Monetary Policy Report

April 2022

Monetary Policy Report

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

The purpose of the Monetary Policy Report is to summarise background material for monetary policy decisions, and to spread knowledge about the Riksbank's assessments. By publishing the reports, the Riksbank aims to make it easier for external parties to follow, understand and assess its monetary policy.

The Riksbank must submit a written report on monetary policy to the Riksdag (Swedish Parliament) Committee on Finance at least twice a year (see Chapter 6, Article 4 of the Sveriges Riksbank Act (1988:1385)). During the spring, a special material is submitted as a basis for the evaluation of monetary policy. During the autumn, the Monetary Policy Report is submitted as an account of monetary policy.

The Executive Board made a decision on the Monetary Policy Report on 27 April 2022. The report may be downloaded in PDF format from the Riksbank's website www.riksbank.se, where more information about the Riksbank can also be found.

[1] See "Monetary policy in Sweden" 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

Monetary policy strategy

- According to the Sveriges Riksbank Act, the objective for monetary policy is to maintain price stability. The Riksbank has defined this as a 2 per cent annual increase in the consumer price index with a fixed interest rate (the CPIF).
- At the same time as monetary policy is aimed at attaining the inflation target, it shall support the objectives of general economic policy for the purpose of attaining sustainable growth and a high level of employment. This is achieved by the Riksbank, in addition to stabilising inflation around the inflation target, endeavouring to stabilise production and employment around paths that are sustainable in the long term. The Riksbank therefore conducts what is generally referred to as flexible inflation targeting. This does not mean that the Riksbank neglects the fact that the inflation target is the overriding objective.
- It takes time before monetary policy has a full impact on inflation and the real economy. Monetary policy is therefore guided by forecasts for economic developments. The Riksbank publishes its own assessment of the future path for the repo rate. This repo-rate path is a forecast, not a promise.
- In connection with every monetary policy decision, the Executive Board makes an assessment of the repo-rate path needed, and any potential supplementary measures necessary, for monetary policy to be well balanced. The trade-off is normally a question of finding an appropriate balance between stabilising inflation around the inflation target and stabilising the real economy.
- There is no general answer to the question of how quickly the Riksbank aims to bring the inflation rate back to 2 per cent if it deviates from the target. A rapid return may in some situations have undesirable effects on production and employment, while a slow return may weaken confidence in the inflation target. The Riksbank's general ambition has been to adjust monetary policy so that inflation is expected to be fairly close to the target in two years' time.
- To illustrate the fact that inflation will not always be exactly 2 per cent each month, a variation band is used that spans between 1 and 3 per cent, which captures around three quarters of the historical monthly outcomes of CPIF inflation. The Riksbank always strives for 2 per cent inflation, regardless of whether inflation is initially inside or outside the variation band.
- According to the Sveriges Riksbank Act, the Riksbank's tasks also include promoting a safe and efficient payment system. Risks linked to developments in the financial markets are taken into account in the monetary policy decisions. With regard to preventing an unbalanced development of asset prices and indebtedness, however, well-functioning regulation and effective supervision play a central role. Monetary policy only acts as a complement to these.
- In some situations, as in the financial crisis 2008–2009, the repo rate and the repo-rate path may need to be supplemented with other measures to promote financial stability and ensure that monetary policy is effective.
- The Riksbank endeavours to ensure that its communication is open, factual, comprehensible and up-to-date. This makes it easier for economic agents to make good economic decisions. It also makes it easier to evaluate monetary policy.

Decision-making process

The Executive Board of the Riksbank usually holds five monetary policy meetings per year at which it decides on monetary policy. A Monetary Policy Report is published in connection with these meetings. Approximately two weeks after each monetary policy meeting, the Riksbank publishes minutes from the meeting, in which it is possible to follow the discussion that led to the current decision and to see the arguments put forward by the different Executive Board members.

Presentation of monetary policy decision

The monetary policy decision is presented in a press release at 09.30 on the day following the monetary policy meeting. The press release also states how the individual members voted and provides the main motivation for any reservations entered. A press conference is held on the day following the monetary policy meeting.

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The global economy is still affected by the major disruption caused by the pandemic. In addition there is now **Russia's invasion of Ukraine**. The war has caused great human suffering and led millions of people to flee. The economic consequences can be seen in **new disruptions in global value chains, a worsening of delivery problems and increased uncertainty** about access to several important commodities. Higher prices for energy and food are pushing inflation up further in a situation where the rate of price increase is already high in several countries.

CPIF inflation was 6.1 per cent in March, which is the highest level since the beginning of the 1990s. Last year's upturn in inflation was largely explained by rapid increases in electricity and fuel prices, **but since the monetary policy decision in February, inflation has become significantly higher than expected, even disregarding energy prices**. Outcomes point to the upturn now being broad.

Monetary policy cannot affect commodity or freight prices. It is therefore unavoidable that the rate of increase in consumer prices of, for example, energy, food and certain other goods, will remain high for some time yet. However, the Riksbank can conduct monetary policy to counteract the higher inflation becoming entrenched in price-setting and wage-formation.

The Executive Board has therefore decided to raise the repo rate from 0 per cent to 0.25 per cent. The forecast for the repo rate is that it will be raised a further two to three times this year and will be slightly below 2 per cent at the end of the forecast period. The Executive Board has also decided to reduce the pace of the asset purchases during the second half of the year, so that the holdings begin to decline. With this monetary policy, inflation is expected to fall back next year and be close to 2 per cent from 2024.

1 Monetary policy to safeguard the inflation target

The global economy is still affected by the major disruption caused by the pandemic. In addition there is now Russia's invasion of Ukraine. The war has caused great human suffering and led millions of people to flee. The economic consequences can be seen in new disruptions in global value chains, a worsening of delivery problems and increased uncertainty about access to several important commodities. Higher prices for energy and food are pushing inflation up in a situation where it is already high in several countries.

CPIF inflation was 6.1 per cent in March, which is the highest level since the beginning of the 1990s. Last year's upturn in inflation was largely explained by rapid increases in energy prices, but since the monetary policy decision in February, inflation has become significantly higher than expected, even disregarding energy prices. Outcomes point to the upturn now being broad.

Monetary policy cannot affect the fact that commodity and shipping prices are high. It is therefore unavoidable that the rate of increase in consumer prices of, for example, energy, food and certain other goods, will remain high for some time yet. However, the Riksbank can conduct monetary policy to counteract the higher inflation becoming entrenched in price-setting and wage-formation. The Executive Board has therefore decided to raise the repo rate from 0 per cent to 0.25 per cent. The forecast for the repo rate is that it will be raised a further two to three times this year and will be slightly below 2 per cent at the end of the forecast period. The Executive Board has also decided to reduce the pace of the asset purchases during the second half of the year, so that the holdings begin to decline. With this monetary policy, inflation is expected to fall back next year and be close to 2 per cent from 2024. The Riksbank adapts its monetary policy to developments in the economy and is prepared to raise the repo rate faster if needed to ensure that inflation returns to the target.

1.1 International prices rising rapidly

Increased uncertainty and rapidly rising prices in the wake of the pandemic and the war in Ukraine

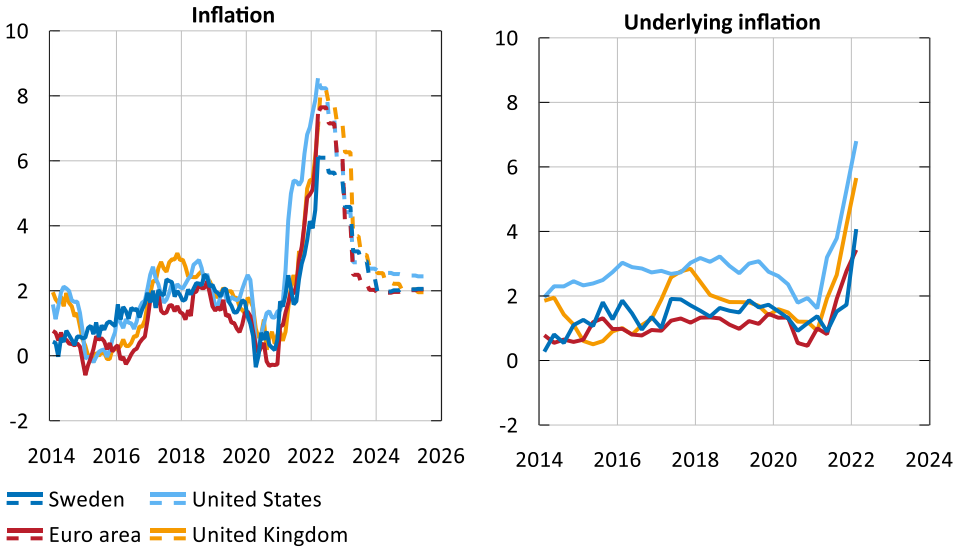
After over two years, the pandemic has begun to release its grip on the world economy, although there is now widespread spread of infection in parts of Asia, such as China. Many countries have more than recovered the severe downturns in GDP that took place at the start of 2020, and outcomes and indicators at the start of the current year point to continued good growth in both the euro area and the United States. Since Russia's invasion of Ukraine, however, the geopolitical security situation in Europe has deteriorated significantly. The war has not only caused great human suffering and led millions of people to flee but also affects the economy. It is difficult to predict the economic consequences, but there are many indications that the war and the western world's sanctions against Russia will hold back growth this year (see the article "Economic consequences of the war in Ukraine").

The severe fluctuations in demand during the pandemic created disruptions in global value chains. Last year, the rapid recovery in the global economy, combined with disruptions to freight and production, meant that inflation rose in many countries. The production problems have worsened with new shutdowns in China and Russia's invasion of Ukraine. However, at present the most apparent effect of the war is that uncertainty has increased regarding access to several important commodities, such as oil, natural gas and grains. World market prices for fossil fuels have risen and energy prices in Europe have risen significantly. Higher prices for energy and food are thus expected to push inflation up in a situation where it is already high in many countries.

In the United States, the United Kingdom and the euro area, inflation is now close to 8 per cent, which are the highest outcomes in several decades. Energy prices are an important explanation for this, but even measures of underlying inflation, which disregard energy and, in some cases, food prices, have risen in many countries. The price increases have spread further and reflect not only the direct effects of high oil and gas prices (see Figure 1). In the United States in particular, underlying inflation has risen rapidly and in March amounted to 6.5 per cent.

Higher energy prices push companies' costs up. For households, the higher prices mean their real incomes become lower, which is expected to lead to lower consumption. All in all, growth is expected to slow down in the short term and become lower this year in relation to the February assessment. This applies not least to the euro area. At the same time, public expenditure for migration has increased in many countries, and various forms of fiscal policy measures have been launched to compensate or protect households and companies from higher costs. To some extent this counteracts the slowdown in growth. Higher inflation and higher interest rates are expected to dampen demand and international GDP growth (KIX-weighted) will slow during the forecast period, from 3 per cent this year to just over 2 per cent in 2024.

Figure 1. Inflation and underlying inflation in various countries and regions
Annual percentage change



Note. Consumer prices refer to the CPIF for Sweden, the CPI for the United States and the United Kingdom and the HICP for the euro area. Solid line refers to monthly outcomes, broken line refers to the Riksbank's quarterly forecast. Underlying inflation shows quarterly data and refers to the CPIF excluding energy for Sweden, the HICP excluding energy for the euro area and the CPI excluding energy and food for the United States and United Kingdom.

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

As inflation has risen, many central banks have raised or signalled raises in their policy rates and have adjusted purchases and holdings of securities in a more restrictive direction. This applies in particular in countries where the underlying inflation rate has risen significantly. For example, in March the US Federal Reserve raised the interval for its policy rate by 0.25 percentage points to 0.25–0.50 per cent and the Bank of England raised its policy rate by 0.25 percentage points to 0.75 per cent. The European Central Bank, ECB, held its policy rates unchanged at the meeting in April, but has signalled that it will soon conclude the net asset purchases and after that begin raising policy rates.

As market participants now expect a faster pace of monetary policy tightening, bond yields have risen rapidly. For instance, the 5-year bond yields in Sweden and the United States are now almost 1 percentage point higher than at the monetary policy meeting in February. In 2023, inflation is expected to fall back and gradually approach the central banks' inflation targets.

Despite fluctuations in pricing on certain financial markets in connection with the Russian invasion, so far there have been few signs of problems with market functioning. Nor are funding conditions for households and companies deemed to have been affected notably. The krona depreciated at the beginning of the year, but has strengthened since March. Mainly as a result of rising bond yields, Swedish financial conditions are assessed to be somewhat less expansionary than they were at the time of the monetary policy decision in February.

Swedish growth in a calmer phase

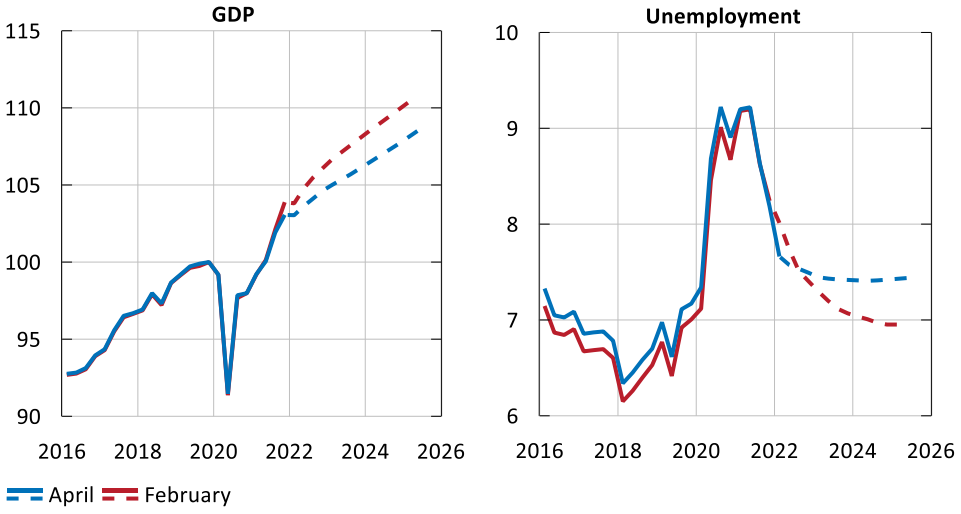
GDP increased rapidly last year, despite supply disruptions, but growth slowed down at the beginning of 2022, partly due to the war in Ukraine. The Riksbank's forecast is based on the current sanctions against Russia remaining in place during the entire forecast period. At the same time, refugee immigration and investments in defence will contribute to higher demand, especially through increased public sector consumption.

Household saving rose substantially at the start of the pandemic. Households' consumption patterns began to normalise last year, a development that is expected to continue this year. This implies a decline in saving in the household sector, despite the uncertainty linked to the war in Ukraine, and that consumption will develop relatively strongly in the near term. However, the high inflation will hamper household consumption, even if the compensation announced by the Government for high electricity and fuel prices partly counteracts the negative effects.

The high inflation means that monetary policy will begin to be tightened, which will slow down economic activity in Sweden. High inflation and rising interest rates will contribute to household consumption and business sector investment being weaker than was assumed in the February forecast. The high demand for housing will slow down and housing prices are expected to fall, which will also lead to a slowdown in housing construction. The forecast for GDP growth has therefore been revised down, but growth is still expected to be fairly good (see Figure 2). Demand for labour will also still be relatively high in the coming years, but unemployment will level off at a higher level than in the previous forecast (see Figure 2).

Figure 2. GDP and unemployment according to LFS in Sweden

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



Note. Unemployment prior to 2021 has now been adjusted for the time series break that arose in the LFS in January 2021, see fact box at the end of Chapter 3. Solid line refers to outcome, broken line represents the Riksbank's forecast.

Sources: Statistics Sweden and the Riksbank.

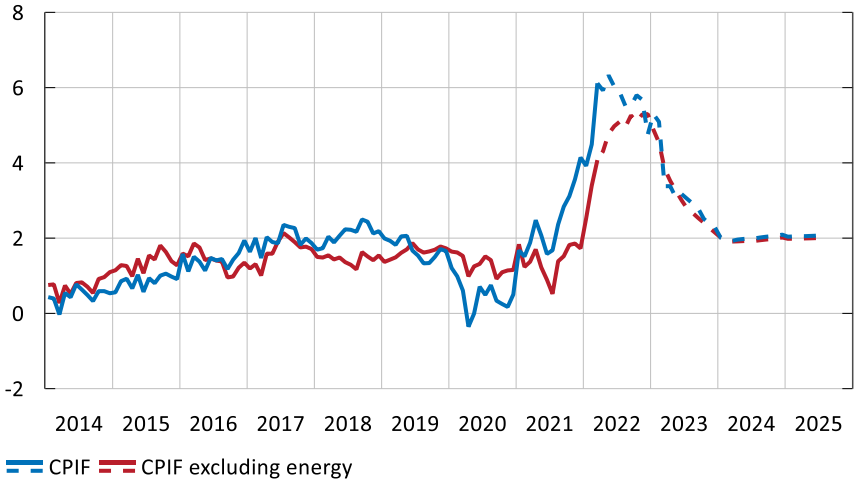
Higher Swedish inflation this year

Inflation was 6.1 per cent in March, which is the highest level measured in Sweden since the beginning of the 1990s. Inflation in Sweden has risen since the middle of last year, which is largely explained by rapid price increases on electricity and fuel. In February, the Riksbank assessed that energy prices would not continue to increase this year, but since the Russian invasion of Ukraine, energy prices have risen further (see the article “Economic consequences of the war in Ukraine”). Energy prices are thus expected to contribute to CPIF inflation rising further.

When adjusted for energy prices, inflation was relatively moderate last year, but it rose rapidly at the start of the current year (see Figure 3). Measured as CPIF excluding energy, inflation was 4.1 per cent in March. In particular, prices of food and other goods have contributed to the rapid upturn, but prices of services have also increased faster than usual. Underlying inflation is expected to continue rising in the coming period, and to be over 5 per cent until the end of the year. The pandemic-related imbalances between supply and demand are expected to wane gradually. According to forward prices, energy prices will also fall. Together with a tighter monetary policy, this will contribute to inflation falling back and being expected to be close to two per cent from 2024 (see Figure 3).

Figure 3. The CPIF and the CPIF excluding energy

Annual percentage change



Note. Solid line refers to outcome, broken line represents the Riksbank’s forecast.

Sources: Statistics Sweden and the Riksbank.

