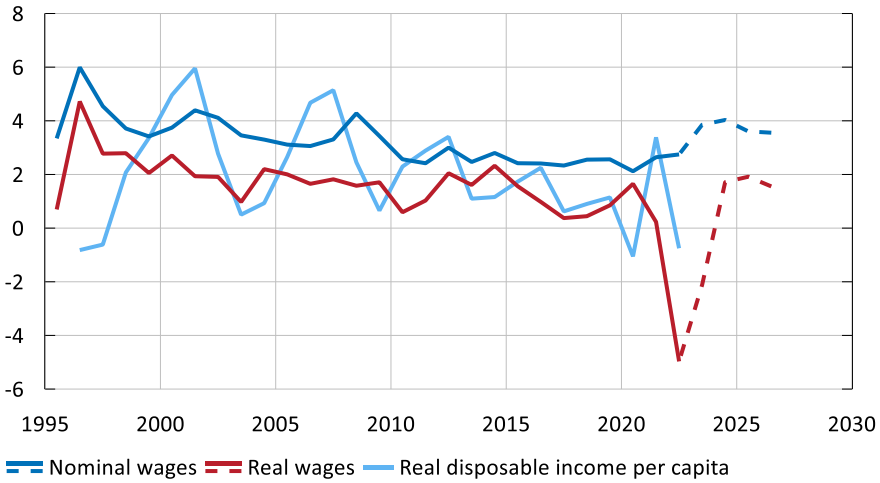
Note. The solid horizontal line illustrates the mean value and the dashed horizontal lines illustrate a standard deviation above and below the mean value. Confidence indicators are calculated as the mean value of the net figures for a number of questions about, for example, pending orders, production volume, number of employees and sales volume.

Source: National Institute of Economic Research.

[52] See "Sharper competition putting pressure on prices", *Riksbank Business Survey,* September 2023, Sveriges Riksbank.

Despite nominal wages rising at a faster rate, real wages will fall again this year as a result of the high inflation. Real disposable household income per capita is also expected to fall this year (see Figure 41). Next year, when inflation is expected to be back around the target, real wages are assessed to rise again.

Figure 41. Nominal and real wages and real disposable income per capita in Sweden
Annual percentage change



Note. Real wages are calculated as the difference between wage growth and the rate of increase in the CPIF. Real disposable income is calculated using the deflator for households' consumption expenditure, which usually increases at about the same rate as the CPIF. Solid lines refer to outcomes, dashed lines to the Riksbank's forecasts.

Sources: National Mediation Office, Statistics Sweden and the Riksbank.

The economic situation will improve towards the end of 2024

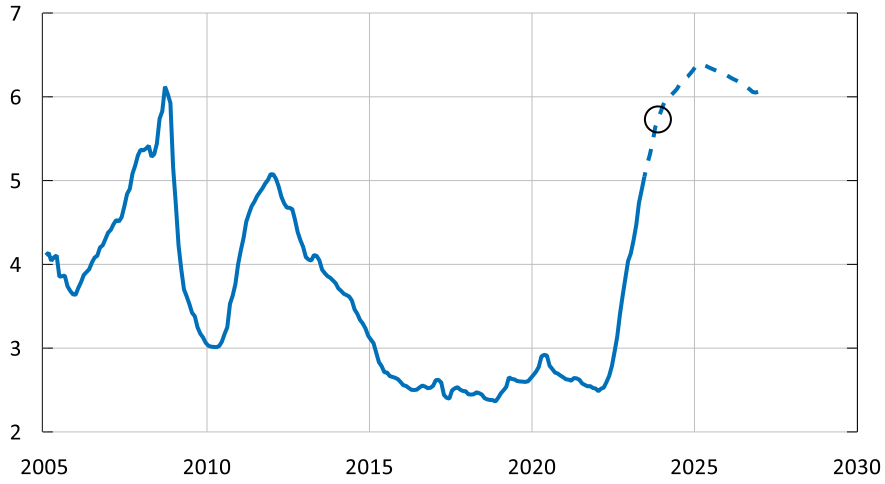
Demand abroad will gradually rise from the start of the second six months of 2024 when inflation will be close to target and households' real incomes will strengthen. The level of GDP will follow a steeper upward trend in the euro area and the United States over the rest of the forecast period (see Figure 37). As growth picks up internationally, Swedish export growth is also expected to increase in 2024.

Activity in the Swedish economy is also expected to pick up gradually in 2024. Inflation will fall back and real disposable household income will increase, which will lead to higher consumption. Household savings as a share of disposable income will therefore decrease gradually over the forecast period and level off on the same level as before the pandemic.[53] During the autumn, the interest-to-income ratio, households' interest expenses as a percentage of their disposable income, has continued to increase as a consequence of more loans having matured and been renewed at a variable interest rate. Over the next year, the interest-to-income ratio is expected to rise slightly further before peaking at the start of 2025 (see Figure 42).

