

# **Monetary Policy Report**

March 2024



Rectification 27 March 2024 Figure 34: In the note, *CPIF excluding energy* has been corrected to *CPIF*.

Rectification 2 April 2024 Minor editorial changes.

## **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 four 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.<sup>1</sup> The report includes a description of the outlook 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 26 March 2024.

<sup>&</sup>lt;sup>1</sup> 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 sustainably 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 a long time before monetary policy has a full impact on inflation and the real economy, monetary policy is guided by forecasts of economic development. 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 can 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 eight monetary policy meetings a year. After four of these meetings, a Monetary Policy Report with forecasts will be published. At the other four meetings, the Executive Board's assessments and motives for its monetary policy decisions are described in a shorter document, a Monetary Policy Update. Just under a week after each monetary policy meeting, minutes from the meeting are published, which set forth the reasoning of the different Executive Board members.

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## Monetary policy considerations

Monetary policy and diminishing effects of supply shocks have contributed to lower inflationary pressures. Inflation expectations are firmly anchored and wage increases are moderate. Inflation has continued to fall, and forward-looking indicators imply that it is approaching 2 per cent.

Given the very high inflation in recent years and changed pricing behaviour, the Executive Board wants further confirmation that inflation will stabilise close to the target. The risk of inflation becoming entrenched at levels that are too high continues to decline, but inflationary pressures are still somewhat elevated. The Executive Board has therefore decided to leave the policy rate unchanged at 4 per cent.

If the inflation prospects remain favourable, it is likely that the policy rate can be cut in May or June. The need for contractionary monetary policy declines when inflation falls towards the target and economic activity is weak. However, there are risks that can cause inflationary pressures to rise again, such as new supply shocks resulting from the geopolitical unrest, that the krona continues to weaken, or companies' pricing behaviour not normalising as expected. Monetary policy should therefore be adjusted cautiously going forward, in the form of gradual cuts in the policy rate.

The US economy continues to perform strongly. Expansionary fiscal policy has maintained demand, at the same time as the impact from the policy rate increases is limited by households' long interest-rate fixation periods. Various changes in the supply side of the economy are also contributing to rapid growth.

**Growth is much weaker in the euro area than in the United States.** This is due to the euro area economies being hit harder by the energy crisis following Russia's invasion of Ukraine and to fiscal policy being less expansionary, among other things. However, the labour markets have developed strongly in both the euro area and the United States. Growth abroad is expected to gradually increase as from the second half of 2024.

Inflation abroad continues to fall, but more slowly. In February, HICP inflation in the euro area was 2.6 per cent on an annual rate and CPI inflation in the United States was 3.2 per cent on an annual rate. Inflation in the United States is being held up by substantial rent increases. PCE inflation, which has a lower weight for rents and is the measure the Federal Reserve focuses mostly on, is lower.

#### The Federal Reserve and the ECB have emphasised that further information is

needed before they can cut policy rates. Indicators point to both growth and the labour market remaining strong in the United States. One uncertainty factor with regard to US inflation is to what extent the strong growth is supply or demand driven. The ECB for its part stresses that they are following wage growth closely to assess cost pressures going forward. The Riksbank expects monetary policy abroad to remain tight for a while and then gradually begin to normalise towards the middle of 2024.

Since the Monetary Policy Update in February, market expectations of policy rates have risen. This affected long term market rates, which have risen again after the decline during the last months of 2023. Swedish short term market rates have not moved as much.

Low activity in the Swedish economy. The slowdown has been driven by the interestsensitive parts of the economy, such as household consumption and housing investment. The business sector's other investment has developed strongly, but fell somewhat during the final quarter of 2023.

**Confidence in the economy has begun to recover and economic activity is expected to gradually increase in 2024.** Household consumption is expected to strengthen in the first half of this year, as inflation falls back and real wages increase. However, reduced employment is forecast to partially hold back consumption growth. Housing investment is expected to recover towards the end of the year.

The economic slowdown is forecast to be relatively short-lived and the labour market is expected to resist the slowdown relatively well. Employment continued to decline during the fourth quarter and unemployment rose to 8.0 per cent. Indicators point to a modest weakening in the labour market in the coming period. In the forecast, unemployment is forecast to rise slightly further and peak at 8.3 per cent. From 2025 onwards, the labour market is expected to recover and unemployment to fall.

**Inflation fell in February and was somewhat lower than expected.** Measured as the CPIF and the CPIF excluding energy it amounted to 2.5 and 3.5 per cent as an annual rate (see Figure 1). Price increases on goods have continued to slow down, while service prices are still increasing relatively fast. Price changes in the shorter term have fallen, and are now in general close to 2 per cent, annualised.

Wage growth has risen in line with expectations in recent months. In December it amounted to 4.4 per cent, and the increases over and above central agreements have continued to be low in a historical perspective. The forecast is for wage growth to slow down some way into 2024 and in total amount to 3.9 per cent this year. However, lower inflation means higher real wages, which contributes to strengthening households' purchasing power.

#### Forward-looking indicators point to a continued fall in inflationary pressures.

According to the National Institute of Economic Research's Economic Tendency Survey, companies' pricing plans have fallen further and are assessed to be in line with price increases of 2 per cent. The Riksbank's Business Survey for February also shows that price plans among household-related businesses are falling. Inflation falling towards the target when economic activity slows down. As a result of the monetary policy tightening, demand has slowed down in Sweden. This in turn has contributed to gradually lower inflation. The fading effects of supply shocks since the pandemic are also slowing down price increases. In addition, the Riksbank assesses that the krona will appreciate gradually in the coming years, which also help cool inflation. Energy prices are expected to be lower this year than last year, which means that CPIF inflation will reach the target faster than the CPIF excluding energy.

The economic activity could become either stronger or weaker than is forecast.

Developments on the labour market are uncertain. Many companies have so far chosen to retain their staff, despite the economic downturn. A more prolonged economic downturn could be triggered both by domestic factors and weaker international developments. This could lead to greater adjustments among both households and companies. Signals of a lower interest rate going forward can at the same time mean that households and companies are now beginning to consume and invest much more than expected.

**Risks challenging the brighter inflation prospects.** An increase in geopolitical unrest could trigger renewed supply shocks and lead to inflation rising again. The strong development of the US economy could also have repercussions for Swedish inflation via a weaker krona. Higher costs as a result of this type of factor could also prompt companies to again pass on their cost increases to consumers in a way that is not considered compatible with the inflation target.

#### Policy rate left unchanged at 4 per cent

Monetary policy has been adjusted according to inflation prospects. After very high inflation and rapid interest rate increases from April 2022 to September 2023, there were signs during the autumn that inflationary pressures had been dampened. The Executive Board therefore held the policy rate unchanged in November. Inflation prospects then continued to improve. Following the monetary policy meeting in January, the Executive Board communicated that the probability of policy rate cuts had increased, and that there might even be a possibility the rate would be cut during the first half of this year.

Inflation has continued to fall, and forward-looking indicators imply that it is approaching 2 per cent. Long-term inflation expectations are still firmly anchored close to the target and wage increases are moderate. The risk of inflation becoming entrenched at levels that are too high is continuing to decline, but inflationary pressures are still somewhat elevated.

The Executive Board has decided to leave the policy rate unchanged at 4 per cent. Given the very high inflation in recent years and changed pricing behaviour, the Executive Board wishes for further confirmation that inflation will stabilise close to the target.

If inflation prospects remain favourable, the policy rate could possibly be cut in May or June (see Figure 1). But there is a risk of setbacks. For example, there is still uncertainty over the development of the krona exchange rate and companies' pricing behaviour. The geopolitical unease could also increase and lead to renewed supply shocks.

Monetary policy going forward should be adjusted with caution – in the Riksbank's forecast the policy rate is cut gradually. The need for contractionary monetary policy declines when inflation falls towards the target and economic activity is weak. This indicates further cuts in the policy rate this year. Economic activity strengthens when household purchasing power increases and the policy rate is cut. Too fast and too large rate cuts could lead to a strong increase in demand and to inflation rising once again. New information and how it is expected to affect the prospects for the economic and inflation outlooks is decisive in determining the monetary policy stance.



Figure 1. Policy rate and inflation

Per cent (left) and annual percentage change (right)

Note. Solid line refers to outcome, dashed line refers to the Riksbank's forecast. Outcomes for the policy rate are daily data and the forecasts refer to quarterly averages. Sources: Statistics Sweden and the Riksbank.

# A new means of illustrating the forecast for the policy rate

The forecast for the policy rate shows the development during the forecast period that is considered consistent with the other forecasts, including the expected development of inflation. Starting with this report, the policy rate forecast will be shown in two different time horizons. The reason for this is to clarify the difference in how the Executive Board views the decisions in the near term and those in the longer term, which is more uncertain.

The section *Monetary policy considerations* shows the Executive Board's assessment of the policy rate in the coming three quarters. There is more information about developments in the near term than developments further ahead. The forecasts for the economy in the near term are therefore less uncertain. The Executive Board can therefore predict the next few monetary policy decisions with somewhat greater accuracy, even though these forecasts are also uncertain.

The final chapter of the report, *Monetary policy analysis*, shows the interest rate path during the entire forecast period, and also interest rate paths based on alternative scenarios for macroeconomic developments. The forecasts for the policy rate further ahead become more uncertain as the probability of new shocks hitting the economy increases over time.

## 1 The economic outlook

Economic activity abroad has on the whole continued to slow down at the end of 2023 and the beginning of 2024, but there are major differences between regions. In the United States, GDP growth has been strong, while it has been significantly weaker in the euro area. International inflation has continued to fall, but at a somewhat slower pace. In connection with the downturn in inflation, several central banks have communicated that interest rates have peaked and that policy rates may be cut towards the summer. However, market expectations of international policy rates have risen since the Riksbank's Monetary Policy Update in February which is mainly explained by economic activity being stronger than expected in the United States.

Swedish GDP declined somewhat in 2023, as a result of reduced housing investment and lower household consumption. The labour market has also weakened recently, but the employment rate is still high, given the weak demand. Confidence among households and companies is low, but has recovered somewhat in recent months. Inflation is approaching the target and was 2.5 per cent in CPIF measures in February. Price changes in the shorter term have fallen, and are now in general close to 2 per cent, calculated as an annual rate.

## 1.1 Real economy and inflation abroad

## Continued weak growth abroad, but clear regional differences

GDP abroad was weak during 2023. The aggregate GDP growth for Sweden's most important trading partners was 1.4 per cent, which can be compared with an average growth of 2.3 per cent between 2010 and 2019 (see Figure 2).

In the United States, economic developments have in general been stronger than in Europe since 2022 (see Figure 3). Expansionary fiscal policy measures in the United States have stimulated investment and maintained household demand. At the same time, the impact from interest rate increases is limited by mortgages in general having longer interest-rate fixation periods. Real wages have also developed more strongly in the United States than in the euro area. The euro area economies were also harder hit than the United States by the energy crisis following on from Russia's invasion of Ukraine. In the euro area, productivity growth was weak in 2023, and fiscal policy was assessed to have been tighter. However, the labour markets have developed more strongly than expected in both areas (see Figure 3).