It is important that inflation expectations are compatible with the inflation target

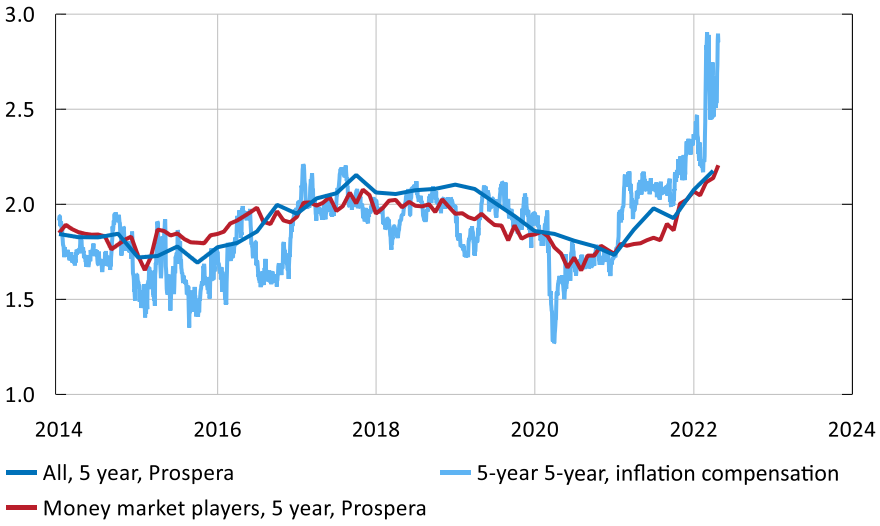
Short-term inflation expectations among economic agents normally vary in line with actual inflation and have therefore risen significantly over the past year. Even longer-term inflation expectations appear to react to actual developments in inflation, but not to the same extent. At the start of the pandemic, long-term inflation expectations fell slightly but started to recover fairly quickly. In the wake of the rapid upturn in inflation, expectations have continued to rise both abroad and in Sweden. The long-

term expectations measured using market prices of various financial contracts have risen rapidly this year and are clearly above 2 per cent (see Figure 4). Expectations according to surveys have also risen but remain close to 2 per cent.

Confidence in the inflation target is reflected in the longer-term inflation expectations of the participants in the economy. The high inflation can contribute to price and wage expectations continuing to rise so that they are no longer compatible with the inflation target. The overall picture of long-term expectations is that they are still close to 2 per cent, but monetary policy needs to take into account the fact that confidence in the inflation target may weaken if inflation deviates from the target over a longer period. The Riksbank is prepared to adapt monetary policy to ensure that inflation is returned to the inflation target and that long-term inflation expectations among economic agents remain close to 2 per cent.

Figure 4. Long-term inflation expectations

Per cent



Note. The inflation compensation refers to a 5-year period starting in 5 years' time, calculated from bond yields. Both inflation compensation and expectations from Prospera refer to the CPI.

Sources: Kantar Sifo Prospera and the Riksbank.

1.2 Monetary policy needs to be tightened for inflation to return to the target

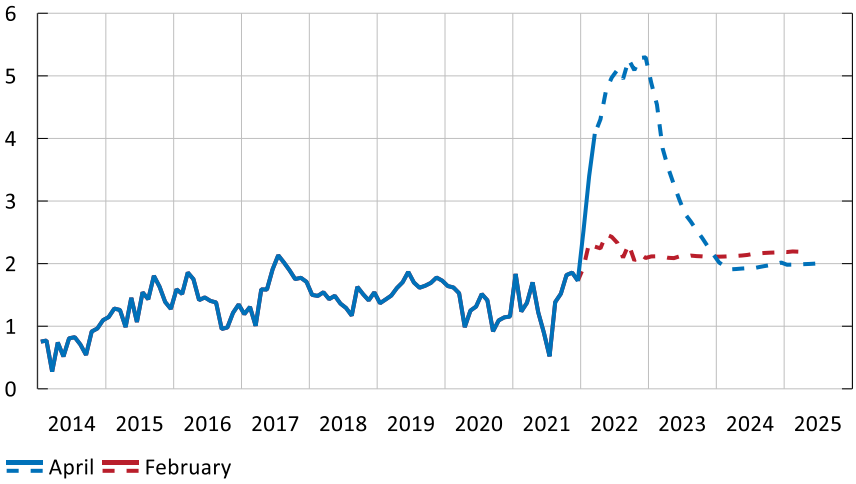
Much higher inflation than expected

During the second half of 2021, inflation rose as a result of the upturn in energy prices, but there were no clear signs that the higher energy prices had spread further to create a broad upturn in prices. The high energy prices, in combination with continued disruptions to global value chains, high freight and commodity prices, higher consumer prices abroad and a weaker krona were nevertheless expected to lead to higher underlying inflation this year. Since the autumn, the Riksbank has moreover

emphasised the uncertainty surrounding contagion effects and the persistence of the high inflation.[2] Underlying inflation has risen much more than expected during the early part of the year (see Figure 5). Outcomes point to the upturn now being broad. In addition to energy prices, a clear upturn in the rate of price increase for both food and other goods and services is visible.

Figure 5. CPIF excluding energy

Annual percentage change



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

Sources: Statistics Sweden and the Riksbank.

Monetary policy cannot affect the fact that internationally-determined commodity and shipping prices are high. It is therefore unavoidable that the rate of increase in some consumer prices, for example, energy, food and certain other goods, will remain high for some time yet (see the article "Many indications that inflation will be high this year and next year"). The Riksbank's forecast for underlying inflation in the coming year has therefore been clearly revised up (see Figure 5). However, the Riksbank can conduct monetary policy to counteract higher inflation becoming established in price-setting and wage-formation, and so that inflation returns to the target after some time.

Gradual rate increases commence

The prices that have so far increased quickly are in one way or another connected to the higher international prices. As yet, there are no clear signs of a spread to more long-term inflation expectations and wage increases. But the risk that this will happen has increased as a result of the recent rapid upturn in inflation. If expectations of more persistent higher inflation affect participants in the economy such that price and wage-setting begin to be based on an inflation higher than the target, and larger increases become more accepted, an upward inflation spiral could take off. Monetary

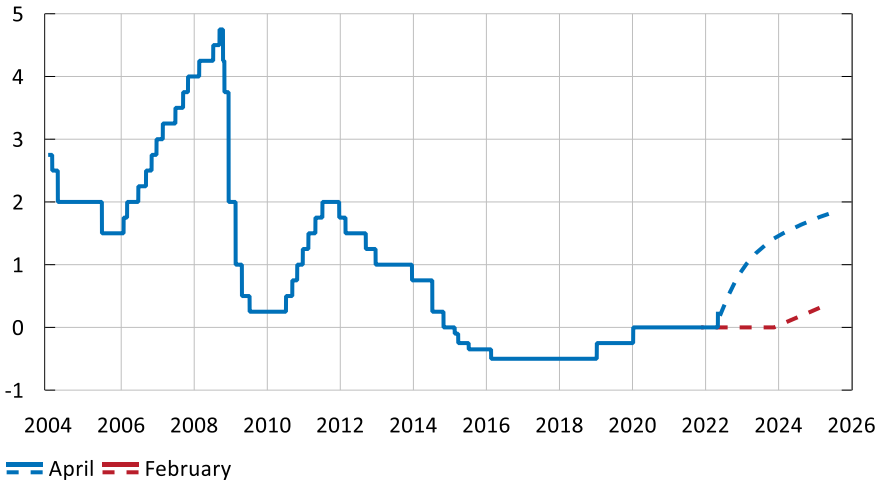
[2] See the articles "Higher inflation – temporary or persistent?", in Monetary Policy Report, November 2021, Sveriges Riksbank and "High energy prices – how will other consumer prices be affected?" in Monetary Policy Report, February 2022, Sveriges Riksbank.

policy must therefore react so that inflation falls back and price-setting and wage-formation in the economy can continue to use the inflation target as a benchmark.

The Executive Board has therefore decided to raise the repo rate from 0 to 0.25 per cent. The forecast for the repo rate is that it will be raised a further two to three times this year and will be slightly below 2 per cent at the end of the forecast period (see Figure 6). With this monetary policy, inflation is expected to fall back next year and be close to 2 per cent from 2024 (see Figure 7). Compared with previous periods of interest rate increases, the repo rate will be raised at a relatively moderate pace.

Figure 6. Repo rate

Per cent

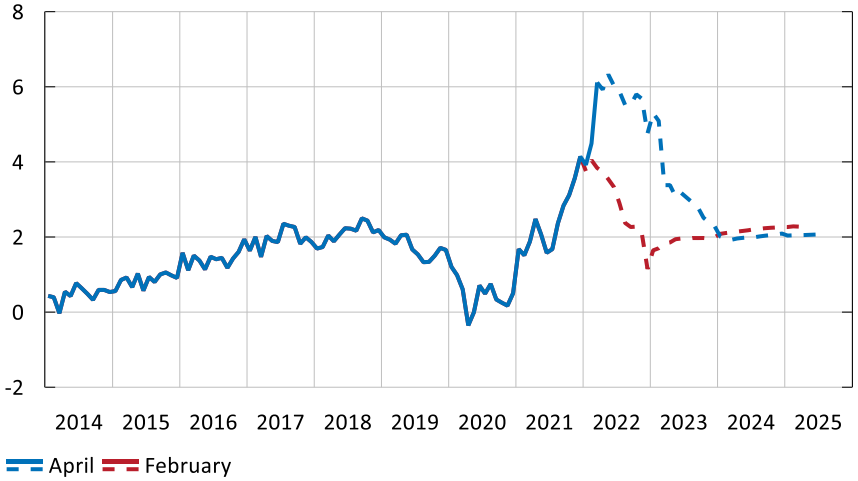


Note. Solid line refers to outcome, broken line represents the Riksbank's forecast. Outcomes are daily rates and the forecasts refer to quarterly averages.

Source: The Riksbank.

Figure 7. CPIF

Annual percentage change

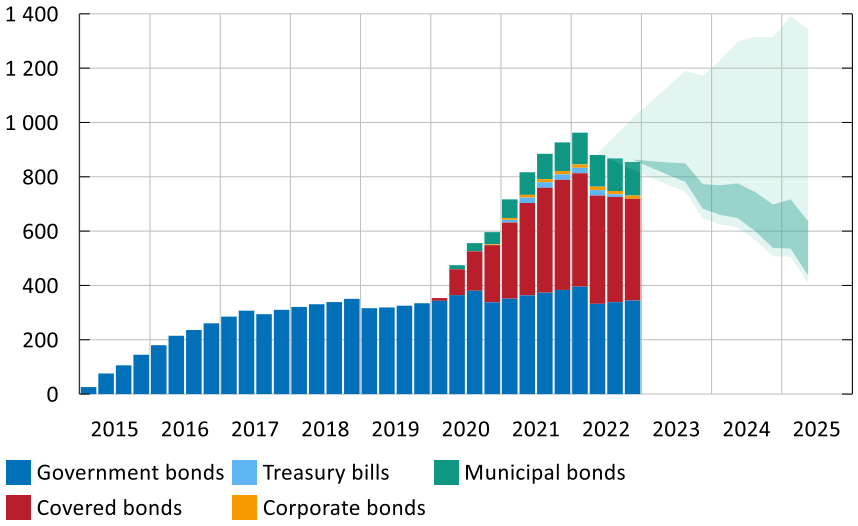


Note. Solid line refers to outcome, broken line represents the Riksbank's forecast.

Sources: Statistics Sweden and the Riksbank.

This year, bonds in the Riksbank's asset portfolio will mature to the value of around SEK 154 billion, or on average around SEK 38 billion per quarter. In accordance with the decision in February, the Riksbank will purchase bonds for SEK 37 billion in the second quarter of 2022 to compensate for forthcoming principal payments.
The Executive Board now assesses that the Riksbank's asset purchases shall thereafter be aimed at gradually reducing the holdings going forward, and has decided that during the second half of the year the Riksbank will purchase half the amount of bonds as was purchased during the first half of the year (see Figures 8 and 9). After that, the holdings are expected to continue to decline. The interval shown in Figure 8 is broader than the earlier forecast to illustrate that the renewed uncertainty, not least regarding international developments, could mean that purchases at a considerably faster pace cannot be ruled out entirely, although the risk of this is slight.

Figure 8. The Riksbank's holdings of securities and forecast for holdings
Nominal amounts, SEK billion



Note. The bars refer to executed and decided purchases. The lower interval limit is a projection of the holdings assuming that no more asset purchases are made after 2022 Q2. Its upper limit reflects a development in which the Riksbank's asset purchases continue at the same pace as during 2021. The darker area's lower limit is a projection of the holdings assuming that no more asset purchases are made after 2022, while its upper limit shows the development of holdings with a purchasing rate that compensates for half of the maturities in each respective year.

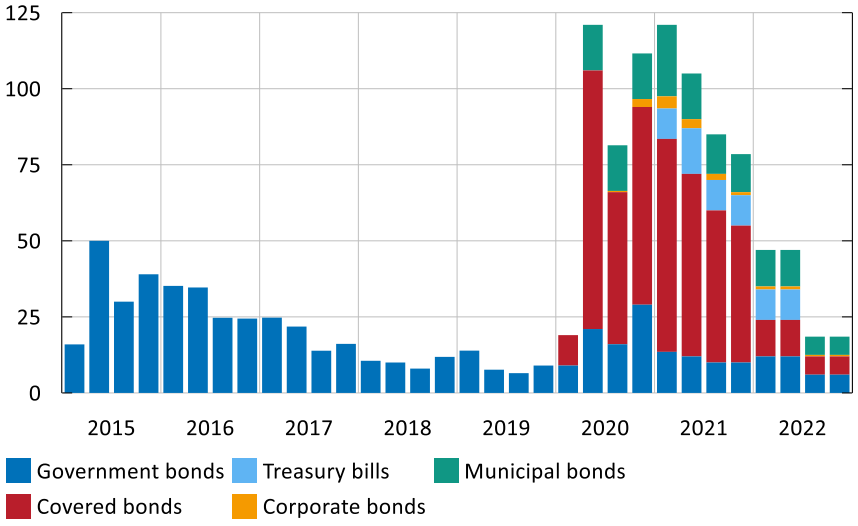
Source: The Riksbank.

The decision means that during the second half of 2022, the Riksbank will buy bonds for a total nominal amount of SEK 37 billion (see Figure 9). The Riksbank will purchase Swedish government bonds for a nominal amount of SEK 12 billion, municipal bonds for a nominal amount of SEK 12 billion, covered bonds for a nominal amount of SEK 12 billion, and corporate bonds for a nominal amount of SEK 1 billion.

The Executive Board has also decided that the Riksbank shall cease buying Swedish treasury bills with effect from 28 April 2022.[3]

Figure 9. The Riksbank's purchases of securities

Nominal amounts, SEK billion



Note. Refers to executed and decided purchases.

Source: The Riksbank.

Protracted period with low-inflation environment appears to be over

Common trends such as increased globalisation and digitalisation have long contributed to low inflation around the world. Moreover, the long-term real interest rate has fallen in developed economies, which has contributed to dampened inflationary pressures, despite policy rates being at historically low levels. Although the global trends that have contributed to a low-inflation environment are judged to remain to some extent, the development of inflation and the Riksbank's forecasts illustrate that the protracted period of inflation below the target appears to be over, both in Sweden and abroad, at least for a number of years to come. It is thus reasonable to revaluate and adapt monetary policy. Just as in many other parts of the world, monetary policy in Sweden needs to move in a tighter direction in the coming years.

It is difficult in the current situation to assess how much the interest rate needs to be raised going forward for inflation to return to the target in a reasonable time perspective. The uncertainty is illustrated by an interval around the forecast for the repo rate in Figure 10. The planned monetary policy will mean that the real interest rate gradually becomes less negative (see Figure 11). Many of the factors holding back the long-term global real interest rate are judged to remain, however.[4] In year 2017, the Riksbank published an assessed interval for the long-term policy rate of

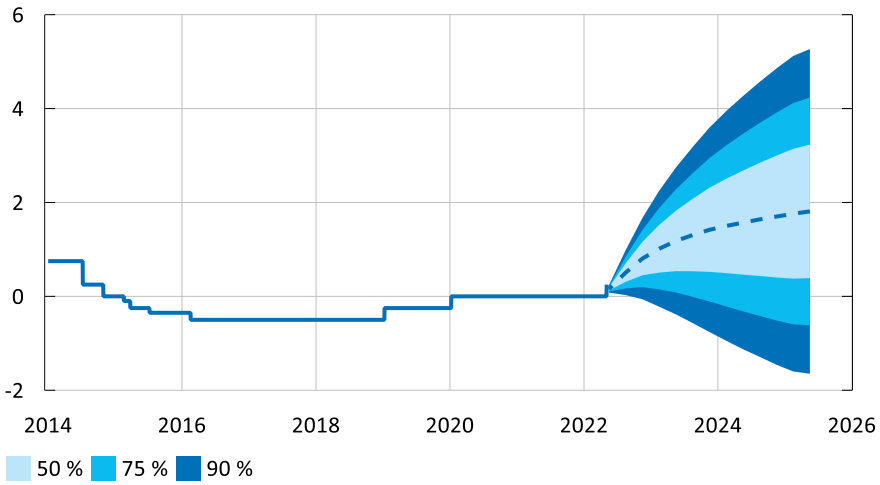
[3] The expected repo rate increases during the forecast period entail a major impact on the Riksbank's expected results (see the fact box "The Riksbank's financial results are affected by interest rate changes").

[4] See the article "Are low global real interest rates set to continue?" in Monetary Policy Report, November 2021, Sveriges Riksbank.

2.5–4 per cent. At present, it is reasonable to assume that the interest rate will in the longer run be at the lower end of, or slightly below, this interval.[5]

Figure 10. Repo rate with uncertainty bands

Per cent



Note. The uncertainty bands are based on the Riksbank's historical forecasting errors and on risk premium-adjusted forward rates' forecasting errors for the period 1999 until the Riksbank began publishing forecasts for the repo rate in 2007. The uncertainty bands do not take into account the fact that there may be a lower bound for the repo rate. Outcomes are daily rates and the forecasts refer to quarterly averages.

Source: The Riksbank

Calmer economic activity dampens inflation

To safeguard confidence in the inflation target, monetary policy needs to be tightened. With the monetary policy in the Riksbank's main scenario, price-setting and wage-formation are assessed to remain in line with the inflation target and economic activity will dampen somewhat, but this does not mean that a significant slowdown in the economy is required.

The rapidly rising energy and food prices are, however, being felt by households and companies. Those who are highly indebted will also be affected by higher interest rates on mortgages, consumption loans, student loans and other loans. Following the long period with very low interest rates, it is uncertain how well-equipped economic agents are to manage rising interest rates. The Riksbank regularly assesses both the persistence of the higher inflation and how rising prices and interest rates affect developments in the economy as a whole, and will if necessary adapt its monetary policy.