[53] See "Household savings increased significantly during the pandemic", *Monetary Policy Report*, September 2023, Sveriges Riksbank.

Figure 42. Interest-to-income ratio

Household interest as a percentage of disposable income



Note. Interest-to-income ratio on a monthly basis, disposable income and debts, adjusted for season and frequency. MFI rate for all outstanding loans to households according to financial market statistics. Disposable income and debts from the National Accounts and financial accounts respectively. Solid line refers to outcome, dashed line represents the Riksbank's forecast. The circle shows an assessment of the current situation.

Sources: Statistics Sweden and the Riksbank.

Housing investment is expected to continue to develop weakly (see Figure 44), thereby burdening growth in 2024 as well.[54] This investment is now falling unusually sharply in relation to housing prices and is expected to fall further. This is partly due to higher construction costs in combination with lower demand. The price fall in housing is expected to be almost 15 per cent in relation to the peak in February 2022. Towards the end of 2024, when inflation is lower and real disposable household income rises, demand for housing is expected to pick up again along with housing prices. In turn, this is also expected to affect housing investment with a certain lag (see Figure 44).

The Swedish labour market is expected to resist the GDP downturn relatively well (see Figure 45). The employment rate will fall back slightly from the record peak levels but is expected to increase again in 2025. Unemployment will rise again over the next year to peak at just over 8.5 per cent, after which it will subside again. Resource utilisation is expected to fall and be below normal in 2024 and 2025, before normalising towards the end of the forecast period (see Figure 39).

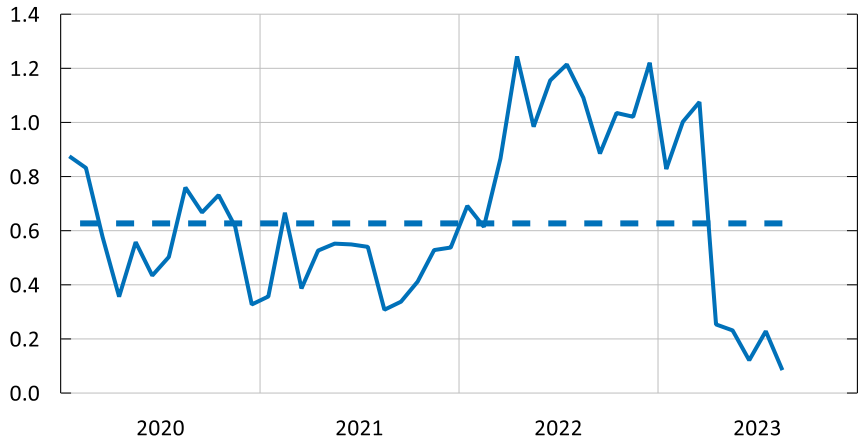
However, there is a risk that the deterioration of the labour market may be greater. The occupation rate is very high at present and there are some indications that companies may have more staff than they really need. The last twenty-year period also shows that things can move very quickly when the labour market turns and developments therefore must be monitored closely.

[54] New construction of rental apartments has slowed down especially significantly.

Wage growth according to short-term wage statistics is expected to continue rising in Sweden and peak at the beginning of next year, which is in line with the profile of the central wage agreements. The wage agreements that in most cases will apply until the beginning of 2025, mean that wage growth this year and next year will be higher than last year.[55] So far, however, wage growth outside the scope of the agreements has been very low from a historical perspective (see Figure 43). Hourly labour costs, i.e. wages and employers' contributions combined, will increase by between 3.5 and 4 per cent per year in line with short-term wages. Productivity is expected to rise gradually from a very low level and the rate of increase in unit labour costs will thereby fall back and is expected to increase by 2 per cent towards the end of the forecast period.

Figure 43. Wage increases in excess of agreements

Percentage points



Note. Dashed lines represent averages since 1997.