## Figure 2. GDP abroad

Annual percentage change, seasonally adjusted data

Note. KIX-weighted GDP in fixed prices. The KIX is a weighted average against 31 countries that are important for Sweden's international trade. The black dashed line represents the average for 2010–2019.

Sources: National sources and the Riksbank.

### Figure 3. GDP and unemployment abroad





Note. Quarterly data (GDP) and monthly data (unemployment). The right-hand figure refers to unemployment among those aged 15–74 in Sweden, the euro area and Norway, and those aged 16 and older for the United States and United Kingdom.

Sources: Eurostat, Statistics Norway, Statistics Sweden, U.K. Office for National Statistics, U.S. Bureau of Economic Analysis and U.S. Bureau of Labor Statistics.

Confidence among economic agents is subdued, particularly in the euro area, but also in the United States. In the euro area, the purchasing managers' index has stabilised, but at a level that indicates relatively weak growth. Industrial production is also still weak, especially in large economies such as Germany. In the United States, industrial production has been somewhat stronger and remained roughly unchanged. Confidence indicators for the manufacturing industry rose at the beginning of the year, but are still at a low level.

### Inflation continues to fall in the United States and the euro area

The downward trend in inflation has continued both in the euro area and the United States, but the fall in inflation has to some extent come to a halt in recent months, especially in the United States (see Figure 4). It is service prices that have kept inflation elevated in both the euro area and the United States, which is due among other things to wages, which are important for service prices, having increased relatively rapidly. The price increase on goods, on the other hand, has continued to slow down (see Figure 5).

Price changes in the shorter term can provide more up-to-date information on what the rate of price increases is at present and where inflation is heading. Inflation excluding energy, measured over the past three months, has fallen over the past year in the euro area and the United States. However, the rate of price movements for services is still high (see Figure 6). The three-month rate for PCE inflation, which is the Federal Reserve's preferred measure has been 2 per cent since the middle of 2023 (see more about the difference between the measures CPI and PCE in the Fact Box "The difference between the measures CPI and PCE in the United States").



#### **Figure 4. Inflation**

Annual percentage change



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

#### Figure 5. Prices of goods and services abroad

Annual percentage change



Note. Refers to HICP for Sweden, the euro area and Norway, and the CPI for the USA and UK. Sources: Eurostat, UK Office for National Statistics and US Bureau of Labor Statistics.



## Figure 6. Services prices and inflation excluding energy

Annualised three-monthly change, per cent, seasonally adjusted data

Note. Refers to the CPIF for Sweden, the HICP for the euro area and the CPI for the United States. Seasonal adjustment made by the Riksbank for all series except service prices in the United States.

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

# FACT BOX – The difference between the CPI and PCE measures in the United States

There are several different measures of inflation in the United States, where the most common are the CPI (consumer price index) and the PCE (personal consumption expenditure). The PCE is the measure the Federal Reserve prefers to monitor and for which it produces forecasts. The CPI normally increases a few tenths of a percentage point faster than the PCE, but otherwise the indices have historically followed one another relatively well. In recent years, however, they have deviated more from one another. Moreover, in recent months they have showed slightly different trends – core inflation measured according to the PCE continues to fall, while according to the CPI it is moving sideways (see Figure 7).

Put simply, the CPI aims to measure price developments on what households pay for themselves, while the PCE instead measures price developments in households' total consumption including things that are paid for by others. However, there are in practice several different factors that cause index developments to differ and these differences have recently had greater impact.<sup>2</sup>

One such substantial difference is how the weights in the respective consumer baskets are updated. The PCE captures the consumption patterns prevailing right now, while they are only updated once a year in the CPI. Thus, the PCE reflects a more up-to-date composition of consumption than the CPI. During periods when consumer behaviour varies substantially this has a relatively large significance.

There is also a large difference in how large the weights for various sub-indices are. The largest difference is that the CPI has a much higher weighting for accommodation, where prices have continued to increase comparably quickly, and a lower weighting for medical care. The CPI also has a somewhat higher weighting for some components that can sometimes have larger price fluctuations, such as used cars.

Finally, prices of certain components are measured in different ways in the surveys. This may mainly affect medical care and financial services such as insurances, where the PCE normally shows a more stable development than the CPI.

<sup>&</sup>lt;sup>2</sup> See, for instance, N. Johnson (2017), "A Comparison of PCE and CPI: Methodological Differences in U.S. Inflation Calculation and Their Implications", *Statistical Survey Paper*, November, U.S. Bureau of Labor Statistics, for a more detailed account of the differences between the indices.



## 1.2 Financial conditions

## The central banks are communicating that policy rates have peaked and the time for cuts is approaching

The European Central Bank (ECB) and the Federal Reserve once again left their policy rates unchanged at their meetings in March. Their communication implies a greater certainty that policy rates have peaked and indicates that the timing for rate cuts is approaching. However, the central banks have emphasised that more information is needed before the policy rates can be cut. They have in particular highlighted developments on the labour market and the rate of wage growth as important for the inflation outlook and thereby for the future monetary policy stance.

Market expectations of international policy rates in the coming years fell significantly at the end of 2023 and the beginning of 2024. However, they have risen again since the February Monetary Policy Update (see Figure 8). The main explanations for this are that outcomes for US inflation have become higher and that the labour market has been stronger than expected. According to market pricing, the first cuts in the ECB's and Federal Reserve's policy rates are expected during the summer. Among other central banks, it is worth noting that the Swiss National Bank cut its policy rate in March, and the Bank of Japan raised its primary policy rate for the first time in 17 years.



Figure 8. Policy rates and policy rate expectations according to market pricing Per cent

Note. The figure shows policy rates and market-pricing of future policy rates. Solid lines represent pricing 25 March 2024. Dashed lines represent pricing immediately prior to the Monetary Policy Update in February.

Sources: National central banks and the Riksbank.

### Swedish government bond yields have risen

The short term Swedish market rates have continued to follow the policy rate well since the February Monetary Policy Update. During the same period, higher policy rate expectations have had an impact on government bond yields with longer maturities, which have risen.

The spread between yields on risky bonds over swap rates generally increased in 2022.<sup>3,4</sup> The increase in the yield spread was largest with regard to corporate bonds. Since the second half of 2023, the yield spread for corporate bonds has shown a clearly downward trend, mainly driven by property companies (see Figure 9). The downturn is likely an effect of the expectation that policy rates will be cut and the assessment that the risks in the economy have recently declined.

<sup>&</sup>lt;sup>3</sup> The Riksbank uses the term risky bonds to refer to bonds with higher credit risk than government bonds, such as covered bonds, municipal bonds and corporate bonds.

<sup>&</sup>lt;sup>4</sup> Interest-rate swaps normally refer to the expected average level of STIBOR (Stockholm Interbank Offered Rate) 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 "<u>What is a swap rate?</u>" in *Monetary Policy Report*, February 2023, Sveriges Riksbank.



## Figure 9. 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 Update in February.

Sources: Bloomberg, Refinitiv and the Riksbank.

### Continued low demand for credit among households and companies

The policy rate affects the interest rates charged to households and this occurs relatively rapidly in Sweden, because of the large share of mortgages at variable interest rates. Since the beginning of 2022, the increases in the policy rate to 4 per cent have led to the average interest rate on new and renegotiated loans to households having risen from around 1.4 per cent to 4.7 per cent in January 2024. This increase corresponds to an impact of just over 80 per cent. The average interest rate on all outstanding loans to household has in the same period increased from around 1.5 to just over 4.0 per cent. Lending rates on companies' new loans have risen at roughly the same pace as the policy rate (see Figure 10).

The average deposit the banks offer to households has risen from 0.1 per cent in January 2022 to 2.4 per cent in January 2024. Thus, the impact of the policy rate on deposit rates is barely 60 per cent and therefore lower than the impact on lending rates. The increase in deposit rates is partly due to households transferring money from their transaction accounts, where the banks offer very low interest, to savings accounts with higher interest.<sup>5</sup> The transmission from the policy rate to the interest rates met by households and companies is functioning in line with historical patterns.

<sup>&</sup>lt;sup>5</sup> See the article <u>"Flightiness of deposits varies across Swedish banks"</u> in *Financial Stability Report*, 2023:2, Sveriges Riksbank.



## Figure 10. 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.

The annual growth rate for households' new loans has continued to fall and is now at a historically low level close to zero. The annual lending rate for companies was negative in January, for the first time since the beginning of 2021 (see Figure 11). However, the fact that lending to companies has declined follows from a particularly large increase in bank loans in 2022 and 2023, which was due to companies increasing their investment and at the same time reducing their borrowing on the bond market.<sup>6,7</sup>

The fact that demand from households and companies for credit has fluctuated so much in recent years affects the total money supply in the economy, see the Fact Box "What drove the major fluctuations in deposits between 2020 and 2023?"

<sup>&</sup>lt;sup>6</sup> The downturn is greatest in larger companies and in a sector breakdown it is primarily in companies in the retail trade and manufacturing industry that lending declined. See *Financial Market Statistics*, February 2024, Statistics Sweden.

<sup>&</sup>lt;sup>7</sup> See *Financial Stability Report*, 2023:2, Sveriges Riksbank.





Note. Lending by monetary financial institutions (MFIs) to households and non-financial corporations 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.

#### The krona exchange rate is somewhat weaker than in February

After having weakened substantially in 2022 and large parts of 2023, the krona strengthened towards the end of 2023 in terms of KIX4.<sup>8</sup> The clear strengthening at the end of last year came in connection with a period of a global fall in inflation and increased expectations of earlier policy rate cuts. At the beginning of the year, the expected policy rates rose again and the krona weakened somewhat. After fluctuating, the exchange rate is now somewhat weaker than at the time of the February Monetary Policy Update (see Figure 12). One explanation for the recent krona weakening could be economic developments in the United States, which have been stronger than expected. This development illustrates how much significance international events have for the krona exchange rate.<sup>9</sup>

<sup>&</sup>lt;sup>8</sup> 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.

<sup>&</sup>lt;sup>9</sup> See the article <u>"The krona will strengthen in the medium term"</u>, *Monetary Policy Report*, September 2023, Sveriges Riksbank with regard to factors affecting the krona exchange rate.



Figure 12. Nominal exchange rate against KIX4, as well as against the US dollar and euro

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 Update in February. Sources: Macrobond Financial AB and the Riksbank.