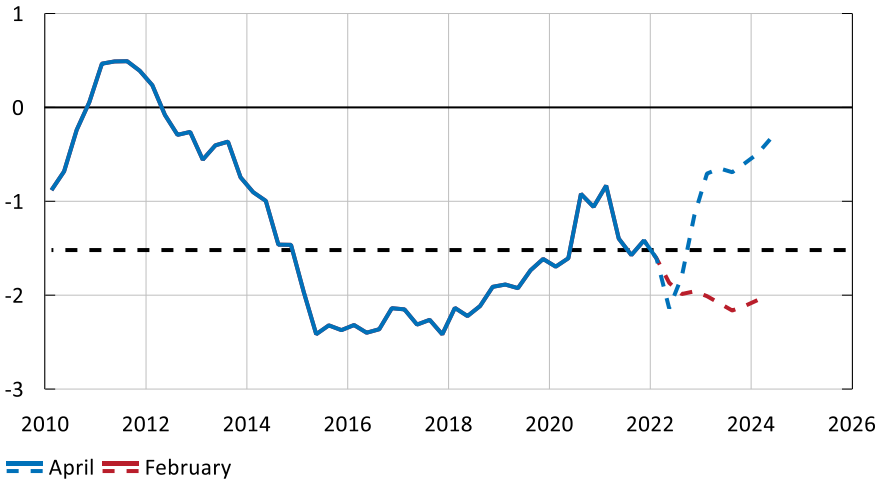
To safeguard confidence in the inflation target, monetary policy is totally aimed at ensuring that inflation does not persistently exceed the target. As a trade-off, this can entail negative short-term effects on the real economy, but in the long term a credible inflation target creates the right conditions for good and sustainable growth. With a

[5] See the article "The long-term repo rate" in the Monetary Policy Report, February 2017, Sveriges Riksbank.

benchmark that guides expectations of future inflation in the economy, it will be easier for households and companies to plan and make informed financial decisions. Price-setting and wage-formation characterised by stability and predictability benefit the economy.

Figure 11. Real repo rate

Per cent



Note. The real repo rate is the Riksbank's expected real interest rate, calculated as a quarterly mean value of the Riksbank's repo rate forecast one year ahead minus the inflation forecast (CPIF) for the corresponding period. Outcomes are based on the most recently published forecasts at that time. Black broken line represents an average for the period 2012–2021.

Source: The Riksbank.

1.3 Preparedness to adapt monetary policy if the inflation outlook changes

The major fluctuations in inflation mean that it is more uncertain than usual how inflation will develop in the near term. It is also uncertain what impact the current high inflation will have on price-setting and wage-formation going forward. There are factors that could cause higher inflation in the coming year, for instance higher inflation abroad, a continued rise in commodity prices and even larger delivery problems or further contagion effects in the form of, for instance, wage drift. If there are surprises in relation to the Riksbank's forecast that are judged to be temporary, monetary policy would not necessarily need to be adapted. But if there is reason to believe that the development of inflation will deviate more persistently from the Riksbank's forecast, the Riksbank will react with tighter monetary policy to ensure that inflation returns to the target level.

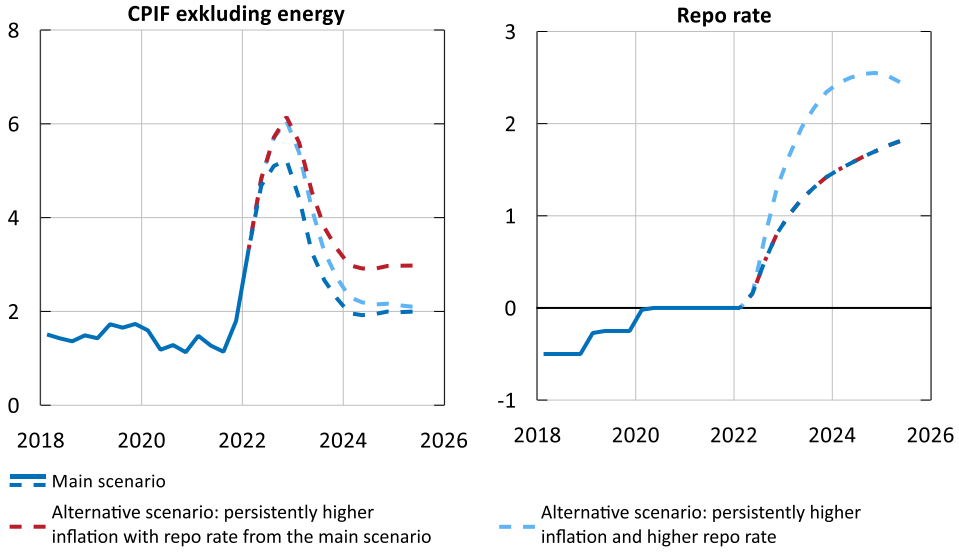
Inflation could also become lower than in our forecast. For instance, growth could slow down faster than expected, as a result of higher prices and interest rates and/or due to the geopolitical uncertainty. In this type of scenario, inflation could fall back quickly (as at the beginning of the pandemic) and the Riksbank can postpone continued rate increases or lower the interest rate.

The risk outlook for inflation is on the upside, however, particularly in the near term. Figure 12 therefore shows an alternative scenario for economic developments, where underlying inflation rises even further in the coming year, compared with the Riksbank's main scenario. In this scenario, the development also implies higher inflationary pressures in the slightly longer term, as higher inflation outcomes in the near term lead price- and wage-setters to begin to expect that inflation will overshoot the two per cent target more persistently. With the repo rate in the main scenario, companies would then begin to raise their prices more and wages would rise much faster than in the Riksbank's main scenario and result in persistently higher inflation.

As such, a higher repo rate than in the main scenario would be required to ensure that inflation falls back and is close to 2 per cent at the end of 2024. Exactly how high the repo rate needs to be depends on how the real economy and inflation are ultimately affected by higher interest rates. One possible development is illustrated in Figure 12.[6] The task of monetary policy is to stabilise inflation close to 2 per cent and the Riksbank will do what is required to achieve this. In this scenario, a considerably tightening is required to bring inflation back to target. The tighter monetary policy in the scenario entails greater strains for the real economy. GDP growth will be lower and unemployment will be higher during the forecast period.

Figure 12. Alternative scenarios

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



Sources: Statistics Sweden and the Riksbank.

During the pandemic, when inflation has been low and monetary policy has been limited by its effective lower bound, monetary policy ad fiscal policy have complemented

[6] One of several sources of uncertainty over these effects is how highly-indebted households and companies react to interest rate rises that not only come sooner but proceed more rapidly. The repo rate path in the scenario has been produced with the aid of an estimated model, which means that the effects of monetary policy are based on average historical patterns. The monetary policy response may in practice be different to that anticipated in the scenario, once all of the specific circumstances prevailing at the time the decision is made have been taken into consideration.

one another and in this way been able to contribute more effectively to good economic growth. With the current high inflation, this situation is changed. Broad fiscal policy demand stimulus can contribute to inflation rising further, and therefore to a need to further tighten monetary policy. However, in a situation where the monetary policy tightening causes negative real economic effects, fiscal policy may use labour market policy measures to improve matching in the labour market and in this way more directly facilitate for vulnerable groups. Targeted fiscal policy measures can also reduce the risk of sizeable wage drift. This in turn can reduce the need for monetary policy tightening.

1.4 Many uncertainty factors also surround the economic outlook

There are a number of uncertainty factors surrounding the economic outlook in Sweden and abroad, which can ultimately also affect inflation prospects in Sweden.

The continued development of the war in Ukraine – and its economic effects – are very uncertain. Even if Sweden's direct trade with Russia and Ukraine is small, the war entails significant effects on developments in the euro area, which accounts for an important part of Sweden's foreign trade. In the Riksbank's forecast, growth in the euro area is expected to slow down in the short term, although no recession is predicted. However, depending on both the development of the war and the response of the euro countries, for instance with regard to sanctions and domestic energy supply, developments could be both stronger and weaker than in the Riksbank's forecast.[7]

Inflation has risen to very high levels in most economies around the world recently. One substantial uncertainty factor is by how much the central banks need to raise their policy rates to tame the high inflation, and what consequences the tighter monetary policy will have for the real economy. After many years of very low interest rates, rising asset prices and increasing indebtedness, it is uncertain how economic agents would be affected by a rapid rise in the level of interest rates. Many emerging economies will moreover be affected particularly much both by rising energy and food prices and by interest rates abroad rising. This could lead to both political unease and to the domestic currency weakening. The direct economic consequences for Sweden of such a development would probably be small, but it cannot be ruled out that the problems could spread via the financial markets and in this way have larger consequences for the Swedish economy as well.

There are also a number of uncertainty factors regarding domestic demand in Sweden. The Riksbank has for a long time pointed out the risks on the Swedish housing market. Several of the factors that have contributed to rising housing costs in recent years are expected to turn around in coming years. After being low for a long time, mortgage rates are expected to rise going forward. Moreover, the Riksbank assesses that the sharp upturn in house prices during the pandemic was largely due to changed preferences among households for larger living space and to many of them

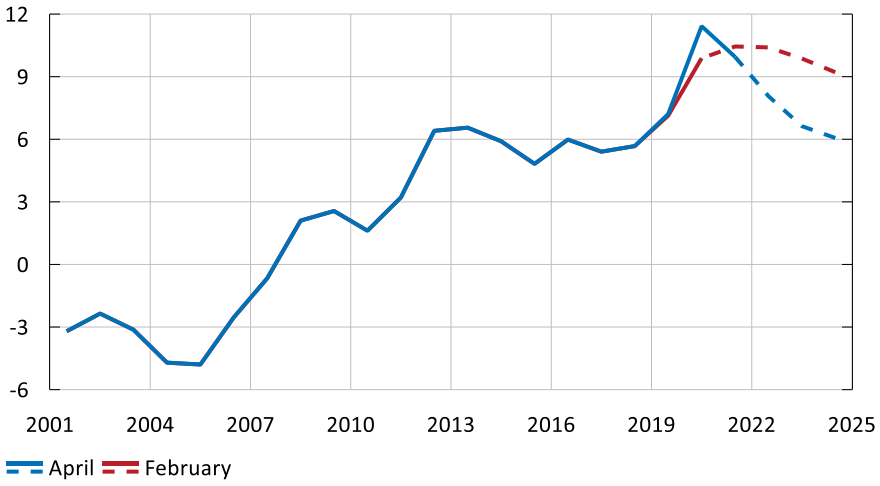
[7] See the article "Economic consequences of the war in Ukraine".

having spent a lot of time at home and being forced to hold back on other consumption.[8] Now that the restrictions have been lifted, this development is expected to be largely reversed. In addition, a large number of new homes have been built in recent years, which has increased the supply. The Riksbank's forecast is that housing prices will slow down during the forecast period, but still be at a higher level in 2024 than prior to the pandemic. One risk is that the adjustment process will be abrupt and that housing prices will fall considerably. This could cause both household consumption and housing investments to be weaker than in the forecast.

One related uncertainty factor concerns households' demand for consumption in the coming years. The Riksbank's forecast means that the abolished restrictions will lead households to gradually reduce their saving to the levels that prevailed prior to the pandemic (see Figure 13). However, developments could be both weaker or stronger. One downside risk is that expectations of higher mortgage rates, rising housing costs in general and increased uncertainty resulting from the war in Ukraine mean that households do not reduce their savings to the extent expected in the forecast. An upside risk is that households might want to use the savings they have built up during the pandemic to catch up on lost consumption during the past two years, especially if the uncertainty regarding the economic effects of the war were to wane. Then, saving might fall to an even lower level than forecast, and consumption might be stronger.

Figure 13. Household saving in Sweden

Percentage of disposable income



Note. Household savings refers to saving ratio excluding excluding collective insurance schemes. Solid line refers to outcome, broken line represents the Riksbank's forecast.

Sources: Statistics Sweden and the Riksbank.

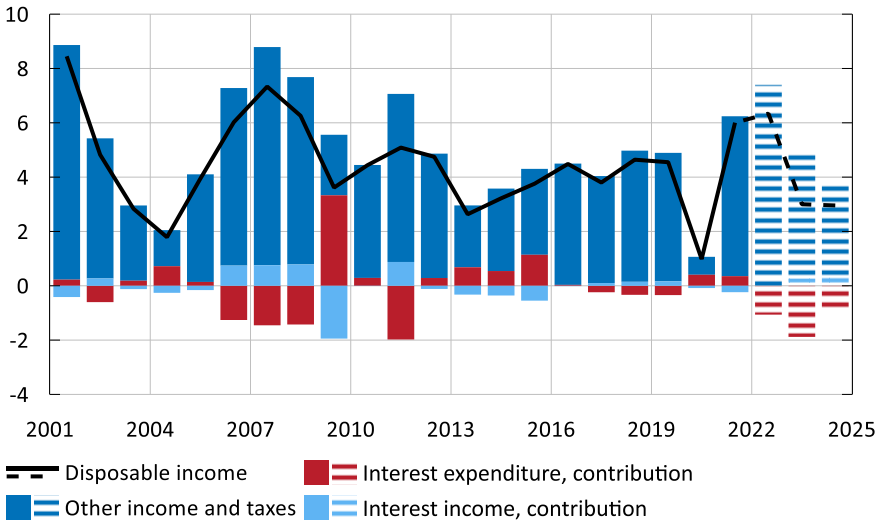
A further uncertainty factor concerns how the highly-indebted households in Sweden will be affected by rising interest rates. Compared with earlier tightening cycles, the forecast for the repo rate entails a fairly moderate upturn in interest rates (see Figure 6). The Riksbank assesses that the household sector as a whole will be able to manage rising interest rates during the forecast period. For instance, rising wages mean that

[8] See "Rapidly rising housing prices despite the coronavirus crisis" in Monetary Policy Report, April 2021, Sveriges Riksbank.

the nominal disposable income is expected to grow going forward, despite increased interest expenditure (see Figure 14). However, the share of highly-indebted new mortgagors has increased significantly in recent years.[9] For the households that are least indebted, the effect of rising mortgage rates will be scarcely noticeable, while those with the most debt may see their disposable income decline significantly from even a moderate upturn in interest rates.[10] As there is no up-to-date microdata on households' assets and savings, it is difficult to assess how households will adapt their consumption to the new circumstances. If the households with the highest debt are also those with the highest propensity to consume, the differences in indebtedness could contribute further to reinforcing the cash flow effects on consumption, so that it develops weaker than in the Riksbank's forecast.

Figure 14. Contributions to disposable household income

Annual percentage change and percentage points respectively



Note. Other income refers to payroll expense, dividends, transfers, etc. Solid line and bar refers to outcome, broken line and bar represents the Riksbank's forecast.

Sources: Statistics Sweden and the Riksbank.

[9] See Mortgage Report 2022, Finansinspektionen.

[10] The Riksbank has in previous years attempted to survey the cash flow effects of rising interest rates. See, for instance "How are household cashflows and consumption affected by rising interest rates?" article in Monetary Policy Report, December 2018, Sveriges Riksbank and "How are households affected by rising interest rates?" article in Monetary Policy Report, December 2017, Sveriges Riksbank.

FACT BOX – The Riksbank is reforming its operational framework for the implementation of monetary policy

The Riksbank's operational framework for the implementation of monetary policy steers short-term market rates. The framework consists of the monetary policy instruments, the counterparties the Riksbank can enter into financial transactions with and the collateral the Riksbank requires to provide credit. By determining the interest rate on deposits and loans with the Riksbank, the Riksbank steers the overnight rate, which in turn effects the pricing of substitutes for these investments on the market. The primary objective of the operational framework is to ensure short market rates are close to the Riksbank's policy rate. Changes in short market rates then spread to other interest rates and ultimately affect economic developments in general.

In July 2019, the Riksbank began to reform the operational framework for monetary policy. On 22 March this year, the Executive Board decided to implement the second and final step.[11] The changes are made against the background of what is happening in the financial system, particularly on the payments market. They are not aimed at changing the direction of the monetary policy conducted. The purpose is to make the operational framework simpler, more automated and flexible, and less sensitive to changes in factors outside of the operational framework that affect the banking system's liquidity position towards the Riksbank and can disrupt the Riksbank's capacity to stabilise the overnight rate close to the policy rate. The changes now being implemented mean that, as of 8 June, the Riksbank will be:

- changing the name of the Riksbank's repo rate to the Riksbank's policy rate,
- tightening the collateral requirements for the Riksbank's standing lending facility, where the interest rate as before is 0.10 percentage points higher than the policy rate, to only include government securities and central bank claims (known as primary collateral volume),
- establishing a supplementary liquidity facility, in which the Riksbank will offer credit overnight against other collateral accepted by the Riksbank (designated secondary collateral volume) at an interest rate corresponding to the policy rate with a supplement of 0.75 percentage points.

The higher interest rate in the supplementary liquidity facility reinforces the incentives for counterparties to primarily use government securities and central banks claims as collateral for credit with the Riksbank and to seek market solutions for managing their liquidity. In conjunction with reforming the monetary policy operational framework, it is appropriate to change the name of the interest rate on which the Riksbank's Executive Board takes decisions. The current name, repo rate, refers to a specific instrument, monetary policy repos, which the Riksbank has not used since 2008. This change will give the interest rate decided upon by the Executive Board a more appropriate name. The change of name should not affect any existing or outstanding contracts that refer to the Riksbank's repo rate.

[11] For a more detailed description, see Amendments to the Riksbank's operational framework for the implementation of monetary policy - Step 2 (ref.no. 2019-00786).

FACT BOX – The Riksbank's financial result is affected by changes in interest rates

Between the years 2015 and 2017, the Riksbank purchased government bonds with the aim of making monetary policy more expansionary. During the pandemic, the holdings of assets were increased further and the purchases were extended to cover several asset types and were supplemented with other measures. Then the purchases of debt securities, in the form of government securities, covered bonds, municipal bonds, and, to a lesser extent, corporate bonds, were extended.

The asset purchases increase both the assets and the liabilities on the Riksbank's balance sheet (see Figure 8 in Chapter 1). As a rule, the bonds have a maturity of several years and most of them have a fixed interest rate. When the Riksbank purchases bonds, new money is created in the RIX payment system, which leads to increased deposits with the Riksbank (see Figure 17 in Chapter 2). To ensure the overnight rate is close to the Riksbank's repo rate, the Riksbank needs to pay interest on the deposits. As the Riksbank's assets largely have long interest-rate fixation periods, and deposits in kronor are at a variable interest rate, the Riksbank's revenue and expenditure can fall out of step and the net result may vary more than previously, when the asset holdings were lower. The Riksbank's results are thus more sensitive to interest rate changes, which is usually described by saying the interest rate risk has increased.[12] The forecast for the repo rate indicates that it will rise much faster than was previously assessed (see Figure 6 in Chapter 1). The upward revision means that the expected interest expenditure increases, which weakens the reported results for the Riksbank.