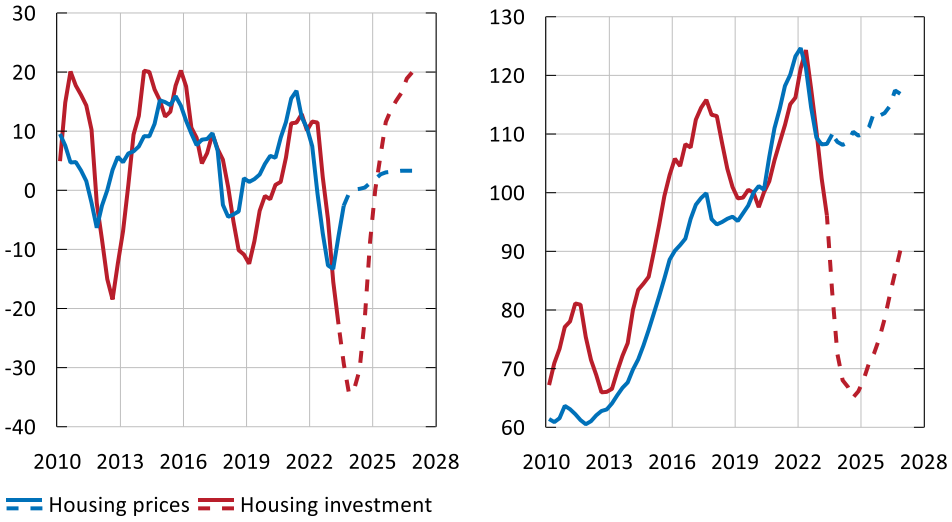
Source: The National Mediation Office.

Fiscal policy is currently deemed neutral in Sweden and is not affecting economic activity to any greater degree, but how it will develop towards the end of the forecast period is more uncertain. Neither is fiscal policy expected to make any significant contribution to growth in the euro area, while it assumed to be somewhat expansionary in the United States. Unlike Sweden, the United States, in particular, continues to have large budgetary deficits.

[55] The agreements are based on the industrial agreement, which stretches over two years and gives a total wage increase of 7.4 per cent, divided into 4.1 per cent the first year and 3.3 per cent the second year. Agreements in other areas have been reached for similar levels.

Figure 44. Housing prices and housing investment

Annual percentage change (left) and index respectively, 2019 Q4 = 100 (right)

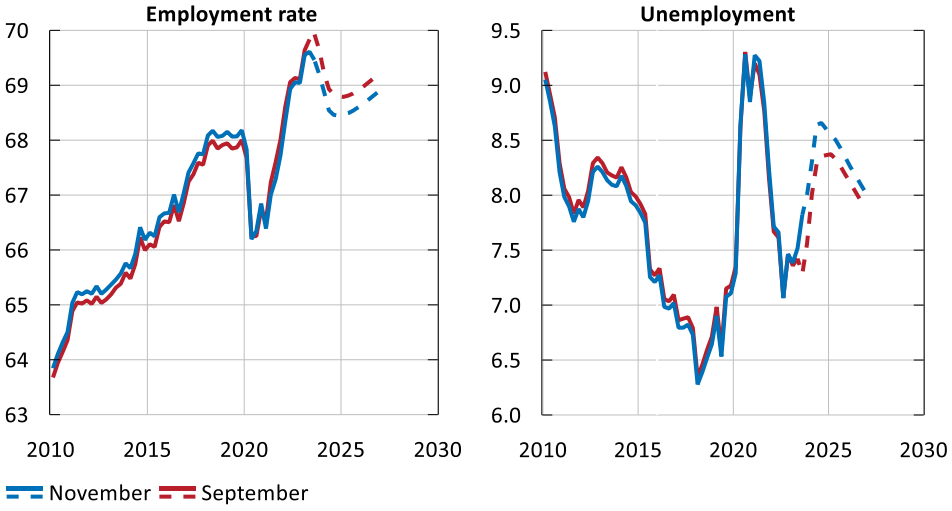


Note. Housing prices refer to the HOX Sweden price index for tenant-owned apartments and detached houses. Solid line refers to outcome, dashed line represents the Riksbank's forecast.

Sources: Valueguard and the Riksbank.

Figure 45. Employment rate and unemployment in Sweden

Percentage of population (left) and percentage of labour force (right), seasonally adjusted data



Note. 15–74 years. Solid line refers to outcome, dashed line represents the Riksbank's forecast. The series have been relinked and revised by Statistics Sweden for the time series break that occurred in the LFS in January 2021 for the period 2005-December 2020. The outcomes after 2021 have also been revised as a result of some compilations of the statistics.

Sources: Statistics Sweden and the Riksbank.

ARTICLE – The pass-through of the krona to inflation appears to have been larger than usual

Inflation has been high both abroad and in Sweden this past year. But it is now somewhat higher in Sweden than the average in the euro area. Among the components in the CPIF, the difference is clearest in that goods prices has increased more rapidly in Sweden. There are many factors that affect the development of goods prices, such as energy prices and input goods, but an important explanation for why goods prices has increased more rapidly in Sweden than in many other countries is probably the depreciation of the krona. In addition, there are signs that the change in the exchange rate has affected consumer prices more rapidly than usual this past year, which is in line with studies indicating that cost changes have a greater pass-through to prices when inflation is high than when it is low.