# FACT BOX – What drove the major fluctuations in deposits between 2020 and 2023? $^{\rm 10\,11}$

To interpret why deposits develop in the way they do, one needs to understand how the banking sector's balance sheet changes with different types of transaction. The banking sector's deposits from the public in Sweden, that is, money that Swedish households, companies and public administration have in their bank accounts, is shown in Figure 13.<sup>12</sup>

A bank's balance sheet consists in simple terms of loans issued on the asset side and deposits on the liabilities side. When the bank issues a new loan, the asset side of the balance sheet increases. At the same time, the bank places the loan amount into the borrower's account in the bank, and thus increases the liabilities side of its balance sheet. This means that the bank, by issuing loans, has increased deposits in the banking system.

A bank can also finance the loans it grants by issuing bonds. When the bank issues a bond, the buyer of the bond pays with bank deposits. The sales of the bond thus mean that the composition of the bank's liabilities side has changed. The bank's

<sup>&</sup>lt;sup>10</sup> This Fact Box is based on E. Andersson and P. Kaplan (2024) "What drove the major fluctuations in deposits between 2020 and 2023?" *Economic Commentaries*, No. 4, Sveriges Riksbank.

<sup>&</sup>lt;sup>11</sup> Deposits here refers to the money supply measure M2. See the detailed definition under Figure 12. <sup>12</sup> One can observe that deposits and the money supply, M2, are closely related concepts. Changes in deposits therefore man that the money supply develops in principle in the same way.

liabilities in the form of deposits have declined, and been replaced by the issued bond. Increased bond financing for the banks therefore means that deposits decline, all else equal.

Central banks' actions can affect deposits. Central banks have periodically used quantitative easing (QE) and quantitative tightening (QT) to influence economic activity.<sup>13</sup> QE means that the central bank buys a bond from the market, for instance a government bond from a financial company. The purchase of the bond is made via a bank that acts as intermediary for the selling company. The central bank receives a bond on its asset side and finances it by depositing central bank money in the form of reserves in the company's bank's account at the central bank. The bank, which has received assets in the form of reserves, creates the corresponding sum in bank deposits and deposits this into the selling company's deposit account at the bank. Thus, deposits increase when central banks buy assets.<sup>14</sup> QT is the opposite of QE and entails the central bank instead selling assets, which reduces deposits.

The right-hand image in Figure 13 shows the contributions to the change in deposits in the banking system between 2020 and 2023 and how the different contributions have developed over time. As shown in the figure, a large part of the variation in deposits is explained by the examples above, but not all variation.

QE had increased deposits and the banking sector's central bank assets in 2020 and 2021. During 2022, QT began, which reduced the banking sector's assets in relation to the Riksbank and at the same time deposits, (light blue columns in Figure 13). Growth in loans during this period has contributed positively to deposits. At the start of the pandemic, there was considerable uncertainty in the economy which contributed to a high demand for liquidity at the same time as activity in the housing market was still high. This contributed to a high demand for bank loans. When long-term interest rates rose at the end of 2021, property companies that were considered high risk began to experience difficulties in financing themselves on the bond market, which then increased their demand for bank loans.

In addition, there were large investment needs in other sectors, which also contributed to the growth in credit in 2022, see the dark blue columns in Figure 13. The Riksbank's QE entailed a large inflow of central bank claims and deposits in the banking system, which in turn reduced the banks' need for bond funding during late 2020 and 2021. However, since 2022, the banks have issued large volumes of securities, largely driven by the phasing in of regulation regarding resolution.

Since the start of 2023, we have had a historically weak growth in deposits. This can be explained by a combination of low demand for credit, QT, and increased bond issuances by the banks.

<sup>&</sup>lt;sup>13</sup> QE and QT are abbreviations for "Quantitative Easing" and "Quantitative Tightening".

<sup>&</sup>lt;sup>14</sup> An exception is if the seller in the transaction were a bank. For further reasoning, see E. Andersson and P. Kaplan (2024) "What drove the major fluctuations in deposits between 2020 and 2023?" *Economic Commentaries*, No. X, Sveriges Riksbank.

The transactions made in the banking system are assumed to take place between the banking sector (including the central bank) and the Swedish public. In the cases where this does not occur, for instance, when transactions are with foreign agents, for instance, they are represented by a residual in Figure 13. During 2022 it was very negative, at the same time as there was a significant upturn in loans in foreign currency. The blue column can therefore overestimate the upturn in deposits as the loans can be held by foreign agents. The weakening of the Swedish krona against, for instance, the US dollar could be due to foreign agents having sold Swedish assets to the Swedish general public during the period, which in turn reduces Swedes' deposits as these are exchanged for other assets.



**Figure 13. Money supply and decomposition of deposits in the banking system** SEK billion (left) and annual change in SEK billion (right)

Note. M2 consists of M1 (notes and coins plus demand deposits) and deposits with conditions. Deposits with conditions include deposits with terms of notice of up to 3 months or a maturity of up to 2 years. Residual refers to the change in the banking sector's assets and liabilities in addition to the other categories.

Source: Statistics Sweden.

## 1.3 Swedish real economy

## Continued weak growth in Sweden

Economic activity in Sweden has largely been unchanged since the fourth quarter of 2021 (see Figure 14). Net exports and business sector investment excluding housing have developed strongly while other interest-sensitive areas of the economy such as household consumption and housing investment have declined significantly. GDP declined by 0.2 per cent in 2023 compared to 2022.

Confidence among households and companies is still low, but has recently begun to recover somewhat. Both the purchasing managers' index and the confidence indicator have risen since the middle and the end of 2023 respectively. In the Economic Tendency Survey the increase is broad across all sectors, but largest among households (see Figure 15). However, the level indicates weak growth going forward. Housing prices have also increased somewhat in recent months.



### Figure 14. GDP

Per cent and percentage points (left) and index 2019 Q4 = 100 (right)

Note. Contribution to annual percentage change in GDP in fixed prices (left). Seasonallyadjusted data (right).

Sources: National Institute of Economic Research and Statistics Sweden.



Figure 15. Confidence indicators in the Economic Tendency Survey

Note. The confidence indicators are calculated as the mean value of net figures for a number of questions concerning the current economic situation and future prospects.

Source: National Institute of Economic Research.

## FACT BOX – the Riksbank's Business Survey<sup>15</sup>

The results of the Riksbank's Business Survey in February indicate that economic activity continues to weaken. Companies are hoping for an improvement, but at the same time see few actual signs of a turnaround. They are adapting their workforce to the lower demand to some extent, but companies are cautious about laying off their employees.

Domestic demand has been weak for a long time and there are few signs that a turnaround is imminent. However, household-related businesses: in particular are hopeful that the economic situation will improve going forward. These hopes are linked to expectations of lower inflation and interest rates, which will affect households' confidence and willingness to consume.

Households are under severe financial pressure and have adapted their purchasing behaviour accordingly. The fierce competition for their consumption is leading to intense campaigns and increased discounts in the retail sector. The weak demand has also led to several household-related businesses focusing on increasing sales volumes by reducing selling prices. Companies selling goods and services to other companies are instead planning to continue passing on their cost increases to their customers, provided that demand does not weaken further.

<sup>&</sup>lt;sup>15</sup> See the <u>Riksbank's Business Survey</u>, February 2024, Sveriges Riksbank.

### Slight increase in unemployment

The employment rate in Sweden rose to a historically high level in the second quarter of 2023, but has since declined somewhat. During the fourth quarter, the number of persons employed continued to decline and unemployment rose to 8.0 per cent.

The labour market has continued to weaken somewhat during the start of 2024. The number of redundancy notices and bankruptcies has increased (see the Fact Box "Bankruptcies and redundancy notices have increased"), while the number of newly-registered vacancies at the Swedish public employment service has declined. Recruitment plans throughout the business sector strengthened at the beginning of 2024 according to the Economic Tendency Survey, but in some sectors they are still clearly negative, for instance in the retail trade and construction and civil engineering.

# FACT BOX – Bankruptcies and redundancy notices have increased

The number of companies going bankrupt has increased and has in recent months been higher than normal in a historical perspective. Companies being wound up and making room for more robust and productive companies is a natural part of economic development. During the period 2003–2023 on average around 0.6 per cent of all companies in Sweden went bankrupt per year. During the pandemic, the number of bankruptcies was unusually low, despite the low demand. This was largely due to companies receiving various forms of fiscal policy support, including temporary tax forbearance.

Increased bankruptcies can lead to a rise in unemployment. However, companies have often given notice of redundancy to many employees before they go bankrupt, and if they have more than five employees at the time of bankruptcy they must give them notice of termination of employment in advance. As the statistics for redundancies are currently published weekly, an upturn can usually be identified relatively quickly. However, it now appears to be mainly small companies that have difficulty, which means that more employees risk being affected by unemployment than is indicated in the redundancy statistics.<sup>16</sup>

A simple forecasting model for unemployment that includes the number of redundancies as an explanatory variable, indicates that unemployment will rise by 0.2 percentage points during the first half of this year. The Riksbank's forecast for unemployment is somewhat higher and is also assessed to include the effect of the increased number of bankruptcies.



#### Figure 16. Bankruptcies and redundancies

<sup>&</sup>lt;sup>16</sup> See <u>The Swedish Tax Agency</u>, January 2024.

## 1.4 Swedish inflation

## Inflation has continued to fall, but is still somewhat higher than the target

CPIF inflation fell to 2.5 per cent in February (see Figure 4). Both goods and service prices have fallen on an annual rate in recent months. However, as in the United States and Europe, the rate of price increase for services is still relatively high, (see Figure 5). In Sweden, this is partly due to rapid increases in prices and fees that rarely change, such as rents and municipal fees. This is largely explained by earlier increases in prices and costs rather than the demand in the Swedish economy. Despite the unrest in the Red Sea having increased transport costs, this has not yet been reflected in higher consumer prices.

Price changes in the shorter term can provide more up-to-date information on what the rate of price increase is at present and where inflation is heading. Price increases excluding energy measured in recent months have for some time had a downward trend and are now close to 2 per cent (see Figure 17).



#### Figure 17. CPIF excluding energy

Note. Seasonally adjusted data. Black dashed line shows 2 per cent. Sources: Statistics Sweden and the Riksbank.

## Rate of price increase continuing to slow down

Several indicators point to the rate of price increase continuing to slow down. Companies' price plans have overall decreased according to both the Economic Tendency Survey and the Riksbank's Business Survey (see Figure 18 and the Fact Box "The Riksbank's Business Survey"). The Riksbank assesses that companies' price plans are now compatible with an inflation rate of 2 per cent. In addition, commodity prices are at much lower levels than they were in 2022 when inflation rose rapidly. Producer prices have also increased more slowly in recent months (see the analysis "Correlation between producer prices and consumer prices").



#### Figure 18. Companies' price plans in Sweden

Net figures (left) and 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 twelve months (right). The net figures show the difference in how many companies are planning to raise prices and how many are planning to reduce them. Standard-ised 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.

### Higher wage growth at the end of 2023

Wage growth rose at the end of 2023 and amounted to 4.4 per cent in December, in line with the profile in the wage agreements signed in 2023.<sup>17</sup> Wage increases over and above central agreements have remained low in a historical perspective. The rate of increase in unit labour costs also rose towards the end of 2023. This is mainly because productivity increased more slowly, but is also due to rising wage growth.