The Riksbank has capital that functions as a buffer against losses. This capital has several components. For instance, the Riksbank has made unrealised gains on the asset holdings in earlier years and has also made financial risk provisions. Decisions on this type of risk provision are made annually, and based, for instance, on calculations of how large the losses might be if interest rates rise.[13] Moreover, the Riksbank has its own equity that comprises a buffer in case other types of buffers have been utilised.

If the Riksbank were to make losses to the extent described, for instance, in the background material to the most recent provision decision, the Riksbank's capital would decline substantially. As it is desirable that the central bank is financially independent and self-financed in the long run, it is appropriate that the Riksbank's capital in this case can be strengthened going forward.

[12] There are also other types of financial risk to the Riksbank's results, such as exchange rate risk and credit risk, which are not discussed here.

[13] See provision decision 12 January 2021 (ref.no. 2020-01285) and 12 January 2022 (ref.no. 2021-01343) at www.riksbank.se. The Riksbank observed in the most recent decision that there was a need to make financial risk provisions, but that there was no scope for this as the result for 2021 was just below zero.

2 Higher interest rates and tighter financial conditions in well-functioning markets

The high inflation in the wake of the pandemic, combined with signals from central banks of approaching rate hikes are now leading participants in the financial markets to expect a tighter monetary policy than previously. The Russian invasion of Ukraine and the sanctions on Russia also led inflation expectations to rise further and initially entailed greater uncertainty and large price fluctuations on the markets.

Just as in many other countries, interest rates in Sweden have increased markedly from low levels since the start of the year. The Swedish krona weakened substantially in connection with the Russian invasion of Ukraine. The krona subsequently strengthened when inflation became surprisingly high and the Riksbank communicated its intention to raise its rate sooner than announced in February. Despite the abrupt fluctuations in pricing in many financial markets, they have continued to work well and the transmission from monetary policy tools to funding conditions for households and companies has not deteriorated. Above all due to higher rates on the bond markets, Swedish financial conditions are deemed to be less expansionary than they were at the time of the monetary policy meeting in February.

2.1 Higher inflation expectations and great uncertainty

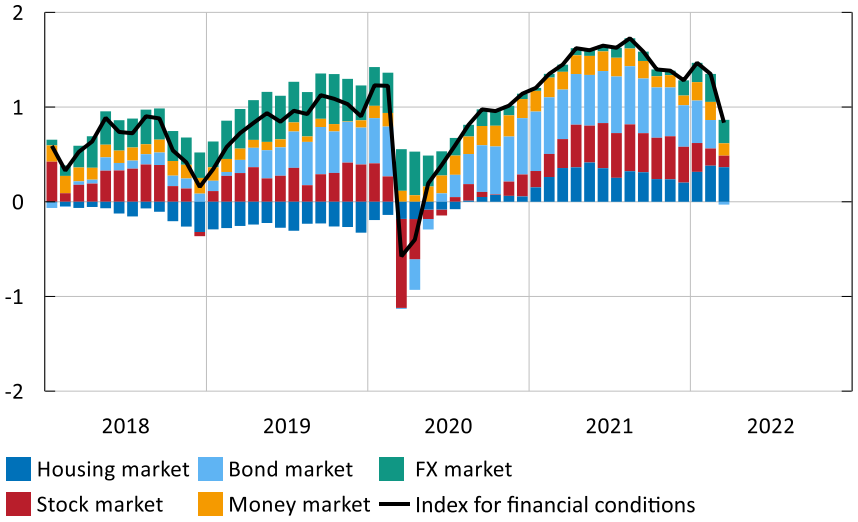
Inflation has increased unexpectedly rapidly in the wake of the pandemic and inflation expectations have continued to rise since the start of the year. In turn, this has led central banks around the world to signal an intention to raise interest rates more in the near term and to speed up the adjustment of purchases and holdings of securities in a more restrictive direction. Taken together, this has made yields for government bonds and other interest-bearing securities rise. Uncertainty over developments following Russia's invasion of Ukraine and the political and economic consequences of international sanctions against Russia created great uncertainty and higher inflation expectations at the end of February and start of March. Nevertheless, the markets continued to function without major problems.

Inflation has also risen unexpectedly rapid in Sweden this year. According to forward pricing, market participants therefore now expect the Riksbank to raise the policy rate several times this year, which has contributed to the rise in government bond yields. At the same time, corporate bond yields have increased a little more. Even if risk appetite and prices in many financial markets have periodically varied heavily, the krona exchange rate has been approximately unchanged since the monetary policy

meeting in February and equity prices have fallen. This development has led to financial conditions becoming tighter in March, primarily due to rising yields on the bond markets (see Figure 15).

Figure 15. Index for financial conditions in Sweden

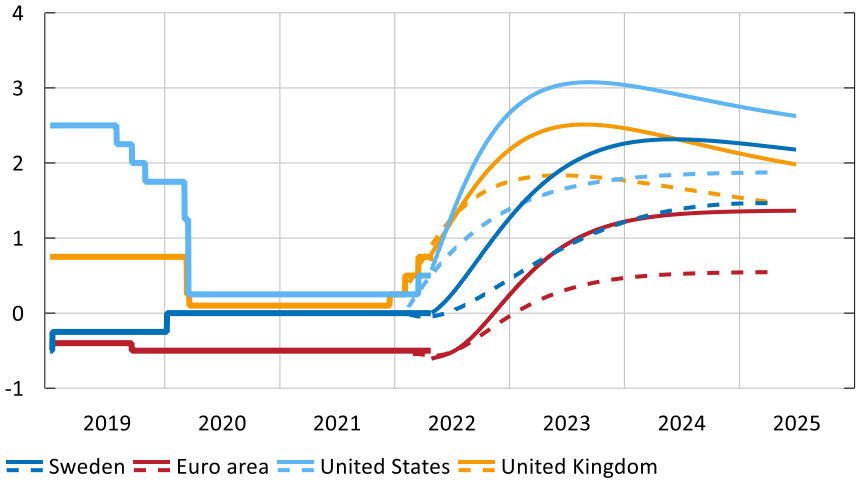
Standard deviations. A higher value indicates more expansionary financial conditions



Source: The Riksbank.

Figure 16. Policy rates and rate expectations according to forward pricing

Per cent



Note. Forward rates describe market-based expectations of the overnight rate, which do not always correspond to the policy rate. Solid lines represent forward rates 25 April 2022. Broken lines represent forward rates 08 February 2022. In the euro area, the over-night interest rate ESTR replaced EONIA as the underlying interest rate in forward contacts as of 01 January 2022. Hence, the forward contracts are shown with the ESTR overnight rate as underlying rate.

Sources: Macrobond and the Riksbank.

Central banks hike policy rates earlier

As inflation has risen rapidly for some time and has become very high in some places, monetary policy, which has been highly expansionary for a long time in large parts of the world, has now started to move in a less expansionary direction. Many central banks have raised or signalled hikes of their policy rates and have adjusted purchases and holdings of securities in a more restrictive direction. This has led market participants to expect higher policy rates over the next few years, as indicated by forward pricing on the financial markets (see Figure 16).

This development is particularly clear for the US Federal Reserve, which, at its March meeting raised the interval for the policy rate by 25 basis points to 0.25–0.50 per cent. In addition, the median member of the Federal Open Market Committee (FOMC), the US monetary policy committee, expects the policy rate to reach 1.9 per cent at the end of the year, which is significantly higher than the previous assessment at the meeting last December. At the same time, the Federal Reserve communicated its intention to decide soon to allow its bonds holdings to decrease, as detailed in the minutes of the meeting. The pricing of forward contracts indicates that the participants in the financial markets expect the US policy rate to be about 2.7 per cent by the end of 2022 and about 3.3 per cent by the end of 2023 (see Figure 16).

As expected, the European Central Bank (ECB) kept its policy rates unchanged at its meeting in April and also kept to its decision from March to taper monthly purchases in its asset purchase programme, APP, in the second quarter. In the third quarter, the ECB intends to move on to a phase where they only make purchases to compensate for the maturing bonds in their holdings. According to the ECB's previous communication, this is a precondition for considering rate hikes. According to forward pricing, market participants expect the ECB to have raised its deposit rate to 0.2 per cent by the end of 2022 and to 1.4 per cent by the end of 2023 (see Figure 16). At its March meeting, in line with previous communication, the ECB also decided to focus asset purchases within the PEPP pandemic programme on compensating for maturing bonds. However, the ECB has not yet signalled any date for when it intends to decrease its holdings in APP and plans to stop reinvesting maturing bonds in PEPP at the start of 2025 at soonest.

Like the Federal Reserve, the Bank of England raised its policy rate by 25 basis points to 0.75 per cent at its meeting in March. At the previous meeting in February, it decided to reduce its bond holdings by ceasing to reinvest maturing bonds and initiating the sale of its holdings of corporate bonds. According to forward pricing, the market participants expect the Bank of England to raise its policy rate to about 2.2 per cent by the end of the year and to 2.5 per cent by the end of 2023 (see Figure 16).

Other central banks have also started to taper their asset purchases and have signalled or implemented policy rate hikes. At its meeting in March, Norges Bank decided to raise its policy rate by 0.25 percentage points to 0.75 per cent and published a forecast with three more hikes this year. At its March meeting, the Bank of Canada raised its policy rate for the first time in three years from 0.25 to 0.5 per cent, and raised the policy rate further in April by 0.5 percentage points, when it also decided to stop purchasing securities to compensate for maturing bonds in its holdings.

The Reserve Bank of Australia held its policy rate unchanged at 0.10 per cent at its monetary policy meeting in April after having decided to stop expanding its holdings of bonds at the February meeting. In contrast, the Reserve Bank of New Zealand raised its policy rate by 0.5 percentage points to 1.5 per cent in April. In February, it decided to reduce its bond holdings by ceasing to reinvest maturing bonds.

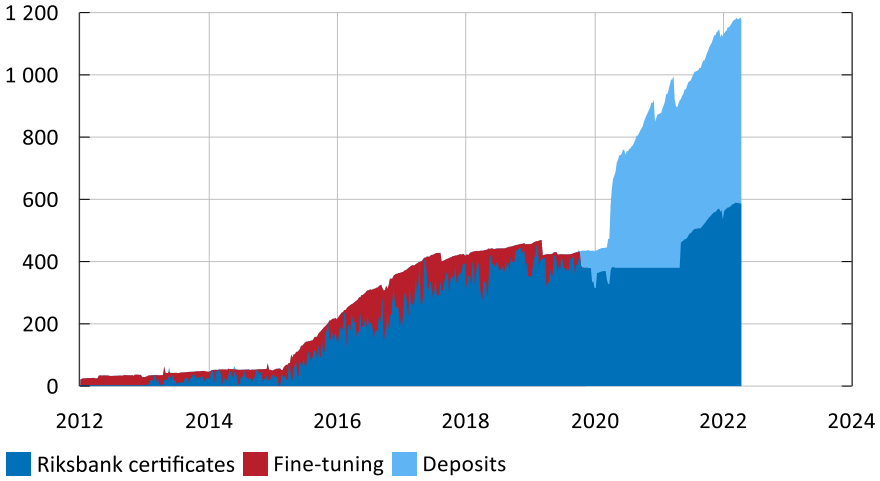
Interest rates on the Swedish money market close to the repo rate

Swedish forward rates have also risen since February and market participants now expect the Riksbank to raise the repo rate to about 1.3 per cent by the end of the year (see Figure 16). In Kantar Sifo's Prospera survey from April, money market participants, on average, expected the Riksbank to raise the repo rate to 1.15 per cent within the next two years and further to 1.49 per cent within five years. In line with the Riksbank's decision, the median respondent expects the Riksbank to purchase bonds for SEK 37 billion in the second quarter of this year. According to the same survey, the median respondent then expects the Riksbank to purchase bonds for a total amount of SEK 30 billion in the following three quarters.[14]

The Riksbank has purchased bonds for monetary policy purposes since 2015, which has led to a considerable increase in the liquidity surplus in the banking system.[15] The Riksbank's decisions on new asset purchases and lending programmes during the pandemic strengthened this development (see Figure 17).

Figure 17. Liquidity in the banking system, deposits and Riksbank Certificates

SEK billion



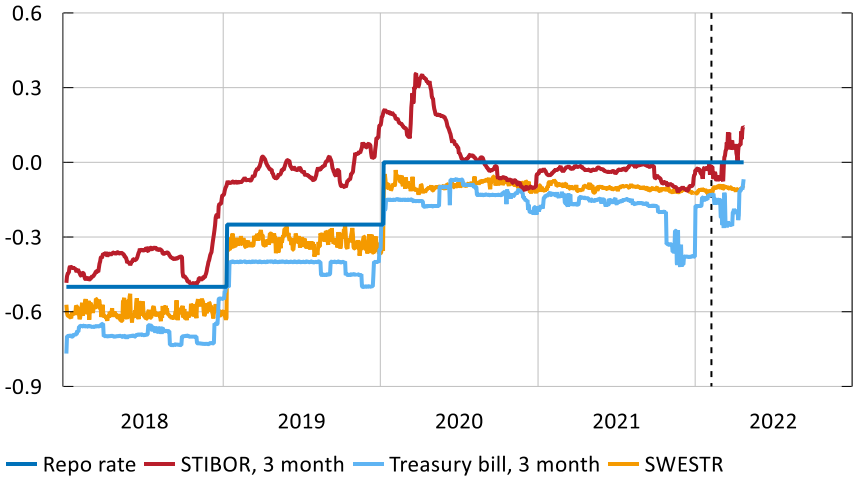
Source: The Riksbank.

[14] Presenting average responses risks being misleading as they have a very large spread, possibly because respondents made slightly different interpretations of the question. The question regards the current quarter and the coming three quarters.

[15] The banks' liquidity surplus towards the Riksbank represents the Riksbank's liquidity debt to the banking system. The Riksbank's purchases of foreign exchange with the aim of replacing the external funding of the foreign exchange reserves also mean that the liquidity surplus in the banking system is increasing. These purchases have no monetary policy purpose.

Figure 18. Repo rate and market rates

Per cent



Note. SWESTR falls very heavily on the last banking day of each year, quotations that have been omitted from this figure. Broken line marks the monetary policy meeting in February.

Sources: Macrobond, Refinitiv and the Riksbank.

The SWESTR reference rate shows that the actual transactions made in the Swedish money market from one business day to the next are continuing to occur at a rate close to the deposit rate in the Riksbank's standing facility (see Figure 18).[16] At the same time, interest rates for borrowing or investing money on the Swedish money market are continuing to follow the repo rate. The upturn in the interest rates of loans with a maturity of 3 months on the interbank market, STIBOR, can be explained by the market participants' expectations that there is some likelihood of the Riksbank raising the repo rate in April.

Rapid upturn in government bond yields

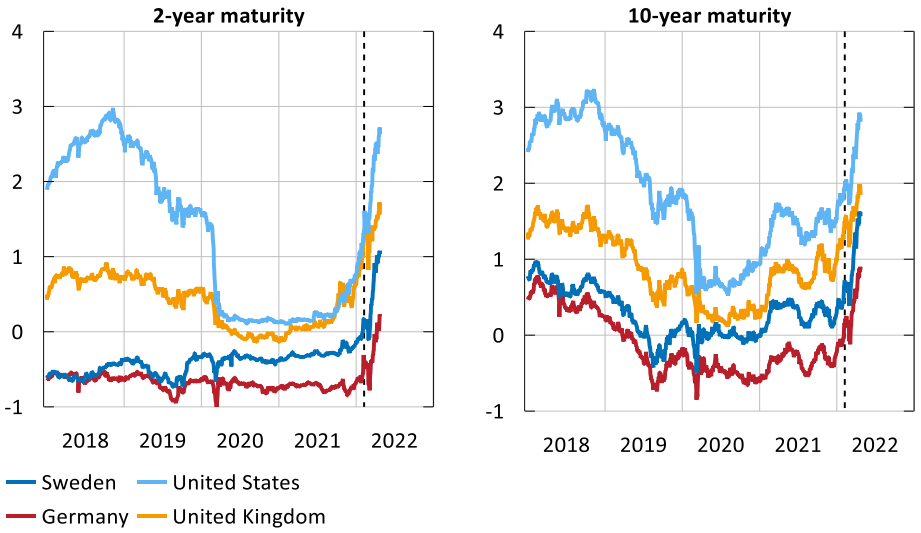
In many countries, including Sweden, government bond yields have risen rapidly since the monetary policy decision in February, even though uncertainty connected to the Russian invasion of Ukraine temporarily led to high demand for government bonds and lower yields at the end of February. The rise in yields is greatest for government bonds with shorter maturities, which are being strongly affected by signals of earlier policy rate hikes (see Figure 19). The upturn is substantial in the United States, where inflation is very high and market participants now expect significantly more and faster rate hikes than before, in line with signals from the Federal Reserve. In Sweden too, the increase in bond yields since the monetary policy meeting in February has been significant. The upturn in five-year government bond yields since the monetary policy meeting in February largely corresponds to the upturn in the expected short-term rate, even if heavily increased demand for safe assets in connection with the Russian

[16] SWESTR can be used in financial contracts as of 1 September 2021. For more information, see https://www.riksbank.se/sv/statistik/swestr/. The deposit rate in the Riksbank's standing facility amounts to the policy rate −10 basis points.

invasion of Ukraine contributed to the yield spread between government bonds and the expected short-term rate diverging temporarily (see Figure 23).

Figure 19. Government bond yields

Per cent



Note. Zero coupon rates for Sweden, Germany and the UK. 2-year and 10-year benchmark rates for the US. Broken line marks the date of the monetary policy meeting in February.

Sources: National central banks, the U.S. Treasury and the Riksbank.