Exchange rate weakening has contributed to inflation upturn

There are numerous indications that companies' pricing behaviour has changed over the past years of high inflation. For example, the correlations between producer prices and consumer prices, between energy prices and consumer prices, and between exchange rates and inflation have not followed historical patterns. Supply shocks in the aftermath of the pandemic and Russia's invasion of Ukraine coincided with high demand as society opened up and households had large savings to use for consumption. The imbalance between supply and demand allowed companies to pass on large cost increases to a greater extent than we have seen historically. A weaker krona is one of these factors. In this article, we analyse the impact of the krona on goods prices.

The exchange rate is one of many factors that influence inflation, as it affects the price of what is imported. However, it is difficult to determine exactly how large an effect variations in the exchange rate have on inflation and the pass-through also varies over times. Over the past two years, the krona has depreciated by around 15 per cent and the Riksbank assesses that this has to some extent contributed to the high inflation in Sweden during this period.[56]

Normally, variations in the exchange rate have moderate effects on inflation. In 2016, the Riksbank published results from various estimated models that showed overall

[56] In October 2023, the krona was 16 per cent weaker against the euro compared with October 2021. The corresponding depreciation in KIX terms was 13 per cent.

that a permanent 10-percent depreciation of the krona usually leads to an increase in inflation of at most around 0.5 percentage points after approximately one year.[57] In the Riksbank's macroeconomic model, MAJA, the effect of the same change in the exchange rate is 0.7, 0.3 and 0.2 percentage points respectively the first three years.[58] These estimated pass-throughs, which describe the average historical effect are small given that between 25 and 30 per cent of private consumption consists of imports.[59]

If one uses these assumptions as a base, the krona depreciation in recent years has not affected inflation to any great extent. The estimates imply that the contribution should have been at most 0.3-0.4 percentage points in early 2023. If one allows the MAJA model to explain developments in inflation in recent years, the contribution will be about the same size.[60] This is small in relation to a total inflation level that in some months amounted to around 10 per cent (see Figure 1).

Swedish goods prices rising relatively rapidly

Inflation is somewhat higher in Sweden than in the euro area and many other European countries (see Figure 27). It is goods prices in particular, which comprise just over 25 per cent of the CPIF, that have increased faster in Sweden over the past year (see Figure 46). Over the past year, the rate of increase has deviated from other countries considerably, with, on the one hand, Sweden and Norway, which deviate upwards and, on the other hand, Denmark which deviates downwards. What Sweden and Norway have in common is that both the Swedish krona and the Norwegian krona have weakened against the euro, while the Danish krone is pegged to the euro. This indicates that the exchange rate's development may have contributed to the differences. But the slower increase in goods prices in Denmark than in the euro area, despite the same exchange rate development, indicates at the same time that other factors may well be as important for goods prices.

[57] See the article "The impact of the exchange rate on inflation in *Monetary Policy Report*, December 2016, Sveriges Riksbank. Note that the estimates apply to effects on inflation. It is reasonable to expect that prices will rise more in the longer run, but there is a gradual adjustment.

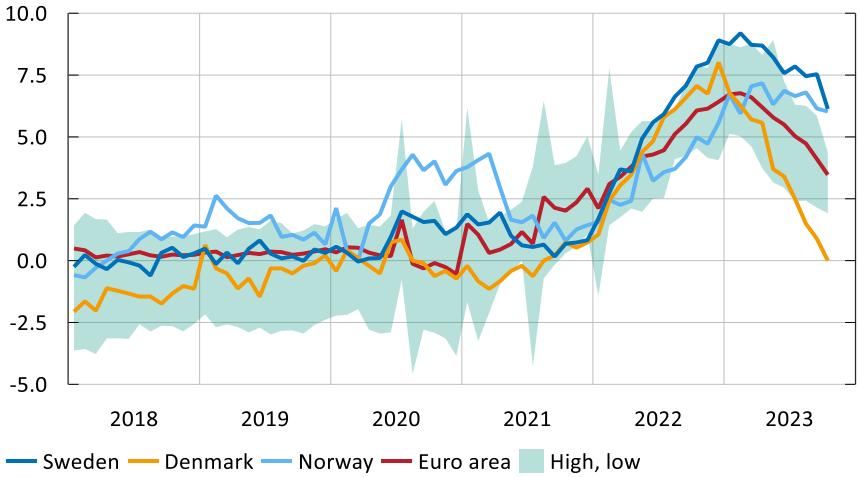
[58] This applies when the change in the exchange rate is driven by a change in the risk premium on Swedish assets. For a discussion of what has caused the krona depreciation, see the article "The krona will strengthen in the medium term" in *Monetary Policy Report*, September 2023, Sveriges Riksbank.

