

# Monetary Policy Report

September 2024



# Monetary Policy Report

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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.

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The Executive Board made a decision on the Monetary Policy Report on 24 September 2024.

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<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

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

# Contents

	Monetary policy in Sweden – The Riksbank’s strategy	3
	Monetary policy considerations	5
<b>1</b>	<b>The economic situation</b>	<b>11</b>
1.1	Real economy and inflation abroad	11
1.2	Financial conditions	16
1.3	Swedish real economy	22
	ANALYSIS – Microdata gives insights into how companies adjust their prices	24
1.4	Swedish inflation	27
<b>2</b>	<b>Outlook for the coming years</b>	<b>31</b>
2.1	The economic outlook abroad	32
2.2	The economic outlook in Sweden	33
	FACT BOX – Budget Bill 2025	36
2.3	Inflation outlook in Sweden	37
	FACT BOX – The CPIF under alternative assumptions for energy prices	40
<b>3</b>	<b>Monetary policy analysis</b>	<b>42</b>
3.1	Monetary policy in Sweden	43
3.2	Uncertainty, risks and alternative scenarios	47
	FACT BOX – The policy rate is often adjusted gradually	54
	ANALYSIS – Effects of monetary policy	56
	Forecast tables	59

## Monetary policy considerations

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Inflationary pressures have fallen over the year and are now assessed to be compatible with an inflation rate of around 2 per cent. The Riksbank has gradually eased its monetary policy over the year, by both cutting the policy rate and communicating that further cuts can be expected. Low and stable inflation and falling interest rates are contributing to a recovery in the economy.

Since last spring there has been an evident shift in the balance of risks for the outlook for inflation and economic activity. The risk of inflation becoming too high has gradually declined. At the same time, the recovery appears to be proceeding somewhat more slowly than expected. It is important in itself that economic activity strengthens, but it is also a necessary condition for inflation to stabilise close to the target. Consequently, it is assessed that the policy rate can be cut at a faster pace than the Riksbank has previously communicated.

The Executive Board has decided to cut the policy rate by 0.25 percentage points to 3.25 per cent. If the outlook for inflation and economic activity remains unchanged, the policy rate may also be cut at the two remaining meetings this year. The forecast for the policy rate reflects that a cut of 0.5 percentage points at one of the coming meetings is possible. It also indicates that one or two further cuts may be made during the first half of 2025. Together, these changes imply a relatively large shift of monetary policy in a more expansionary direction, which will improve households' finances and make it easier for companies to invest.

However, the prospects for inflation and economic activity are uncertain. There are risks linked, for instance, to the recovery in the Swedish economy, the geopolitical unease, and the krona exchange rate that can lead to a different outcome for inflation and the stance of monetary policy.

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### International developments

**The signs are increasingly clear that the US labour market is slowing down, despite strong GDP growth.** Unemployment has risen over the past year, albeit from a low level. GDP growth is still being maintained by households' strong demand for consumption. Inflation is falling and was 2.5 per cent in August, measured as the CPI. Rents are still contributing a lot to the rate of inflation, while the contribution from

other factors has slowed down significantly. PCE inflation, which is the variable that Federal Reserve focuses on the most, has a lower weighting for rents and was about 0.5 percentage points lower than CPI inflation in July.

**Unemployment in the euro area is still low, despite weak GDP growth.** The relationship between growth and developments in the labour market thus differs somewhat between the euro area and the United States. However, inflation has fallen in both the euro area and the United States in recent months. In August, HICP inflation in the euro area fell to 2.2 per cent. The downturn is mainly explained by a lower rate of increase in energy prices. The rate of increase in service prices is still relatively high and wages are rising rapidly in several countries.

**Monetary policy abroad is now in a phase where most central banks are cutting their policy rates.** The ECB cut its policy rate further in September to 3.5 per cent, but signalled some caution with regard to continued rate cuts. The Federal Reserve cut its policy rate by 0.5 percentage points in September and made it clear that further rate cuts could follow in the near term.

**Market participants are expecting further rate cuts.** According to pricing on the fixed income market, the ECB is expected to cut its policy rate by almost 1.5 percentage points and the Federal Reserve to cut its rate by a good 1.5 percentage points by the middle of next year.

**The overall assessment is that the development of the global economy is somewhat weaker than expected.** This is primarily affecting Sweden through weaker export demand. At the same time, the prospects for stabilising inflation at a low and stable level have improved, further reducing the risk that high import prices will lead to excessive inflation in Sweden.

## Developments in Sweden

**The recovery of the Swedish economy looks like being somewhat delayed.** GDP fell somewhat during the second quarter, compared with the first. Broadly speaking, the Swedish economy has not grown at all since the end of 2021 and has been in a mild recession for some time. Even though disposable household income and real wages are increasing and optimism has strengthened clearly during the year, consumption has continued to be weak.

**The labour market reflects the weak economic activity.** Unemployment has been trending upwards since the end of 2022. Outcomes during the summer months, together with indicators such as redundancy notices and job openings, suggest the labour market will develop weakly for some time yet.

**Economic activity is expected to improve next year.** Domestic demand is the driving force behind the expected recovery in the Swedish economy. Household consumption is expected to grow more quickly towards the end of the year and next year, as real wages rise, interest rates fall and fiscal policy becomes more expansionary. Unemployment is expected to show a downturn again next year, when demand increases.

**Inflationary pressures are assessed to be compatible with inflation of around two per cent.** In August, CPIF inflation fell to 1.2 per cent. Low energy prices pushed inflation down and, when measured in terms of the CPIF excluding energy, inflation was 2.2 per cent in August. The rate of increase of the CPIF excluding energy, measured as a three or six-month change calculated as an annual rate, has been close to two per cent since the start of the year. Even if energy prices are expected to restrain inflation for a few more months, the effect is expected to be temporary and to gradually wear off.

**Wage increases have slowed down over the year but real wages are rising as inflation falls.** In June, wages rose by 4.0 per cent, which is approximately 0.5 percentage points lower than at the beginning of the year. The slowdown in wage growth reflects the profile in the collective agreements negotiated at the start of last year. Despite this, the lower inflation means that real wages have again started to rise.

**Indicators point to inflation being close to the target.** Companies' pricing plans are close to their historical average, according to the National Institute of Economic Research's Economic Tendency Survey. Long-term inflation expectations are well anchored around the target. The Riksbank's analysis of microdata also indicates that companies are now changing their prices about as frequently as they did before the rise in inflation. This is a sign that pricing behaviour has normalised, at least for the moment.<sup>2</sup> In addition, producer prices are increasing at a moderate pace.

**The krona is at around the same level as at the August Monetary Policy Update.** The Riksbank's assessment is that the krona is undervalued and will strengthen in the coming years. However, exchange rate forecasts are traditionally associated with great uncertainty.

**CPIF inflation is expected to be below 2 per cent for a few months more.** This is due to the low energy and fuel prices that are currently holding back inflation. Measured as the CPIF excluding energy, inflation is expected to be close to the target, both in the near term and in the slightly longer term.

**Since last spring there has been an evident shift in the balance of risks for the outlook for inflation and economic activity.** The risk of inflation becoming too high has declined significantly. At the same time, the risk that the recovery in the Swedish economy will take longer than expected has increased. An increase in geopolitical tension could trigger new supply shocks and lead to inflation rising again and the recovery being further delayed. There also remain question marks regarding economic policy in both the United States and Europe.

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<sup>2</sup> See the analysis "Microdata gives insights into how companies adjust their prices".

## Policy rate cut by 0.25 percentage points to 3.25 per cent

**The Riksbank has gradually eased monetary policy as the inflation outlook has brightened.** The policy rate was cut in May and August, at the same time as the Riksbank communicated that further cuts could be expected during the remainder of the year.

**The interest rate cuts have contributed to lower interest rates for households and companies.** Since the beginning of the year, the variable mortgage rates charged to households have fallen around as much as the policy rate. Mortgage rates with longer maturities have fallen more than variable ones, which largely reflects expectations of a lower policy rate going forward. Companies are also facing a lower lending rate than in the spring. It is important that rate cuts also continue to have the expected impact on other interest rates in the economy and the Riksbank is following developments closely.

**Conditions are right for a recovery in the Swedish economy but it looks like it will take slightly longer than expected.** Monetary policy has contributed to inflation now being close to the target. Low and stable inflation and falling interest rates improve households' finances and make it easier for companies to invest. Despite an expectation among economic agents of better times ahead, there are few clear signs as yet of a recovery in the Swedish economy. It is important in itself that economic activity strengthens soon, but it is also a necessary condition for inflation to stabilise around the target.

**Over the year, inflation has shown increasing signs of stabilising around two per cent.** In addition, the risk of excessive inflation has gradually decreased. Unusually low energy prices are expected to lead to CPIF inflation being below two per cent for a few months more before stabilising around the target over the course of next year. However, the development of energy prices is highly uncertain and may lead to CPIF inflation becoming higher or lower than forecast.<sup>3</sup>

**It is assessed that the policy rate can be cut at a faster pace than previously communicated.** The Executive Board has decided to cut the policy rate by 0.25 percentage points to 3.25 per cent. If the outlook for inflation and economic activity remains unchanged, the policy rate may also be cut at the two remaining meetings this year. The forecast for the policy rate reflects that a cut of 0.5 percentage points at one of the coming meetings is possible. It also indicates that one or two further cuts may be made during the first half of 2025 (see Figure 1). Together, these changes imply a relatively large shift of monetary policy in a more expansionary direction, which will improve households' finances and make it easier for companies to invest. However, the starting point will still be that monetary policy is adjusted gradually.<sup>4</sup>

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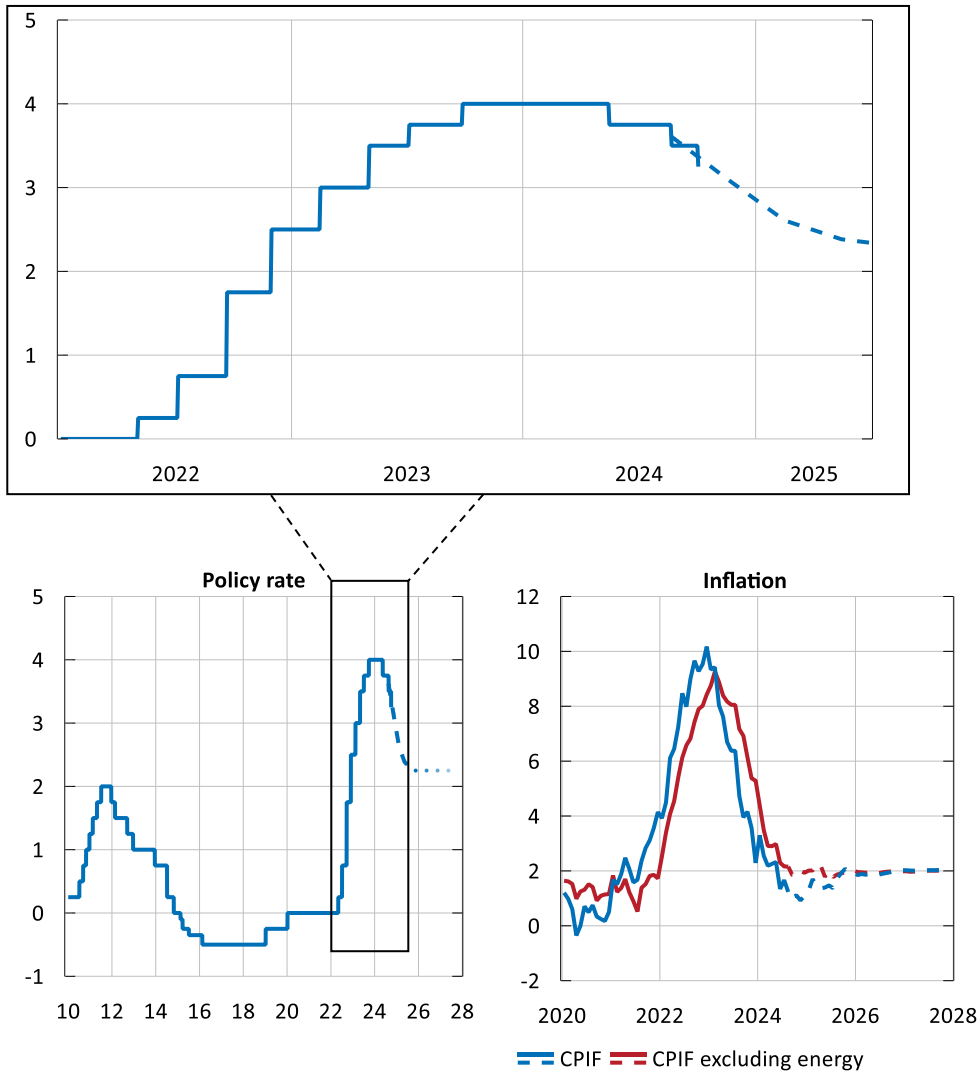
<sup>3</sup> See also the Fact box "The CPIF under alternative assumptions for energy prices".

<sup>4</sup> See the Fact box "The policy rate is often adjusted gradually".



**Figure 1. Swedish policy rate and inflation**

Per cent and annual percentage change respectively (lower right)



Note. Solid line refers to outcome, dashed/dotted lines represent the Riksbank's forecast. Outcomes for the policy rate are daily data and the forecasts refer to quarterly averages. The upper image shows the forecast for the policy rate in the short run and is based on the long-term policy rate path in the lower left figure. The dotted line marks the high uncertainty surrounding the forecast for the policy rate in the long term, which is discussed in chapter 3. The inflation forecast is assessed to be compatible with the forecast for the policy rate.

Sources: Statistics Sweden and the Riksbank.

### **Forecast for the policy rate**

The forecast for the policy rate shows the development during the forecast period that is considered compatible with the other forecasts, including the expected development of inflation. The Riksbank reports the policy rate forecast over two time horizons. The aim of this is to clarify that the forecasts for the policy rate become more uncertain as they move further into the future.

The upper image in Figure 1 shows the Executive Board's assessment of the policy rate in the coming three quarters. The forecasts for economic developments in the short term are based on further information and are thus usually less uncertain than longer range forecasts. The Executive Board can therefore predict the more imminent monetary policy decisions with somewhat greater accuracy, even though these forecasts are also uncertain.

The lower left image in Figure 1 shows the policy rate path over the entire forecast period. The forecasts for the policy rate further ahead become more uncertain as the probability of new shocks hitting the economy increases over time. The dotted line emphasises this uncertainty.

# 1 The economic situation

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Inflation has continued to fall abroad even though services prices are still increasing at a relatively fast pace. Many central banks, including the ECB and Federal Reserve, have cut their policy rates once or several times and more cuts are expected. GDP in the euro area increased during the first half of 2024, after remaining in principle unchanged since the end of 2022. In the United States, GDP has long been strong, but there are now signs of a slowdown and unemployment has risen.

In Sweden, CPIF inflation was 1.2 per cent in August due to low energy prices. Measured in terms of the CPIF excluding energy, inflation was 2.2 per cent. Companies' pricing plans and long-term inflation expectations indicate that inflation will remain close to 2 per cent going forward. Swedish GDP decreased slightly in the second quarter and the labour market is weaker than normal, although indicators suggest that the downturn is close to bottoming out.

The transmission of the Riksbank's monetary policy to the interest rates faced by households and companies is considered to be working well. Deposit and lending rates have continued to fall at the same pace as the Riksbank has cut the policy rate and we are following developments closely.

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## 1.1 Real economy and inflation abroad

### **Strong growth in United States, weaker in euro area**

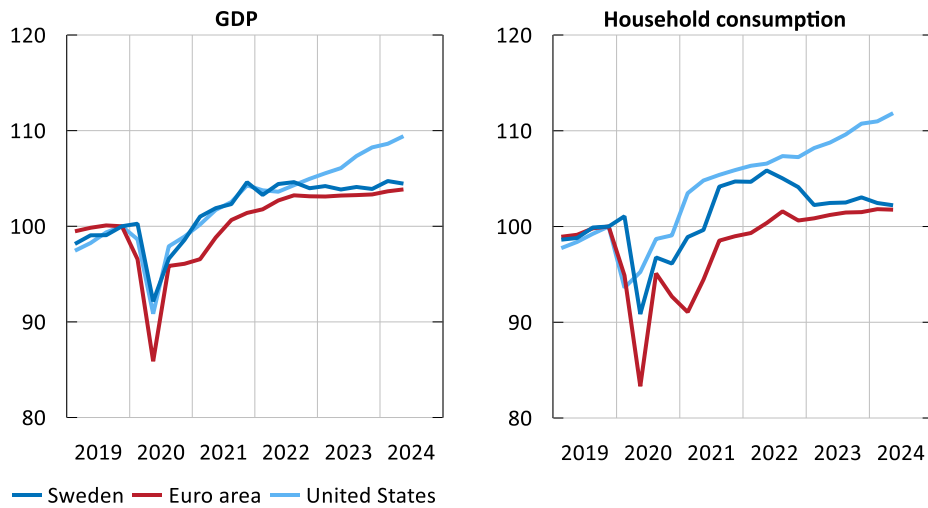
After remaining in principle unchanged since the end of 2022, euro area GDP has grown during the first half of this year. During the second quarter, GDP rose by 0.2 per cent compared with the first quarter (see Figure 3). Both household consumption and in particular gross fixed investment declined, however, and growth was primarily driven by a positive net export. Growth in the euro area differs substantially between countries; for instance GDP fell somewhat in Germany during the second quarter, while it rose fairly significantly in Spain. Indicators for the business sector give a mixed impression, with the purchasing managers' index in the services sector indicating growth, although marginally, while it looks weaker in the manufacturing sector (see Figure 3). So far, consumption growth has been weak in many countries, but rising real incomes indicate slightly stronger consumption and growth going forward.

In the United States, GDP rose more than expected in the second quarter, by 0.7 per cent compared with the first quarter of this year. Growth was partly due to a continued strong outcome in household consumption (see Figure 3). In July, too, household consumption remained strong, but the purchasing managers' index, for example, suggests weaker development going forward (see Figure 3).

Growth in China was marginally lower than expected during the second quarter, which is largely explained by weak domestic demand. Indicators such as the purchasing managers' index and in particular consumer confidence indicate that domestic demand will be weak.