<sup>&</sup>lt;sup>17</sup> According to the National Mediation Office statistics.

## 2 Outlook for the coming years

Economic activity abroad is expected to continue to slow down during the first half of 2024. At the same time, the Riksbank assesses that inflation will fall back towards central banks' targets. Falling inflation and a gradual easing of monetary policy will help to increase demand abroad.

Swedish GDP growth is expected to remain weak in the first half of 2024. Weak demand and low cost increases for companies are expected to result in inflation falling back to 2 per cent at the end of the second quarter of 2024. GDP growth will then rise when household purchasing power is strengthened and demand from abroad increases. Demand for labour is also expected to rise, causing the employment rate to begin rising again.

## Key assessments and assumptions in the forecasts<sup>18</sup>

- The forecasts for the Swedish real economy and inflation are based on the assessment that growth is expected to be relatively strong in the United States going forward, while it will be more subdued in the euro area, where it will gradually recover with effect from the second half of this year.
- The conflict in the Middle East and ensuing disruptions to maritime shipping are assumed to have limited effects on the global economy and inflation.
- The oil price is assumed to follow forward pricing and fall slowly.
- Economic activity is assessed to be weaker than normal to start with.
- This forecast is based on fiscal policy being neither expansionary nor contractionary and not affecting the economic situation during the forecast period to any great extent.

**Forecast for monetary policy:** In the Swedish forecast the policy rate will be cut for the first time at one of the coming monetary policy meetings and it is expected to be just over 2.5 per cent at the end of the forecast period.

<sup>&</sup>lt;sup>18</sup> The points in the box list key assessments and assumptions that are exogenous in the forecast, that is, factors that are not directly affected by Swedish monetary policy. These development of these factors is also connected with considerable uncertainty. Unforeseen events abroad or changed domestic conditions can affect the forecast in this chapter (see Section 3.2 for a discussion of uncertainty and risks).

## 2.1 The economic outlook abroad

## The economic situation abroad will improve from the second half of 2024 onwards

GDP growth is expected to continue to be relatively strong in the United States going forward, while it is more subdued in the euro area. Towards the end of 2024, inflation in both areas is expected to have fallen back towards the targets. The lower inflation means that central banks will gradually be able to cut policy rates, helping to strengthen economic activity and increase real household income. From the end of 2025 onwards, GDP growth in Sweden's most important trading partners is expected to be around 2 per cent per year. This is just below the historical average since 1980.

As demand picks up, global trade is also expected to increase. However, weaker growth in China is expected to dampen this development. Greater protectionism and a tendency to support domestic production is also expected to lead to lower global trade over the next few years than the historical trend. Reduced global trade leads in turn to moderate productivity growth. However, increased development and use of AI are predicted to increase productivity in the long term, but the extent of this is still difficult to assess. At the same time, the labour force is increasing slowly or not at all, especially in Europe.

## Inflation abroad approaching central bank targets

Inflation abroad will continue to fall going forward. In the euro area, HICP inflation is expected to fall back to 2 per cent as early as the second half of this year, while inflation in the United States is expected to be at a level compatible with the target at the beginning of 2025. The decline in inflation in both the euro area and the United States over the next year is explained by a lower rate of increase in service prices. The rate of increase in food and goods prices is already close to normal levels.

Indicators, including a reduced job vacancy rate, point to more spare capacity in the labour market in 2024 than in 2023. Wages are therefore expected to increase at a slower pace in 2024 in the euro area and the United States.

However, there are still major uncertainties regarding global inflation. Any new disruptions to maritime shipping in the Red Sea may, for example, lead to reduced global trade volumes and push up corporate costs. If ongoing armed conflicts around the world escalate further, it may lead to even larger and longer-lasting effects, not least on energy prices. There is also uncertainty linked to the United States and the euro area, where the US economy is continuing to be strong, while the prospects for the euro area are more subdued, see more in the alternative scenarios in Section 3.2.

### Table 1. Key indicators abroad

Annual percentage change unless otherwise specified. The figures in brackets refer to forecasts from previous Monetary Policy Reports

	2023	2024	2025	2026
GDP, euro area	0.5 (0.5)	0.5 (0.5)	1.5 (1.5)	1.5 (1.5)
GDP, United States	2.5 (2.4)	2.3 (1.2)	1.9 (1.8)	1.9 (1.9)
HICP, euro area	5.4 (5.5)	2.2 (2.3)	2.0 (2.0)	2.0 (2.0)
CPI, United States	4.1 (4.1)	3.2 (2.5)	2.3 (2.3)	2.3 (2.3)

Sources: Eurostat, US Bureau of Economic Analysis, US Bureau of Labor Statistics and the Riksbank.

## 2.2 The economic outlook in Sweden

### Growth to increase gradually in the Swedish economy

Swedish GDP growth is expected to increase gradually in 2024 (see Figure 19). GDP is forecast to be unchanged in the first quarter and grow by 0.4 per cent in the second quarter. This is slightly stronger growth than the November forecast, but still weak in relation to the average quarterly growth in 2010–2019, which is 0.6 per cent. In 2025 and 2026, activity in the economy will recover and GDP is expected to grow by around 2 per cent as an annual rate.





Note. Solid line refers to outcome, dashed line represents the Riksbank's forecast. The black dashed line marks the time of the monetary policy meeting in March.

Sources: Statistics Sweden and the Riksbank.

Household consumption is expected to recover from the first half of 2024 onwards, as inflation falls back, the interest rate is gradually lowered and real disposable household income rises. Tax refunds are forecast to be larger than usual due to high interest expenses in 2023 and are expected to contribute to some increase in consumption. At the same time, reduced employment is expected to hold consumption back somewhat.

Households tend to increase their consumption and reduce their savings when economic uncertainty decreases. The saving rate, which has risen since interest rates started to increase in 2022, will fall somewhat during the forecast period.

Housing investments are expected to continue falling until the end of the third quarter of 2024. They were affected early on by higher interest rates which reduced the demand for new housing and at the same time increased the financing costs of property companies. When inflation falls back and interest rates start to fall gradually, the demand for housing will increase and housing prices will rise. This leads, with some delay to higher housing investment. Despite housing investment being expected to rise by almost 20 per cent during the forecast period, the number of housing starts will still be lower than before the pandemic (see Figure 20).



Figure 20. Housing prices and housing investment

Note. Seasonally adjusted data. Housing prices refer to the HOX Sweden price index for tenantowned apartments and detached houses. Solid line refers to outcome, dashed line represents the Riksbank's forecast. The black dashed line marks the time of the monetary policy meeting in March.

Sources: Valueguard and the Riksbank.

### Employment set to rise again towards the end of 2024

The weak GDP growth is expected to have a relatively limited impact on the Swedish labour market going forward. This is in part due to companies being reluctant to reduce their workforces despite weak demand, something which is confirmed by the Riksbank's Business Survey. Many companies seem to expect the current economic slowdown to be short-lived.<sup>19</sup>

<sup>&</sup>lt;sup>19</sup> See "No green shoots visible yet", the *Riksbank's Business Survey*, February 2024, Sveriges Riksbank.

In the Riksbank's forecast, the number of persons employed falls slightly in the first half of 2024, and unemployment rises to 8.3 per cent in the third quarter. The gradually stronger demand in the economy is then expected to lead to an increase in demand for labour, which will make the employment rate rise and unemployment fall (see Figure 21).

Figure 21. Employment rate and unemployment in Sweden

Percentage of population (left) and percentage of labour force (right)



Note. Seasonally adjusted data. Refers to persons aged 15–74. Solid line refers to outcome, dashed line represents the Riksbank's forecast. The black dashed line marks the time of the monetary policy meeting in March.

Sources: Statistics Sweden and the Riksbank.

### Table 2. Key figures Sweden

Annual percentage change unless otherwise specified. The figures in brackets refer to forecast from the previous Monetary Policy Report.

	2023	2024	2025	2026
GDP	-0.2 (-0.7)	0.3 (-0.2)	1.9 (1.9)	2.4 (2.8)
Employed persons	1.4 (1.4)	-0.6 (-0.8)	0.6 (0.4)	0.8 (0.8)
Unemployment	7.7 (7.7)	8.3 (8.6)	8.2 (8.5)	8.0 (8.2)
GDP gap*	0.2 (-0.3)	-1.3 (-2.0)	-1.0 (-1.4)	-0.5 (-0.5)
General government net lending, per cent of GDP	-0.5 (0.1)	-1.1 (-0.7)	-0.7 (-0.6)	-0.5 (-0.4)

\*Percentage deviation from the Riksbank's assessed potential levels.

Note: The figures refer to actual, non-calendar-adjusted, growth rates.

Sources: Statistics Sweden and the Riksbank.

## Swedish economy assessed to be in mild recession

The objective of the Riksbank's monetary policy is to stabilise inflation around 2 per cent. Monetary policy shall also, if the development of inflation allows, help to keep output and employment close to long-term sustainable levels, that is, to stabilise resource utilisation. Resource utilisation in the Swedish economy is currently assessed to be somewhat lower than normal and the economy is in a mild recession.

Resource utilisation can be estimated in different ways. The Riksbank's resource utilisation indicator, which is a composite of different indicators, suggests that resource utilisation has fallen and is low (see Figure 22). Another way of estimating resource utilisation is to assess the difference between actual and potential activity in the economy, known as the GDP gap. According to the Riksbank's assessment of the GDP gap, resource utilisation is lower than normal.

As GDP growth increases towards the end of 2024, resource utilisation is expected to gradually return to balance. This means that the amount of idle resources in the economy decreases. Economic activity is assessed to once again be at a normal level at the beginning of 2027 (see Figure 22).



Figure 22. Measures of resource utilisation in Sweden

Note. The gap refers to the percentage deviation of GDP from the Riksbank's assessed trend. The RU indicator is a statistical measure of resource utilisation. The measure is from Q1 1996 to Q4 2023, 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. The black dashed line marks the time of the monetary policy meeting in March.

Sources: Statistics Sweden and the Riksbank.

## 2.3 Inflation prospects in Sweden

The Riksbank assesses that inflation in CPIF measures will continue to fall going forward and that it will be close to the target of 2 per cent from the middle of 2024. This assessment is supported by several indicators. Wage agreements also indicate that wages will increase at a pace that is compatible with the inflation target.

## Somewhat lower wage growth, but higher real wages

Wages, which are an important factor for inflation, rose faster than normal in 2023, but are assessed to increase more slowly with effect from spring 2024, in line with the profile of the agreements. The current industrial agreements, which also set the norm for other sectors, are valid until early 2025 and are expected to lead to lower wage increases from the spring of 2024 onwards. Wage growth in 2025 is forecast to be moderate as inflation and inflation expectations are then expected to be in line with the target.