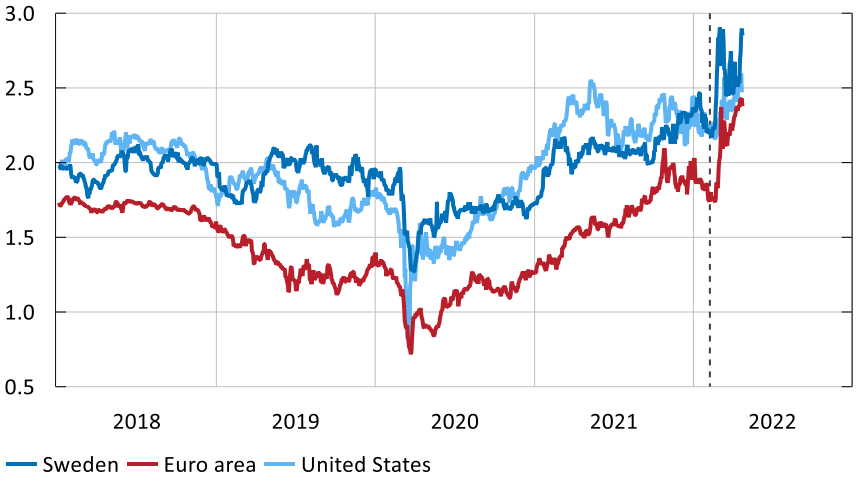
Long-term inflation expectations have increased recently in many countries. For most countries, the increase is clearest in the market-based measures (see Figure 20).[17]

In Sweden, market-based measures of long-term inflation expectations have risen since the monetary policy meeting in February and are now clearly over two per cent (see Figure 20). Also according to Kantar Sifo's Prospera survey, inflation expectations have risen compared to earlier this year, particularly expectations on the shorter term. According to the survey, conducted at the start of April, money market participants on average expected, prices one year ahead to increase by over 3 per cent. However, according to the same survey, inflation five years ahead was expected to subside to just over 2 per cent. Taken together, Swedish inflation-adjusted rates, the inflation-linked bond yields, are close to the level at the monetary policy meeting in February but slightly higher for shorter maturities and slightly lower for longer maturities.

[17] The market-based measures are not necessarily pure measures of expectations, as they also reflect different market conditions. This could explain why these measures sometimes deviate from the survey-based measures. In addition, the Swedish market-based measure is based on the rate of inflation measured using the CPI and accordingly may be positively influenced by expectations of higher policy rates.

Figure 20. Long-term inflation expectations in Sweden, the euro area and the United States

Per cent

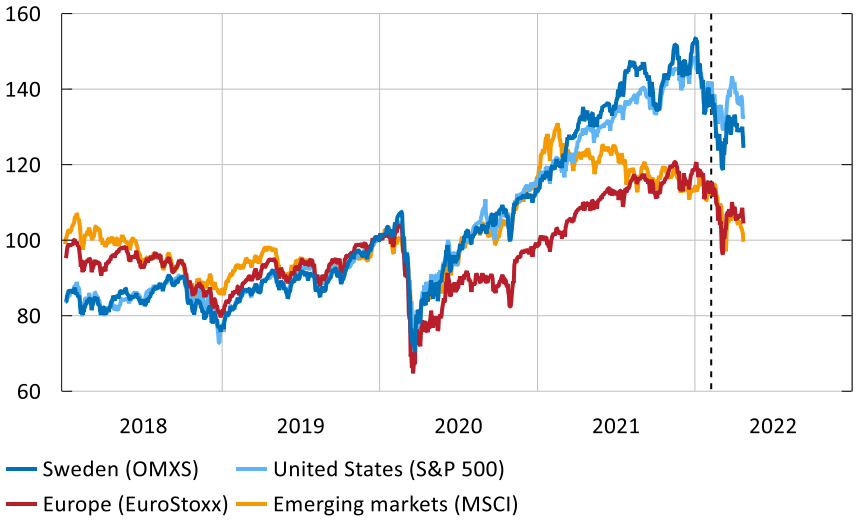


Note. Inflation expectations are market-based measures that refer to a 5-year period starting in 5 years' time. For the euro area, they are calculated using inflation swaps and refer to the HICP. For Sweden and the United States, they are calculated on the basis of bond yields and refer to the CPI. Broken line marks the date of the monetary policy meeting in February.

Sources: Bloomberg, Macrobond and the Riksbank.

Figure 21. Equity market movements in domestic currency

Index, 31 December 2019 = 100



Note. Broken line marks the date of the monetary policy meeting in February.

Source: Macrobond.

Abrupt fluctuations in prices on riskier assets

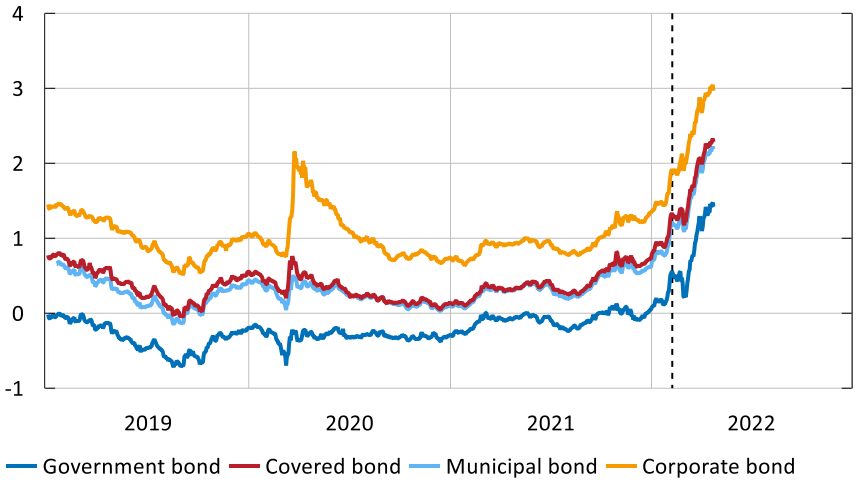
The expectation of higher future interest rates and lower demand for riskier assets have been reflected in falling equity prices since the start of the year. Uncertainty over the implications of the war in Ukraine for companies' future prospects initially strengthened this development but the stock market has subsequently recovered (see

Figure 21). All in all, US equity prices have fallen by just over 10 per cent since the start of the year, while, in Sweden, the OMXS has fallen by approximately 20 per cent over the same period.

The bond markets are being affected by a general rise in interest rates (see Figure 22). Reduced willingness to take risks and signals of adjustments of the central banks' asset holdings in a tighter direction are conceivable explanations for differences between yields on higher-risk bonds and the expected short-term rate, measured as the yields on so-called interest rate swaps has increased slightly (see Figure 23).[18] On the other hand, the yields on Swedish government bonds have not increased to the same extent as the expected short-term rate over the last six months. Disregarding temporary variations in demand for government bonds, among other things in conjunction with the Russian invasion of Ukraine, this development is deemed, among other things, to reflect the market's expectations that the supply of risk-free assets will remain low. Central government borrowing requirements are low, meaning that a limited amount of government bonds will be issued, at the same time as the Riksbank owns a large share of outstanding volumes of government bonds.

Figure 22. Yields for various types of bond, 5-year maturity

Per cent



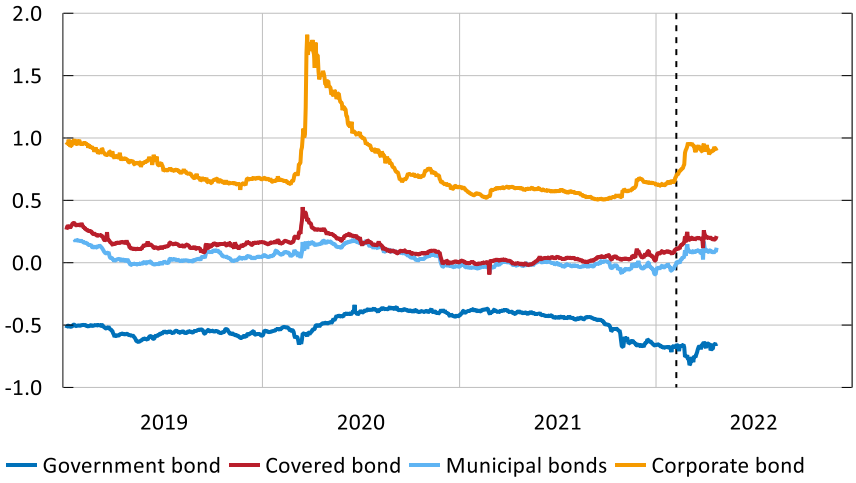
Note. Government bonds, Kommuninvest, covered bonds and corporate bonds refer to a zero coupon rate. Corporate bonds refer to bonds/companies with credit ratings that correspond to Investment grade. Covered bonds refer to bonds issued by Stadshypotek and municipal bonds are issued by Kommuninvest i Sverige AB. Broken line marks the date of the monetary policy meeting in February.

Sources: Bloomberg, Macrobond, Refinitiv and the Riksbank.

[18] An interest rate swap is a financial instrument that makes it possible for two parties to exchange interest flows for a fixed period without this affecting the companies' balance sheets, underlying loans or deposits. The swap rate constitutes of the expected 3-month STIBOR, which is to say the expected cost of short-term borrowing on the Swedish interbank market. This rate thus only reflects the banking system's credit risk, which is very low in normal times.

Figure 23. Yield spreads between different types of bonds and interest rate swaps, 5-year maturity

Percentage points



Note. Government bonds, Kommuninvest, covered bonds and corporate bonds refer to a zero coupon rate. Corporate bonds refer to bonds/companies with credit ratings that correspond to Investment grade. Covered bonds refer to bonds issued by Stadshypotek and municipal bonds are issued by Kommuninvest i Sverige AB. Broken line marks the date of the monetary policy meeting in February.

Sources: Bloomberg, Macrobond, Refinitiv and the Riksbank.

The development of the krona has been characterised by a willingness to take risks on the financial markets and clear signals of a higher repo rate

Investors usually regard the Swedish krona as a riskier currency than, for example, the US dollar or euro. The krona exchange rate can thus fluctuate heavily over shorter periods when uncertainty on the financial markets is high and the krona accordingly depreciated in conjunction with the Russian invasion of Ukraine at the end of February (see Figure 24). The krona subsequently appreciated rapidly, which, to some extent may be due to declining uncertainty on the financial markets, but primarily due to market participants now expecting a higher repo rate. The krona's exchange rate against other currencies, measured in terms of the KIX, has weakened by approximately 1.5 per cent since the start of the year, but is almost unchanged compared with the February monetary policy decision. The krona has weakened by a few per cent against the US dollar but has strengthened slightly against the euro.

Figure 24. Nominal exchange rate, KIX

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 since the Russian rouble was excluded from it. A higher value indicates a weaker exchange rate. Broken line marks the date of the monetary policy meeting in February.

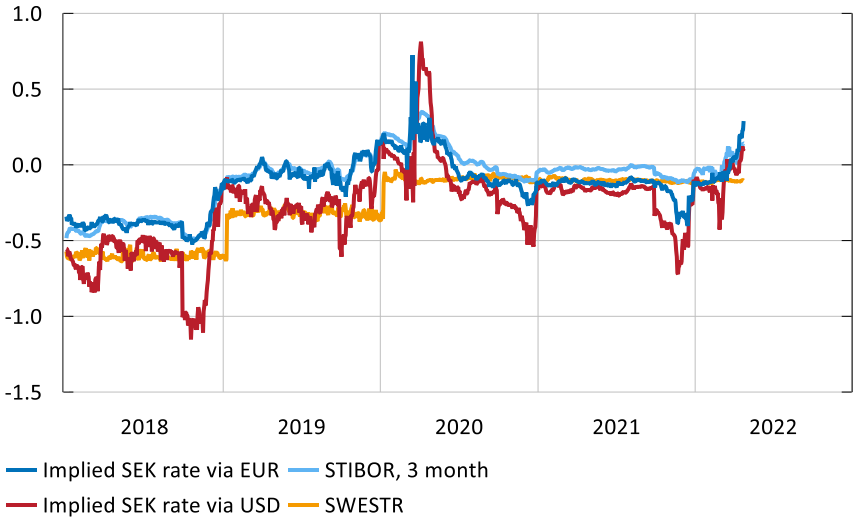
Source: The Riksbank.

2.2 Higher expected repo rate contributing to more expensive loans for households and companies

Even though uncertainty has increased on the financial markets and price fluctuations have periodically been large, Swedish banks are continuing to meet interest rates close to the repo rate for a large part of their short-term funding. The recent shift in market participants' expectations towards earlier policy rate rises has resulted in the banks' short-term funding in Swedish and foreign currency as well as yields on covered bonds, an important source for the banks' long-term funding, becoming more expensive (see Figures 22 and 25). Another important source of funding is bank deposits from the general public. These increased heavily in 2020 but grew more slowly last year and have been at close-to-zero interest rates for several years (see Figure 26).

Figure 25. Money market rates, in SEK

Per cent

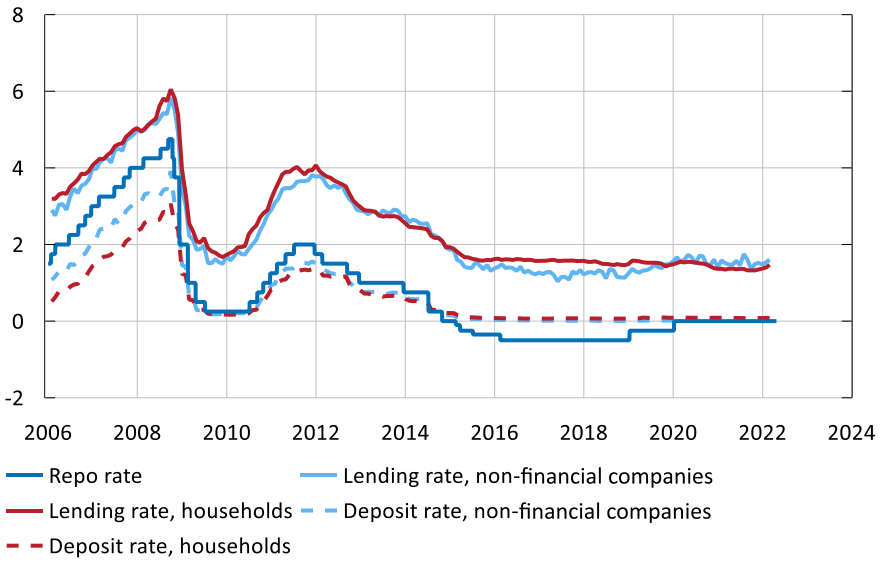


Note. The implied SEK interest rates are calculated using spot rates and forward exchange rates, as well as 3-month interest rates (EURIBOR and USDLIBOR). SWESTR falls very heavily on the last banking day of each year, quotations that have been omitted from this figure.

Sources: Bloomberg and the Riksbank.

Figure 26. Repo rate, and average deposit rate and lending rate to households and companies, new and renegotiated loans

Per cent



Note. Deposit and lending rates are volume-weighted averages of monetary financial institutions' deposits and lending at all maturities.

Sources: Statistics Sweden and the Riksbank.

High credit growth but rising interest rates

The general increase in interest rates leads to higher funding costs for banks and there are signs that the higher expected repo rate is contributing to tighter funding conditions for households and companies. At the same time, this is only visible to a limited extent in the chronologically delayed statistics for households and companies' more aggregated credit volumes and interest rates.

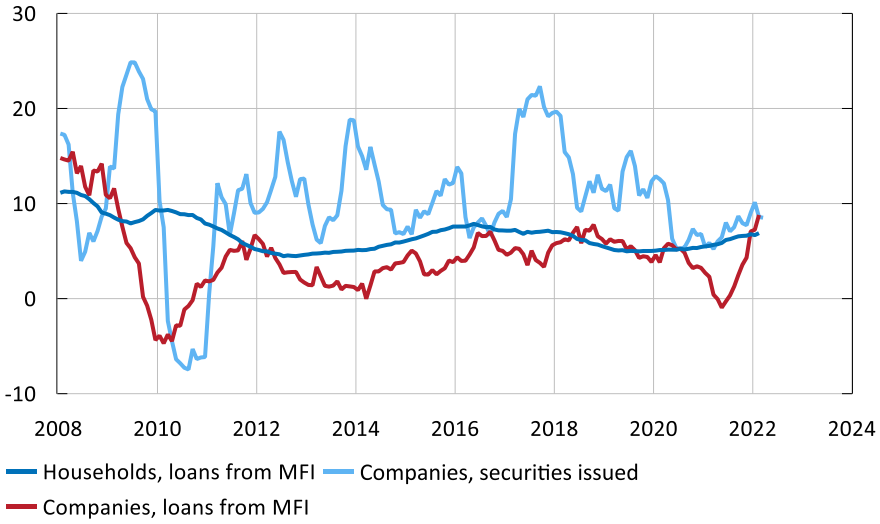
Swedish companies primarily obtain funding via bank loans, even though the share of borrowing made up of wholesale funding has increased in recent years. This is because many larger companies, not least in the property sector, have started to issue certificates and bonds. Both bank lending and the outstanding volume of issued securities has increased at an accelerating rate over the last year and they increased by almost 9 per cent in February and March, measured as an annual percentage change (see Figure 27). At the same time, Almi's lending indicator for the first quarter of the year indicates slightly tighter funding conditions in the period ahead compared with the last survey. Even though the average interest rates for corporate loans only rose marginally to 1.6 per cent in February, the rise in interest rates on loans with longer maturities was greater (see Figures 26 and 28). In addition, companies' costs for obtaining funding on the corporate bond market have risen further in March and April (see Figure 28).

Swedish households largely fund their housing purchases with loans. This has contributed to household debt with MFIs having grown increasingly fast in the wake of heavily rising housing prices and large amounts of newly-built housing in the last few years.[19] In February, households' mortgages increased by almost 7 per cent at an annual rate and households' total debt increased by about the same degree (see Figure 27). Taken together, this development means that the household debt-to-income ratio, which is to say household debt in relation 8to disposable incomes, now amounts to about 200 per cent. This corresponds to an upturn of just over 30 percentage points over the last 10 years. There are also signs that the expected repo rate rises are starting to make an impression in households' funding costs. It is true that the average interest rates for households' new or renegotiated mortgages have largely remained unchanged for a longer period and only increased marginally in February, but, at the same time, the rise in interest rates for mortgages with longer fixed-rate periods was clear (see Figures 26 and 28). Recent expectations of a higher repo rate have also led the banks to continue to adjust their listed mortgage rates upwards in March and April, in particular for loans with slightly longer fixed-rate periods. An average of the major mortgage players' listed rates with fixation periods of 5 years was just over 3 per cent in mid-April, which is the highest level since 2014.

[19] Household mortgage loans make up just over 80 per cent of Swedish households' debts with MFIs.