**Figure 2. GDP and consumption abroad**

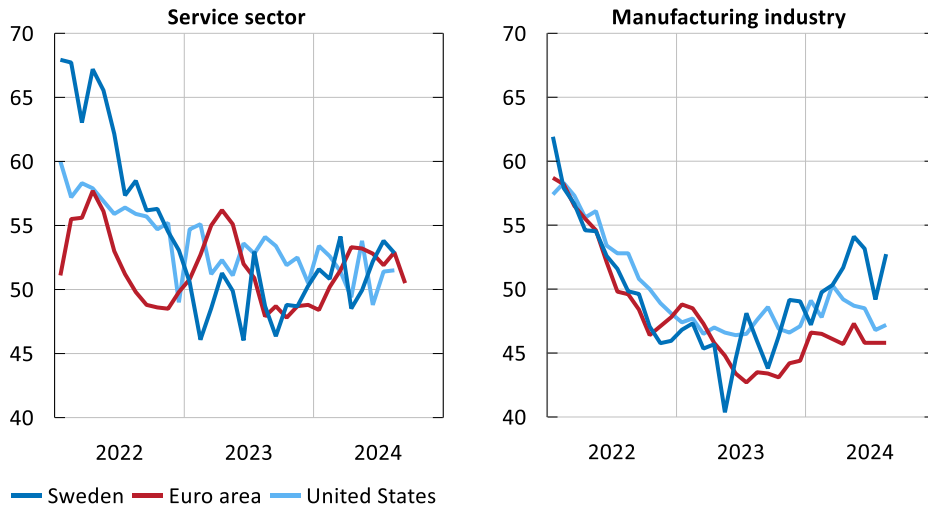
Index, 2019 Q4 = 100



Note. Seasonally-adjusted and calendar-adjusted data.

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

**Figure 3. Purchasing managers' index in the service sector and manufacturing sector**  
Index



Note. The purchasing managers' index is an indicator of economic activity where an index figure above 50 indicates growth, while a figure below 50 indicates a downturn.

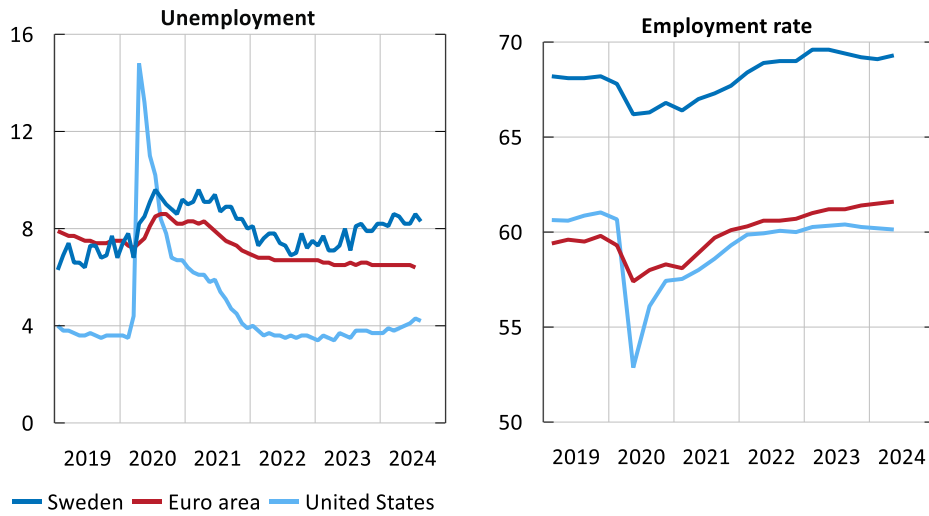
Sources: Institute for Supply Management, S&P Global and Swedbank.

### Labour market starting to weaken in United States

In the euro area, unemployment is still low and the employment rate is rising (see Figure 4) despite a period of relatively weak growth and companies' recruitment plans having fallen since last winter. The weakening in the labour market in the United States has become clearer recently. The increase in employment according to Nonfarm Payrolls has slowed down significantly, and US unemployment has risen over the past year, although it fell marginally in August to 4.2 per cent. Moreover, new recruitments and voluntary redundancies have fallen to a low level. In a longer term perspective, however, unemployment in the United States can still be regarded as low.

**Figure 4. Unemployment and the employment rate abroad**

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



Note. Seasonally adjusted data. Unemployment and the employment rate among those aged 15–74 in Sweden and the euro area, and those aged 16 and older for the United States.

Sources: Eurostat, Statistics Sweden and the US Bureau of Labor Statistics.

### Inflation is on the way down but inflation in service prices is still high

In August, HICP inflation in the euro area fell to 2.2 per cent. The downturn can largely be explained by a lower rate of increase in energy prices (see Figure 5). Since the end of last year, the annual rate of increase for services prices has been at around 4 per cent, which is substantially higher than normal (see Figure 6).<sup>5</sup> Agreed wage increases in the euro area slowed down during the second quarter but, in several countries, wages are still rising at a relatively rapid pace, which contributes to maintaining the rate of increase in service prices. This includes Germany.

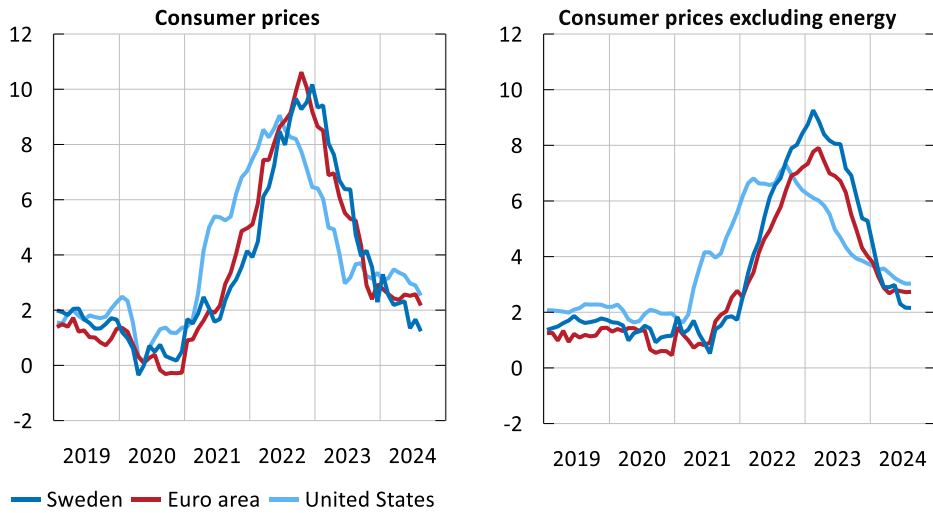
In the United States, CPI inflation has continued to fall and was 2.5 per cent in August. One reason for this is the lower rate of increase for energy prices, as well as the slower increase of services prices excluding rents and energy in recent months at the same time as the rate of increase in prices for goods has remained low. Moreover, other prices are now increasing at a more moderate pace. In terms of the PCE, inflation was 2.5 per cent in July.<sup>6</sup> US wage growth has slowed down over the last year. In addition, commodity prices have fallen on the world market and inflation expectations have slowed down in both the euro area and United States. This suggests lower inflationary pressures in the period ahead.

<sup>5</sup> The average annual change in services prices since January 2000 is 2.1 per cent in the euro area, 3.0 per cent in the United States and 2.3 per cent in Sweden.

<sup>6</sup> PCE is the Federal Reserve’s preferred measure of inflation. Rents have a lower weighting in this measure than in the CPI. See the fact box “The difference between the measures CPI and PCE in the United States” in the Monetary Policy Report March 2024, Sveriges Riksbank, for a description of the differences between the CPI and PCE measures.

**Figure 5. Consumer prices in various countries and regions**

Annual percentage change

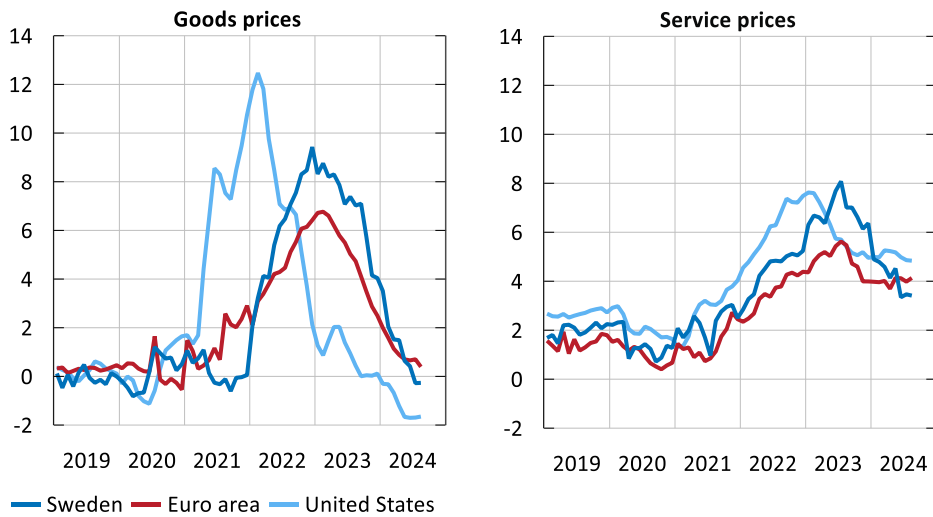


Note. Refers to the CPIF for Sweden, the HICP for the euro area and the CPI for the United States.

Sources: Statistics Sweden, Eurostat and US Bureau of Labor Statistics.

**Figure 6. Prices of goods and services abroad**

Annual percentage change



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

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

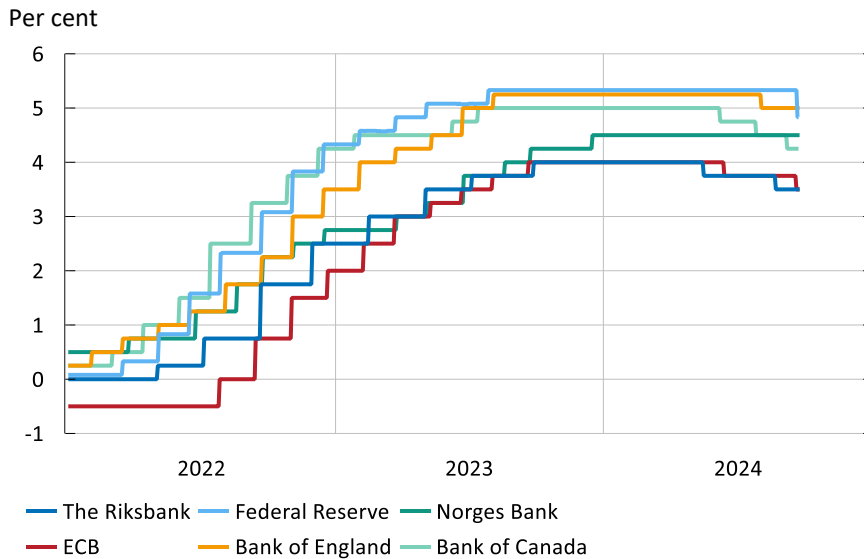
## 1.2 Financial conditions

### ECB and Federal Reserve cut their policy rates in September

Following the rapid increases in policy rates, most central banks around the world are in a situation where they are now gradually easing their monetary policy, even if interest rate levels are still contractionary (see Figure 7). On 12 September, the ECB cut its deposit rate by 0.25 percentage points, to 3.5 per cent.<sup>7</sup> The ECB emphasises that it is unwilling to commit to a certain interest rate path in advance and that interest rate decisions will be taken on a meeting by meeting basis.

The Federal Reserve cut its policy rate on 18 September for the first time since March 2020. At its meeting, the target interval for the Federal funds rate was cut by 0.5 percentage points to 4.75-5.00 per cent. The central bank communicated that the upside risks for inflation have declined and that the downside risks for the labour market have increased, and that it is therefore appropriate to begin easing monetary policy to avoid an overly weak economic development. The Federal Reserve emphasises that they are not following a predetermined interest rate path, but will take decisions one meeting at a time. The FOMC members' own assessments of the future policy rate, illustrated by the 'dot-plot', were lowered for 2024 and 2025 and indicate a policy rate of 4.4 per cent before the end of the year and 3.4 per cent at the end of 2025.<sup>8</sup>

**Figure 7. International policy rates**



Sources: National central banks and the Riksbank.

<sup>7</sup> The ECB also cut the interest rate for its lending facility and the interest rate for its main refinancing operations. See ECB monetary policy decision, 12 September 2024.

<sup>8</sup> Refers to the mid-point for the policy rate interval. See *FOMC Projections material*, September 2024, Federal Open Market Committee, Federal Reserve.



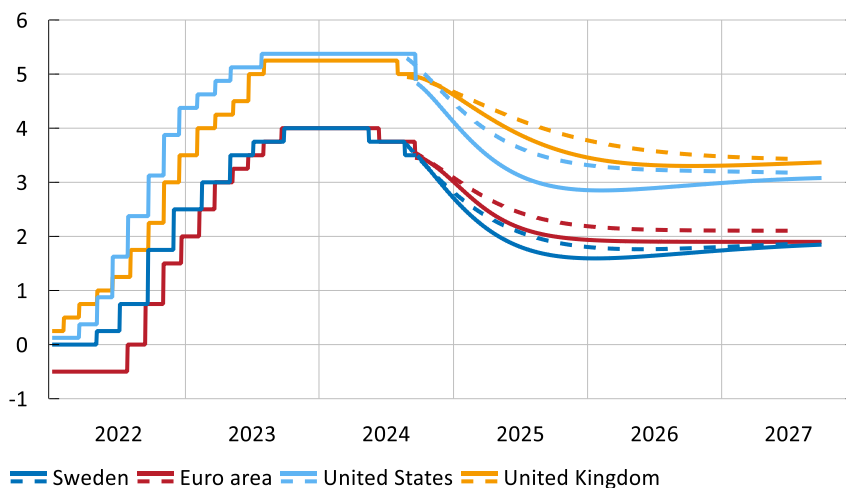
## Market expectations of international policy rates have fallen again

At the beginning of the year, there were widespread expectations that central banks abroad would cut their policy rates several times over the year. During the spring, these expectations were reversed, largely due to surprisingly high inflation outcomes and stronger economic activity. Over the summer, market expectations have shifted down again apace with clearer signs of lower inflation outcomes and economic slow-down. The expectations of the Federal Reserve's monetary policy have varied substantially, with market pricing having shifted several times in response to new economic outcomes.

According to the pricing of futures contracts for short-term money market rates, market participants expect the Federal Reserve to cut the policy rate by around 1.7 percentage points until the middle of next year. For the ECB, expectations of rate cuts are somewhat lower. The ECB is expected to cut the deposit rate by around 1.3 percentage points over the same time period (see Figure 8).

**Figure 8. Market expectations of policy rates in the future**

Per cent



Note. The figure shows policy rates and market-based expectations according to forward pricing (Nelson-Siegel (1994)). Solid lines represent expectations on 23 September 2024. Dashed lines represent expectations immediately prior to the Monetary Policy Update in August.

Sources: National central banks and the Riksbank.

## Market rates at both short and longer maturities have fallen slightly

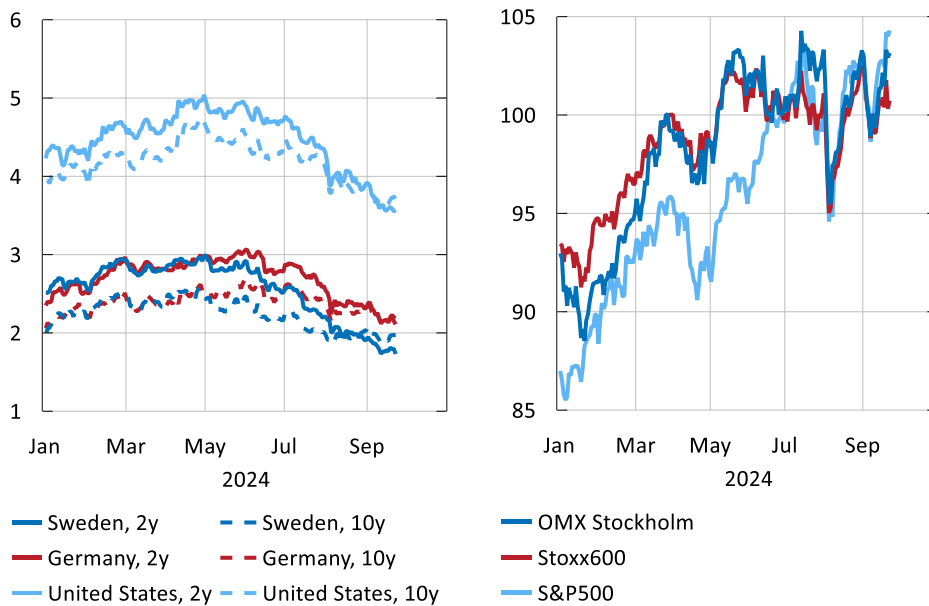
Since the Monetary Policy Update in August, both short and long-term government bond yields and yields on higher-risk bonds have fallen slightly in Sweden, the euro area and the United States (see Figure 9). In the euro area and United States, the yield spread between risky bonds and swap rates increased temporarily in conjunction with the financial turbulence at the start of August.<sup>9</sup> Even though monetary policy remains

<sup>9</sup> Risky bonds refers to covered bonds, municipal bonds and corporate bonds, for example.

contractionary, the shrinking yield spreads are making it easier for banks and companies, for example, to obtain funding on the market. The global financial conditions can change rapidly, however. One example of this was the market turbulence observed at the beginning of August, when for instance yen-financed carry-trades were rapidly settled.

**Figure 9. Government bond yields and stock market movements in Sweden, the euro area and US**

Per cent (left) and index, 27 June 2024 = 100 (right)



Note. The left-hand figure refers to zero coupon rates for Sweden and Germany, as well as benchmark rates for the United States.

Sources: Macrobond and the Riksbank.

Stock markets have also continued to develop strongly and have recovered from the downturn at the start of August (see Figure 9). Measured using the VIX index for the United States and Germany, volatility on the stock market is lower today, overall, than it was during the summer. Indicators measuring financial stress on the markets are also at low levels.