Despite the assessment that wages will increase more slowly in the period ahead, the Riksbank's forecast is that real wages will increase in 2024 as inflation returns to 2 per cent. Real disposable household income per capita is also expected to increase in 2024, after having fallen two years in a row (see Figure 23). This increase is primarily due to higher real wages.



Figure 23. Nominal and real wages, and real disposable income per capita Annual percentage change

Note. Red and light blue lines refer to real wages calculated as the difference between wage growth and the rate of increase in the CPIF and CPI respectively. Real disposable income is calculated using the deflator for households' consumption expenditure, which usually increases at the same rate as the CPIF. Solid lines refer to outcomes, dashed lines to the Riksbank's forecasts. Black dashed line marks the turn of the year 2023/2024.

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

### Inflation falls towards the target when economic activity slows down

The Riksbank's model forecasts summarise information from a large number of indicators and suggest that the rate of increase in the CPIF excluding energy will fall in the coming months (see Figure 24).<sup>20</sup> The Riksbank's forecast is in the upper span of model estimates. One explanation for this is that rents and tenant-owner housing association fees are expected to increase faster than usual this year, which is not captured in the models.



Figure 24. Model forecasts for the CPIF excluding energy

Note. The red band shows a range between the highest and lowest projections from different models. The model projections are based on a large number of indicators of price developments.

Sources: Statistics Sweden and the Riksbank.

Companies' cost increases for their labour forces will ease going forward, which is also expected to contribute to the decrease in inflation. Slower wage growth than previously reduces corporate cost pressures. The rate of increase in unit labour costs is expected to be just over 2 per cent towards the end of the forecast period.

The strong economic activity in 2022 gave companies the opportunity to pass on the high cost increases that arose after the pandemic unusually quickly to consumers.<sup>21</sup> The Riksbank's rate rises over the last two years have led to economic activity weakening, which also contributes to the expectation that inflation will fall and approach the target of 2 per cent.

<sup>&</sup>lt;sup>20</sup> A sample of these indicators are mentioned in Chapter 1.

<sup>&</sup>lt;sup>21</sup> See "Prissättning hos svenska företag 2023" (Pricing among Swedish companies in 2023), National Institute of Economic Research (konj.se).

In addition, the Riksbank assess the krona to be undervalued and will appreciate gradually during the forecast period.<sup>22</sup> The stronger krona leads to lower import prices, slowing the rate of price increases in the Swedish economy.

However, rents and tenant-owner housing association fees are expected to increase more rapidly than normal in the next few years and contribute to sustaining inflation. They will also be affected going forward by the upturn in inflation in recent years and by higher interest expenses.

Overall, inflation measured both as the CPIF and the CPIF excluding energy is expected to continue to fall and reach 2 per cent within the next year (see Figure 26). CPIF inflation is expected to reach the target slightly earlier, explained by the rapidly falling energy prices. As a result of earlier rate increases, CPI inflation is expected to be higher than the other measures of inflation in 2024, but to reach 2 per cent in 2025. The rate of price increases will fall among all sub-groups in the CPIF excluding energy over the coming year (see Figure 25).

<sup>&</sup>lt;sup>22</sup> See "The krona will strengthen in the medium term", article in Monetary Policy Report, September 2023 (riksbank.se).



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



Note. The dashed black line in the lower right-hand image shows 2 per cent. Sources: Statistics Sweden and the Riksbank.



Figure 26. CPIF, CPIF excluding energy and CPI

Note. Solid line refers to outcome, dashed line represents the Riksbank's forecast. The black dashed line marks the time of the monetary policy meeting in March.

Sources: Statistics Sweden and the Riksbank.

#### Table 3. Key figures inflation

Annual percentage change, annual average. The figures in brackets refer to forecast from the previous Monetary Policy Report.

	2023	2024	2025	2026
CPIF	6.0 (6.0)	2.3 (2.3)	1.9 (1.7)	2.0 (2.0)
CPIF excluding energy	7.5 (7.6)	2.7 (2.9)	2.1 (2.0)	2.0 (2.0)
СРІ	8.5 (8.6)	3.5 (4.4)	1.5 (2.4)	1.6 (1.9)
Wages, NMO	3.8 (3.9)	3.9 (4.0)	3.6 (3.6)	3.6 (3.6)

Sources: Statistics Sweden and the Riksbank

## Inflation expectations stable around the target

Inflation expectations are still stable around the target. Expectations over shorter periods rose rapidly with the higher inflation at the start of 2022, but have fallen since the end of the same year and have stabilised again close to the target. Expectations at the longer time horizon of 5 years have remained relatively stable at the inflation target during the entire period (see Figure 27).



Figure 27. Inflation expectations

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

Sources: Kantar Prospera and National Institute of Economic Research.

# ANALYSIS – Relationship between producer and consumer prices

Consumer prices for food and goods have risen rapidly in recent years. Producer prices have also risen and the relationship between these and consumer prices appears to have been stronger than it has been historically. One cause of this might be companies' sharply increased costs. With more normal cost changes, companies can choose to smooth these out and instead adjust consumer prices more gradually. When the cost increases are too large, the scope for this is reduced and they are passed on more rapidly to consumers.

Prices of food and other goods have risen rapidly in recent years at both the consumer and the producer stage and are now on a level that is much higher than a few years ago. The increased prices are due to imbalances in supply and demand during and after the pandemic, rapidly rising energy and commodity prices after Russia's invasion of Ukraine and a weak krona.

Many of the factors that drove up prices have decline in significance, and producer prices have ceased rising in many areas. They are also showing signs of starting to turn downwards again. This analysis discusses the relationship between producer prices and consumer prices for goods and food, what they have looked like in recent years, and whether this can say anything about the direction of consumer prices in the period ahead.

## What are producer prices?

The Consumer Price Index (CPI) measures prices at the consumer stage, i.e. of goods and services that households consume. But prices are also measured at an early stage, at the producer stage, where producers' selling prices are measured. For imported products, the price the importer pays when the products come into Sweden is measured.<sup>23</sup>

Unlike the CPI, in which services have a large weighting, producer price statistics measure almost exclusively prices of goods. Prices of intermediate and capital goods are also included. This means that the coverage and weighting distribution between the producer and the consumer stages differ quite considerably, making it difficult to analyse the relationship between them.

An essay from the Riksbank shows that the relationship seems to be quite strong when matching similar products in the producer and consumer stages using

<sup>&</sup>lt;sup>23</sup> Imported products that are priced in foreign currencies are converted to SEK in the statistics. This means that there is a very strong covariation between import prices and the exchange rate.

microdata.<sup>24</sup> This eliminates a large part of the composition problems in aggregate data. Another important conclusion from the study is that cost increases at the producer stage appear to have a rapid impact on consumer prices for goods whose prices are updated often, such as food, and more slowly for other goods.

## Greater variation in producer prices

Figure 28 shows how domestic and imported producer prices have evolved compare with consumer prices for food and other goods. The figure shows that the correlation for goods has been relatively weak until recent years, while it has been somewhat stronger for food. However, in recent years the correlation for both goods and food has been much stronger. Import prices are generally the most volatile of the three measures, but domestic producer prices also move much more than consumer prices.



**Figure 28. Prices for goods and food in consumer and producer stage** Annual percentage change

An important explanation is that the purchase of goods only constitutes one part of consumer companies' total costs. Other parts, such as wages and rents, are generally more stable. This means that consumer prices do not move as much as producer prices even if producers were to pass on all their cost changes directly.

With normal fluctuations in producer prices, companies can also use their profit margins to smooth out fluctuations in purchasing costs instead of directly passing them on to customers. If purchasing prices rise faster than normal, they can allow margins to fall and then increase them again when costs rise more slowly or fall by not fully reducing prices. One motive for acting in this way can be that for competitive reasons one does not want to adjust prices too often and that it will entail a cost to change prices often.

Source: Statistics Sweden.

<sup>&</sup>lt;sup>24</sup> See E. Ahlander, M. Carlsson and M. Klein (2023), "Price Pass-Through Along the Supply Chain: Evidence from PPI and CPI Microdata", *Working paper* No. 426, Sveriges Riksbank.

There is also a difference between sectors in how large a share of the costs consist of purchasing costs. In the food sector, where purchasing is a very large proportion of total costs, gross margins are low while they are higher in other sectors. All else being equal, a larger covariation between producer and consumer prices can be expected in sectors where purchasing makes up a large proportion of the costs and where gross margins are low.

Low net margins also provide less scope for absorbing increased costs into the profit margin without making a loss. If the costs rise a great deal, as in recent years, the scope of companies to smooth out the increase in consumer prices within a normal variation in the profit margin is exhausted. Companies must then choose to either reduce their margins even more or make a loss or to a greater extent directly pass on the costs to consumers.

## Larger pass-through for goods prices in recent years

To capture the long-term relationship between producer and consumer prices, socalled error correction models can be estimated. These models not only take into account the rate of change, but also the relative level of the series. In other words, if the consumer prices have previously been raised less than the increase in producer prices, the models indicate that there is a pent-up need to increase consumer prices unless the gap is instead closed by lower producer prices.

Figure 29 shows the estimated pass-through from producer prices to consumer prices from these models in the event of a permanent upturn in producer prices of 10 per cent. The pass-through is estimated on data both up to the end of 2021 and up to and including December 2023. For food, both estimations show a relatively rapid and large pass-through, but for other goods prices, the pass-through seems to be significantly faster if recent years are taken into account.





That companies have in recent years chosen to more rapidly pass on costs to consumers may be due to a combination of factors as mentioned above. The relatively good demand situation and acceptance for price increases, together with the fact that almost all companies raised their prices at the same time has probably also helped make this possible.

It is too early to say whether there has been a lasting change in companies' pricing behaviour and whether this will be a possible strategy going forward. The size of the effect of a changed pass-through from producer prices to consumer prices is mostly down to how producer prices themselves will develop. The Riksbank's inflation forecast is based on the assumption that producer prices will increase at an approximately normal pace going forward. If this assumption is correct, the size of the impact from producer prices will have less significance for developments in consumer prices.

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## 3 Monetary policy analysis

The Executive Board has decided to leave the repo rate unchanged at 4 per cent. If the prospects for inflation remain favourable, the policy rate can probably be cut in May or June.

The need for contractionary monetary policy declines when inflation falls towards the target, at the same time as economic activity is weak. The Riksbank's forecast indicates that the policy rate will be cut going forward, but there is still a risk of setbacks and the adjustment of monetary policy therefore needs to be implemented with caution going forward.

There is considerable uncertainty over inflation prospects, for instance, linked to global geopolitical unrests and to the difference in economic developments in the United States and the euro area. The Riksbank will regularly adapt its monetary policy in light of changes in inflation prospects.