[59] See Table A2 in J. Hansson and J. Johansson, "Alternative measures of inflation for monetary policy analysis", Economic Review, 2007:3, Sveriges Riksbank for estimates of import content. See also the discussion in M. Lindskog and H. Lovéus (2023), "Import prices, labour costs and profits – what role have they played in inflation dynamics?" *Staff Memo*, September, Sveriges Riksbank.

[60] This refers to the contributions from changes in the exchange rate caused by risk premium disruptions in MAJA.

Figure 46. Goods prices (excl. food)

Annual percentage change



Note. The interval shows the highest and lowest rates of increase in Spain, Italy, Germany, France, the Netherlands, Belgium, Ireland, Luxembourg, Portugal, Austria and Finland.

Source: Eurostat.

The krona depreciation may have contributed more than usual to inflation recently

The question of how large a pass-through the exchange rate has had to inflation and whether this has changed has been very much in focus recently. The fact that the historically normal exchange rate pass-through is less than the import content in consumption is because many companies tend to smooth their price increases and allow profit margins to absorb some of the fluctuations in the exchange rate in the short term. The way prices change depends on what causes the change in the exchange rate and in which economic environment it occurs, and the effects on inflation can be both greater and smaller than has been the case on average.[61] There are studies indicating that the pass-through from cost changes, such as changes in the exchange rate, is greater when, for example, inflation and demand are high.[62] Besides exchange rate changes, the pass-through is also grater from changes in energy prices and other input goods in such an environment.

The krona has depreciated by around 15 per cent against the euro since the end of 2021 (see Figure 47). This is not the first time the krona has depreciated to a corresponding extent against the euro in a short time. For example, a similar depreciation occurred between 2016 and 2019. Since the beginning of 2022, goods prices in Sweden have increased by around 5 per cent more than in the euro area, but when the krona depreciated between 2016 and 2019, Swedish goods prices rose at around the same pace as those in the euro area (see Figure 47). This could be a sign that

[61] See V. Corbo and P. Di Casola (2020), "Drivers of consumer prices and exchange rates in small open economies", *Working Paper* No 387, Sveriges Riksbank

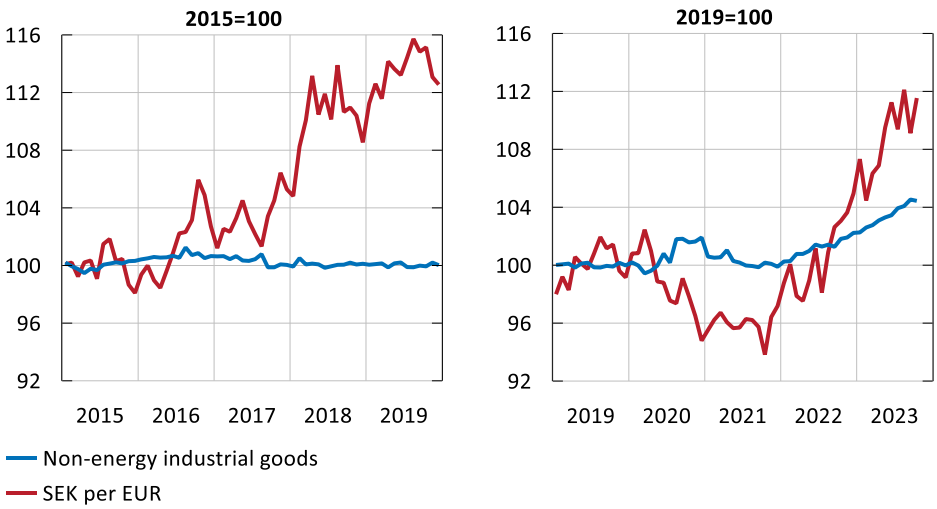
[62] See, for example, the fact box "Pass-through of the exchange rate when inflation is high" in Monetary Policy Report, June 2023, Sveriges Riksbank and C. Borio, M. Lombardi, J Yetman and E. Zakrajšek (2023), "The two-regime view of inflation", BIS papers No 133, Bank for International Settlements.

companies have passed on a more significant share of their costs from exchange rate changes to their prices over the past year than they did during the period up to 2019.