### Lower lending and deposit rates for households and companies

As the Riksbank has cut its policy rate, the interest rates faced by households and companies have also fallen. Since the start of the year, the average mortgage rate on new loans has fallen by about as much as the Riksbank has so far cut the policy rate (see Figure 10).<sup>10</sup> For mortgage rates on loans with a longer maturity that also include expectations of lower interest rates going forward, mortgage rates have fallen more than the policy rate, however (see Figure 11). For instance, the average rate on new mortgages with a fixed interest period of between one and three years has fallen by around one percentage point since the beginning of 2024. In the corporate sector too,

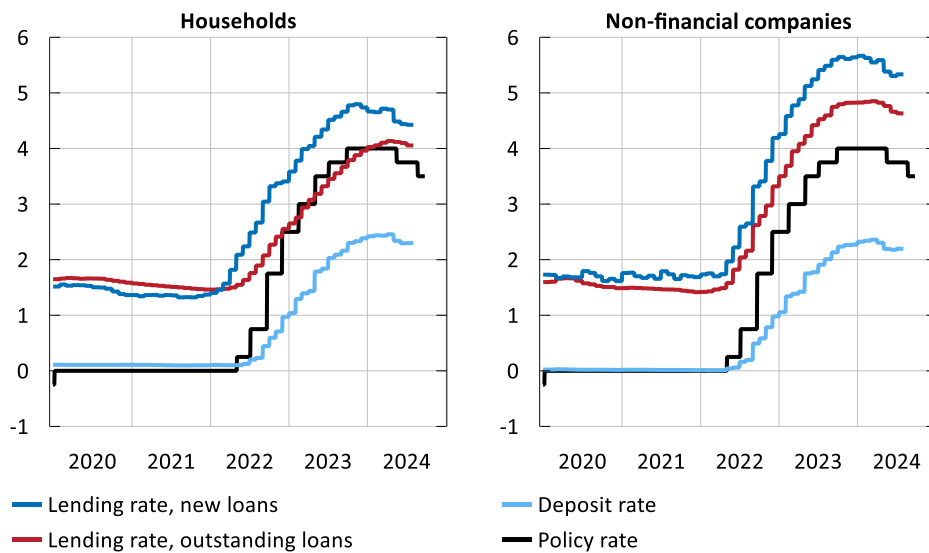
<sup>10</sup> Based on Statistics Sweden's financial market statistics until the end of July and the banks' published average interest rates in August.

all industries are facing a lower interest rate on their outstanding bank loans (see Figure 10).

The deposit rate has also fallen, although not by as much as the average lending rates. When the policy rate is cut, deposit rates usually fall by less than lending rates. This is partly because competition for deposits is relatively high, not least from other financial instruments in which depositors can invest their liquidity. The transmission from the policy rate to the interest rates met by households and companies is following historical patterns and working well.

**Figure 10. Average lending and deposit rates to households and companies and the Riksbank's policy rate**

Per cent

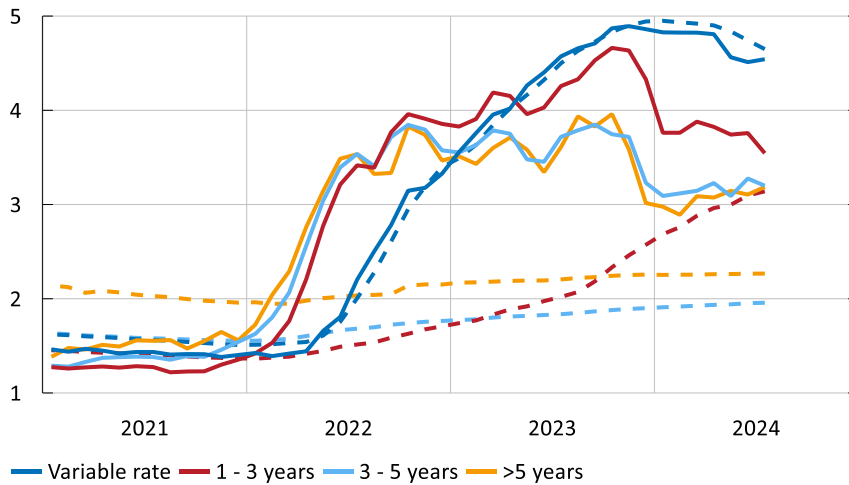


Note. Volume-weighted averages of lending and deposit rates at all maturities. For households, this refers to interest rates on loans from monetary financial institutions, housing credit institutions and alternative investment funds. Household lending rate refers to loans for housing purposes. For companies, this refers to loans from monetary financial institutions. New loans also includes renegotiated loans. The last outcome refers to July 2024.

Sources: Statistics Sweden and the Riksbank.

**Figure 11. Average mortgage rates to households for various fixed terms**

Per cent



Note. Refers to mortgage rates from monetary financial institutions, housing credit institutions and alternative investment funds. Solid lines represent new and renegotiated loans, dashed lines represent outstanding loans. The last outcome refers to July 2024.

Source: Statistics Sweden.

### Credit growth remains on low levels and housing prices are rising slowly

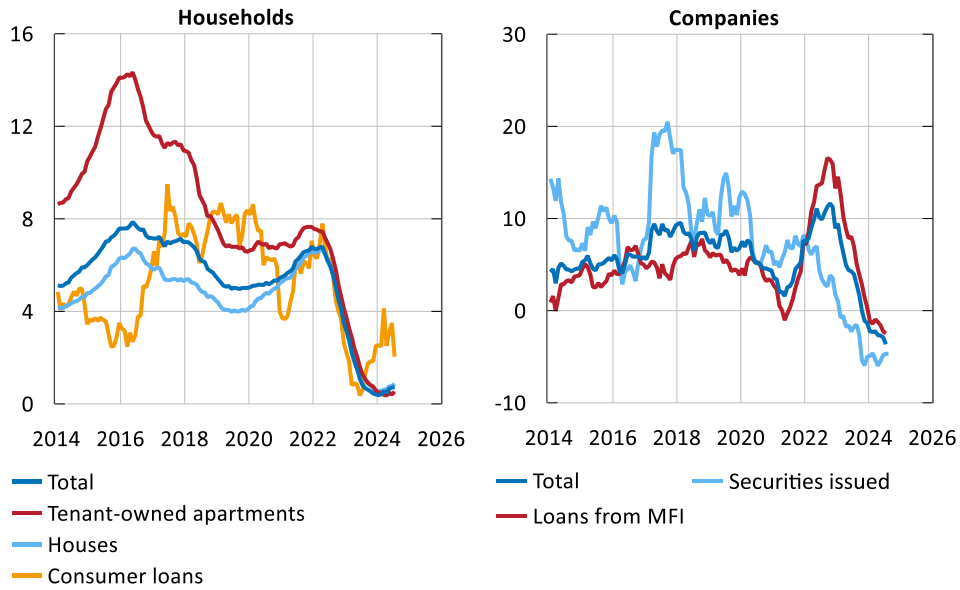
Despite the slightly lower lending rates, lending to households and companies remains on low levels. It is still negative for companies (see Figure 12).<sup>11</sup> Companies within all sectors, except for the categories “property sector – housing” and “other services”, which are cutting their borrowing.

Since the start of the year, housing prices have risen by about 2.5 per cent. Housing prices are now on about the same level as before the pandemic. Even though turnover on the housing market has started to recover slightly, the supply of housing has continued to increase during the year. The large supply in relation to turnover may have a restraining effect on housing prices.

<sup>11</sup> Corporate borrowing can take place via bank loans or by the issuance of securities on the bond market. Even if total credit growth is negative, there are some signs that lending via the bond market in Swedish kronor is increasing slightly due to increased risk appetite and lower risk premiums.

**Figure 12. Household and corporate borrowing**

Annual percentage change



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 securities issues constitute around a third.

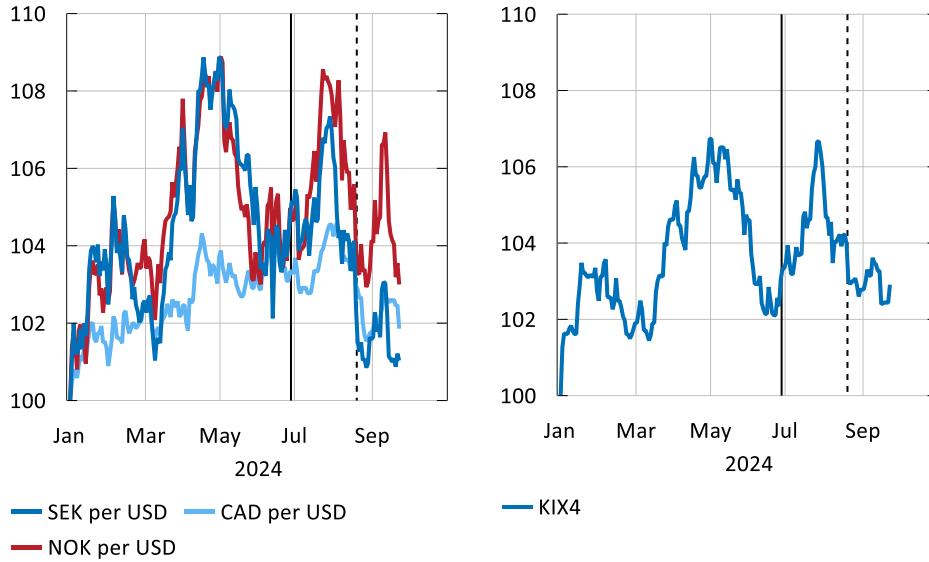
Source: Statistics Sweden.

**Lower interest rates in the United States are supporting the appreciation of smaller currencies**

The market has continued to adjust its expectations of the development of interest rates in the United States downwards. This has contributed to the further depreciation of the dollar and has supported smaller currencies, such as the Swedish krona. Overall, the krona has developed in line with other small currencies and, measured in terms of the KIX, the krona is at around the same level as the Monetary Policy Update in August (see Figure 13). In the Riksbank’s forecast, the krona is assumed to strengthen in the period ahead.

**Figure 13. Development of a number of smaller currencies against the dollar plus nominal exchange rate against KIX4**

Index, 1 January 2024 = 100



Note. A higher value indicates a weaker exchange rate. The KIX4 (krona index) is a weighted average against the US dollar, euro, pound sterling and Norwegian krone. The dashed vertical lines mark the date of the Monetary Policy Update in August and the solid vertical lines mark the date of the Monetary Policy Report in June.

Sources: Macrobond Financial AB and the Riksbank.

## 1.3 Swedish real economy

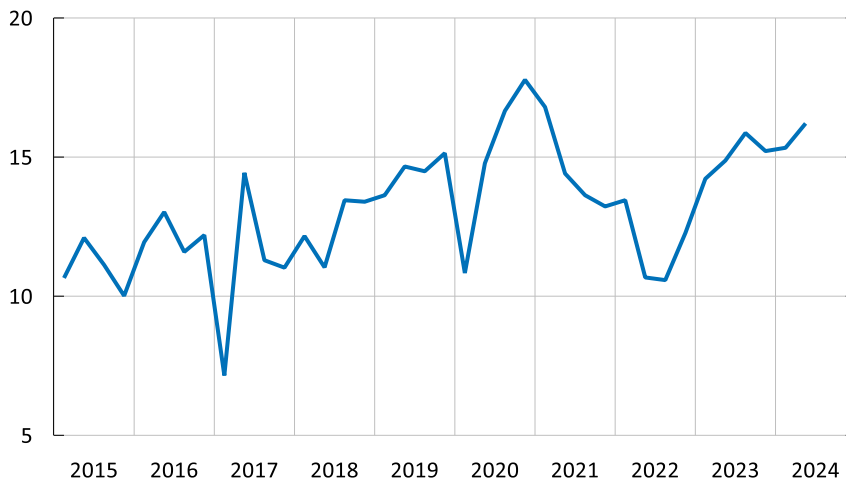
### Swedish consumption remains weak

Swedish GDP decreased by 0.3 per cent during the second quarter of the year, compared with the previous quarter (see Figure 3). The downturn can largely be explained by weak consumption and investment, while the greatest positive contribution came from net exports. The household savings ratio has been high and consumption has been restrained since interest rates started to be raised in 2022 (see Figure 14).<sup>12</sup>

<sup>12</sup> See also “Households continued saving at the same time as the growth rate for mortgages increased”, Financial accounts, second quarter 2024, Statistics Sweden.

**Figure 14. Household savings ratio**

Percentage of disposable income



Note. Seasonally adjusted data. Households and non-profit institutions serving households (NPISH).

Sources: Statistics Sweden and the Riksbank.

The National Institute of Economic Research's Economic Tendency Survey fell marginally in August and overall contributes to the view of slightly weaker development than the Riksbank expected in its June forecast. However, there remain signs of future optimism among households. For example, their assessment of Sweden's economy and their own economies in 12 months is higher than normal.

### Continuing weak labour market

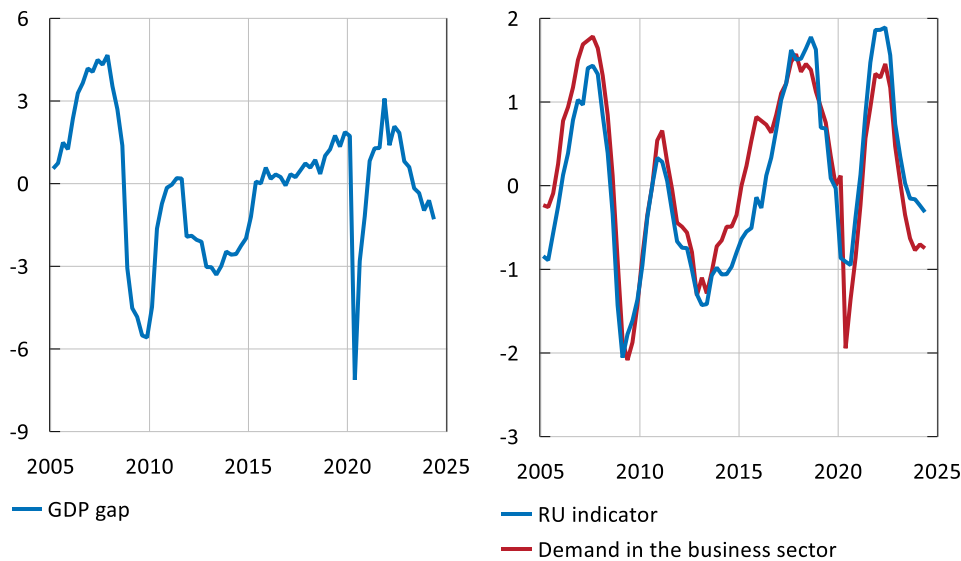
Unemployment has risen since the end of 2022 (see Figure 4). The low demand in the economy and labour market indicators all point to the continuing relatively weak development of the labour market in the near term. The number of redundancy notices and bankruptcies is on an elevated level and the number of newly-registered vacancies has fallen significantly. On the other hand, recruitment plans are weakly positive, with the service sector in particular planning new recruitment.

### Recession close to bottom

Resource utilisation in the Swedish economy is currently assessed to be somewhat lower than normal and the economy is in mild recession. One way of estimating resource utilisation is to assess the size of the gap between actual and potential levels for GDP, for example, known as the GDP gap. Another indicator of resource utilisation is the view taken by companies of the current demand situation, which is measured regularly by the National Institute of Economic Research. The Riksbank's assessment is that the GDP gap is lower than normal, which corresponds well to the current demand situation (see Figure 15). The Riksbank's resource utilisation indicator, the RU indicator, which weighs together various indicators, also suggests that resource utilisation has fallen and is marginally below normal. But indicators for growth have risen since the start of the year and are starting to approach levels compatible with normal growth. The assessment is thus that economic activity will not weaken much more.

**Figure 15. GDP gap and demand in the business sector**

Per cent (left), standard deviation (right)



Note. GDP gap refers to the deviation from the Riksbank's assessed long-term trend. The RU indicator is a statistical measure of resource utilisation. The RU indicator and demand situation in the business sector are both normalised so that the mean value is 0 and the standard deviation is 1.

Sources: National Institute of Economic Research, Statistics Sweden and the Riksbank.

## ANALYSIS – Microdata gives insights into how companies adjust their prices

One way of gaining an understanding of how companies adjust their prices is to investigate how often and by how much prices change for products included in the consumer price index (CPI). The results show that it is primarily the frequency, and not the magnitude, of price changes that correlates with the rate of inflation. This was evident in 2022 and 2023, when inflation was high. At that time, companies increased their prices much more frequently than before, while the average size of price changes did not change much. As inflation has fallen, companies have also started to change their prices less frequently. This indicates that pricing behaviour is now more in line with what it was before the period of high inflation.

To understand what affects inflation, it is important to understand how companies set their prices and whether and, if so, how this changes under different economic circumstances. There are studies indicating that the pass-through to consumer prices



from companies' changed costs is greater when inflation and demand are high.<sup>13</sup> Such changes in companies' costs could, for example, be changes in the prices of their input goods or wage costs.

A study by the National Institute of Economic Research (NIER) showed that Swedish companies, on average, raised their prices in line with how their costs rose in the period from 2019 to the second quarter of 2023.<sup>14</sup> Historically, however, companies have tended to even out price changes and allow part of their cost changes to be absorbed by profit margins, but this did not occur during the period of rising inflation in 2022 and 2023. This indicates that this part of companies' price-setting behaviour changed during the period of high inflation.

Here, we study another aspect of companies' price-setting behaviour, namely by how much and how often companies change their prices. Using a large data set, we have studied in detail how prices change for the products included in the consumer price index (CPI).<sup>15</sup> Figure 16 shows that the gap between the frequency of price rises and that of price reductions increased strongly during the period of high inflation but that, as of the start of 2024, it seems to have been at about the same level as it was before inflation started to rise. The development in the high inflation period was thus primarily driven by an upswing in how often companies raised their prices. In contrast, the development of the average size of price movements was relatively stable and did not change particularly much.<sup>16 17</sup>

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<sup>13</sup> See, for instance, C. Borio, M. Lombardi, J. Yetman and E. Zakrajšek (2023), "The two-regime view of inflation", BIS papers No 133, Bank for International Settlements.

<sup>14</sup> National Institute of Economic Research, "Prissättning hos svenska företag 2023" (Pricing among Swedish companies in 2023), special study, National Institute of Economic Research (2023).