Figure 27. Household and corporate borrowing

Annual percentage change

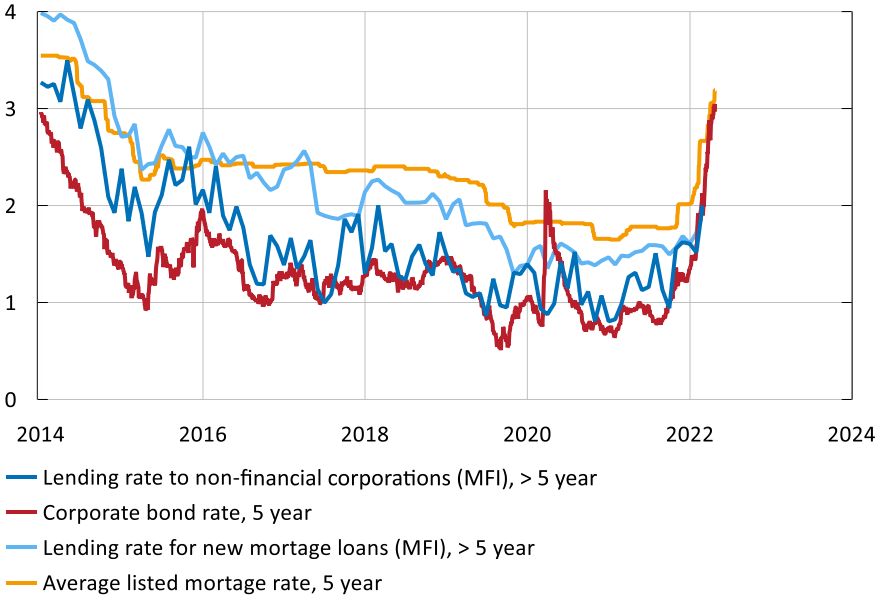


Note. Lending by monetary financial institutions to households and non-financial corporations adjusted for reclassifications and bought and sold loans. Securities issued by non-financial corporations have been adjusted for currency impact. Loans from MFIs constitute about two thirds of total lending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

Source: Statistics Sweden.

Figure 28. Interest rates charged to companies and households for loans with longer maturities

Per cent



Note. Corporate bonds refer to companies with a high credit rating. The average listed mortgage rates are an average of rates from SEB, Swedbank, SHB, SBAB, Länsförsäkringar Bank and Nordea. These interest rates are higher than the interest rates actually faced by households, as the mortgage actors apply interest discounts.

Sources: Statistics Sweden, the respective mortgage actor and the Riksbank.

3 Rapidly rising prices in global economy

The fluctuations in demand during the pandemic created disruptions in global value chains. The rapid recovery in the global economy, combined with disruptions to freight and production meant that inflation rose rapidly in many countries last year. Now Russia's invasion of Ukraine and widespread infection in China have reinforced the problems in global supply chains and pushed prices of energy, goods and food up further. In the short term, this is expected to hamper investment and production, in particular for European companies. The higher than expected rise in inflation means at the same time that households' real disposable incomes will decline in many countries, which is expected to dampen consumption and growth. Economic developments are still good, however. Monetary policy both in Sweden and abroad is taking a much less expansionary direction to bring inflation towards the target. In the euro area and Sweden, fiscal policy measures are at the same time expected to provide some support to the economy.

In March, CPIF inflation in Sweden was 6.1 per cent. An important explanation for the high inflation is high energy prices. However, the upturn has been broad since the turn of the year and excluding energy, the CPIF increased by 4.1 per cent in March. Inflation is expected to average around 5 per cent this year. A tighter monetary policy will contribute to inflation being close to the target of 2 per cent with effect from 2024.

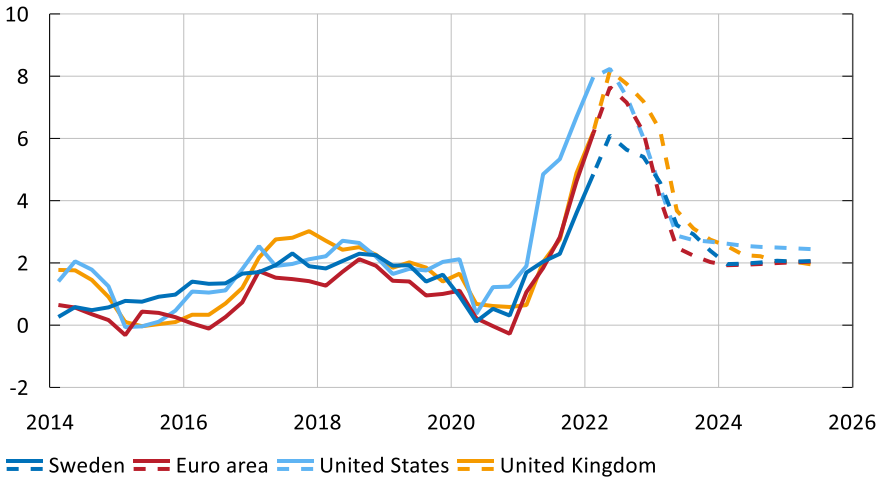
3.1 The Russian invasion dampens economic developments and spurs inflation

Economic developments abroad were good at the beginning of the year, despite the rapid spread of the omicron infection. However, inflation has risen rapidly. The demand for goods rose substantially during the pandemic, and supply has not been able to keep up. Disruptions in global supply chains aggravated the problems, which led to rising prices for electronics, second-hand cars and furniture, for instance. Demand for goods remains high, at the same time as demand in the service sector is now normalising. The annual rate of price increase has risen clearly in the hard hit service industries that recovered quickly when restrictions were removed after the pandemic, for instance, hotels, restaurants and travel. During the recovery from the pandemic, prices for energy and input goods have also increased rapidly and for some time have also been having a clear impact on the consumer prices (see Figure 29). Russia's invasion of Ukraine is reinforcing the rising inflation, partly through higher prices on energy, commodities and food, and partly through renewed problems in the global supply chains. Economic developments will slow down, at least in the near

term. Confidence indicators have fallen significantly, above all in the euro area (see Figure 30). Monetary policy in many countries is now taking a much less expansionary direction to bring inflation towards the target.

Figure 29. Consumer prices in various countries and regions

Annual percentage change

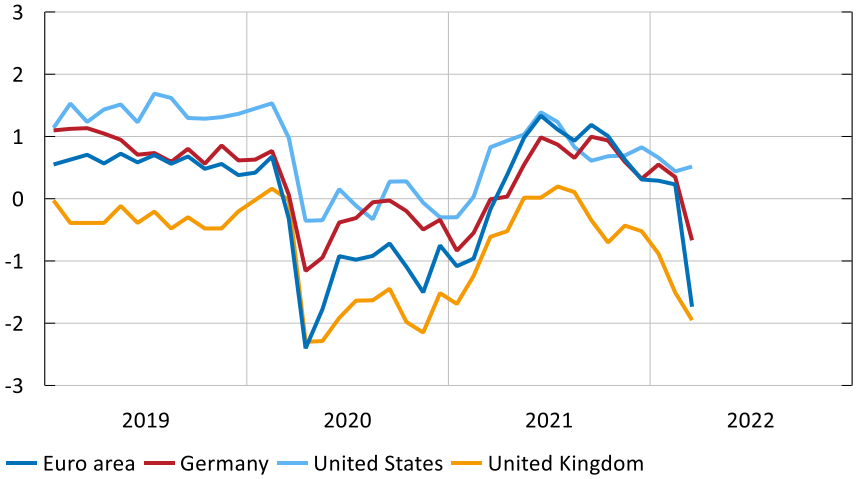


Note. Consumer prices show quarterly data and refer to the CPIF for Sweden, the CPI for the United States and the United Kingdom and the HICP for the euro area. Solid line refers to outcomes, broken line represents the Riksbank's forecast.

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

Figure 30. Consumer confidence

Standardised data, mean = 0, standard deviation = 1



Sources: Conference Board, European Commission and GfK Consumer Survey.

The western world's sanctions against Russia have been numerous, extensive and coordinated. For Russia the economic effects are already substantial and the Russian economy is expected to enter a severe recession this year. The consequences of the war for the Ukrainian economy are devastating. Rebuilding Ukraine and recreating the

country's production capacity will be one of the biggest social challenges in Europe in coming decades.

Russia is a small economy, around 1.5 per cent of the world's GDP, and trade with Russia is relatively limited in most countries in Europe.[20] But the economic effects of the war can nevertheless be considerable for the rest of the world, which is linked to what is exported from Russia, Ukraine and Belarus. During 2020, Russia accounted for around one quarter of the EU's import of oil and around 40 per cent of natural gas.[21] The latter in particular is difficult to replace in full, as it requires investments in infrastructure, as well as other suppliers.

Energy prices have risen further as a result of the war (see Figure 53). There are substantial price variations, but compared with the February Monetary Policy Report, forward pricing for deliveries of oil and natural gas in the coming year are around 25 and 30 per cent higher. The price increase on gas is partly due to the risk of deliveries from Russia declining, but also due to an increase in demand. The EU's gas stocks are small, and they are now trying to restore them quickly, in time for the coming winter. In addition, the European Commission has communicated that they want to significantly reduce the dependence on Russian gas already as this year, which further increases demand from alternative suppliers.[22]

In addition to energy, Russia also exports important input goods to the manufacturing industry, such as nickel, palladium and platinum.[23] Commodity prices have risen during the pandemic, and rose further when the invasion began (see Figure 31). Ukraine also produces important input goods. Reduced or no deliveries of, for instance, wiring from Ukraine have caused periodic production stoppages in the German automotive industry. There is also a risk that the shortage of semiconductors will worsen. Just over half of the global supply of neon used in manufacturing semiconductors and microchips is refined by a handful of companies in Ukraine, two in Odessa and one in Mariupol.[24]

In February, the Riksbank assessed that the supply problems would decline gradually during 2022. However, the war in Ukraine, and a large increase in infection in China, has exacerbated the problems with deliveries and shortages of components in many parts of the manufacturing industry. Delivery times, which showed signs of beginning to normalise at the start of the year, have begun to rise again (see Figure 31). Freight prices also remain high. The price of container freight has increased almost fivefold since the start of the pandemic. The cost of shipping commodities (for instance, iron

[20] The exception is the Baltic countries, which have much more extensive trade. It is also worth noting that Norway, which is Sweden's largest trading partner, instead benefits from the recent developments.

[21] So far this year, however, the EU's imports of Russian natural gas have been relatively low and the Baltic countries have already stopped all imports of Russian oil and gas. Germany intends to halve Russian oil imports by the summer and cease them completely over the course of 2022.

[22] The European Commission's plan, called REPowerEU, involves imports of Russian natural gas decreasing by two-thirds this year. See https://ec.europa.eu/commission/presscorner/detail/en/ip_22_1511.

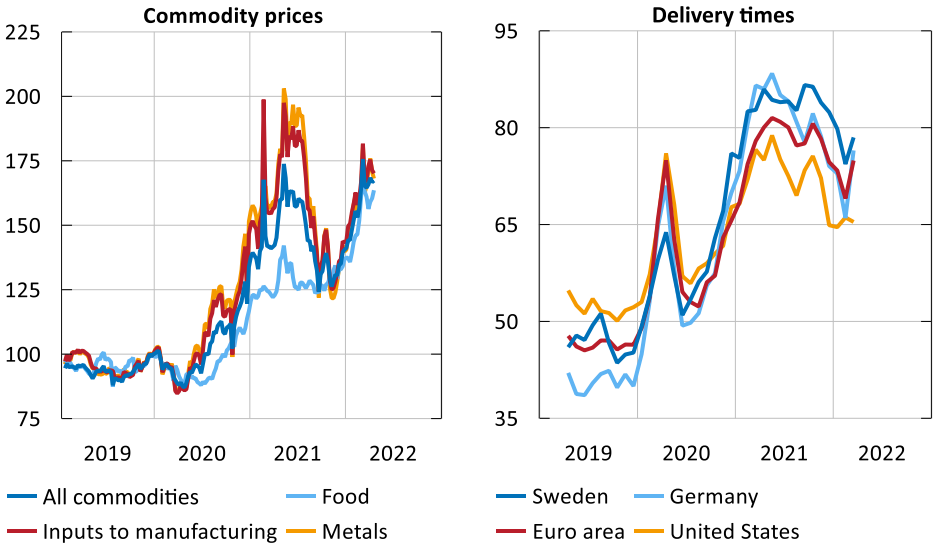
[23] Nickel is used in batteries, for instance. Palladium, platinum and neon are required for the production of semiconductors, which are used in everything from mobile phones and computers to cars.

[24] Neon gas is a by-product of Russian steel manufacture, which is sent to Ukraine for refining and then in turn sent to producers of semiconductors abroad.

ore, coal or grains), fell during the latter part of 2021, but has now begun to rise again.

Figure 31. Commodity prices and delivery times

USD, Index, 2019 week 52 = 100 (left) and diffusion index respectively (right)



Note. For the delivery times (right image) a value of 50 indicates that delivery times have not changed since the previous month, values below 50 indicate that delivery times have become shorter and values over 50 indicate that delivery times have become longer. PMI Markit for the euro area and Germany was published on 6 April.

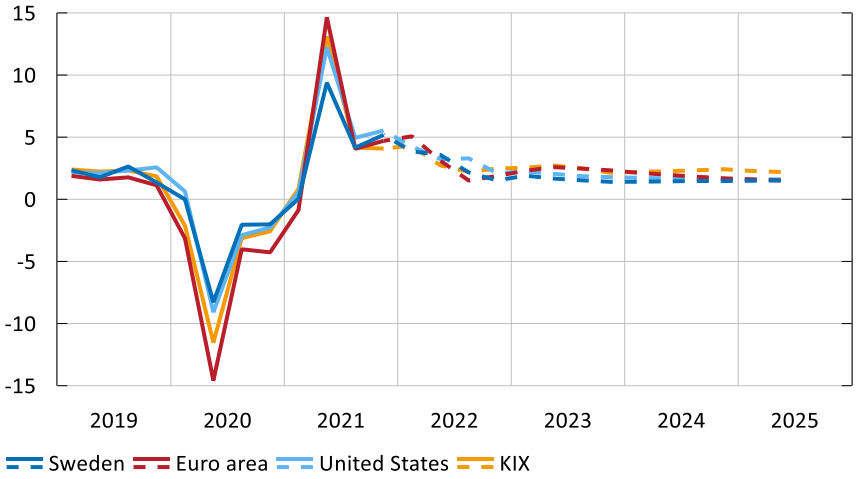
Sources: The Economist, The Institute for Supply Management (ISM), Markit Economics and Swedbank.

Energy and commodities prices are also expected to affect the prices of other goods and services going forward, including food (see the article “Many indications that inflation will be high this year and next year”). Russia exports large amounts of grain and together with Belarus is one of the leading exporters of fertiliser. Ukraine is also one of the world's largest grain producers and exports wheat and maize in particular. A significant share of Ukraine’s agricultural lands may become unusable this year and exports via the ports on the Black Sea are strongly limited as a result of the Russian invasion. The prices of wheat and maize, for instance, have risen markedly following the invasion (see Figure 55).

All in all, the Riksbank now assesses that KIX GDP will grow by 2.9 per cent this year (see Figure 32), which is a downward revision by one percentage point, compared with the February Monetary Policy Report. The high inflation reduces households’ purchasing power and, together with a tighter monetary policy, will hold back consumption and contribute to growth slowing down. Economic developments are still good, however.

Figure 32. GDP in Sweden and abroad

Annual percentage change, seasonally adjusted data



Note. The KIX is an aggregate of 32 countries that are important for Sweden's international trade. Solid line refers to outcomes, broken line represents the Riksbank's forecast.

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

Rising interest rates are expected to lead to tighter financial conditions in several emerging market economies in a situation where public finances are under severe pressure following the pandemic. At the same time, the starting situation is in some respects better than when interest rates were raised in 2013 and 2018. In general, the foreign exchange reserves are larger and the current accounts are stronger. High prices for energy, commodities and food are expected to have a greater impact on demand in relation to developed economies, and to hold back growth going forward.

Clear slowdown expected in euro area economy

In the euro area, GDP grew by a modest 0.3 per cent during the fourth quarter of last year, compared with the previous quarter. One reason was the most recent wave of the pandemic, which contributed to a fall in household consumption of 0.3 per cent. Up until Russia invaded Ukraine on 24 February, however, there were clear signs of a stronger development at the beginning of the year. The effects of the pandemic were waning and there were also signs that the bottlenecks were beginning to diminish. Confidence in the service sector rose clearly, and confidence in the manufacturing sector and among consumers remained good. Retail trade developed strongly, the labour market continued to strengthen and unemployment fell to 6.8 per cent in February. Inflation has continued to rise and amounted to 7.4 per cent in March. Although energy prices provided the largest contribution, the rate of price increase on food, services and capital goods was unusually high. The price increases have thus spread further and reflect not only the direct effects of high oil and gas prices. Underlying inflation, measured as the HICP excluding energy, food, alcohol and tobacco, has also risen clearly since last summer and amounted to 2.9 per cent in March. Despite the demand for labour having become increasingly strong, the rate of wage increase has so far been limited, although it is expected to rise somewhat going forward.

The war, combined with sanctions by the western world, has increased uncertainty over economic developments and provides further upward pressure on inflation (see the article "Economic consequences of the war in Ukraine" in this report). With regard to the euro area, the uncertainty primarily applies to access to Russian energy and the effects of phasing it out, as well as the size of the migration flows brought by the conflict.[25] Although households are to some extent compensated for the high energy prices by various government support measures, households' real disposable incomes are declining as a result of the high inflation, and this together with the uncertainty over future developments, will contribute to dampening consumption. A clear sign of this can be seen in the European Commission's measure for consumer confidence, which fell tangibly in March and is now close to the level measured at the start of the pandemic (see Figure 30). In the near term, companies are also expected to postpone their investments.[26] All in all, a relatively subdued GDP growth is expected in the first half of this year, followed by a recovery during the latter part of the year.

The need for fiscal policy measures has increased. The war has forced many people to flee, to an extent not seen in Europe since the Second World War. The EU has for the first time activated the Temporary Protection Directive, which means that people from Ukraine are offered temporary residence and work permits within the EU for up to three years. This means increased public expenditure in the form of economic support, costs for schools, medical care and housing. In addition to governments compensating households for the rising energy prices, substantial private and public investment is also expected, with the aim of releasing the EU from dependence on Russian energy in the long run. On 8 March, the European Commission presented a plan for this. The aim is for the EU to be able to manage without Russian energy in the year 2030 and for two thirds of this adjustment to be attained within one year.[27] The threat outlook in Europe has also changed rapidly and several countries, including Germany, have announced higher defence expenditure going forward.

Inflation and inflation expectations, which have also risen, and a gradual rise in resource utilisation contribute to somewhat higher wage growth going forward. In Germany, minimum wages will be raised by a relatively large amount in October, which will affect around six million workers. Moreover, many collective wage agreements will be renegotiated during the autumn and leading trade unions in Germany are expected to present wage demands in the summer, when inflation is forecast by the Riksbank to be at its highest, prior to central wage bargaining in a number of sectors and regions. Unemployment is expected to decline further during the forecast period. The increasingly strong labour market, combined with high inflation, is expected to entail demands for compensation that cause the rate of wage growth to rise somewhat faster than was expected in the February Monetary Policy Report. This will lead, with some time lag, to further upward pressure on underlying inflation. Food prices

[25] According to the UNHCR, more than 5 million people have so far fled Ukraine and many more within the country have fled their homes https://data2.unhcr.org/en/situations/ukraine.