## 3.1 Monetary policy in Sweden

Monetary policy acts with a lag and must therefore be based on forecasts of future developments. Forecasts are in turn influenced by the assumptions made about monetary policy, i.e. how the policy rate and the Riksbank's other monetary policy tools will evolve. This chapter discusses the assumptions about monetary policy that are considered to give an appropriate balance between how quickly inflation approaches the target and the effects on real economic developments.

A basic condition for inflation to be close to the target over time, however, is that households and companies have confidence in any deviations from the target not lasting too long. When inflation is stable and economic agents all have a picture of how prices will develop in the future, it becomes easier to plan for the long term. This in turn creates favourable conditions for economic development.

## Diminishing supply shocks and weaker economic activity

The global economy was hit by different types of disruptions to production during and after the pandemic and again in connection with Russia's invasion of Ukraine. These contributed to unusually rapid cost increases for companies. At the same time, economic activity was strong, which meant that companies changed their pricing behaviour and could quickly pass the costs on to consumers. This led to inflation rising dramatically.

A very important task for monetary policy in this situation was to prevent the high inflation from becoming entrenched and confidence in the inflation target being jeopardised. Now the rapid policy rate increases by the central banks have contributed to dampening economic activity and cost increases have declined significantly.

Economic activity is continuing to slow down in large parts of the world, even if the US economy has developed stronger than expected. Underlying measures of inflation in the euro area and the United States have fallen and the prospects for inflation suggest a continued decline. Central banks have increasingly focused on communicating the timing of a rate cut, after previously having discussed further rate hikes. According to economic analysts and forward pricing, both the Federal Reserve and the ECB are planning to cut their policy rates towards the middle of this year.

Swedish inflation is still above 2 per cent, but since the Monetary Policy Report in November, inflation, and especially underlying inflation, has fallen. The prospects for economic activity in Sweden are at the same time still weak, even if a recovery is expected to begin during the second half of this year. The subdued economic activity is largely explained by the weak economic developments in rate-sensitive parts of the economy, such as household consumption and housing investment. The weak economic developments are also reflected in the labour market, where unemployment has been rising for some time.

According to the Economic Tendency Survey and the Riksbank's Business Survey, companies' price plans continue to moderate and are now assessed overall to be at levels compatible with prices rising in line with the inflation target. At the same time, other forward-looking indicators support the view that inflation will continue to decline and that inflation is expected to be close to target in the second half of this year.

Well-anchored inflation expectations and inflation that is initially close to target create favourable conditions for the wage bargaining rounds in 2025. According to the Riksbank's forecast, wages will largely increase at pace with productivity growth and inflation in the coming years. The krona is expected to appreciate gradually and developments in corporate costs are largely expected to be compatible with inflation close to 2 per cent.

## Risk for persistently high inflation has continued to decrease

During 2022 and 2023, when inflation rose very quickly and both the Riksbank and other analysts systematically underestimated the inflationary pressures in the economy, the Riksbank considered the credibility of the inflation target to be under threat. This could have led to excessively high wage settlements or to companies continuing to increase their prices in an unsustainable way. Runaway inflation would in turn have required the Riksbank to increase the policy rate further and for longer to bring inflation back to target, something which would have led to significantly higher unemployment and a severe deterioration in the economic conditions for both households and companies.

During 2023, inflation developed increasingly in line with the Riksbank's forecasts and the risk of more lasting high inflation declined (see Figure 30). Together with a

generally more optimistic view of the Swedish economy's inflation propensity, this means that a much lower forecast for the policy rate is now considered compatible with an inflation forecast that is essentially similar to the forecast from November. The improved inflation prospects were also reflected in the Monetary Policy Update in February, when the Riksbank communicated that it was likely that the policy rate could be cut earlier than was indicated in the November forecast.

## **Figure 30. Forecasts for the CPIF 2022 – 2023** Annual percentage change



Note. Solid lines represent outcomes, dotted lines represent the Riksbank's forecasts during the period February 2022 to November 2023.

Sources: Statistics Sweden and the Riksbank.

## The forecast reflects that monetary policy should be adjusted with caution

The need for contractionary monetary policy declines when inflation falls towards the target and economic activity is weak. However, the Riksbank assesses that inflationary pressures remain somewhat elevated and given the very high inflation and changed pricing behaviour in recent years, the Executive Board wishes to have further confirmation that inflation is stabilising close to the target. The policy rate is therefore being left unchanged at 4 per cent. If the inflation prospects continue to develop favourably, the policy rate can probably be cut in May or June.

The risk of setbacks remains and there are several reasons why inflationary pressures could increase. Fresh supply shocks as a result of geopolitical unrest could cause global inflation to rise again in an uncontrolled manner, which would alter the conditions for monetary policy. The future development of the krona is also uncertain and a significantly weaker development than in the Riksbank's forecast could contribute to undesirably high inflation.<sup>25</sup> Stronger than expected developments in the United

<sup>&</sup>lt;sup>25</sup> There is also uncertainty over how the development of the krona will affect inflation. The pass-through of the krona to inflation was discussed in the article "The pass-through of the krona to inflation appears to have been larger than usual" in the Monetary Policy Report in November 2023, Sveriges Riksbank.

States could have repercussions on inflation in Sweden via higher demand and a weaker krona. Moreover, it is uncertain how domestic demand will be affected by the signals of a lower future policy rate and if demand rises a lot more than expected, this risks fuelling inflationary pressures. Higher inflationary pressures as a result of any of these factors could also prompt companies to again pass on cost increases to consumers in a way that is not considered compatible with the inflation target.

Overall, these factors indicate that monetary policy should be adjusted gradually and with caution. This also affects the Riksbank's forecast for the policy rate, which means that the real policy rate falls clearly, but relatively slowly in the coming years (see Figure 31 and Figure 32). Monetary policy will help to stabilise resource utilisation and ensure than inflation stabilises sustainably close to target.



Figure 31. Policy rate forecast

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.

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Figure 32. Real policy rate forecast

Note. The real policy rate is calculated as a quarterly average of the Riksbank's forecast for the policy rate one year ahead minus the forecast for CPIF inflation for the corresponding period. The forecast therefore only extends to 2026 Q1. The outcomes are calculated using the most recently published forecasts. As the real policy rate is forward looking, the outcomes are calculated using the most recently published forecasts available at that specific point in time. Source: The Riksbank.

The economy is regularly exposed to shocks that change the conditions for monetary policy. The effects of monetary policy on inflation and the real economy can also change over time. There is therefore considerable uncertainty regarding the forecast for the policy rate. Consequently, households and companies need to plan their finances based on the possibility of the policy rate having to be adjusted in a way that deviates significantly from the Riksbank's forecast. Hence the policy rate could be higher or lower than in the forecast. Some of the risks that, if realised, imply a different monetary policy than in the forecast are discussed in Section 3.2, where two alternative scenarios area also discussed in more detail.

There is also considerable uncertainty about the level of the policy rate in the longer run. The Riksbank last communicated its view on this rate in the Monetary Policy Report in April 2022. The overall assessment at that time was that it was reasonable to assume that the policy rate in the longer run (5–10 years) was in the lower part of the previously communicated interval of 2.5–4 per cent, or slightly lower.<sup>26</sup>

Studies indicate that the global factors that together are important for determining this rate overall have not changed significantly in recent years. The prospects for these factors also point to relatively minor effects on the level of interest rates going forward (see the analysis "Structural factors determine interest rates in the longer run").

<sup>&</sup>lt;sup>26</sup> See the article "The repo rate in the long run" in the Monetary Policy Report in February 2017, Sveriges Riksbank and the Monetary Policy Reports in July 2019 and April 2022, Sveriges Riksbank.

The uncertainty surrounding these estimates indicates that monetary policy needs to be formulated using a testing approach.<sup>27</sup> More specifically, this means that the Riksbank adapts the policy rate gradually and successively increases its knowledge of what interest rate is compatible with normal resource utilisation.

The Riksbank's asset holdings in Swedish kronor are assumed to continue to decrease in accordance with the decision at the monetary policy meeting in January and thereby contribute to a continued normalisation of the Riksbank's balance sheet (see Figure 33). The Riksbank plans to return to the subject of what comprises a reasonable level for the its asset holdings in the long term later in the year and to describe in more detail how such a portfolio could be composed.



Figure 33. The Riksbank's asset holdings

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 6.5 billion per month. The series in the figure end 2027 Q1, which is the final quarter in the Riksbank's three-year forecast horizon.

Source: The Riksbank.

## 3.2 Uncertainty, risks and alternative scenarios

To forecast the development of the policy rate, the Riksbank needs to identify and assign the appropriate weight to the risks that, if realised, would affect Swedish inflation prospects and thus monetary policy. As the dramatic developments of recent years have shown very clearly, this is difficult.

The Swedish economy will, due to developments abroad or changed domestic conditions, probably be affected by unforeseen events that also affect the outlook for inflation in the coming years. These would change the conditions for monetary policy,

<sup>&</sup>lt;sup>27</sup> For more detailed reasoning, see A. Orphanides and J.C. Williams, "Robust Monetary Policy Rules with Unknown Natural Rates", Brookings Papers on Economic Activity, 2:2002.

which is one explanation why the policy rate forecast is always uncertain. A number of risk factors deemed capable of affecting the Swedish outlook for inflation and the Riksbank's monetary policy are discussed below.

## Uncertain developments abroad – widespread geopolitical unrest and a strong US economy

There is currently a considerable risk of new supply shocks in the global economy that would also affect the development of the Swedish economy. War in Europe and geopolitical unrest in the Middle East create uncertainty about how prices for energy, food and freight will develop. Further escalation of the geopolitical unrests could give rise to a significant increase in inflation.

There is also uncertainty surrounding the future development of international demand. Economic developments in the United States have for some time exceeded the forecasts of most analysts and could decelerate the decline in US inflation. A continued strong development and no US rate cuts in the near term could contribute to higher inflation in Sweden. This could be through, for instance, global prices rising faster, foreign demand for Swedish goods and services increasing and a risk of the krona weakening.

At the same time, there are question marks about the economic developments in Germany and China. Their economies have a directly or indirectly large effect on the Swedish economy. Significantly weaker demand from them would subdue international demand for Swedish goods and services and contribute to weaker Swedish economic activity.

Given the large budget deficits and rising public debt, concern over the sustainability of many countries' public finances has increased in recent years. If this development continues, it could lead to the sustainability of these countries' public finances being questioned. This would in turn probably require significant fiscal policy tightening that would dampen growth in the economies concerned.

The future development of the krona is very uncertain. It has often weakened when geopolitical uncertainty has increased, and also when international developments have been stronger than those in Sweden. Several of the international risks we have mentioned can therefore, if they become more tangible, mean that the krona becomes weaker than in the Riksbank's forecast. This could in turn contribute to higher inflationary pressures and mean that monetary policy needs to remain contractionary for a longer period.