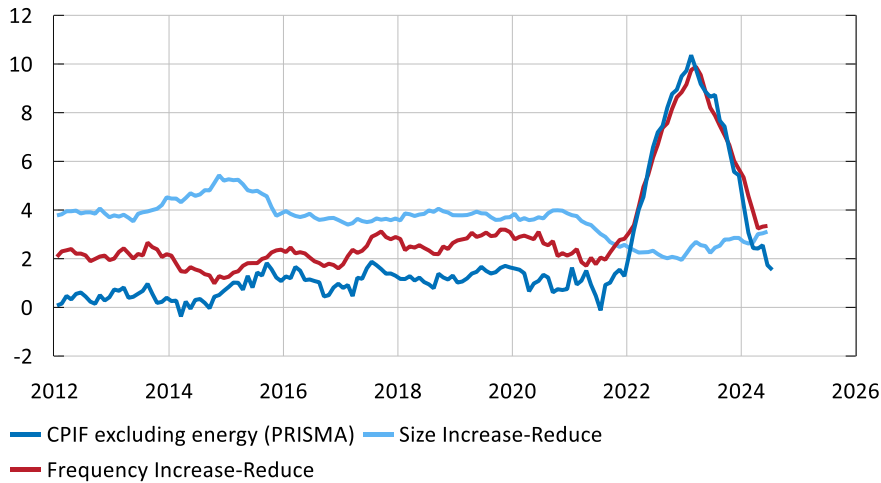
<sup>15</sup> For a more detailed examination, see M. Klein, K. Strömberg and O. Tysklind (2024), "Inflation dynamics in the high inflation period: insights from new micro data", *Economic Commentaries*, no. 14, Sveriges Riksbank.

<sup>16</sup> The aggregate price level in the CPI is calculated on the basis of a large number of collected prices and it thus depends on both how often and by how much prices are adjusted. The data set used covers about 75 per cent of the total weight of the CPI and includes about 9 million price observations from 2010 on. The material allows the prices of individual products to be followed month by month to see if they change and, if so, by how much. From there, product and product group weights can be used to create aggregate measures of the frequency of price increases and decreases, and measures of the magnitude of price changes.

<sup>17</sup> These results are in line with similar studies in other countries. See, for example, the article "Analyzing businesses' price-setting behaviour" in Bank of Canada's Monetary Policy Report from April 2024. The result is also in line with how companies in the Riksbank's Business Survey responded in 2022, when they reported that they were adjusting prices more frequently than usual. Similar results have emerged from surveys in other countries, such as this one at CEPR: [Price-setting in a high-inflation environment](#).

**Figure 16. Aggregate price change rate over 12 months and relative frequency and size of price changes**

Annual percentage change (CPIF) and percentage points (frequency and size)



Note. The CPIF excluding energy (PRISMA) is based on the CPIF excluding energy, where the components not included in the microdata have been excluded. The relative frequency and magnitude of price changes compared with the previous month are expressed as 12-month moving averages. This is to match the annual percentage change.

Sources: Statistics Sweden and the Riksbank.

The same pattern can be seen when the subgroups food and other goods are examined in the CPI. However, for services prices the relationships are different. Among services prices, the rate of price increase remains high and companies are changing their prices more frequently than usual.<sup>18</sup> Municipal taxes and rents are examples of service prices that have increased more than usual. This is assessed to be primarily due to the cost increases that took place in 2022 and 2023, rather than the demand and cost developments taking place presently.

As inflation has become normalised, so too has the frequency of price changes. One lesson that can be learned for the future is that it is important to spot early signs that companies are starting to adjust their prices more frequently during periods of major changes in costs and high demand. One source of such information, for example, could be the Riksbank's own Business Surveys. Early in 2022, companies in the Survey stated that they were adjusting prices more frequently than usual and that it was easier than usual to gain acceptance from customers for increased prices.<sup>19</sup>

<sup>18</sup> M. Klein, E. Skeppås and O. Tysklind, "Price changes on goods and services during the high inflation period: insights from microdata", Economic Commentaries, no. 15, Sveriges Riksbank (2024).

<sup>19</sup> See, for example, "I've never before experienced customers accepting price increases so easily", Riksbank's Business Survey, February 2022, Sveriges Riksbank.

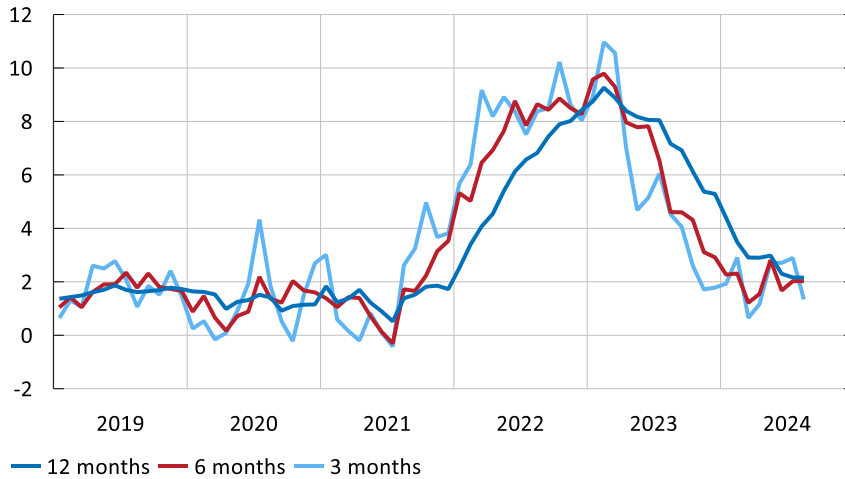
## 1.4 Swedish inflation

### Inflation continuing to fall

Since the forecast in the Monetary Policy Report in June, inflation has fallen slightly more than expected. In August, CPIF inflation was 1.2 per cent (see Figure 5). This can largely be explained by the weak development of energy prices. Excluding energy, inflation was 2.2 per cent in August and measured as a three or six-month change calculated as an annual rate it has been close to two per cent since the start of 2024 (see Figure 17).

**Figure 17. CPIF excluding energy**

Annual percentage change and three and six-month change calculated in annualised terms



Note. Seasonally adjusted data.

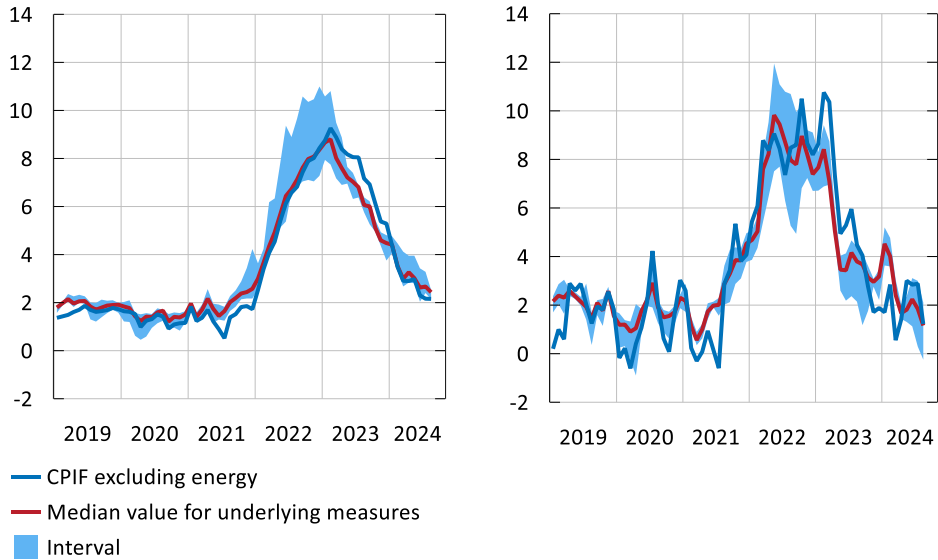
Sources: Statistics Sweden and the Riksbank.

The Riksbank also analyses different measures of underlying inflation, which excludes or reduces the significance of prices that vary sharply.<sup>20</sup> These measures have fallen significantly both annualised and especially as monthly changes (see Figure 18).

<sup>20</sup> For more information on different measures of underlying inflation, see the Riksbank's website: <https://www.riksbank.se/sv/statistik/makroindikatorer/underliggande-inflation/>.

**Figure 18. Different measures of underlying inflation**

Annual percentage change (left) and monthly change, annualised three month moving average (right)



Note. The field shows the highest and lowest outcome among 5 measures of underlying inflation: UND24, Trim85, persistence-weighted inflation (KPIFPV), factors from principal component analysis (KPIFPC) and weighted mean inflation (Trim1). The right-hand figure shows seasonally-adjusted monthly changes. The KPIFPV has been excluded from the interval for monthly changes.

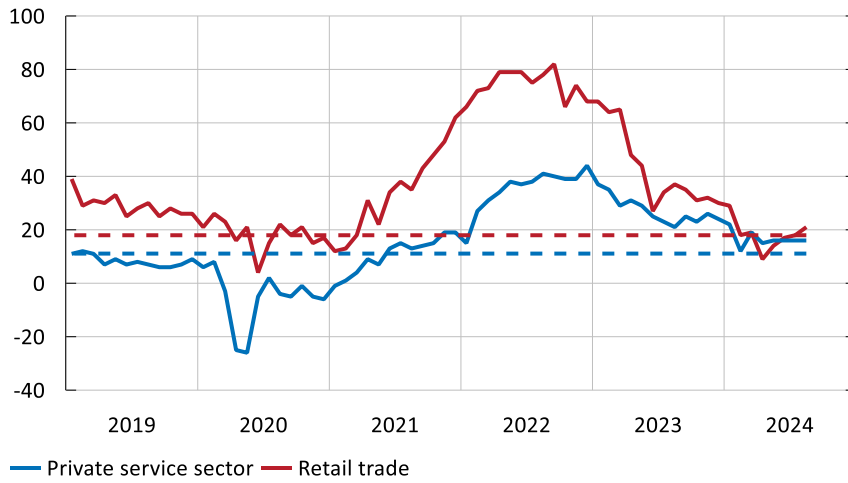
Sources: Statistics Sweden and the Riksbank.

Like the rest of the world, the rate of price increases for goods and food has fallen and is now close to its historical average. Service price rises have also continued downwards but remain higher than normal. Above all, this can be explained by large rises in prices that are rarely changed, such as rents and administratively set prices. These prices are still being affected by the cost increases that took place in 2022 and 2023, rather than the demand and cost development that is occurring now.

According to the National Institute of Economic Research's Economic Tendency Survey, companies' price plans are close to their historical average (see Figure 19). In addition, producer prices are developing at a moderate pace and the long-term inflation expectations are well anchored around the inflation target (see Figure 20). This is creating good conditions for inflation close to 2 per cent going forward.

**Figure 19. Price plans in Economic Tendency Survey**

Net figures

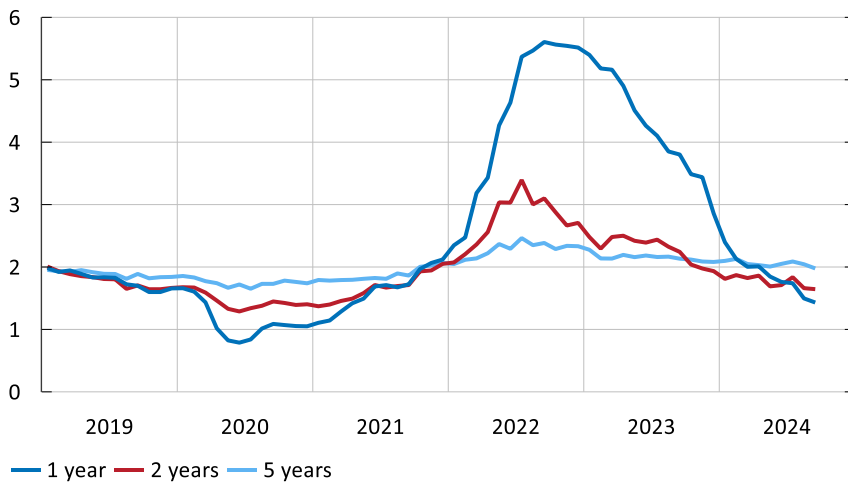


Note. The figure shows net balances of how many businesses responded that they plan to increase their prices compared with how many plan to reduce them in the coming three months. Seasonally adjusted data. The dashed lines represent the average for the period 2000–2024.

Source: National Institute of Economic Research.

**Figure 20. Inflation expectations**

Per cent



Note. Expectations refer to the CPI. Money market agents.

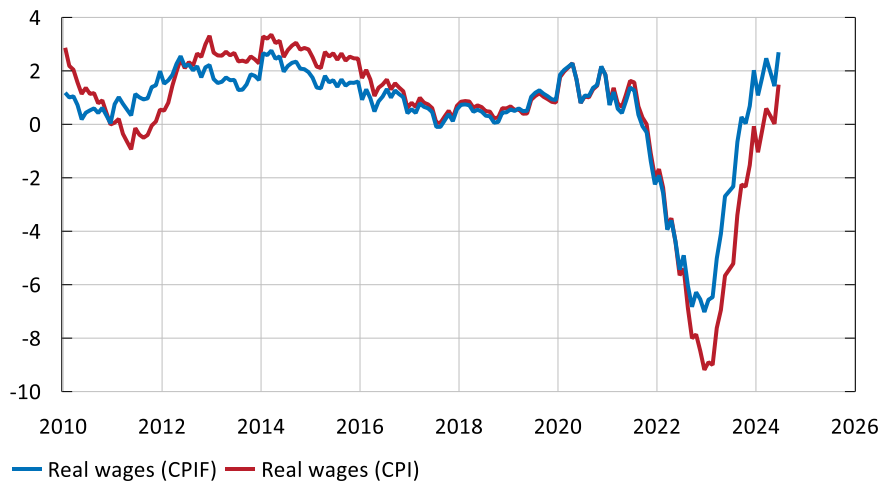
Source: Kantar Prospera.

### Real wages are rising again

Wage growth fell over the first six months of 2024, even if a certain upturn took place in June. Lower wage growth is in line with the profile in the agreements negotiated at the start of last year. Even though wages have increased more slowly in recent months, the lower inflation means that real wages have started to rise again and are now higher than normal (see Figure 21).<sup>21</sup>

**Figure 21. Real wages**

Annual percentage change



Note. Real wages are calculated as the difference between the rate of wage growth and the annual percentage change in the CPI and CPIF. Data on the rate of wage growth is preliminary and refers to the National Mediation Office's forecasts of the last outcomes. The last observation is for June.

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

<sup>21</sup> Real wages have risen by an average of 1.1 per cent a year since 2000, measured as both the CPI and the CPIF.

## 2 Outlook for the coming years

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Inflation has fallen in both the euro area and the United States in recent months and is expected to approach central bank targets next year. Growth in the euro area remains relatively weak this year but gradually lower interest rates will contribute to growth increasing slightly in the coming years. In the United States, growth will slow down instead after a couple of years of strong development. All in all, growth abroad is expected to be modest during the forecast period.

In Sweden, GDP growth is expected to remain slightly lower than normal and unemployment to continue to rise somewhat in the second six months of this year. Next year, however, growth is expected to pick up and unemployment to fall. The recovery will be driven by strong domestic demand, in which rising real wages and lower interest rates will strengthen household purchasing power. Adjusted for energy prices, inflation has stabilised close to two per cent, but low energy prices mean that CPIF inflation is expected to be lower over the next year.

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### Key assessments and assumptions in the forecast

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- The forecasts for the Swedish real economy and inflation are based on the assessment that the recession in the euro area has bottomed out and that growth will increase in 2025. In the United States, growth is expected to slow down at the end of 2024.
- Geopolitical tensions are assumed to have limited effects on global GDP and inflation during the forecast period.
- Energy prices are assumed to follow forward pricing in the next few years.
- Resource utilisation in the Swedish economy is assessed to be weaker than normal to start with.
- Swedish fiscal policy is assumed to be mildly expansionary and to make a slightly positive contribution to GDP growth in 2025, but then to be neither expansionary nor contractionary.
- The forecast period stretches until the end of the third quarter of 2027.

**Forecast for monetary policy:** The policy rate is cut by 0.25 of a percentage point in September. If inflation prospects remain the same, the policy rate can be cut twice more this year. The forecast means that the policy rate will then be cut so that it reaches 2.25 per cent at the end of the forecast period.

## 2.1 The economic outlook abroad

### **Weak global growth this year will rise slightly in the period ahead**

The recovery in the euro area is proceeding slowly. Even though real wages in many European countries have risen rapidly for some time, consumer growth is weak and saving has increased. Inflation in the euro area is expected to continue to fall and consumption and GDP will gather slightly more speed in 2025 in step with a less contractionary monetary policy.<sup>22</sup>

In the United States, GDP growth has been strong both last year and so far this year but there are signs that growth will weaken and that the US labour market has slowed down. However, inflation is falling and gradually lower interest rates will stimulate demand in the period ahead (see Figure 8). Despite high indebtedness and regardless of the outcome of the US presidential election, the public sector deficit in the United States is expected to remain high, supporting demand, at least in the medium term. Next year, however, US growth is expected to be lower than normal.

In China, GDP growth is being restrained by low domestic demand. This is partly due to weak demographic growth and falling property prices that have heavily impacted consumer confidence and credit growth.

Even if global growth picks up somewhat in the coming years, from a historical perspective it is expected to be moderate overall.<sup>23</sup>

### **Inflation is falling abroad**

In the euro area, HICP inflation fell to 2.2 per cent in August. The downturn can largely be explained by a lower rate of increase in energy prices. Inflation excluding energy and food was 2.8 per cent in August. Inflation is expected to continue to fall, primarily because the continued high rate of increase in services prices will slow down. However, wage growth is expected to be high in the euro area this year, meaning it will take longer than in the United States for the rate of increase in services prices to go down. Towards the end of the forecast period, wage growth in the euro area will fall to around 3 per cent. In the United States, price growth in rents will also slow down, contributing to slower growth in services prices. In both the euro area and United States, inflation is expected to stabilise around central bank targets in 2025.

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<sup>22</sup> As a large proportion of euro area households have fixed loans, the effect of the lower interest rate will arrive with a greater time lag than in Sweden, for example.

<sup>23</sup> Here, global refers to KIX-weighted GDP in fixed prices. The KIX is a weighted average against 31 countries that are important for Sweden's international trade. Average growth between 2010 and 2019 was 2.3 per cent.