[26] In March, corporate sector confidence fell heavily in the euro area, according to analysts on the financial markets (ZEW-index) and a little further in April. The IFO index for Germany fell heavily in March, while the purchasing managers' index for the euro area fell marginally in March and rose in April.

[27] On 25 March, the EU and the US also signed an agreement regarding further US deliveries of natural gas. This year it means a further 15 million cubic metres (above the earlier 22).

are expected to rise further as a result of the war, but the rate of increase for both energy and food prices is expected to fall during the second half of the year.
HICP inflation in the euro area will slow down from 6.8 per cent this year to 2.7 per cent in 2023 and 2.0 per cent in 2024 (see also Figure 29). The ECB is expected to conduct a gradually less expansionary monetary policy going forward, but interest rates are still low. The new fiscal policy initiatives, a stronger labour market and, eventually, lower inflation will lead to real disposable incomes rising again. GDP growth is expected to fall from 5.4 per cent in 2021 to 2.9 per cent this year, 2.4 per cent in 2023 and 1.9 per cent in 2024.

Resource utilisation is high and the labour market is becoming tighter in the USA

The US economy is not expected to be affected by the war in Ukraine to the same extent as that of the euro area. GDP grew by 1.7 per cent in the fourth quarter of last year, compared with the previous quarter and for the year as a whole growth was 5.7 per cent. It was primarily changes in inventories, but also private consumption, that contributed to growth. Going forward, growth will gradually dampen. Consumer confidence has fallen since the start of the year. Confidence in the service sector and the manufacturing industry has also dampened, but is still at levels that clearly show a belief in continued growth going forward. One reason why consumers have a gloomier view of the future is that inflation has continued to rise more than expected and thus undermined purchasing power. CPI inflation amounted to 8.5 per cent as an annual rate in March. The upturn was due – as in the euro area – to higher prices on energy and food, but for a few months now, core inflation has been providing an increasing contribution and in March amounted to 6.5 per cent as an annual rate.[28] The fact that goods with normally stable prices become more expensive shows that inflation has now increased on a broader front and means that it will probably be high for a longer period of time than previously expected. The plans for monetary policy have therefore been changed relatively quickly and the Federal Reserve began its rate increases in March. The FOMC members´ median forecast signals increases to 1.9 per cent at the end of the year, and then further increases to 2.8 per cent until the end of next year. This can be compared with the corresponding median forecast in December, when the interest rate was expected to be only 0.9 per cent at the end of 2022.

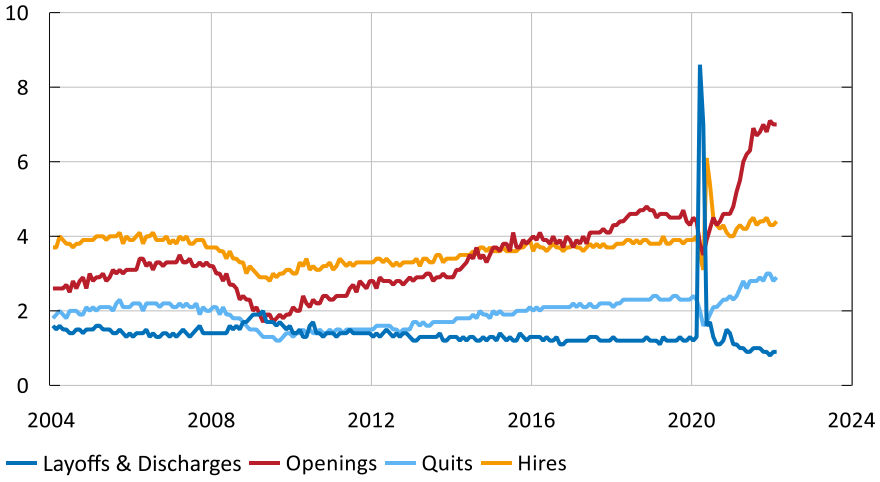
As a result of high demand combined with a restrained labour supply after the pandemic, the labour shortage has increased. In March, unemployment fell further to 3.6 per cent. In the near term, the situation on the labour market is expected to be strained; there is a large number of vacant positions in relation to the number of jobseekers and the risk of losing one's job is seen as slight. At the same time, a record-high number of people are choosing to resign to seek better jobs and conditions (see Figure 33). The labour shortage has caused wage growth to rise substantially. In March, hourly wages increased by 5.6 per cent on an annual rate and there are many indications that the payroll cost index (ECI) may rise further going forward. According

[28] To slow down the rapid price upturn on fuel, the United States decided at the end of March to use 1 million barrels of oil per day from strategic oil reserves during the coming six months, which corresponds to around 5 per cent of the US daily consumption.

to the Atlanta Fed's salary indicator, wage increases are particularly high among those changing jobs, among young people and those with low wages. The strained situation on the labour market is assessed to lead to wages continuing to rise this year and the increased payroll costs are expected to be passed on to consumer prices to some extent. The forecast is for wages to rise faster than was assessed in the February Monetary Policy Report.

Figure 33. Demand for labour and turnover on the US labour market

Per cent



Note. Vacant positions are stated in relation to the sum of the number of employed and job vacancies. New recruitments, voluntary resignations and redundancies are stated in relation to the number of persons employed.

Sources: Job Openings and Labor Turnover Survey (JOLTS) and U.S. Bureau of Labor Statistics.

The demographic developments will continue to hold back the labour supply in future and workforce participation will only rise slowly. High inflation and tighter monetary policy with higher interest rates will mean that demand dampens going forward, and then resource utilisation will normalise. However, CPI inflation in the United States is expected to be high this year, on average 7.4 per cent, and then to fall back to 3.2 per cent next year. Towards the end of the forecast period, inflation is expected to amount to around 2.5 per cent. Unemployment is expected to fall somewhat further in the coming months, but is then expected to turn around and rise to 3.9 per cent at the end of the forecast period. GDP is expected to grow by 3.2 per cent this year, and then to slow down to 2.0 per cent in 2023 and 1.7 per cent in 2024.

Chinese growth slowing down

Last year, China's economy grew rapidly, by 8.5 per cent, but during the second half of the year growth slowed down. Industrial production and the retail trade indicated a relatively strong start this year and in the first quarter GDP grew by 1.3 per cent, compared with the preceding quarter, but the "headwinds" have increased. A high level of infection has caused new shut-downs, which risks burdening both the service sector and the manufacturing sector. At the end of March, for instance, the whole of Shanghai was closed down. This is the location of China's largest harbour, which is

also the world's busiest and an important hub in the global delivery chains. The number of container ships waiting outside of China's main harbours has in a short time almost doubled, in relation to February. Growth is also slowed down by rising commodity prices that lead to both more expensive imports and weaker demand from abroad. There will continue to be considerable uncertainty in the property sector, where demand has declined and several property companies are suffering major financial problems. During the winter, economic policy has become more expansionary and more stimulus is expected during the year. Economic growth is expected to fall to just over 4.4 per cent this year, lower than the growth target of around 5.5 per cent, and then reach around 5 per cent in the coming years.

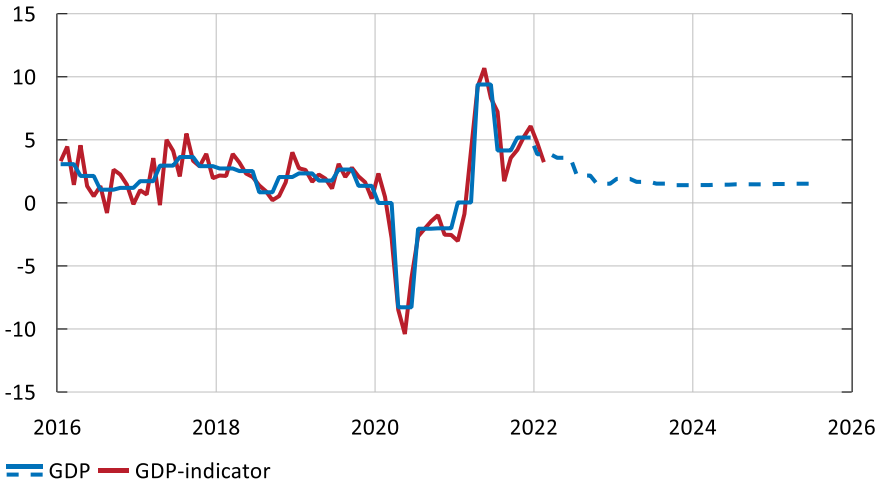
3.2 GDP growth in Sweden slowing down, but employment rate record-high

Strong Swedish economy at outset

During 2021, the Swedish economy recovered rapidly and GDP increased by almost 5 per cent in relation to the previous year. In the fourth quarter of 2021, GDP was around 3 per cent higher than prior to the pandemic. Companies experienced some difficulties in managing the demand caused by the recovery, and reported shortages of some input goods and long delivery times, at the same time as prices for commodities and other input goods were at a high level. In some sectors there were also signs that companies had difficulties in finding staff. Employment rose rapidly in 2021, and the downturn during the pandemic was fully recovered.

Figure 34. GDP and GDP indicator in Sweden

Annual percentage change



Note. The GDP indicator describes the monthly development of activity in the entire Swedish economy on the basis of the available statistics on the use and production side. Solid line for GDP refers to outcome, broken line represents the Riksbank's forecast.

Sources: Statistics Sweden and the Riksbank.

The rate of increase in production appears to have slowed down recently. The GDP indicator points to a weak start in 2022, when the spread of infection and sickness absences were high (see Figure 34). At the same time, employment increased rapidly and the weaker GDP in the first few months of the year was assessed to have been temporary.

The war in Ukraine affects Swedish GDP via several different channels

The war in Ukraine and the sanctions against Russia have significantly increased the uncertainty surrounding economic developments and will affect the Swedish economy via several different channels. Sweden's direct trade with Russia and Ukraine is not particularly large, but a more remarkable effect is that prices of certain commodities and energy have risen. This has caused inflation to rise, both in Sweden and abroad.

In times of uncertainty, companies, households and market participants tend to become more cautious and avoid taking risks. Confidence in the household sector fell in March to the lowest level since the financial crisis, according to the Economic Tendency Survey, while confidence among companies in the business sector remained largely unchanged at a high level. All in all, the uncertainty can lead to households and companies postponing consumption and investment, while waiting for further information on the economic outlook. The size of the impact the war has on the Swedish economy depends on several different factors (see the article “Economic consequences of the war in Ukraine”).

Small public finance deficit this year despite many new measures

The invasion of Ukraine has led to a humanitarian disaster and millions of people have fled their homes. According to the Swedish Migration Agency’s forecast in March, between 76,000 and 212,000 people may seek asylum in Sweden by the summer. This means increased expenditure for the public sector. The size of the expenditure will depend on how many flee to Sweden. It is assumed in the forecast that around 100,000 people from Ukraine will seek refuge in Sweden this year.

In addition to increased expenditure as a result of receiving refugees, which is expected to be partly funded through the foreign aid budget, the Government has decided and announced new unfinanced measures[29] since the start of the year to value of almost SEK 60 billion. This includes measures in the form of compensation to households for increased electricity and fuel prices and investments in defence. Together with the unfinanced measures corresponding to around SEK 70 billion already decided in the government budget for 2022, the new measures mean that fiscal policy will clearly contribute to demand this year. The Government has also announced an

[29] Unfunded reforms refer to the amount that has been decided and announced, but is not funded by active decisions on expenditure cuts or tax increases. However, the government fiscal balance increases via a so-called automatic budget strengthening measure. This means that the balance is strengthened in the event of unchanged rules since tax revenue develops approximately in line with GDP while expenditure tends to decrease. The unfunded reforms are thus partly financed via the automatic budget strengthening measure.

expansion of defence in the coming years, which entails higher public consumption and investment expenditure.

Despite high pandemic-related expenditure, last year's general government net lending was low. This is because of the strong development in tax revenue. This year, the temporary pandemic-related support will cease to apply, but the Government's new announced investments, together with the increased costs for receiving refugees, mean that savings, despite historically large dividend payments from state-owned companies, are not expected to strengthen this year. General government net lending is expected to remain close to zero for the entire forecast period.

Calmer growth rate in the Swedish economy

After a period of strong recovery in the Swedish economy, GDP growth will now dampen going forward. The high inflation will erode households' real incomes, which will dampen consumption. High inflation will lead to monetary policy being tightened and in the future households will face increasingly high interest expenditure, which will further reduce their purchasing power and dampen consumption. Increased interest expenditure and higher energy costs are expected to contribute to housing prices falling somewhat, but from high levels. This means that it will be less favourable to build housing, and combined with the construction industry warning of an increased shortage of input goods, it is expected to lead to fewer homes being built in 2023 and 2024 than in 2022.

This year, however, there are factors counteracting a rapid downturn in GDP growth. The recovery after the pandemic is continuing and households are judged to want to consume services again to the same extent as prior to the pandemic. Moreover, fiscal policy in the form of tax cuts and transfers will provide a positive contribution to household incomes this year. These factors will slow down a more rapid decline in consumption in 2022. Increased general government expenditure linked to an influx of refugees will also cause demand to increase, and in particular public sector consumption. In time, increased investments in defence will also lead to higher public sector investment and consumption. GDP will grow by almost 3 per cent this year and then slow down to a growth of around 1.5 per cent a year in 2023 and 2024, which is roughly in line with the assessed trend growth.

Higher prices and interest rates reduce household purchasing power

During the pandemic, households' capacity to consume and households' savings, which were high even before the pandemic, increased rapidly. Now that COVID-19 is no longer classed as a danger to society and the restrictions have been removed, households are expected to have a high willingness to consume. This is reinforced by employment being at a high level.

But the high inflation erodes households' purchasing power. In addition, mortgage rates are expected to rise and even if interest rates rise from a low level, this is a further factor dampening households' disposable incomes. This year, real wages will decline as a result of the high inflation. Despite this, the real disposable income per

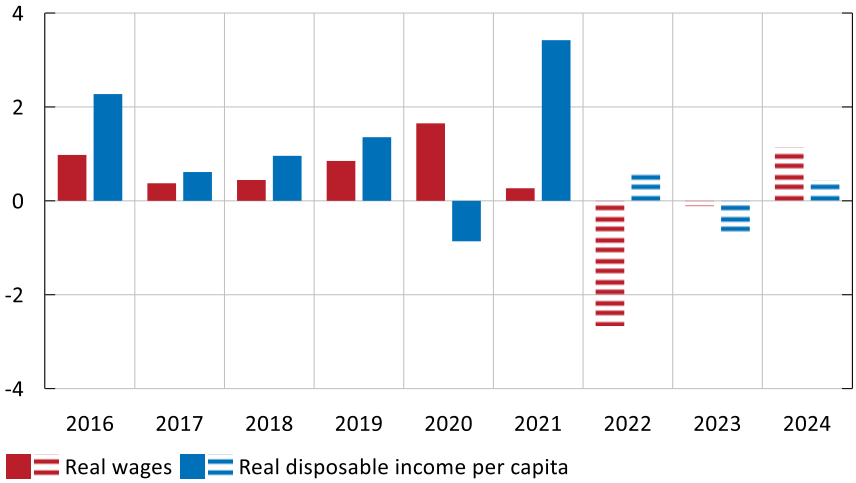
capita will increase (see Figure 35).[30] This is partly due to increasing employment, tax cuts and various transfers to households such as compensation for high electricity and fuel prices, and high capital incomes. But even if real disposable incomes increase for the total household sector as a whole, the situation can become problematic for some households. Highly-indebted households that do not receive any of the transfers will probably see their real disposable incomes decline.

The households that have previously saved a large share of their income will be able to reduce their regular savings and thereby maintain consumption when prices and interest rates rise. However, this possibility is dependent on how much they have saved and how much prices and interest rates rise. Households' choices between consuming and saving depend on several different factors. Increased concern over economic developments, for instance, in the wake of the war in Ukraine, would normally contribute to higher precautionary saving.

Monthly statistics for household consumption indicate that consumption declined at the start of the year, when the spread of infection and sickness absences were high. Household confidence indicators fell in March to the lowest level since the financial crisis, according to the Economic Tendency Survey, but data on card transactions from Swedbank-Pay indicates that at the same time consumption was strong. Households are now expected to want to normalise their consumption after the pandemic and it will therefore increase steadily in the spring and summer, which will contribute to consumption for the whole year 2022 increasing by 3.4 per cent, compared with 2021.

Figure 35. Real wages and real disposable income

Annual percentage change



Note. Real wages are deflated using the CPIF and real disposable incomes with the consumption deflator. Solid bar refers to outcomes, broken bar to the Riksbank's forecast.

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

[30] Real disposable income is deflated using the consumption deflater and real wages with the CPIF. Differences can arise in individual years due to different deflation being used. However, this is not so important at present.

During 2023 and 2024, consumption will slow down significantly and grow by on average 1.5 per cent. However, incomes will decline more than consumption and the household saving ratio will fall from 17 per cent in 2021 to around 14 per cent in 2024. This means that the saving ratio is expected to fall 2 percentage point more than was assessed in February.

Corporate investment growing at a normal pace

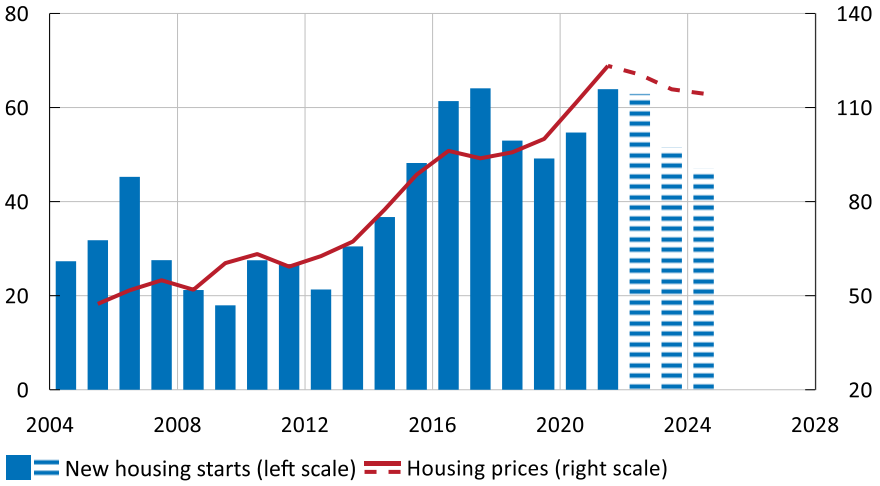
Investments in the business sector excluding housing increased rapidly in 2021, and are now back to the trend that prevailed prior to the pandemic. Increased uncertainty regarding economic developments, higher production costs and rising interest rates can mean that some investment is once again being postponed. The high energy costs can contribute to larger investments to hasten the transition from fossil fuels and make use of energy in production more efficient, but it can at the same time mean that other investments are not prioritised. In countries that are dependent on gas from Russia, the war is creating a need for investments in the energy sector. The Swedish Energy Agency assesses that the risks to the electricity supply in Sweden from the war are small. However, to meet increased demand for fossil-free electricity there is a substantial pre-existing need for long-term investment. All in all, investments in the business sector excluding housing are expected to increase at a normal pace in the coming years. Compared with the assessment in February, the forecast has been revised down, which is in line with the weaker economic activity. The expansion of the defence forces will contribute to increased investment in the public sector in the coming years.