Imports' share of goods prices is around 50 per cent, which is higher than in other parts of private consumption (for instance services). If companies pass on in full the cost increases resulting from a depreciation of the krona against the euro of 15 per cent, goods prices would then increase by 7.5 per cent more in Sweden than in the euro area. Normally, however, this type of adjustment takes a long time. The fact that good prices in Sweden have now increased by around 5 per cent more than in the euro area therefore implies that companies have passed on most of their cost increases from the krona depreciation to consumer prices faster than usual. Please note that this is a simplified calculation. In practice, there are many other costs that can evolve differently between countries, at the same time as the composition of household consumption also differs. But the calculation can nevertheless give some indication of the effect the exchange rate has had on goods prices.

Figure 47. Relative development in goods prices between Sweden and the euro area and the krona exchange rate against the euro

Index of relative price levels and indices



Note. The blue lines show the relative index for goods prices excluding food in the HICP between Sweden and the euro area. In the left-hand figure the base year is 2015 and in the right-hand one it is 2019. The red lines show the index for the exchange rate SEK/EUR with base year 2015 in the left-hand figure and 2019 in the right-hand one.

Sources: Eurostat and the Riksbank.

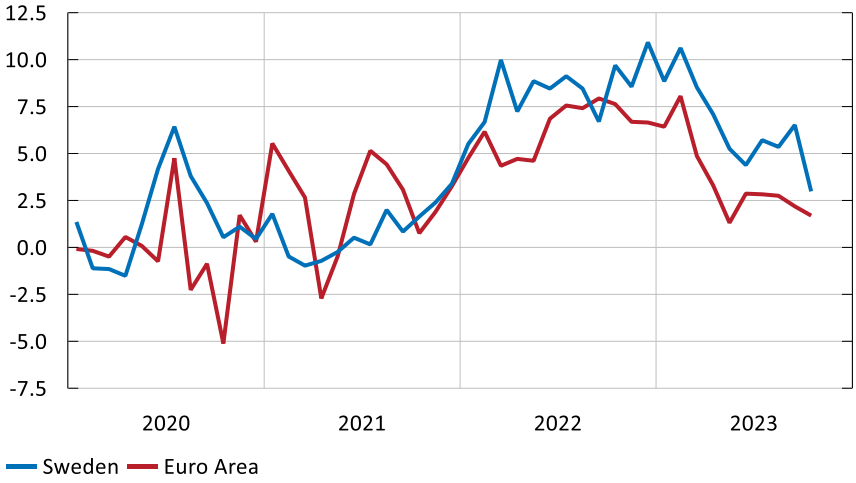
Exchange rate pass-through assessed to be more normal going forward

In the coming years, demand in the Swedish economy is expected to be lower than normal and inflation to be around 2 per cent. The fact that demand is weaker and inflation lower than in recent years indicates that the pass-through from the exchange rate to inflation will return to its historically normal level. The analysis also indicates that we have already seen most of the pass-through from the krona depreciation and thus do not need to expect more effects from the depreciation that has occurred in recent years. More high-frequency data on developments in goods prices provide

some support for this. For example, in Figure 48 we see that the three month change in goods prices in Sweden has approached the euro area.

Figure 48. Goods prices

Three-month change in per cent, calculated as an annual rate, seasonally-adjusted data



Source: Eurostat.

This conclusion is also compatible with an analysis made using the Riksbank's MAJA model. If the model assumes that the exchange rate pass-through has recently been greater than normal, the model gives the result that the contribution from the exchange rate depreciation will decrease more rapidly in the period ahead.[63] The forecast for inflation will then be lower than if the pass-through has been normal this past year.[64] The assessment of the effects of the exchange rate on inflation going forward are very uncertain, however, and in the forecast for inflation, the Riksbank has assumed a pass-through in line with the historical norm.

[63] The exchange rate pass-through is increased by assuming that import companies review their prices more often, which means that their prices will become more sensitive to changes in the costs for input goods. Changes in the prices of the goods they import that are driven by exchange rate changes then have a faster and greater impact on consumer prices.

[64] If the pass-through has been greater, then the weak exchange rate becomes a more important explanation for the upturn in inflation in MAJA. However, the model then at the same time needs to put less weight on other explanations of the high inflation. And these explanations have contributed to a higher persistence in inflation than the exchange rate. The assumption of a greater pass-through therefore means that the inflation forecast will be lower.

Forecast tables

The forecast in the previous Monetary Policy Report is shown in brackets.

Table 1. Policy rate forecast

Per cent, quarterly averages

	2023Q3	2023Q4	2024Q1	2024Q4	2025Q4	2026Q4
Policy rate	3.75 (3.75)	4.00 (4.03)	4.04 (4.09)	4.10 (4.10)	3.87 (3.95)	3.51

Source: The Riksbank.