**Table 1. International key performance indicators**

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

	2023	2024	2025	2026
<b>GDP, euro area</b>	0.5 (0.6)	0.8 (0.8)	1.3 (1.5)	1.3 (1.4)
<b>GDP, United States</b>	2.5 (2.5)	2.6 (2.3)	1.5 (1.8)	1.9 (2.1)
<b>HICP, euro area</b>	5.4 (5.4)	2.4 (2.3)	2.0 (2.0)	2.0 (2.0)
<b>CPI, United States</b>	4.1 (4.1)	2.8 (2.9)	2.0 (2.1)	2.2 (2.3)

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

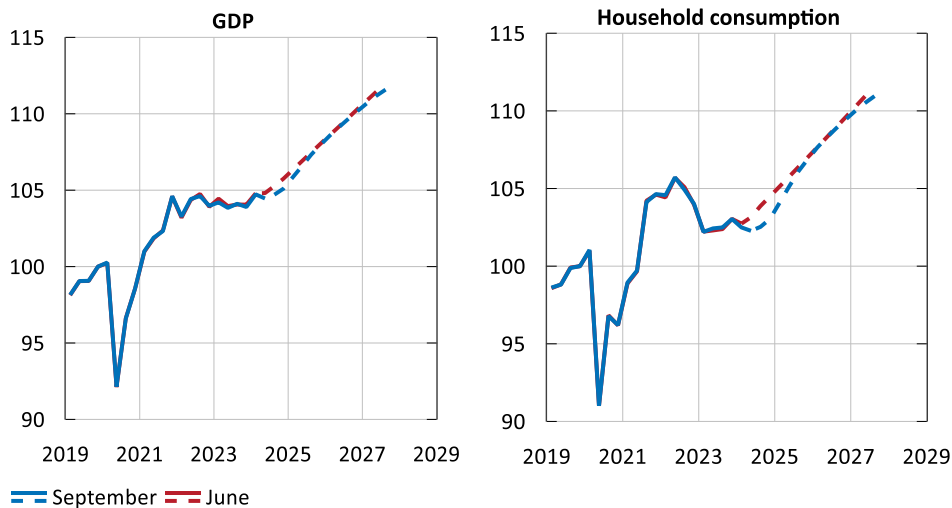
## 2.2 The economic outlook in Sweden

### Growth will pick up in 2025

GDP has developed weakly so far this year and the Swedish economy has been in a mild recession for some time. GDP is expected to rise slightly in the second six months of the year but the recovery will not start until 2025. Household consumption will rise as inflation falls back and the policy rate is gradually cut, leading real disposable household income to rise (see Figure 22). As international demand is expected to stay relatively weak over the next year, the recovery will largely be driven by domestic demand. This is also supported by households being optimistic about the future, according to surveys. In 2025 and 2026, GDP is expected to grow by 1.9 and 2.5 per cent respectively (see Figure 22).

**Figure 22. GDP and consumption in Sweden**

Index, 2019 Q4 = 100



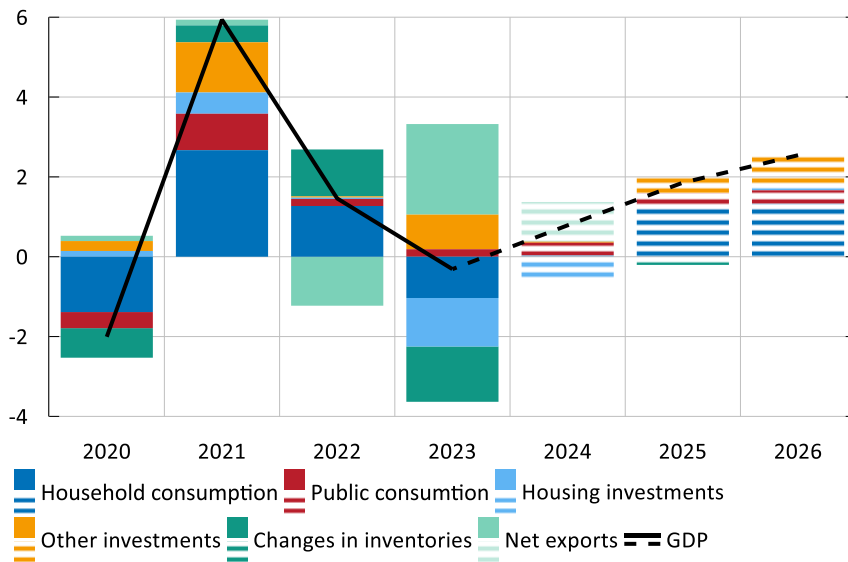
Note. Seasonally adjusted data. Solid line refers to outcome, dashed line represents the Riksbank's forecast.

Sources: Statistics Sweden and the Riksbank.

Housing investment has been weak in recent years but, with a gradually lower interest rate, demand for housing is expected to increase, the rate of increase in housing prices rise and, after a certain delay, housing investment to strengthen (see Figure 23). However, a slower increase in the population in the period ahead means that the upturn in housing investment will be modest. The business sector’s other investments have developed weakly so far this year but are expected to grow gradually faster over the next few years as growth in consumption and exports rises. In addition, public sector investment is expected to increase in 2025 compared with this year. Fiscal policy is expected to make a slightly positive contribution to GDP growth in 2025.<sup>24</sup>

**Figure 23. Contribution to GDP**

Per cent (GDP) and percentage points (contribution)



Note. Contribution to annual percentage change in GDP in fixed prices.

Sources: Statistics Sweden and the Riksbank.

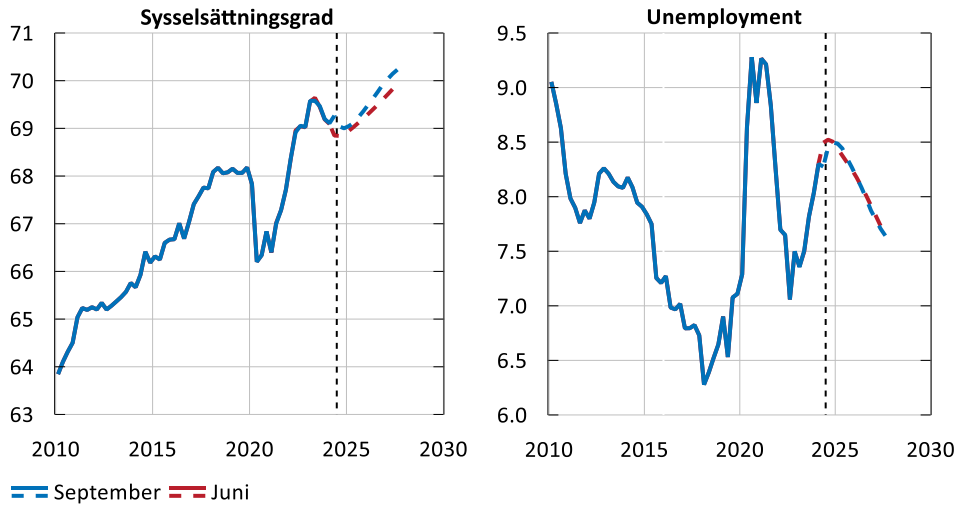
### Unemployment will fall again at the start of 2025

The weak demand in the economy, together with labour market indicators, point to a relatively weak development of the labour market in the near term. In the Riksbank’s forecast, the employment rate will continue to fall and unemployment to rise slightly in the second half of 2024. Unemployment is expected to rise to 8.5 per cent before it starts to fall gradually from the start of 2025 as demand in the economy picks up (see Figure 24).

<sup>24</sup> See the fact box “Budget Bill 2025”.

**Figure 24. 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 June.

Sources: Statistics Sweden and the Riksbank.

**Table 2. Key performance indicators for Sweden**

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

	2023	2024	2025	2026
<b>GDP</b>	-0.3 (-0.2)	0.8 (1.1)	1.9 (1.7)	2.5 (2.4)
<b>Employed persons</b>	1.4 (1.4)	-0.4 (-0.6)	0.4 (0.5)	1.0 (0.8)
<b>Unemployment*</b>	7.7 (7.7)	8.4 (8.5)	8.4 (8.3)	8.0 (8.0)
<b>GDP gap**</b>	-0.2 (-0.3)	-1.2 (-1.1)	-0.8 (-0.8)	-0.1 (-0.3)
<b>General government net lending, per cent of GDP</b>	-0.6 (-0.6)	-1.6 (-1.4)	-1.1 (-0.7)	-0.6 (-0.4)

\* Per cent of labour force.

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

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

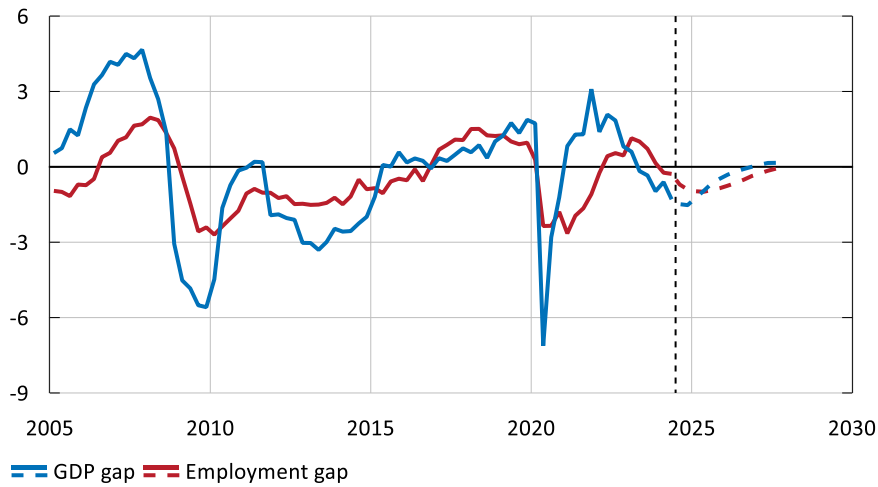
Sources: Statistics Sweden and the Riksbank.

### Resource utilisation will rise in 2025

Resource utilisation is currently lower than normal but the Swedish economy is expected to grow faster than trend as of 2025, meaning that the amount of spare capacity in the economy will decrease and resource utilisation will rise. The gradually rising resource utilisation will contribute to inflation remaining around 2 per cent. Towards the end of the forecast period, economic activity is expected to be in balance (see Figure 25).

**Figure 25. Measures of resource utilisation in Sweden**

Per cent (GDP and employment gap)



Note. The gaps refer to the deviation in GDP and employment from the Riksbank's assessed long term trend. 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 June.

Sources: Statistics Sweden and the Riksbank.

## FACT BOX – Budget Bill 2025

The Budget Bill for 2025 includes proposals for new measures totalling SEK 60 billion next year. The regulatory amendments proposed for taxation will entail reduced tax revenue of over SEK 20 billion. Above all, taxes will be cut for households, partly via increased earned income tax credit. Just over SEK 20 billion concerns public consumption, primarily in the form of increased appropriations to defence, the judicial system and schools. Measures concerning public sector investment amount to around SEK 5 billion, including increased defence funding.

From a monetary policy perspective, the effect of fiscal policy on the development of the real economy and inflation is of particular interest. Based on the Budget Bill, the fiscal policy measures are expected to be slightly greater next year than this year. This indicates that the active fiscal policy will make a somewhat positive contribution to the development of GDP in 2025 in a situation where resource utilisation is expected to be lower than normal.

Adjusting taxes and public expenditure can affect the price level of goods and services. The Budget Bill contains proposals for lower taxes on transport fuel and a higher greenhouse gas reduction mandate, as well as abolished aviation tax next year. The Riksbank deems that these individual proposals will lead to the CPIF becoming just under 0.1 percentage points lower in the second half of 2025 than it otherwise would have been. The overall fiscal policy in the Budget Bill will also affect inflation next year by contributing to a somewhat stronger growth in the real economy.

Overall, the Riksbank deems that the proposed fiscal policy will not substantially change the conditions for monetary policy to maintain the inflation target.

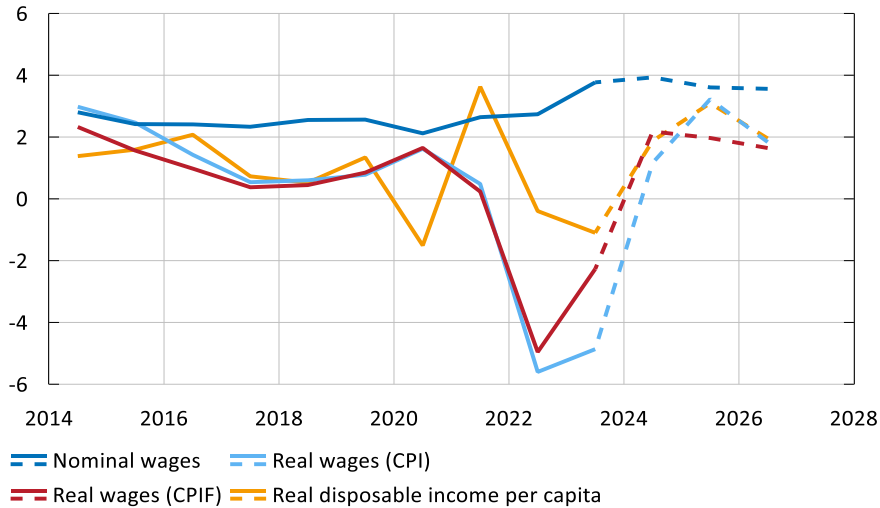
## 2.3 Inflation outlook in Sweden

### Growth in real wages over the entire forecast period

Wage growth, which is an important factor for inflation, will decline in the near future in line with the profile of the agreements but nonetheless it will grow at a relatively strong pace by 3.6 per cent annually in 2025 and 2026. As inflation is close to the target, real wages will rise over the forecast period but it will take until 2026 before real wages return to the same level as prior to the rise in inflation (see Figure 26). Real disposable household income per capita is also expected to increase this year and next year, after having fallen two years in a row. However, disposable incomes have fallen much less than real wages. This is mainly because capital income has increased.

**Figure 26. 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 line refers to outcome, dashed line represents the Riksbank's forecast.

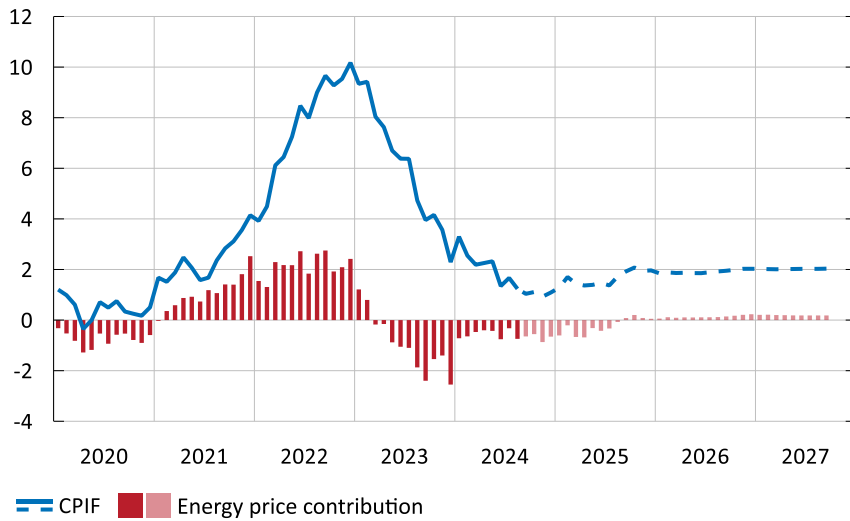
Sources: National Mediation Office, Statistics Sweden and the Riksbank.

### Inflation will be close to target over the entire forecast period

Energy prices are lower than they were one year ago. This is partly because favourable weather has led to electricity prices falling on the commodity market. At the same time, fuel prices are lower than they were last year, partly due to the abolished greenhouse gas reduction mandate but also due to the fall in the price of oil due to decreased demand. Partly because of this, CPIF inflation will be below 2 per cent over the next year. As the lower fuel prices fall out of the 12-month figures at the same time as electricity prices are expected to increase over the winter, the negative contribution made by energy prices decreases and CPIF inflation will increase (see Figure 27).

**Figure 27. CPIF and energy price contribution**

Annual percentage change (CPIF) and percentage points (energy price contribution)



Note. Solid line refers to outcome, dashed line and light red bars represent the Riksbank's forecast.

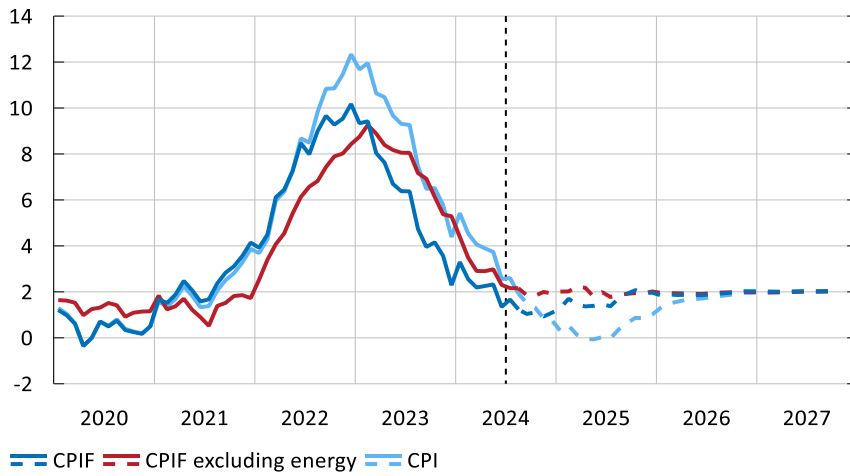
Sources: Statistics Sweden and the Riksbank.

As energy is an important input good in production, a change in energy prices can have a delayed effect on other prices in the economy. These effects are expected to be limited over the forecast period as energy prices in the slightly longer term have not moved particularly much according to forward pricing.

The rate of increase of the CPIF excluding energy is close to 2 per cent at present and is expected to remain there over the forecast period (see Figure 28). Due to the rate cuts, CPI inflation is expected to fall temporarily to close to 0 per cent in mid-2025 before gradually rising to 2 per cent.

**Figure 28. CPIF, CPIF excluding energy and CPI**

Annual percentage change



Note. Solid line refers to outcome, dashed line represents the Riksbank’s forecast. The vertical dashed line marks the time of the Monetary Policy Meeting in June.

Sources: Statistics Sweden and the Riksbank.