## Stronger or weaker economic activity in Sweden than forecast?

The Swedish economy has developed relatively well given how quickly interest rates have risen in recent years and its resilience has been stronger than expected. Signals of a lower policy rate going forward could cause households and companies to consume and invest much more in the belief that rates will be significantly lower in the years ahead. If this trust is too strong, it could cause inflation to pick up again. Fiscal policy can also be made more expansionary than in the forecast as inflation falls back towards the target, which could contribute to a higher demand.

The policy rate hikes have now more or less fully passed through to household cash flows and have contributed to lower consumption. The decline was probably mitigated by households having accumulated savings during the pandemic, and that savings in the Swedish economy are generally high, but as there is no available up-todate data on the distribution of households' assets and savings, it is difficult to assess how large the effect has been and how much of their savings households have left. It is thus also uncertain how sustainable the development of consumption is at current interest rate levels.

The Swedish labour market has long resisted the downturn in demand well. This may be due to companies not expecting the decline in economic activity to be particularly deep or lasting, and they have therefore chosen to retain staff. On the other hand, if demand falls more than companies have expected, they could quickly change their behaviour and lay off staff, which could further reduce demand.

An unfavourable development in which, for example, the labour market weakens more than expected could also have a negative effect on housing demand and thereby contribute to further price falls. This would probably, in turn, reinforce the weak development in household consumption and housing investment.

A risk to stability that the Riksbank has long since warned about is linked to highly leveraged companies in the commercial real estate sector. So far the property companies' financial challenges have affected the banks to a minor extent, although they have affected the real economy via lower investment in new housing and other real estate. The Riksbank's forecasts now indicate that interest rates have peaked, at the same time as the sector's financial conditions in general have improved. However, there are still question marks regarding the way that certain property companies manage the current interest rate levels, and how their rental income will develop as a result of the weak economic activity.

### Two alternative scenarios for inflation and monetary policy

In this section, we describe two alternative scenarios to illustrate how a few of the risks mentioned above could affect the Swedish economy and the forecast for the policy rate.<sup>28</sup>

In the first scenario, inflationary pressures are higher than in the forecast. We assume that international demand will be higher, especially in the United States, but also that new global supply shocks will contribute to increased inflationary pressures.<sup>29</sup> The higher inflationary pressures are explained by more rapidly increasing global prices

<sup>&</sup>lt;sup>28</sup> The scenarios are based on simulations in the Riksbank's macroeconomic model MAJA, like those published in the April, June, September and November Monetary Policy Reports in 2023.

<sup>&</sup>lt;sup>29</sup> The scenario is compatible with developments in the United States depending to a greater extent than expected on strong demand rather than earlier supply shocks waning.

and higher interest rates abroad exerting pressure on the krona to depreciate, but also by rising inflation expectations.

To counteract this development and bring inflation back to target, the Riksbank tightens monetary policy more than in the forecast (see the red line in Figure 34 and Figure 35). This cools demand and reduces inflationary pressures in the economy. Inflation is initially higher than in the forecast, but approaches the target again in 2025. In addition, monetary policy counteracts tendencies to second-hand effects on inflation via price- and wage-setting. A consequence of the monetary policy response is that it contributes to resource utilisation measured in terms of the GDP gap being lower than in the forecast a few years ahead. The alternative to not reacting quickly had instead been for the Riksbank to increase the policy rate considerably more at a later stage, which would have resulted in higher inflation and larger long-term real economic costs.<sup>30</sup>

In the second scenario, inflationary pressures are instead lower than in the forecast. In this scenario, we assume that demand is instead much weaker than expected in important Swedish export markets, such as Germany and China. This contributes to weaker development in the real economy and inflationary pressures that are lower than in the forecast. Unemployment rises, making demand fall further among households that have already faced tougher economic conditions due to higher interest expenses. This reinforces the negative effect on the real economy, and leads to even lower inflationary pressures in the economy.

When the lower demand in export markets cools the real economy and reduces inflationary pressures, the Riksbank has to adopt a less contractionary monetary policy than in the forecast. The lower policy rate dampens the decline in demand and inflation (see light blue line in Figure 34 and Figure 35). From the second half of 2025, inflation begins to rise and is very close to the target at the end of 2026.

<sup>&</sup>lt;sup>30</sup> This was illustrated in the scenario with higher inflation in the Monetary Policy Report in September 2023.



**Figure 34. The forecast and alternative scenarios for inflation and the GDP-gap** Annual percentage change (left) and per cent (right)

Note. Solid line refer to outcome, dashed lines to forecasts and scenarios. Inflation refers to the CPIF. GDP gap refers to the deviation of GDP from the Riksbank's assessed trend. Seasonally-adjusted data (right).

Sources: Statistics Sweden and the Riksbank.



**Figure 35. The forecast and alternative scenarios for the policy rate** Per cent

Note. Solid line refers to outcome, dashed lines to forecast and scenarios. The deviations from the forecast in the alternative scenarios are not symmetrical as they illustrate the monetary policy response to specific feasible shocks to the economy. The asymmetry shall therefore not necessarily be interpreted as the Riksbank seeing the risk surrounding the forecast for the policy rate as unbalanced.

Source: The Riksbank.

# ANALYSIS – Structural factors determine interest rates in the longer run<sup>31</sup>

Prior to the most recent upturn in inflation and interest rates, real interest rates in Sweden and abroad had been steadily falling for several decades. There is relatively broad consensus that much of this decline is due to changes in several structural factors. In recent years, these factors do not seem to have noticeably changed, but how they develop going forward and how this in turn affects interest rates is uncertain. There are arguments indicating both a higher and a lower interest rate in the long term. Regardless of the direction, however, the expected changes are probably relatively small in relation to the trend decline that has already happened.

## The neutral interest rate varies over time

Before the most recent rise in inflation and interest rates, the real interest rate on low-risk assets, such as government bonds, had been steadily falling over several decades. This decline has been common to many developed countries, including Sweden. Central banks can affect the real interest rate in the short term, and therefore also resource utilisation and inflation, as prices of goods, services and labour are sluggish. But in the longer term, the real interest rate, the price of saving that balances the supply of savings and the demand for investment, is determined by structural factors.<sup>32</sup> There is relatively broad consensus that much of the decline in the real interest rate is due to changes in several of these structural factors. These concern, among other things, demographics, lower productivity growth, higher saving in China and a scarcity of safe assets.<sup>33</sup>

Economic theory differentiates between the real interest rate that savers and borrowers actually meet and the real interest rate that is compatible with a normal resource utilisation. The latter is normally referred to as the *neutral* interest rate. However, a complicating factor is that the neutral interest rate, like potential GDP for instance, cannot be observed directly but must be estimated using statistical methods and from assumptions of how the economy functions. The assessment is therefore associated with considerable uncertainty.

<sup>&</sup>lt;sup>31</sup> For further discussion and analysis, see "Structural factors determine interest rates in the longer run", *Economic Commentaries* No. 5 2024, Sveriges Riksbank.

<sup>&</sup>lt;sup>32</sup> However, in recent years a number of studies have questioned this explanatory model, which illustrates the degree of uncertainty regarding this subject, see for instance C. Borio, P. Diyatat, M. Juselius and P. Rungcharoenkitul (2022) "Why so low for so long? A long-term view of real interest rates", International Journal of Central Banking, vol 18, no 3, pp 47–87.

<sup>&</sup>lt;sup>33</sup> For a detailed review of various explanatory factors, see H. Lundvall "Driving forces behind global trends in the neutral interest rate", Annex 2 to the Long-Term Inquiry 2023, SOU 2023:87.

Another source of uncertainty is that it varies over time. It is affected by both global sluggish structural factors, such as demographics, which affect the trend in the neutral interest rate, and also short-term factors such as temporary economic shocks (for instance from fiscal policy) that can cause the neutral interest rate to rise or fall over a number of years. This analysis aims to discuss the development in the long-term trend of the neutral interest rate.

## Empirical estimates and calculations do not indicate any clear change in the trend in the neutral interest rate in recent years

There are different approaches to estimating the neutral interest rate. In recent years, several studies have been published with models that include data for many of the structural factors that are assumed to affect the rate's trend, such as demographics. Such models indicate a downward trend in the neutral interest rate in recent decades.<sup>34</sup> The downturn is explained by, for instance, increased demand for safe assets, demographics and lower productivity. Such estimates and calculations of the trend in the neutral interest rate in a number of developed economies indicate that it has been in the interval –0.6 to 1.3 per cent in recent years, but there is considerable uncertainty.<sup>35</sup> Overall, nor do the estimates indicate any clear change in the most recent years either. Some factors such as higher public debt and an increased supply of government bonds may have raised it, but demographics have continued to work in the opposite direction.

## Structural changes are expected to affect interest rates in different directions going forward

For a small, open economy like Sweden, the trends in the neutral interest rate are almost exclusively determined by structural changes abroad. However, the uncertainty over their development in the future is considerable.

The development of artificial intelligence (AI) could mean that we are now in a period of higher productivity and investment growth, which would contribute to a higher neutral interest rate. But it is too early to draw such a conclusion. The increased geoeconomic fragmentation, with larger gaps between for instance the United States and China, could at the same time indicate reduced pressure on interest rates in developed economies from China's large savings. There is also reason to believe that the climate transition will affect the neutral interest rate, but there is uncertainty in the literature about both the direction and magnitude.

The conclusion that global demographics have driven some of the trend decline in the real interest rate has relatively strong empirical support. In many countries, ageing has reached a point where an increasingly large share of the population is retiring and

<sup>&</sup>lt;sup>34</sup> See for example A. Cesa-Bianchi, R. Harrison and R. Sajedi (2023) "Global R\*", *Staff Working Paper* No. 990, Bank of England; T. Ferreira and S. Shousha (2023), "Determinants of global neutral interest rates", Journal of International Economics, volume 145; and chapter "The natural rate of interest: drivers and implications for policy", *World Economic Outlook*, April 2023, International Monetary Fund.

<sup>&</sup>lt;sup>35</sup> Estimates in real terms for Canada, the euro area, France, Germany, Japan the United Kingdom, and the United States.

may need to reduce their savings. But at the same time, population growth is continuing to slow down globally, reducing the need for investment. Demographics can on the whole be assumed to continue to exert downward pressure on global interest rates.<sup>36</sup> But as more people get older, the costs for medical care and social care increase as well. This is, for example, one reason why public debt in the United States, and thus the supply of US government bonds, are expected to increase. This can in turn be assumed to increase the neutral interest rate.

Overall, there is no clear answer as to how various structural factors will affect the neutral interest rate. However, a common factor of the projections made is that the changes expected, regardless of direction, are probably relatively small in relation to the decline that has occurred since the 1980s.

## Market-based measures have risen somewhat in recent years

Another common way of obtaining an idea of the long-term interest-rate level is to use forward-looking information from financial markets. Both Prospera's survey responses about the policy rate five years ahead and pricing of a nominal five-year government bond have shown a clear downward shift over a longer period of time (see Figure 36).<sup>37</sup> However, in recent years they have risen somewhat and are now between 2 and 3 per cent.