Table 2. Inflation

Annual percentage change, annual average

	2022	2023	2024	2025	2026
CPIF	7.7 (7.7)	6.0 (5.9)	2.3 (2.5)	1.7 (1.8)	2.0
CPIF excl. energy	5.9 (5.9)	7.6 (7.5)	2.9 (2.9)	2.0 (2.1)	2.0
CPI	8.4 (8.4)	8.6 (8.6)	4.4 (4.6)	2.4 (2.4)	1.9
HICP	8.1 (8.1)	5.9 (5.9)	2.3 (2.6)	1.7 (1.9)	2.1

Note. The HICP is an EU-harmonised index for consumer prices.

Sources: Statistics Sweden and the Riksbank.

Table 3. GDP and demand

Annual percentage change unless otherwise specified

	2022	2023	2024	2025	2026
Household consumption	1.9 (1.9)	-1.8 (-2.0)	0.9 (0.8)	2.3 (1.9)	2.8
Public consumption	0.0 (0.0)	2.0 (2.0)	1.6 (1.6)	1.4 (1.3)	1.4
Gross fixed capital formation	6.2 (6.2)	-2.8 (-2.6)	-4.8 (-2.6)	2.3 (2.6)	5.9
Stock investments*	1.1 (1.1)	-0.4 (-0.5)	-0.1 (-0.3)	0.0 (0.0)	0.0
Exports	7.0 (7.0)	1.2 (1.2)	0.8 (0.3)	2.5 (2.1)	3.3
Imports	9.3 (9.3)	-0.1 (-0.2)	0.1 (0.0)	2.8 (2.1)	4.1
GDP	2.8 (2.8)	-0.7 (-0.8)	-0.2 (-0.1)	1.9 (1.9)	2.8
GDP, calendar-adjusted	2.8 (2.8)	-0.5 (-0.6)	-0.2 (-0.1)	2.1 (2.1)	2.6
Final domestic demand*	2.4 (2.4)	-1.1 (-1.1)	-0.5 (0.0)	1.9 (1.8)	3.1
Net exports*	-0.6 (-0.6)	0.7 (0.7)	0.4 (0.2)	0.0 (0.1)	-0.3
Current account (NA), percentage of GDP	5.0 (5.0)	5.3 (5.4)	6.0 (5.6)	6.5 (6.2)	6.7

* Contribution to GDP growth, percentage points

Note. The figures show actual growth rates that have not been calendar-adjusted, unless otherwise stated. NA is the National Accounts.

Sources: Statistics Sweden and the Riksbank.

Table 4. Production and employment

Annual percentage change, unless otherwise stated

	2022	2023	2024	2025	2026
Population, aged 15-74	0.5 (0.3)	0.5 (0.5)	0.5 (0.5)	0.5 (0.5)	0.4
Potential employment	0.8 (0.8)	0.7 (0.7)	0.7 (0.7)	0.6 (0.6)	0.6
Potential hours worked	0.7 (0.7)	0.6 (0.6)	0.6 (0.6)	0.6 (0.6)	0.5
Potential GDP	1.6 (1.6)	1.6 (1.6)	1.5 (1.5)	1.5 (1.5)	1.7
GDP, calendar-adjusted	2.8 (2.8)	-0.5 (-0.6)	-0.2 (-0.1)	2.1 (2.1)	2.6
Hours worked, calendar-adjusted	2.3 (2.3)	1.4 (1.9)	-1.0 (-1.0)	0.8 (0.7)	1.1
Employed persons	3.1 (2.7)	1.4 (1.7)	-0.8 (-0.7)	0.4 (0.3)	0.8
Labour force	1.5 (1.2)	1.6 (1.6)	0.1 (0.2)	0.3 (0.4)	0.3
Unemployment*	7.5 (7.5)	7.7 (7.4)	8.6 (8.3)	8.5 (8.3)	8.2
Employment gap**	0.7 (0.6)	1.3 (1.6)	-0.2 (0.2)	-0.4 (-0.2)	-0.2
Hours gap**	-0.3 (-0.3)	0.3 (0.8)	-1.3 (-0.8)	-1.1 (-0.7)	-0.6
GDP gap**	1.8 (1.8)	-0.3 (-0.4)	-2.0 (-2.0)	-1.4 (-1.4)	-0.6

*Per cent of labour force
**Deviation from the Riksbank's assessed potential levels, in per cent

Note. Potential hours worked and potential GDP refer to the long-run sustainable level according to the Riksbank's assessment.

Sources: Statistics Sweden and the Riksbank.