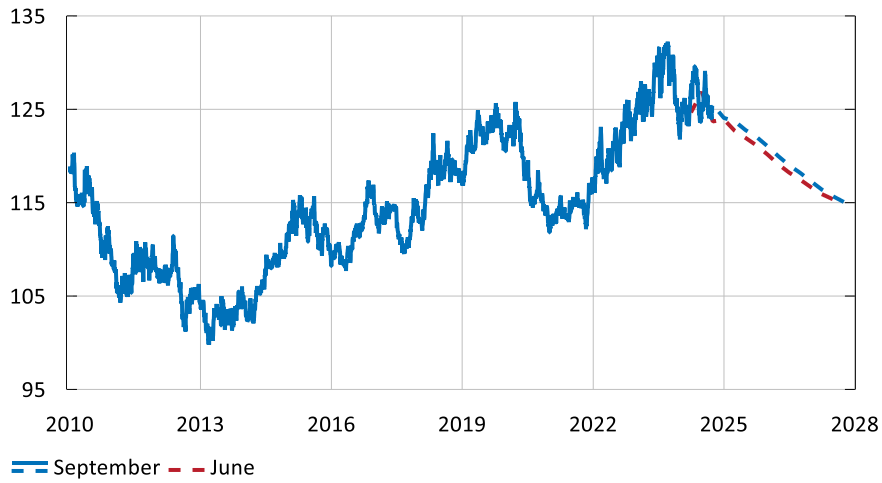
Several indicators support the view that inflation is now stabilising around the inflation target, including companies’ pricing plans and long-term inflation expectations. In addition, the Riksbank’s analysis of microdata indicates that companies are now changing their prices about as frequently as they did before the rise in inflation, which is a sign that pricing behaviour has normalised.<sup>25</sup>

The rate of increase in services prices remains high, largely due to the unusually high rate of increase in rents and administrative prices. To some extent, the rate of increase in services prices will also be kept up by a higher than normal rate of increase over the forecast period. Rents and administrative prices are expected to continue to increase slightly faster than normal for a few more years but their contribution to inflation is expected to fall gradually. Services prices, however, are expected to increase unusually rapidly over the entire forecast period. At the same time, the krona is expected to appreciate, leading to lower import prices that will restrain inflationary pressures in the Swedish economy (see Figure 29). A gradually less contractionary monetary policy and normalised resource utilisation will contribute towards inflation being close to the target towards the end of the forecast period.

<sup>25</sup> See the analysis “Microdata gives insights into how companies adjust their prices”.

**Figure 29. Nominal exchange rate**

Index, 18 November 1992 = 100



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

Source: The Riksbank.

**Table 3. Key performance indicators for inflation**

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

	2023	2024	2025	2026
<b>CPIF</b>	6.0 (6.0)	1.7 (2.0)	1.6 (1.8)	1.9 (1.9)
<b>CPIF excluding energy</b>	7.5 (7.5)	2.6 (2.6)	2.0 (2.0)	2.0 (2.0)
<b>CPI</b>	8.5 (8.5)	2.7 (3.1)	0.4 (1.3)	1.7 (1.6)
<b>Wages, NMO</b>	3.8 (3.8)	3.9 (3.9)	3.6 (3.6)	3.6 (3.6)

Note. NMO refers to the National Mediation Office’s short-term wage statistics.

Sources: Statistics Sweden and the Riksbank.

### FACT BOX – The CPIF under alternative assumptions for energy prices

Energy prices have fallen in the past few months. Electricity prices in particular have fallen by an unexpectedly large degree since the Monetary Policy Report in June. The falling energy prices are presently restraining CPIF inflation. In the forecast, the rate of increase for the CPIF excluding energy remains at the current level of around 2 per cent over the next few months, while the forecast for energy prices entails CPIF inflation being closer to 1 per cent for the rest of the year.

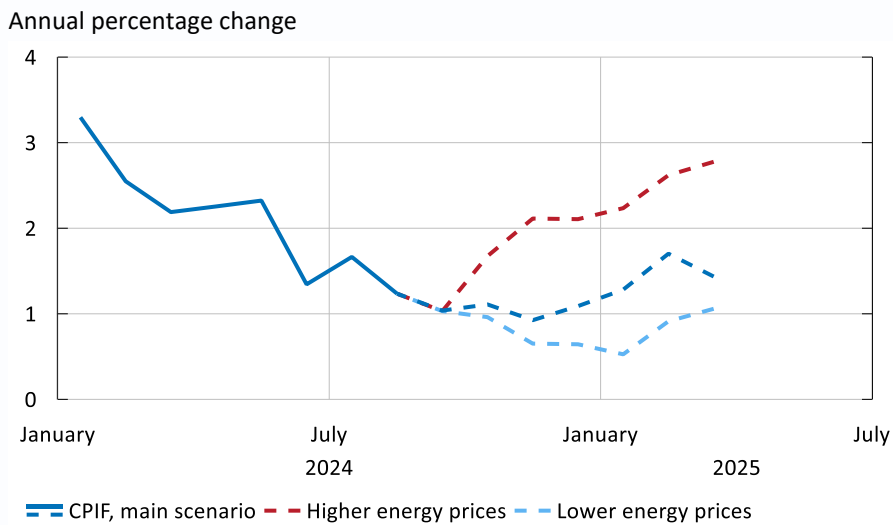
Forecasts for energy prices are very uncertain, as these prices are often affected by unpredictable factors such as weather and geopolitical developments. The Riksbank’s



forecast method for energy prices means that the forecasts are based on daily outcomes of prices on the spot market for electricity (Nordpool) and fuel prices at the pump. The prices are then projected on the basis of prices from the electricity and oil futures markets. These forward prices reflect market participants' priced expectations of future electricity and oil prices. Like spot prices, forward prices vary greatly but, even so, they have proved to work better than alternative forecast methods.

As a way of illustrating how sensitive the forecast for CPIF inflation is for different energy price forecasts, we have constructed two scenarios for the CPIF based on two alternative assumptions. In the scenario where energy prices become higher, electricity prices rise to almost SEK 1/kWh this winter, which is the average price for November to March over the last three years. At the same time, fuel prices rise to SEK 20/litre, in line with the peak level from the spring. In the scenario where energy prices become lower, electricity prices are instead assumed to amount to just below SEK 0.40/kWh, which is the average price for corresponding months until 2020. At the same time, the falling trend for the oil price on the world market is assumed to continue so that the price is around USD 50/barrel, which, in turn, is reflected by even lower fuel prices.

**Figure 30. Development of CPIF under different assumptions of energy prices**



Sources: Statistics Sweden and the Riksbank.

In the scenario with higher energy prices, CPIF inflation reaches 2.1 per cent at the end of the year before rising to 3 per cent at the start of 2025. In the lower scenario, CPIF inflation falls to 0.6 per cent at the end of the year (see Figure 30).

The unusually low initial electricity prices lead the Riksbank to assess that the risk outlook for CPIF inflation over the next few months is somewhat asymmetric. There is a lower limit for how low electricity prices can get, at the same time as a supply shock or a cold winter, for example, could result in electricity prices becoming considerably higher than in the forecast.

### 3 Monetary policy analysis

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Inflationary pressures have fallen over the year and are now assessed to be compatible with an inflation rate close to 2 per cent. However, economic activity is still weak and the recovery appears to be proceeding more slowly than expected. Weaker economic signals are also a theme abroad. More expansionary monetary policy contributes to the recovery gaining more speed and thus to inflation being held stable close to the target going forward.

Furthermore, the risk outlook has gradually shifted over the year, and the risk of lastingly high inflation has declined significantly. This also speaks in favour of a lower policy rate going forward.

The Executive Board has decided to cut the policy rate by 0.25 percentage points. If the outlook for inflation and economic activity remains unchanged, the policy rate may also be cut at the two remaining meetings this year. The forecast for the policy rate reflects that a cut of 0.5 percentage points at one of the coming meetings is possible. It also indicates that one or two further cuts may be made during the first half of 2025. At the end of the forecast period, the policy rate is 2.25 per cent.

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#### Monetary policy is forward-looking

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Monetary policy acts with a time lag. It therefore needs to be based on forecasts of future economic developments. Forecasts are in turn influenced by the assumptions made about monetary policy, i.e. assumptions about how the policy rate and the Riksbank's other monetary policy tools will evolve. This chapter discusses the assumptions about monetary policy that, in the Riksbank's assessment, will provide 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. It is easier to make long-term plans when inflation is stable and economic agents all have a common picture of how prices will develop in the future. This in turn creates good conditions for favourable economic growth over time.

### 3.1 Monetary policy in Sweden

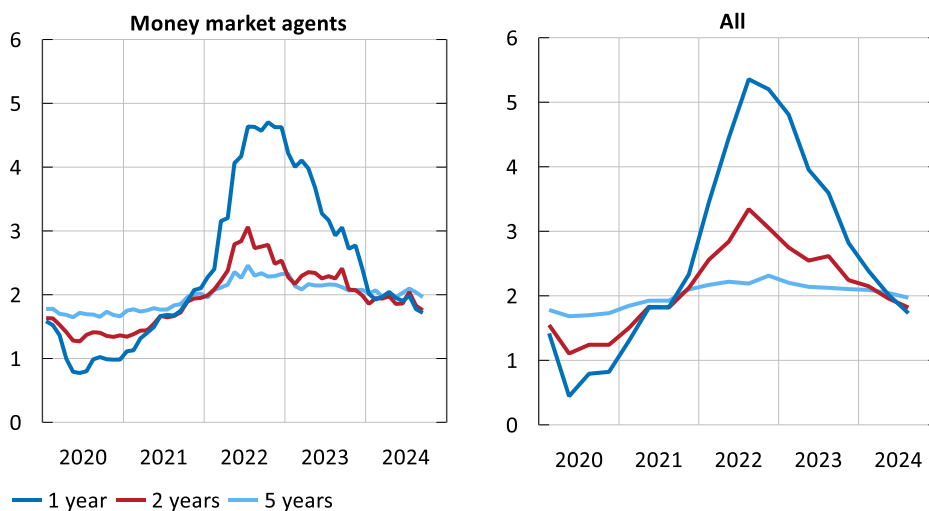
The Riksbank cut the policy rate in May and August this year. This was a consequence of a more favourable inflation outlook with a lower risk of lastingly high inflation.

#### The economic conditions call for an easing of monetary policy

Since the Riksbank reoriented monetary policy in a less contractionary direction during the first half of the year, the conditions for monetary policy have changed somewhat. The risk of inflation becoming too high has continued to decline in recent months. When adjusted for energy prices, which are volatile and difficult to predict, inflation will continue to be close to 2 per cent. Forward-looking indicators, for instance, companies' pricing plans in the Economic Tendency Survey indicate just as before that the conditions for stable inflation close to the target will remain good in the period ahead. Expectations of future inflation will also continue to be compatible with inflation close to the target, especially in the longer run (see Figure 31).

**Figure 31. Inflation expectations**

Per cent



Note. Refers to CPIF. Monthly data (left) and quarterly data (right).

Source: Kantar Prospera.

At the same time, the Swedish economy is still in a mild recession. The conditions for a recovery are in place, but the recovery appears to be proceeding more slowly than expected. Domestic demand is weak. This applies in particular to the interest-rate sensitive parts of the economy. The weak demand also affects the labour market and unemployment is expected to continue to rise somewhat during the remainder of the year.

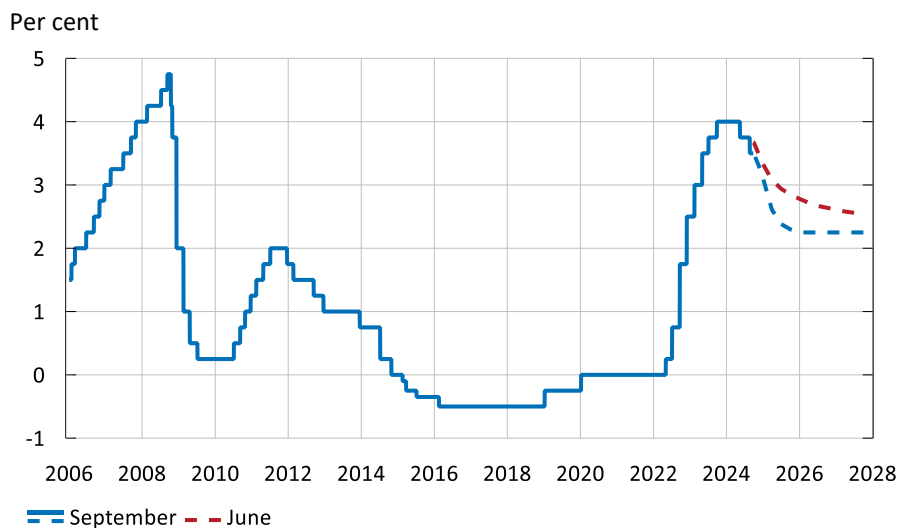
New information thus indicates weak economic developments in Sweden. Weaker economic signals are also a theme abroad. To support economic developments, speed up the recovery and thus contribute to inflation stabilising lastingly close to the target, the policy rate needs to be cut at a faster pace going forward.

Many central banks in other countries have begun to cut their policy rates. However, the forecast for the Swedish policy rate involves it being cut somewhat faster during the coming year than policy rates abroad, measured in terms of a trade-weighted international rate. The effects of the krona on inflation have been noticeable in recent years, when the krona depreciation has contributed to higher inflation. Interest differentials between Sweden and abroad are an important determining factor for exchange rate fluctuations. This is one reason why monetary policy abroad is important for Swedish monetary policy. However, at the same time, the conditions for monetary policy differ between the different economies. Sweden’s well-functioning institutions with regard to wage formation and fiscal policy, combined with interest-rate sensitivity are now contributing to good conditions for a recovery in the Swedish economy and low and stable inflation going forward.

### The forecast for the policy rate entails three or four cuts by the end of June 2025

The Executive Board has decided to cut the policy rate by 0.25 percentage points to 3.25 per cent. If the outlook for inflation and economic activity remains unchanged, the policy rate may also be cut at the two remaining meetings this year. The forecast for the policy rate reflects that a cut of 0.5 percentage points is possible at one of the coming meetings. It also indicates that one or two further cuts may be made during the first half of 2025. Monetary policy has thus changed significantly in a more expansionary direction (see Figure 32).

**Figure 32. 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.

In the forecast, the policy rate is cut gradually, in several stages. At the end of the forecast period, it is expected to be 2.25 per cent. The policy rate will then be roughly in line with a level that neither stimulates nor tightens the economy. However, there

is considerable uncertainty over this level.<sup>26</sup> Moreover, there is uncertainty over how quickly and how much a change in the interest rate affects inflation and resource utilisation. All in all, this means that it is appropriate to conduct monetary policy cautiously and to cut the policy rate in several stages. Cutting the policy rate in several stages also makes monetary policy more predictable, which is assessed to improve the transmission of the monetary policy conducted.<sup>27</sup>

The forecast for the policy rate entails the rate being cut faster and by somewhat more than was forecast in June (see Figure 32). The lower policy rate will contribute to increasing domestic demand and thereby attaining a recovery that accelerates next year. Economic activity will thereby improve gradually, which in turn will contribute to CPIF inflation stabilising close to 2 per cent during the forecast period. All in all, the forecast for the policy rate entails the real policy rate falling tangibly towards the end of 2024 and throughout 2025 (see Figure 33). The recovery means that resource utilisation in the economy will return to being close to normal at the end of the forecast period. CPIF inflation will move back towards 2 per cent as the effects of the large fluctuations in energy prices wane. Inflation measured as the CPIF excluding energy is close to 2 per cent during the entire forecast period.

The upcoming wage bargaining rounds are expected to take place in an environment where inflation is close to 2 per cent, and wages are expected to increase somewhat faster than their historical average. At the same time, monetary policy will also contribute to inflation expectations remaining firmly anchored at 2 per cent. The krona is expected to appreciate gradually and all in all the rate of increase in companies' costs is expected to be compatible with an inflation rate close to 2 per cent.

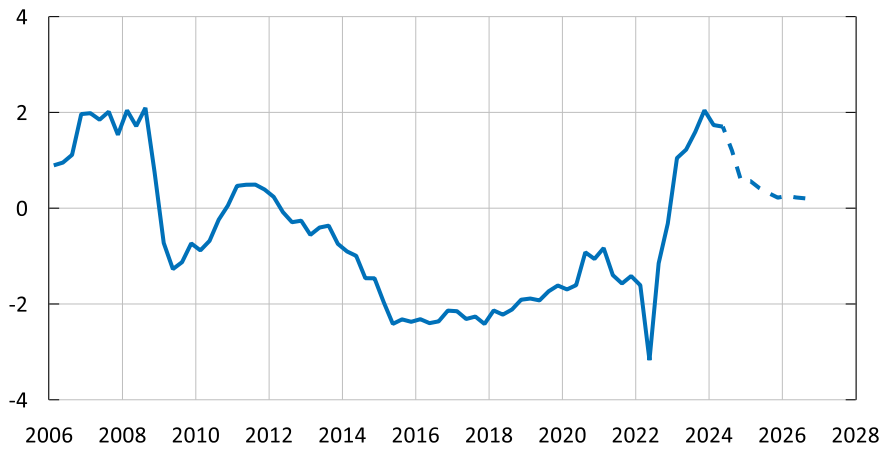
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<sup>26</sup> For further information about the interest rates in the longer run, see for instance the analysis "Structural factors determine interest rates in the longer run" in the *Monetary Policy Report*, March 2024, Sveriges Riksbank.

<sup>27</sup> For a deeper and more fundamental discussion of the motives for adjusting the interest rate in smaller steps, see Fact box "The policy rate is often adjusted gradually".