<sup>&</sup>lt;sup>36</sup> An extensive study finds that all global demographics combined can be assumed to continue to hold back interest rates in coming decades by around one percentage point from the level in 2016, ,see A. Auclert, H. Malmberg, F. Martenet and M. Rognlie (2021), "Demographics, Wealth, and Global Imbalances in the Twenty-First Century", NBER Working Paper No. 29161, National Bureau of Economic Research.

<sup>&</sup>lt;sup>37</sup> As a long-term bond normal includes more risk compared with a short-term loan, it is reasonable to assume that this measure,, in addition to an expectation of the policy rate, also includes a certain positive term premium.



Note. Money market participants' expectations, mean value. Expectations of the real policy rate calculated as expectations of the policy rate minus inflation expectations 5 years ahead. Sources: TNS SIFO Prospera, Macrobond and the Riksbank.

Despite this measure intending to measure the policy rate ans short-term interest rates in the longer run, they have varied substantially since 2019. At the same time, global and sluggish structural factors that affect the trend in the neutral interest rate have not moved to the same extent. This indicates that these market measurements in periods do not necessarily reflect only the development of the structural factors that determine the interest rate in the longer term.

## Central banks have gradually adjusted down their assessments of longterm policy rates

Many central banks publish with varying frequencies an assessment of the interest rate in the long run, or an interval for it. The assessments the Riksbank has previously published have applied to the policy rate's nominal level that can be divided up into a normal level for inflation (2 per cent) and an assessment of the level of the real policy rate in the longer run (5–10 years).

To conduct effective monetary policy, central banks need to adjust to the trends in the global real interest rate that are beyond their control. Over time, as global rates have fallen, many central banks have therefore adjusted down their assessments of their own economy's future policy rate. The Riksbank's interval for the long-term policy rate has been revised down from 3.5–5.0 per cent in 2006 to 2.5–4.0 per cent in 2017. Compared with 2017, several central banks, including Norges Bank and the Bank of Canada, have adjusted their assessments downwards, in line with the development in global sluggish structural factors that affect the neutral interest rate's trend. The Riksbank has also communicated in 2019 and 2022 that it is likely that the level is in the lower region of or slightly below, the interval from 2017. The future development of interest rates is uncertain. Structural factors can both drive up and hold back interest rates in the long term. Overall, however, these factors are expected to have relatively small effects on interest rates for some time to come. But even given an assessment of what the policy rate will be in the longer term, it is uncertain where it will end up in practice. The economy is constantly affected by new short-term economic shocks, which means that over time the policy rate will be both higher and lower than the assessment of the long-term policy rate.

## **Forecast tables**

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

## Table 1. Policy rate forecast

Per cent, quarterly averages

	2023Q4	2024Q1	2024Q2	2025Q1	2026Q1	2027Q1
Policy rate	4.00 (4.00)	4.00 (4.04)	3.93 (4.10)	3.20 (4.10)	2.76 (3.78)	2.58

Source: The Riksbank.

### Table 2. Inflation

Annual percentage change, annual average

	2022	2023	2024	2025	2026
CPIF	7.7 (7.7)	6.0 (6.0)	2.3 (2.3)	1.9 (1.7)	2.0 (2.0)
CPIF excl. energy	5.9 (5.9)	7.5 (7.6)	2.7 (2.9)	2.1 (2.0)	2.0 (2.0)
СРІ	8.4 (8.4)	8.5 (8.6)	3.5 (4.4)	1.5 (2.4)	1.6 (1.9)
ніср	8.1 (8.1)	5.9 (5.9)	2.4 (2.3)	1.8 (1.7)	2.0 (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	2.3 (1.9)	-2.5 (-1.8)	2.0 (0.9)	2.7 (2.3)	2.6 (2.8)
Public consumption	-0.1 (0.0)	1.5 (2.0)	1.4 (1.6)	1.2 (1.4)	1.4 (1.4)
Gross fixed capital formation	6.2 (6.2)	-1.5 (-2.8)	-2.9 (-4.8)	1.9 (2.3)	3.8 (5.9)
Stock investments*	1.1 (1.1)	-1.3 (-0.4)	-0.4 (-0.1)	0.0 (0.0)	0.0 (0.0)
Exports	6.5 (7.0)	3.3 (1.2)	1.7 (0.8)	2.6 (2.5)	3.6 (3.3)
Imports	9.6 (9.3)	-0.9 (-0.1)	1.4 (0.1)	3.1 (2.8)	4.0 (4.1)
GDP	2.7 (2.8)	-0.2 (-0.7)	0.3 (-0.2)	1.9 (1.9)	2.4 (2.8)
GDP, calendar-adjusted	2.7 (2.8)	0.0 (-0.5)	0.3 (-0.2)	2.1 (2.1)	2.2 (2.6)
Final domestic demand*	2.6 (2.4)	-1.1 (-1.1)	0.4 (-0.5)	2.0 (1.9)	2.5 (3.1)
Net exports*	-1.0 (-0.6)	2.2 (0.7)	0.3 (0.4)	-0.1 (0.0)	0.0 (-0.3)
Current account (NA), percentage of GDP	5.6 (5.0)	6.7 (5.3)	7.4 (6.0)	7.7 (6.5)	8.1 (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 specified

	2022	2023	2024	2025	2026
Population, aged 15-74	0.5 (0.5)	0.5 (0.5)	0.4 (0.5)	0.4 (0.5)	0.4 (0.4)
Potential employment	0.9 (0.8)	0.8 (0.7)	0.8 (0.7)	0.7 (0.6)	0.7 (0.6)
Potential hours worked	0.7 (0.7)	0.8 (0.6)	0.8 (0.6)	0.8 (0.6)	0.8 (0.5)
Potential GDP	1.9 (1.6)	1.9 (1.6)	1.9 (1.5)	1.8 (1.5)	1.7 (1.7)
GDP, calendar-adjusted	2.7 (2.8)	0.0 (-0.5)	0.3 (-0.2)	2.1 (2.1)	2.2 (2.6)
Hours worked, calendar-adjusted	2.3 (2.3)	1.8 (1.4)	-0.7 (-1.0)	0.6 (0.8)	1.1 (1.1)
Employed persons	3.1 (3.1)	1.4 (1.4)	-0.6 (-0.8)	0.6 (0.4)	0.8 (0.8)
Labour force	1.5 (1.5)	1.6 (1.6)	0.1 (0.1)	0.5 (0.3)	0.6 (0.4)
Unemployment*	7.5 (7.5)	7.7 (7.7)	8.3 (8.6)	8.2 (8.5)	8.0 (8.2)
Employment gap**	0.4 (0.7)	0.9 (1.3)	-0.5 (-0.2)	-0.6 (-0.4)	-0.5 (-0.2)
Hours gap**	0.1 (-0.3)	1.0 (0.3)	-0.5 (-1.3)	-0.8 (-1.1)	-0.4 (-0.5)
GDP gap**	2.1 (1.8)	0.2 (-0.3)	-1.3 (-2.0)	-1.0 (-1.4)	-0.5 (-0.5)

\*Per cent of labour force

\*\*Deviation from the Riksbank's assessed potential levels, in per cent

Note: Potential hours worked, potential employment 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 unless otherwise specified

	2022	2023	2024	2025	2026
Hourly wage, NMO	2.7 (2.7)	3.8 (3.9)	3.9 (4.0)	3.6 (3.6)	3.6 (3.6)
Hourly wage, NA	3.9 (3.9)	3.6 (3.2)	3.9 (4.0)	3.6 (3.6)	3.6 (3.6)
Hourly labour cost, NA	3.3 (3.4)	4.5 (3.4)	3.9 (4.0)	3.6 (3.6)	3.6 (3.6)
Productivity	0.4 (0.6)	-1.7 (-1.8)	1.0 (0.8)	1.5 (1.4)	1.1 (1.4)
Unit labour cost	3.1 (2.9)	6.2 (5.4)	2.9 (3.2)	2.1 (2.2)	2.5 (2.1)

Note: NM 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 constant 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)	0.5 (0.5)	0.5 (0.5)	1.5 (1.5)	1.5 (1.5)
United States	0.15	0.08	1.9 (1.9)	2.5 (2.4)	2.3 (1.2)	1.9 (1.8)	1.9 (1.9)
China	0.19	0.10	3.0 (3.0)	5.5 (5.4)	4.8 (4.6)	4.6 (4.3)	4.2 (4.0)
KIX weighted	0.75	1.00	3.2 (3.2)	1.4 (1.3)	1.5 (1.4)	2.1 (2.0)	2.1 (2.0)
The World (PPP-	1.00	_	3.5 (3.5)	3.1 (3.0)	3.1 (2.9)	3.2 (3.2)	3.2 (3.1)

Note: Calendar-adjusted growth rates. PPP weights refer to purchasing-power adjusted GDP weights in the world for 2024, according to the IMF. KIX weights refer to weights in the Riksbank's krona index (KIX) for 2024. 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.

СРІ	2022	2023	2024	2025	2026
Euro area (HICP)	8.4 (8.4)	5.4 (5.5)	2.2 (2.3)	2.0 (2.0)	2.0 (2.0)
United States	8.0 (8.0)	4.1 (4.1)	3.2 (2.5)	2.3 (2.3)	2.3 (2.3)
KIX weighted	8.4 (8.4)	5.6 (5.7)	2.7 (3.2)	2.5 (2.6)	2.4 (2.4)
	2022	2023	2024	2025	2026
International policy rate, per cent	0.5 (0.5)	3.6 (3.6)	4.0 (4.1)	3.2 (3.4)	2.8 (3.0)
Crude oil price, USD/barrel Brent	98.6 (98.6)	82.1 (83.0)	81.3 (81.7)	76.6 (77.7)	73.3 (74.6)
Swedish export market	8.8 (8.5)	0.6 (1.0)	1.3 (1.9)	3.1 (3.1)	3.2 (3.1)

Note: The policy rate abroad is an aggregate of rates in the US, the euro area, Norway and the United Kingdom.

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)	3.8 (4.1)	3.0 (4.0)	2.7 (3.6)
10-year rate	1.5 (1.5)	2.5 (2.5)	2.3 (2.9)	2.2 (3.0)	2.2 (3.0)
Exchange rate, KIX, 18 Nov 1992 = 100	121.1 (121.1)	127.5 (127.7)	124.6 (125.3)	122.1 (121.7)	118.3 (117.4)
General government net lending, per cent of GDP	1.2 (1.1)	-0.5 (0.1)	-1.1 (-0.7)	-0.7 (-0.6)	-0.5 (-0.4)

Note: The Riksbank will shortly submit a petition to the Riksdag for the restoration of equity. It is up to the Riksdag to come to a decision on the petition. Public financial savings would be affected by any capital contribution allocated to the Riksbank.

Sources: Statistics Sweden and the Riksbank.



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