Table 5. Wages and labour costs for the economy as a whole

Annual percentage change, calendar-adjusted data unless otherwise stated

	2022	2023	2024	2025	2026
Hourly wage, NMO	2.7 (2.7)	3.9 (3.9)	4.0 (4.0)	3.6 (3.4)	3.6
Hourly wage, NA	3.9 (4.0)	3.1 (3.2)	4.0 (4.0)	3.6 (3.4)	3.6
Hourly labour cost, NA	3.4 (3.4)	3.4 (3.4)	4.0 (4.0)	3.6 (3.4)	3.6
Productivity	0.6 (0.5)	-1.8 (-2.4)	0.8 (0.9)	1.4 (1.5)	1.4
Unit labour cost	2.9 (3.0)	5.4 (6.0)	3.2 (3.0)	2.2 (1.9)	2.1

* Difference in rate of increase between labour cost per hour, NA and hourly wages, NA, percentage points

Note. NMO is the National Mediation Office's short-term wage statistics and NA is the National Accounts. Labour cost per hour is defined as the sum of actual wages, social-security charges and wage taxes (labour cost sum) divided by the number of hours worked by employees. Unit labour cost is defined as labour cost sum divided by GDP in fixed prices.

Sources: National Mediation Office, Statistics Sweden and the Riksbank.

Table 6. International forecasts

Annual percentage change unless otherwise specified

GDP	PPP weights	KIX weights	2022	2023	2024	2025	2026
Euro area	0.12	0.46	3.4 (3.4)	0.4 (0.4)	0.5 (0.6)	1.5 (1.8)	1.5
United States	0.15	0.08	1.9 (2.1)	2.4 (2.0)	1.2 (0.9)	1.8 (1.9)	1.9
China	0.19	0.10	3.0 (3.2)	5.4 (5.1)	4.6 (4.5)	4.3 (4.7)	4.0
KIX weighted	0.75	1.00	3.2 (3.1)	1.3 (1.3)	1.4 (1.5)	2.0 (2.2)	2.0
The World (PPP)	1.00	—	3.5 (3.4)	3.0 (2.9)	2.9 (2.9)	3.2 (3.3)	3.1

Note. Calendar-adjusted growth rates. PPP weights refer to purchasing-power adjusted GDP weights in the world for 2022, according to the IMF. KIX weights refer to weights in the Riksbank's krona index (KIX) for 2022. The forecast for GDP in the world is based on the IMF's forecasts for PPP weights. The forecast for KIX-weighted GDP is based on an assumption that the KIX weights will develop in line with the trend during the latest five years.

CPI	2022	2023	2024	2025	2026
Euro area (HICP)	8.4 (8.4)	5.5 (5.6)	2.3 (2.8)	2.0 (2.0)	2.0
United States	8.0 (8.0)	4.1 (4.1)	2.5 (2.6)	2.3 (2.2)	2.3
KIX weighted	8.4 (8.4)	5.7 (5.7)	3.2 (3.1)	2.6 (2.4)	2.4

	2022	2023	2024	2025	2026
International policy rate, per cent	0.5 (0.5)	3.6 (3.6)	4.1 (4.0)	3.4 (3.3)	3.0
Crude oil price, USD/barrel Brent	98.6 (98.6)	83.1 (83.0)	81.7 (84.4)	77.7 (79.4)	74.6
Swedish export market	8.5 (8.3)	1.0 (0.3)	1.9 (1.8)	3.1 (3.0)	3.1

Note. The policy rate abroad is an aggregate of rates in the US, the euro area, Norway and the United Kingdom. In the euro area, the overnight rate ESTR has replaced EONIA as the reference rate since 1 January 2022.

Sources: Eurostat, IMF, Intercontinental Exchange, national sources, OECD and the Riksbank.

Table 7. Summary of financial forecasts

Per cent unless otherwise stated, annual average

	2022	2023	2024	2025	2026
The Riksbank's policy rate	0.8 (0.8)	3.5 (3.5)	4.1 (4.1)	4.0 (4.0)	3.6
10-year rate	1.5 (1.5)	2.5 (2.5)	2.9 (3.1)	3.0 (3.2)	3.0
Exchange rate, KIX, 18 Nov 1992 = 100	121.1 (121.1)	127.7 (128.8)	125.3 (130.3)	121.7 (125.1)	117.4
General government net lending, per cent of GDP	1.1 (1.1)	0.1 (0.1)	-0.7 (-0.8)	-0.6 (-0.6)	-0.4

Note. The Riksbank's preliminary analysis as per 30 September 2023 indicates that the Riksbank would need a capital injection of close to SEK 80 billion to restore its equity to the basic level under the new Sveriges Riksbank Act. If the capital requirements are in line with the preliminary analysis and the Riksdag approves the capital injection, general government net lending for 2024 will be weakened by a further estimated 1.2 percentage points.

Sources: Statistics Sweden and the Riksbank.

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