**Figure 33. Forecast for the real policy rate**

Per cent



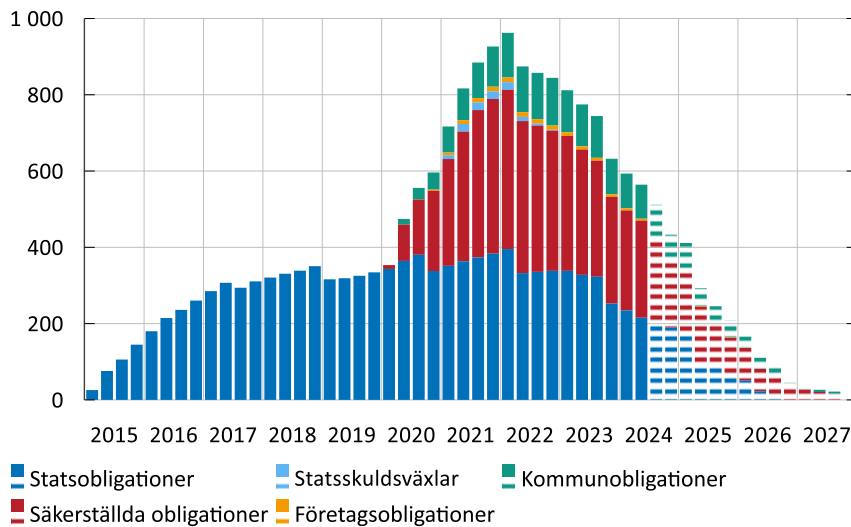
Note. The real policy rate is calculated as a quarterly average of the Riksbank's forecast for the policy rate one year ahead minus the forecast for CPI inflation for the corresponding period. The forecast therefore only extends to 2026 Q3. As the real policy rate is forward-looking, outcomes are calculated using the latest published forecasts at the time.

Source: The Riksbank.

As a result of bond maturities and the Riksbank's sales of government bonds, the Riksbank's securities holdings in Swedish kronor have almost halved since the beginning of 2022. During the second quarter of this year the holdings amounted to around SEK 565 billion. The normalisation of the Riksbank's balance sheet will continue according to the decision at the monetary policy meeting in January (see Figure 34). According to the Riksbank's Financial Markets Survey, the normalisation has coincided with an improvement in market liquidity on the secondary market for government bonds. The Riksbank's sales are not expected to make it more difficult to attain the monetary policy target as a continued normalisation of the balance sheet is assumed to have limited effect on the krona and the interest rates charged to households and companies. Later this year, the Riksbank is planning to return to the topic of what comprises a reasonable level for its asset holdings in the long term and describe how such a portfolio should be composed.

**Figure 34. The Riksbank's asset holdings**

Nominal amounts, SEK billion



Note. The dashed bars are a projection of the Riksbank's securities holdings. They are based on maturities and decisions that no asset purchases will be made after 2022, and that government bonds will be sold for a nominal value of SEK 6.5 billion per month. The series in the figure end 2027 Q3, which is the last quarter in the Riksbank's three-year forecast horizon.

Source: The Riksbank.

### 3.2 Uncertainty, risks and alternative scenarios

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 surrounding the forecast for the policy rate, and the policy rate may be either higher or lower than in the forecast. 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 from the Riksbank's forecast.<sup>28</sup>

Risks may also have different levels of significance for the monetary policy stance. For example, during at least part of the period of very high inflation, monetary policy was characterised by a low tolerance for high inflation, while the probability of overestimating and underestimating inflation was judged to be similar.

Since last spring there has been an evident shift in the balance of risks for the outlook for inflation and economic activity. The risk that inflation could accelerate once again and become too high is assessed to have declined further, while the risk that the recovery in the Swedish economy will take longer than expected has increased. The section below discusses a number of risk factors assessed important for the Swedish outlook for inflation and the Riksbank's monetary policy.

<sup>28</sup> There is also considerable uncertainty regarding the level of the policy rate in the longer run, something that was discussed in Chapter 3 and the analysis "Structural factors determine interest rates in the longer run", *Monetary Policy Report*, March 2024, Sveriges Riksbank.

## Uncertain developments abroad marked by severe geopolitical tensions

Although the risk has declined over the year, there are fully conceivable scenarios where inflationary pressures in the Swedish economy rise again. The risk of supply shocks in the global economy is elevated, partly due to Russia's invasion of Ukraine and the geopolitical tensions in the Middle East. The conflict in the Middle East has given rise to more lasting disruptions with regard to critical transport routes, which has recently contributed to higher freight prices. The global economy may also move in a more protectionist direction.<sup>29</sup> Signs of such a development can be seen in the United States, for instance. The two presidential candidates in the upcoming US election have given some guidance regarding the direction for trade policy, and regardless of who wins the upcoming election, the country appears to be moving in a more protectionist direction. However, there is considerable uncertainty over exactly what trade policy will be conducted in the United State after the election in November. A more protectionist world could entail higher costs for Swedish companies, too, resulting in higher inflation.

For some time now it has become increasingly clear that there are risks abroad that could entail lower Swedish inflationary pressures if they materialise. Although international developments are now expected to be weaker than was assessed in June, there is a risk that economic developments abroad will be even weaker. In the United States there are several questions regarding developments in the US labour market and the real economy in general. A weaker development in the US economy would probably be followed by more expansionary monetary policy in the United States and ultimately lower global interest rates.

Another risk is that the recovery in the European economy will take longer than expected. The Chinese economy has shown signs of weakness, with several indicators developing weakly. One example of this is worrying signs on the property market that could spill over onto weaker economic developments in China, with consequences for the global economy.

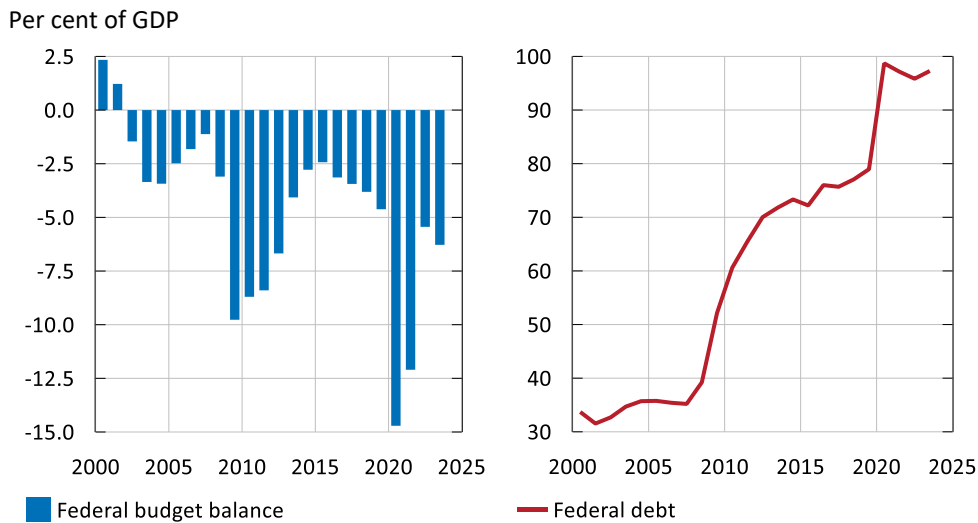
Furthermore, the budget deficit and national debt in both the United States and the euro area have risen in recent years. It is uncertain whether, and if so how, fiscal tightening will occur. In the United States, the public sector deficits after the pandemic have been huge, and the federal debt is just under 100 per cent of GDP (see Figure 35). Neither of the two US presidential candidates has presented any policy to limit the large deficits. This indicates that they could remain large going forward. If the deficits abroad continue to increase, the sustainability of a number of countries' public finances could be called into question, leading to rising government bond yields. This would in turn probably require significant fiscal tightening that would subdue growth in the economies concerned. Significantly lower demand from these countries would contribute to weaker Swedish economic activity and to lower inflationary pressures.

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<sup>29</sup> See the Fact box "China's exports and the western world's increased trade tariffs", *Monetary Policy Report*, June 2024.



**Figure 35. The US federal budget balance and debt**



Source: US Congressional Budget Office.

The krona has often weakened when geopolitical uncertainty has increased, but the interest rate differential between Sweden and abroad also has significance for the development of the krona. Recently, market expectations of international interest rates have fallen, and the krona has strengthened. It is now back to around the same level as in June. All in all, the uncertainty over economic developments entails risks that the krona could be either stronger or weaker than the Riksbank is forecasting. Depending on which risks are realised, the krona can under certain circumstances contribute to strengthening changes in inflationary pressures in the Swedish economy.

### Uncertainty regarding domestic demand and companies' price-setting behaviour

There are still risks linked to companies' price-setting behaviour. During the period of very high inflation, companies passed on their sharply rising costs to consumers unusually quickly, which shows that they are capable of quickly altering their price-setting behaviour.<sup>30</sup> The Riksbank's assessment is that companies' price-setting behaviour has largely normalised. However, there is uncertainty over how stable this normalisation is. If companies are unusually quick to react to cost increases by raising their prices, or if demand increases, it could lead to inflation rising more and faster than expected. How companies' price-setting behaviour affects inflation when their costs increase is discussed in more detail in a scenario with higher inflation described below.

At the same time, costs are now increasing more slowly than before, and the Swedish economy is in a weaker economic situation, where consumers can be assumed to be more price-sensitive. If companies have actually continued to allow prices to vary in line with costs to a greater degree than they did historically, it is possible that

<sup>30</sup> For further information on the frequency of companies' pricing and their significance for inflation, see the analysis "Microdata gives insights into how companies adjust their prices".

companies' lower cost increases will more immediately be reflected in consumer prices going forward. This would to some extent contribute to lower inflationary pressure than in the Riksbank's current assessment.

Although the Swedish labour market is weak, it has nevertheless withstood the economic recession well. There are, however, still signs that the labour market may weaken further going forward. For instance, the number of redundancies has increased gradually over the year, while the number of newly-registered vacancies has fallen. If this is a sign that demand is weaker than companies were expecting, it could cause them to reduce their workforces at a relatively rapid rate. This could in turn risk dampening demand further and ultimately also dampening inflationary pressures. It could also have negative repercussions for the housing market and mean that both household consumption and housing investment are weaker than forecast.

There is also an overall risk that low inflation over a longer period of time, for instance, via energy prices remaining low for a longer period of time or falling further, will have secondary effects on inflation. This could result in a more lastingly low inflation rate.

Two alternative scenarios are described below, to illustrate how a few of the risks mentioned above could affect the Swedish economy and the forecast for the policy rate.<sup>31</sup>

### **Scenario: higher inflation due to supply shocks leads to tighter monetary policy**

In the first scenario, we assume that inflationary pressures will be higher both in Sweden and abroad than in the Riksbank's forecast. The higher inflationary pressures arise as a result of supply shocks that lead companies to face higher costs for their intermediate goods. This type of situation could arise, for instance, if geopolitical tensions break out into new or extended armed conflicts, which prevent flows of strategically important goods. One example of such goods is energy. Another possible cause could be a larger trade conflict that pushes up global prices. Of course, a combination of various factors is also possible.

In this scenario, companies' costs increase as a result of global supply shocks. The higher costs burden companies' profits, and they therefore adjust their prices. This makes inflation rise. The speed of this cost transfer to prices (here referred to as companies' price-setting behaviour) is decisive for how much inflation rises.

The analysis "Microdata gives insights into how companies adjust their prices" describes how the price-setting frequency changed during the upturn in inflation. Companies changed their prices much more often during the period of high inflation than had historically been the case. At present, companies' price-setting behaviour

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<sup>31</sup> The scenarios are based on simulations in the Riksbank's macroeconomic model, MAJA. The scenarios also used estimated effects of monetary policy, like those reported in the analysis "Effects of monetary policy".

appears more normal again, but if their behaviour changes once again in the event of new supply shocks, the inflation upturn could once again be significant.

The difference in the inflation upturn can be seen in Figure 36. The pale blue line illustrates the inflation trend following on from supply shocks if price-setting behaviour is historically normal, while the yellow line illustrates the inflation trend if companies instead pass on their cost increases to consumers at a faster pace. The supply shocks burden economic developments and lead to GDP being lower than forecast.

Figure 37 shows possible developments in the policy rate in the two different cases. The response in the policy rate would probably differ substantially between the two cases, which is natural, as the inflation upturn differs in them. The higher inflation, together with the risk of a more lasting high inflation would mean that the Riksbank needed to raise the policy rate more, to bring inflation down to the target, and ward off tendencies towards secondary effects. In the case of historically normal price-setting behaviour, the Riksbank would not necessarily need to raise the interest rate, but would need to slow down the cuts in the interest rate.

In this scenario, the policy rate is unchanged for around one year, until inflation once again begins to fall towards the target. In the case where price-setting behaviour instead gives rise to a rapid increase in inflationary pressures, a stronger monetary policy response is needed, with policy rate increases, to bring inflation back towards the target within a reasonable time.

The higher interest rate contributes to stabilising inflation expectations close to the target and to inflation returning to 2 per cent during the latter part of the forecast period. One consequence of the monetary policy conducted is that demand in the economy is lower, which contributes to lower resource utilisation (see Figure 36). However, reacting early reduces the risk that the Riksbank will need to raise the interest rate more further ahead, resulting in much larger real economic consequences.

### **Scenario: lower demand leads to lower inflation**

In the second scenario, inflation is lower than in the forecast. Several risks are mentioned above, which if they materialise, could mean that the Swedish economy is weaker than forecast. There are both domestic risks and risks abroad that could lead to lower demand and higher inflation.

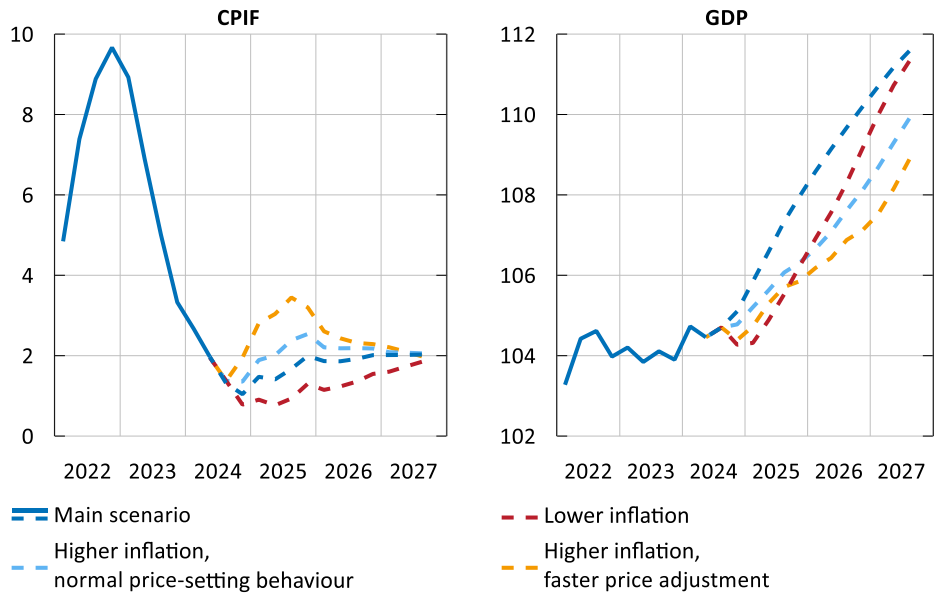
If international developments were weaker, Swedish exports would be negatively affected. This could spread to domestic demand, partly through confidence channels and partly through higher unemployment resulting in lower domestic demand. If the weaker demand were instead essentially domestic, the channel would go directly through lower demand to higher unemployment, resulting in even lower demand. In both cases, inflation and GDP would be lower than in the forecast.

A possible monetary policy response is shown in the red line in Figure 37. To reverse the development and stabilise inflation close to target, the Riksbank would need to cut the policy rate much more and much faster than in the forecast. The lower policy

rate would stimulate domestic demand. Consumption and investment would recover, and the upturn in unemployment would be dampened. This in turn would contribute to inflation once again rising towards the target, and being back at 2 per cent towards the end of the forecast period (see the red line in Figure 36).

**Figure 36. The forecast and alternative scenarios for CPIF and GDP**

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

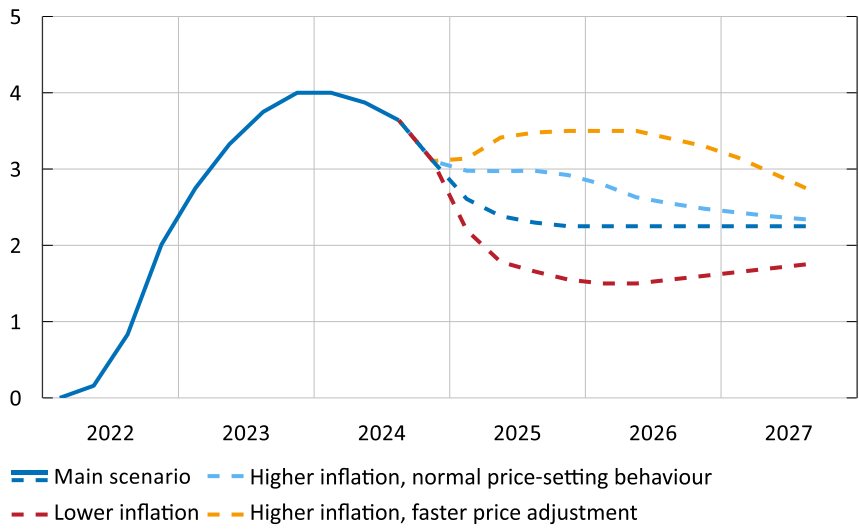


Note. Solid line refers to outcome, dashed line represents the Riksbank's forecasts and scenarios. Quarterly averages. Seasonally-adjusted data (right).

Sources: Statistics Sweden and the Riksbank.

**Figure 37. Forecast and alternative scenarios for the policy rate**

Per cent



Note. Solid line refers to outcome, dashed line represents the Riksbank's forecasts and scenarios. The deviations from the forecast in the alternative scenarios are not symmetrical as they illustrate the monetary policy response to specific 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.

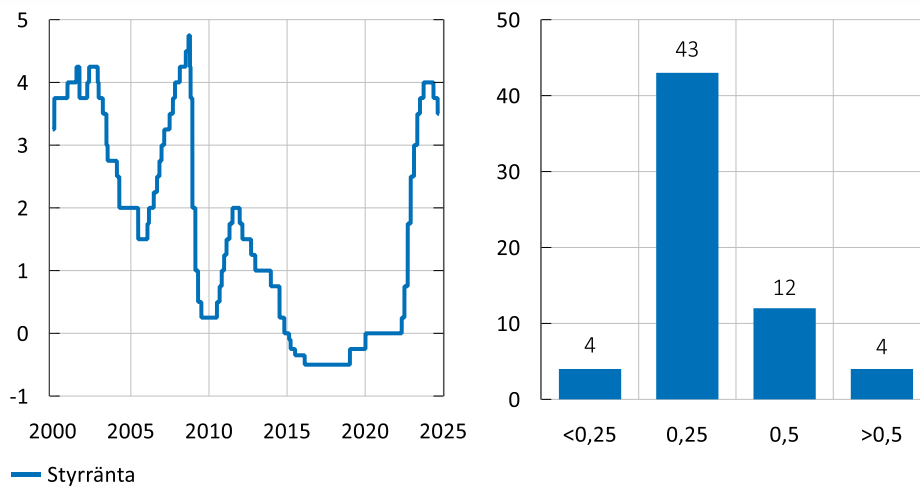
## FACT BOX – The policy rate is often adjusted gradually

A simple principle for setting the policy rate under the framework of an inflation targeting regime is that it is raised when inflation is above target and economic activity is strong, and cut when inflation is below target and economic activity is weak. If economic activity is normal and inflation is around the target, the policy rate is set close to a normal or neutral level.<sup>32</sup> In accordance with this simple principle, one might consider the policy rate being adjusted upwards or downwards following new information on inflation and economic activity, without any clear pattern.

However, studying how central banks with inflation targets have adjusted their policy rates over time reveals a few characteristics: Firstly, the policy rate is usually adjusted in small steps. Secondly, adjustments in a certain direction are generally followed by adjustments in the same direction, so that increases followed by cuts at the subsequent meeting are very unusual. Figure 38 (left-hand image) shows the actual development of the policy rate in Sweden over the last 25 years. We can clearly see that the patterns described above are also a good description of the Riksbank’s monetary policy. Figure 38 (right-hand image) shows the size of the decided policy rate adjustments. Of the 63 agreed policy rate adjustments over the last 25 years, 43 (almost 70 per cent) amounted to 0.25 percentage points. In almost 90 per cent of cases, the policy rate has changed by either 0.25 or 0.50 percentage points.

**Figure 38. Development of the Riksbank’s policy rate and distribution of adjustments by size**

Per cent (left) and number (right)



Note. Daily data.

Source: The Riksbank.

<sup>32</sup> One illustration of this is the well-known Taylor rule; see J. Taylor (1993), “Discretion versus Policy Rules in Practise”, Carnegie-Rochester Conferences Series on Public Policy. For discussions, see, for example, B. Bernanke (2015), “The Taylor Rule: A benchmark for monetary policy?”, Brookings Commentary, and M. Jonsson and G. Katinic (2017), “Is the Swedish monetary policy in line with the Taylor rule?”, *Economic Commentaries* no. 4, Sveriges Riksbank.

The monetary policy literature identifies some conceivable reasons for the common occurrence of gradual policy rate adjustments.<sup>33</sup>

- There is considerable uncertainty regarding economic developments. Economic data are uncertain and often revised in retrospect. There is also uncertainty regarding, for instance, the level of the neutral policy rate.<sup>34</sup> The effects of monetary policy on the economy are also uncertain. All of these factors could make it appropriate to proceed cautiously step by step in monetary policy.
- If the economy is primarily affected by long-term interest rates, a change in the policy rate will affect the economy more if it is expected to be followed by more adjustments in the same direction.
- The risk of financial instability may decrease. Large interest rate adjustments in different directions may create variations in market rates and prices of financial assets, contributing to increased uncertainty in the economy.
- There may be a wish among central bank decision-makers to avoid reversing monetary policy, as this may be difficult to communicate and could ultimately harm confidence in the central bank. There may also be psychological reasons that make individuals, including monetary policy decision-makers, averse towards deviating from an agreed plan.<sup>35</sup>

Much of the literature on gradual monetary policy was published in the early or mid-2000s.<sup>36</sup> This was during “The great moderation” when the world economy was developing calmly. Since then, several dramatic events have affected the world economy, such as the financial crisis of 2008, the pandemic of 2020 and the subsequent large rise in inflation. In these situations there are few doubts regarding where our interest rate is heading and a gradual strategy may be less suitable. For example, in conjunction with the global financial crisis of 2008, the Riksbank cut the policy rate by no less than 4.5 percentage points over the course of a few months, including by 1.75 per cent at a single meeting. And, during the sharp upswing in inflation in 2022, the Riksbank raised the policy rate by a total of 1.75 percentage points at only two monetary policy meetings during the autumn.

Gradual adjustments of the policy rate are thus not a general principle for conducting monetary policy but a good description under more normal circumstances. If the economic conditions change drastically, it may be important to act forcefully.<sup>37</sup>

<sup>33</sup> See, for example, B. Bernanke (2004), “Gradualism”, speech published on 20 May, Federal Reserve Board of Governors, A. Blinder (2006), “Monetary Policy Today: Sixteen Questions and about Twelve Answers”, Working Paper no. 129, Center for Economic Policy Studies, Princeton University and G. Rudebusch (2006), “Monetary Policy Inertia: Fact or Fiction?”, *International Journal of Central Banking* no. 4.

<sup>34</sup> For a discussion of the neutral policy rate, see, for example, the analysis “Structural factors determine interest rates in the longer run”, in *Monetary Policy Report*, March 2024, Sveriges Riksbank.

<sup>35</sup> Behavioural economics sometimes uses the term *sunk cost fallacy* to describe an unwillingness to break off a planned activity, even though the gains from doing so actually outweigh the costs.

<sup>36</sup> See the references in footnote 1. For a new study, see S.C. Smith, A. Timmerman and J.H. Wright (2024), “Monetary Policy in Uncertain Times”, FEDS Notes.

<sup>37</sup> See also M.C. Daly (2023), “What the Moment Demands”, Economic Letter No. 30, Federal Reserve Bank of San Francisco.

## ANALYSIS – Effects of monetary policy

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An important starting point for the Riksbank's monetary policy work is assessments of the scale of the effects monetary policy has on inflation and the rest of the economy. The effects are difficult to measure and the Riksbank regularly evaluates and elaborates on the analysis on which the assessments are based. As a part of this work, the Riksbank has used new methods that can be compared with calculations using more traditional methods. The methods give similar results, but they differ on certain points. It is important to be aware of the uncertainty of the effects.

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Prior to the monetary policy decision, the Riksbank produces various scenarios to evaluate different policy alternatives and assess risks. Apart from presenting a main scenario with accompanying monetary policy, the Riksbank has also started to include alternative scenarios to a greater extent in its Monetary Policy Reports to help communicate its assessments clearly.<sup>38</sup> One of the roles of alternative scenarios is to illustrate how monetary policy would need to be changed if developments were to diverge considerably from the main scenario.

An important starting point in the work on forecasts and scenarios is assessments of the size of the effects monetary policy has on inflation and the rest of the economy. The Riksbank regularly assesses the analyses on which the assumptions are based, and a number of projects have recently been implemented for this purpose. This analysis presents an overview of the results from two of the Riksbank's studies. An Economic Commentary describes the results in more detail and discusses the challenges of calculating the effects of monetary policy.<sup>39</sup> Monetary policy affects the economy via various mechanisms and some of these have a rapid effect, while others take longer. It is also difficult to separate cause and effect when studying developments in the macro economy. It is therefore a challenge to isolate the part of the developments that are due to monetary policy.

To gain an idea of the size of the effects of monetary policy, one often uses data on how the policy rate, GDP, inflation and so on have developed historically, and calculates the effects of monetary policy with statistical methods. The research literature contains various such methods, all with their advantages and disadvantages. One aim of the Riksbank's work has been to produce results with new methods and data and to compare them with updated calculations using more traditional methods.<sup>40</sup>

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<sup>38</sup> See the section on scenarios in Chapter 3.

<sup>39</sup> B. Andersson and H. Lundvall (2024), "Effects of monetary policy", *Economic Commentary* no. 16, Sveriges Riksbank.

<sup>40</sup> The Riksbank will publish documentation of the analysis with the newer method later this year. The analysis with the more traditional method is documented in E. Berggren, S. Mammos and I. Strid (2024), "The effects of monetary policy in Sweden during the inflation targeting period: estimates with structural VAR models", *Staff memo* August 2024, Sveriges Riksbank.



Put simply, both studies use a statistical model, a so-called vector autoregression (VAR) to calculate what effects a change in the policy rate has on, for instance, GDP, unemployment, the exchange rate and inflation. An important difference between the studies is the method used to ensure that it is the effects of monetary policy that are measured, and not the effects of other factors that affect inflation and the other macroeconomic variables. The method in one study is to use assumptions of how quickly monetary policy affects various variables in the short term. The other study isolates monetary policy changes in a more direct way. Here, the method is to use information on how prices on financial markets change during a short time interval in connection with the Riksbank having published new information on monetary policy.

### **The results are relatively consistent, but the effects on GDP and unemployment differ on certain points**

The results of the two studies are similar in several ways, and qualitatively the effects are completely consistent.<sup>41</sup> They also agree with economic theory – when, for instance, the interest rate is raised, the effect is a stronger exchange rate, higher unemployment and lower levels of GDP and inflation, compared with if the interest rate had not been raised. In terms of size too, the effects resemble each other in certain dimensions. The effect on inflation is roughly the same according to the two studies. This applies both to how the effect changes over time and how much inflation is affected at most, that is, the size of the maximum effect. According to both methods, the effect of a policy rate increase is largest after around 1 year. If the policy rate is raised by 1 percentage point, inflation one year later is pushed down by around 0.5 percentage points. After this, the effect gradually abates.

According to both studies, the effect on GDP is largest after around 2 years. On the other hand, the size differs, with the effect on GDP being at most 0.8 per cent in one study and 1.8 per cent in the other if the policy rate is raised by 1 percentage point. The greatest difference between the results is the effect on unemployment. The results in one of the studies indicate that the rate increase has a maximum effect on unemployment that is just over 0.6 percentage points. The maximum effect is also synchronised with the maximum effect on GDP, that is, it occurs after around 2 years. The results in the second study indicate that the maximum effect on unemployment is around 0.2 percentage points and that it occurs a couple of quarters after the policy rate has been raised.

### **It is important to recognise that the effects are uncertain**

Even if the results are relatively consistent, an overall conclusion from studies of this nature is that there is considerable uncertainty as to how large an effect monetary policy has on inflation and the rest of the economy. The statistical methods in the studies themselves contain uncertainty and the results differ on various points, depending on the method. Moreover, the historical correlations between the policy rate, inflation and the rest of the economy on which the calculations are based can

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<sup>41</sup> There is a figure illustrating the results in B. Andersson and H. Lundvall (2024), “Effects of monetary policy”, *Economic Commentary* no. 16, Sveriges Riksbank.

change over time. One example from recent years is the change in companies' price-setting behaviour (see further Chapter 3). It is important to be aware of these various sources of uncertainty. One way of making the conclusions more robust is not to rely on the results from a specific method or model, but to weigh together different results. The Riksbank will take the results of the studies made as a starting point in the forecasting and scenario work going forward. However, when one is to assess the impact of monetary policy, it is important to also weigh in other types of information not included in the models. Ultimately, one always needs to assess whether the effects appear reasonable in the relevant scenario.

# Forecast tables

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

**Table 1. Policy rate forecast**

Per cent, quarterly averages

	2024Q2	2024Q3	2024Q4	2025Q3	2026Q3	2027Q3
<b>Policy rate</b>	3.87 (3.87)	3.64 (3.67)	3.11 (3.33)	2.30 (2.85)	2.25 (2.64)	2.25

Source: The Riksbank.

**Table 2. Inflation**

Annual percentage change, annual average

	2023	2024	2025	2026
<b>CPIF</b>	6.0 (6.0)	1.7 (2.0)	1.6 (1.8)	1.9 (1.9)
<b>CPIF excl. energy</b>	7.5 (7.5)	2.6 (2.6)	2.0 (2.0)	2.0 (2.0)
<b>CPI</b>	8.5 (8.5)	2.7 (3.1)	0.4 (1.3)	1.7 (1.6)
<b>HICP</b>	5.9 (5.9)	1.8 (2.1)	1.5 (1.7)	1.9 (2.0)

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

	2023	2024	2025	2026
<b>Household consumption</b>	-2.3 (-2.3)	0.1 (1.1)	2.8 (2.3)	2.9 (2.5)
<b>Public consumption</b>	0.7 (1.0)	1.2 (1.3)	1.3 (1.2)	1.3 (1.3)
<b>Gross fixed capital formation</b>	-1.4 (-1.3)	-2.2 (-0.6)	1.8 (1.3)	3.6 (2.7)
<b>Stock investments*</b>	-1.4 (-1.3)	0.1 (-0.2)	-0.2 (0.0)	0.0 (0.0)
<b>Exports</b>	3.2 (3.3)	2.0 (1.5)	2.3 (2.4)	3.6 (3.9)
<b>Imports</b>	-1.1 (-1.0)	0.4 (0.5)	2.5 (2.6)	4.0 (3.8)
<b>GDP</b>	-0.3 (-0.2)	0.8 (1.1)	1.9 (1.7)	2.5 (2.4)
<b>GDP, calendar-adjusted</b>	-0.1 (0.1)	0.8 (1.1)	2.1 (1.9)	2.3 (2.1)
<b>Final domestic demand*</b>	-1.2 (-1.1)	-0.2 (0.7)	2.0 (1.7)	2.5 (2.1)
<b>Net exports*</b>	2.3 (2.3)	0.9 (0.6)	0.0 (0.0)	0.0 (0.2)
<b>Current account (NA), percentage of GDP</b>	6.2 (6.1)	7.4 (8.0)	7.9 (8.4)	8.3 (9.1)

\* Contribution to GDP growth, percentage points

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

Sources: Statistics Sweden and the Riksbank.

**Table 4. Production and employment**

Annual percentage change unless otherwise specified

	2023	2024	2025	2026
<b>Population, aged 15-74</b>	0.5 (0.5)	0.1 (0.2)	0.3 (0.3)	0.3 (0.3)
<b>Potential employment</b>	0.9 (0.9)	0.9 (0.8)	0.8 (0.7)	0.7 (0.6)
<b>Potential hours worked</b>	1.0 (0.9)	1.0 (0.9)	0.9 (0.8)	0.8 (0.7)
<b>Potential GDP</b>	1.7 (1.8)	1.7 (1.7)	1.7 (1.7)	1.6 (1.6)
<b>GDP, calendar-adjusted</b>	-0.1 (0.1)	0.8 (1.1)	2.1 (1.9)	2.3 (2.1)
<b>Hours worked, calendar-adjusted</b>	1.4 (1.4)	-0.1 (-0.2)	0.6 (0.6)	1.2 (1.0)
<b>Employed persons</b>	1.4 (1.4)	-0.4 (-0.6)	0.4 (0.5)	1.0 (0.8)
<b>Labour force</b>	1.6 (1.6)	0.3 (0.3)	0.4 (0.4)	0.7 (0.5)
<b>Unemployment*</b>	7.7 (7.7)	8.4 (8.5)	8.4 (8.3)	8.0 (8.0)
<b>Employment gap**</b>	0.8 (0.8)	-0.5 (-0.6)	-0.9 (-0.9)	-0.6 (-0.7)
<b>Hours gap**</b>	0.6 (0.6)	-0.5 (-0.6)	-0.7 (-0.8)	-0.3 (-0.5)
<b>GDP gap**</b>	-0.2 (-0.3)	-1.2 (-1.1)	-0.8 (-0.8)	-0.1 (-0.3)

\* Per cent of labour force

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

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

	2023	2024	2025	2026
<b>Hourly wage, NMO</b>	3.8 (3.8)	3.9 (3.9)	3.6 (3.6)	3.6 (3.6)
<b>Hourly wage, NA</b>	3.8 (3.8)	4.1 (4.0)	3.6 (3.6)	3.6 (3.6)
<b>Hourly labour cost, NA</b>	5.4 (5.1)	4.2 (4.1)	3.6 (3.6)	3.6 (3.6)
<b>Productivity</b>	-1.5 (-1.3)	0.9 (1.3)	1.4 (1.4)	1.1 (1.1)
<b>Unit labour cost</b>	7.1 (6.6)	3.3 (2.7)	2.1 (2.2)	2.4 (2.5)

Note. NMO refers to 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 contributions and payroll 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	2023	2024	2025	2026
<b>Euro area</b>	0.11	0.46	0.5 (0.6)	0.8 (0.8)	1.3 (1.5)	1.3 (1.4)
<b>United States</b>	0.16	0.08	2.5 (2.5)	2.6 (2.3)	1.5 (1.8)	1.9 (2.1)
<b>China</b>	0.19	0.10	5.6 (5.5)	4.8 (5.1)	4.3 (4.5)	4.1 (4.2)
<b>KIX weighted</b>	0.75	1.00	1.5 (1.5)	1.7 (1.6)	1.9 (2.1)	2.0 (2.0)
<b>The World (PPP-weighted)</b>	1.00	—	3.2 (3.2)	3.2 (3.2)	3.2 (3.3)	3.2 (3.2)

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.

CPI	2023	2024	2025	2026
<b>Euro area (HICP)</b>	5.4 (5.4)	2.4 (2.3)	2.0 (2.0)	2.0 (2.0)
<b>United States</b>	4.1 (4.1)	2.8 (2.9)	2.0 (2.1)	2.2 (2.3)
<b>KIX weighted</b>	5.6 (5.6)	3.1 (3.0)	2.6 (2.6)	2.4 (2.4)

	2023	2024	2025	2026
<b>International policy rate, per cent</b>	3.6 (3.6)	4.1 (4.1)	3.1 (3.4)	2.7 (2.9)
<b>Crude oil price, USD/barrel Brent</b>	82.1 (82.1)	80.0 (81.9)	71.7 (77.3)	70.4 (74.1)
<b>Swedish export market</b>	1.0 (1.2)	0.7 (0.7)	3.3 (3.4)	3.3 (3.5)

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 specified, annual average

	2023	2024	2025	2026
<b>The Riksbank's policy rate</b>	3.5 (3.5)	3.7 (3.7)	2.4 (2.9)	2.3 (2.7)
<b>10-year rate</b>	2.5 (2.5)	2.2 (2.3)	2.0 (2.2)	1.9 (2.1)
<b>Exchange rate, KIX, 18 Nov 1992 = 100</b>	127.5 (127.5)	125.3 (124.8)	122.4 (121.5)	118.6 (117.9)
<b>General government net lending, per cent of GDP</b>	-0.6 (-0.6)	-1.6 (-1.4)	-1.1 (-0.7)	-0.6 (-0.4)

Note. The Riksdag decided on 18 June 2024 on a capital injection to the Riksbank of SEK 25 billion, corresponding to 0.4 per cent of GDP, year 2024. The forecast for general government net lending includes the effect of the capital injection.

Sources: Statistics Sweden and the Riksbank.



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