Demand for housing subdued

A good development in income and low interest rates have for a long time contributed to demand for housing being high, which has also led to a sharp rise in housing prices. The high housing prices have contributed to the supply of housing also having increased substantially via new construction, and in recent years supply has increased faster than the population. Rising mortgage rates, high energy costs and weak growth in disposable incomes during 2023 and 2024 are expected to cause housing prices to fall somewhat. Nevertheless, at the end of 2024, housing prices are expected to remain at a higher level than prior to the pandemic. The fact that demand for housing is falling also leads to a substantial slowdown in housing construction. The number of housing starts per year is expected to fall from 64,000 in 2021 to 47,000 at the end of the forecast period (see Figure 36).

Figure 36. Number of housing starts and house prices

Thousands and index, 2019 Q4 = 100



Note. Real wages are deflated using the CPIF and real disposable incomes with the consumption deflator. Solid bar refers to outcomes, broken bar to the Riksbank's forecast.

Sources: Statistics Sweden, Valueguard and the Riksbank.

Swedish exports affected despite little trade with Ukraine and Russia

Russia and Ukraine comprise a small part of the global economy. Moreover, Sweden's direct trade with these countries is limited. Swedish exports of goods to these countries comprise less than 2 per cent of the total export of goods and imports of goods less than 1.5 per cent of total imports of goods. In addition to direct effects on Swedish exports, which come from a lower trade with these countries, exports are also indirectly affected through lower economic activity abroad and a shortage of input goods, and logistics problems. Even before the war broke out, there were shortages of some input goods, as a result of the closures and fluctuations in demand during the pandemic and there are now signals indicating that these problems will remain. New outbreaks of COVID in China are expected to further aggregate the problems.

Although the war has negative economic consequences for Europe, demand will nevertheless be maintained by investments in defence and by major investments in energy to reduce Europe's dependence on Russian gas. Moreover, orders to manufacturing companies have been filled up over the past year as demand has been high, but production has been held back as a result of shortages of input goods. Despite orders being expected to slow down going forward, exports will grow at a good pace over the year while the orders are met. All in all, demand for Swedish exports is expected to increase at a good pace in the coming period (see Figure 37).

Figure 37. Exports and the Swedish export market

Annual percentage change

Note. The Swedish export market aims to measure import demand in the countries to which Sweden exports. This is calculated by aggregating imports in the countries included in KIX and includes around 85 per cent of the total Swedish export market. Solid line refers to outcome, broken line represents the Riksbank's forecast.

Sources: National sources, Statistics Sweden and the Riksbank.

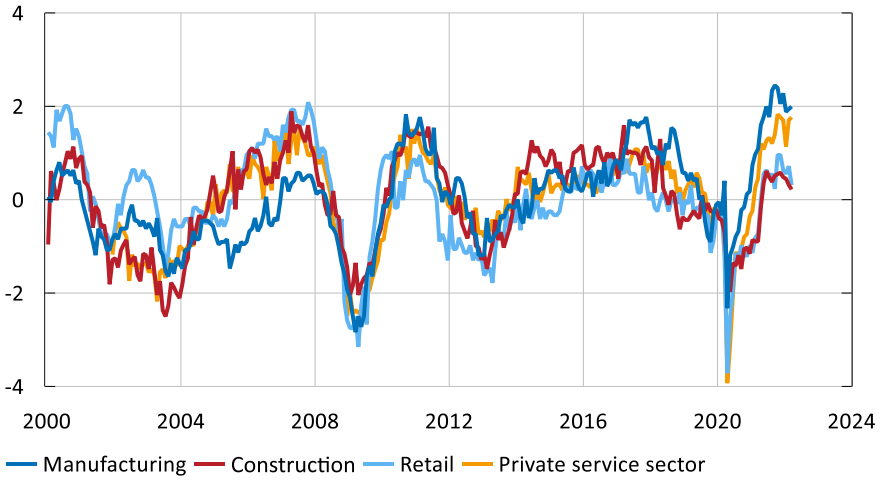
Rapid growth in employment at start of year

Employment rose rapidly last year, and the number of persons employed in Sweden increased by around 100,000 between the fourth quarter of 2020 and the fourth quarter of 2021.[31] Following a record decline in the number of employees in 2020, the hotel and restaurant industry, for instance, employed a lot of people in 2021. During the first months of the year, employment has continued to increase rapidly, and unemployment has fallen. Despite observed problems with input goods and deliveries, the Economic Tendency Survey states that there are still many companies who say they are planning to recruit particularly in the manufacturing industry and private service industries (see Figure 38). At the same time, the number of newly registered job openings at the Swedish Public Employment Service is at a very high level and the number of redundancy notices is low. All in all, forward-looking indicators point to continued high demand for labour in the coming period.

[31] In connection with the publication of the outcome for the month of January, Statistics Sweden published spliced data for the period April 2005–2020, which adjusts for the time series break that arose in January 2021, see the fact box at the end of this chapter for further information.

Figure 38. Recruitment plans by sector

Standardised data, mean = 0, standard deviation = 1



Source: National Institute of Economic Research.

Rising employment rate and falling unemployment

The fact that demand in the business sector is expected to slow down going forward will lead to employment increasing more slowly. However, at the same time, a need has arisen to employ people to meet the large number of people from Ukraine seeking refuge in Sweden, which is judged to increase the number of employed in the public sector in particular. Employment is thus expected to continue to rise this year, but at a slower pace than at the start of the year, and unemployment will continue to decline.

Both labour force participation and the employment rate have reached historically high levels (see Figure 39). During the forecast period, labour force participation is expected to rise somewhat further, especially among older people and those born abroad. Labour force participation in these groups has shown a trend rise for many years, and is expected to continue to do so as a result of raising the age at which one can claim a pension[32], and of integration on the labour market improving.

The Ukrainians who receive residence permits through the Temporary Protection Directive will have the right to work, and the Swedish Public Employment Service has been tasked with charting their competence and informing them on how to seek work.[33] Ukrainians, in comparison with others born abroad who have arrived in Sweden in recent years, have a relatively high level of education.[34] Many of the

[32] For further information, see the National Social Insurance Committee's report, October 2019, En riktålder för höjda pensioner och följsamhet till ett längre liv (A benchmark age for raised pensions and flexibility for a longer life) and Government Bill, March 2022, Justerade åldersgränser i pensionssystemet och i kringliggande system (Adjusted age limits in the pension system and associated systems).

[33] This means that the Ukrainians registering with the Swedish Public Employment Service will be included in the Service's statistics on unemployment.

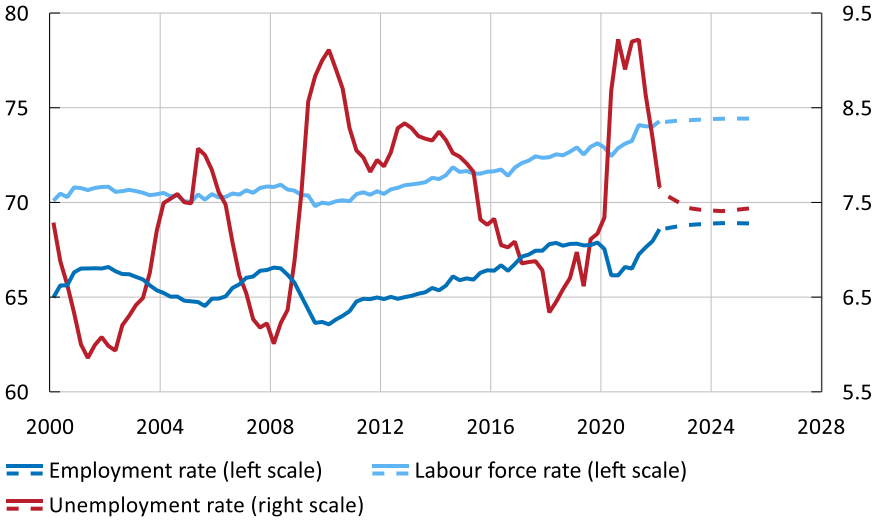
[34] According to Eurostat, 57 per cent of 30–34 year olds in Ukraine have a university education. Among those born abroad who have immigrated to Sweden during 2014–2017 in the age groups 25–34 years and

Ukrainians who have now fled to Sweden are therefore expected to find work, even it it is judged to take some time for even this group to become established on the Swedish labour market. Those who receive residence permits through the Temporary Protection Directive will not be registered in the population database, and therefore will not be included in the LFS samples, regardless of whether or not they work.[35]

Demand for labour is expected to continue to increase in the coming years, which is partly due to the investments in defence that have been announced. All in all, the employment rate is expected to continue to rise somewhat, albeit at a slower pace than at the beginning of 2022, and will then remain at an historically high level. Unemployment is expected to fall to 7.4 per cent next year and then level off at that level.

Figure 39. Employment rate, unemployment and labour force participation

Percentage of population and labour force respectively, 15–74 years, seasonally-adjusted data



Note. The time series are spliced and adjusted by Statistics Sweden for the time series break that arose in the LFS in January 2021 for the period April 2005–December 2020, see the fact box at the end of Chapter 3. Pre-April 2005 data has been spliced by the Swedish National Institute of Economic Research. Solid line refers to outcome, broken line represents the Riksbank's forecast.

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

Resource utilisation is approximately normal

As the amount of spare capacity in the economy affects the development of wages and prices, resource utilisation is of considerable interest for monetary policy. However, it cannot be measured exactly, and the Riksbank therefore assessed resource

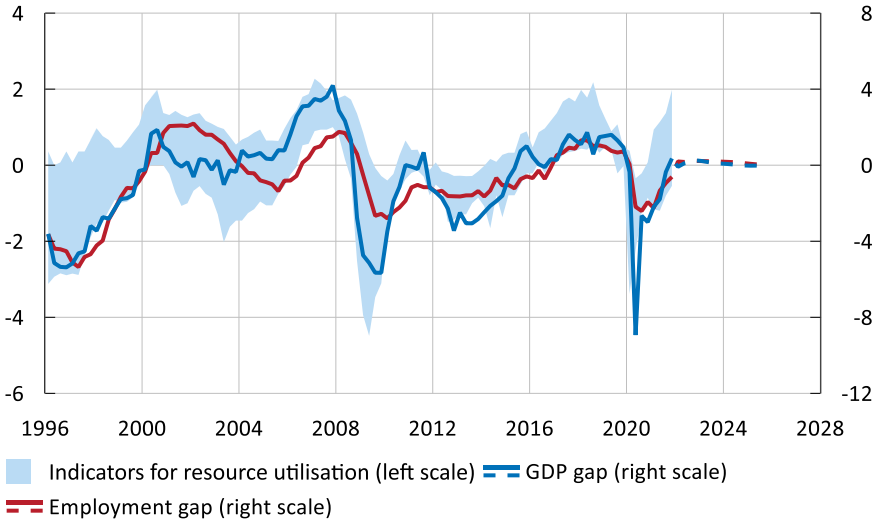
34–44 years, 37 per cent and 31 per cent respectively had a university education. See Eurostat and Stora skillnader i utbildningsnivå mellan nyinvandrade.

[35] The National Accounts (NA) make an addition for the labour input for those who are not registered as part of the population using data from the Swedish Tax Agency, which means that those who work will be included in the statistics on the number of hours worked according to the NA, but not in the number of employed according to the LFS.

utilisation on the basis of various data and indicators. Data monitored by the Riksbank indicate that resource utilisation has risen rapidly, which is supported by all indicators (see Figure 40). However, the span between the different indicators is wide and it is difficult to assess the precise level of resource utilisation. There are indicators that point to resource utilisation being strained, but the Riksbank's overall assessment is that resource utilisation is now roughly normal. This is illustrated by the GDP gap being close to zero. During the forecast period, GDP will grow roughly in line with the assessed trend growth and resource utilisation is therefore assessed to remain roughly normal throughout the forecast period.

Figure 40. Measures of resource utilisation

Standard deviation and per cent



Note. The field shows the highest and lowest outcomes for standardised indicators of resource utilisation. Included series are: Inverted unemployment according to LFS, and according to the Swedish Public Employment Service; Capacity utilisation in the industrial/manufacturing sector according to Statistics Sweden/the Economic Tendency Survey; Economic Tendency Survey series for the business sector on shortages, profitability assessment and demand. The gaps refer to the deviation in GDP and employment from the Riksbank's projected trends. Solid line refers to outcome, broken line represents the Riksbank's forecast.

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

Wage growth on the up

Wage growth rose in 2021 and is projected to have averaged 2.7 per cent. This is an increase compared to 2020 and even slightly higher than 2019. The increase is primarily due to the fact that wage negotiations at the end of 2020 meant that the centrally agreed wages increased by an average of about 2.4 per cent in 2021. This year, the agreed wage growth is 1.7 per cent, although the total wage growth is not just determined by centrally agreed wages but also by local pay reviews. The size of these is affected by, among other factors, the situation in the labour market. As the demand for labour is high now, wages over and above central agreements are expected to rise faster this year than last year. Despite the agreed wage growth being lower this year, actual wage growth is expected to be somewhat higher on average than last year. If wage-earners were compensated in full for the rapidly rising prices, there is a risk that

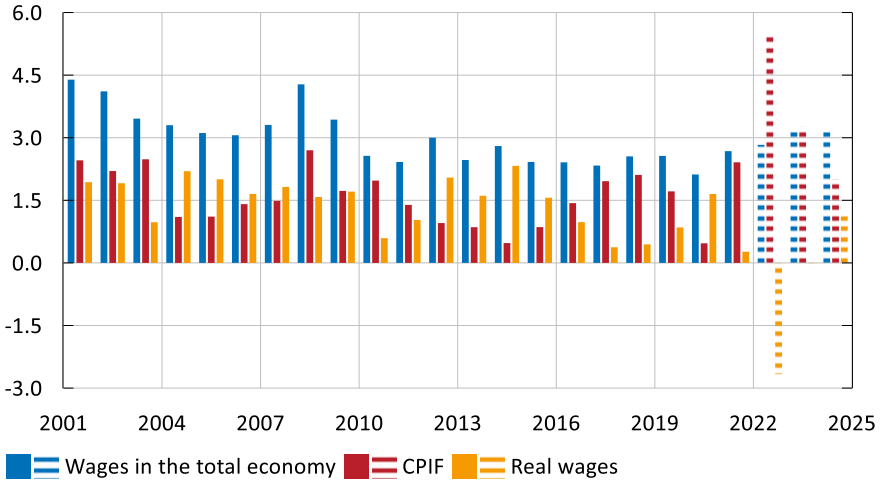
inflation would rise further. Chapter 1 contains a description of a scenario with higher inflation resulting from further contagion effects in the form of wage drift, for instance (see section 1.3 in this report).

Real wages have been increasing over many years (see Figure 41). This year, inflation will rise partly due to rising energy prices and higher prices on other largely imported goods. Prices for many imported input goods will also rise. In many cases, this will lead to companies having higher costs. The higher prices companies charge consumers will mean that companies have their higher costs covered to some extent, but not necessarily that they will have better profits and more scope to raise wages. Wages are thus not expected to increase fast enough this year to compensate for the higher prices faced by households, which means that their real wages will fall. However tax cuts and transfers will contribute to real disposable incomes nevertheless increasing this year.

Negotiations on central wage agreements for 2023 and beyond will begin in autumn 2022. Unemployment is expected to be lower then, and inflation much higher than when the current agreements were signed in the crisis year 2020. Wages abroad are also expected to increase faster than in recent years. This is expected on the whole to contribute to wage growth in Sweden being somewhat higher in the coming years. Measured according to the short-term wage statistics, the Riksbank estimates that it will amount to just over 3 per cent in 2023 and 2024. During 2024, Inflation is expected to increase somewhat more slowly than nominal wages and real wages to therefore increase again (see Figure 41).

Figure 41. Wages, the CPIF and real wages

Annual percentage change



Note. Real wages are calculated as the difference between wage growth and the rate of increase in the CPIF, which is to say the blue bar minus the red bar. Solid bars refer to outcomes, broken bars to the Riksbank's forecast.

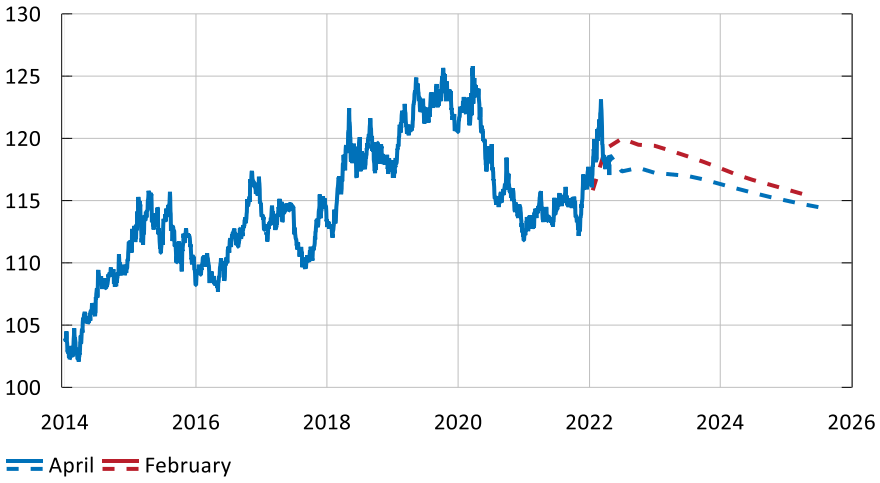
Sources: National Mediation Office, Statistics Sweden and the Riksbank.

Krona will strengthen in the years ahead

The Swedish krona weakened substantially in connection with the Russian invasion of Ukraine, but has since strengthened again and is now approximately unchanged since the monetary policy meeting in February. The real exchange rate is thought to be weaker than the level that can be expected based on, for example, Swedish productivity in relation to the rest of the world. In trade-weighted terms, the krona is expected to appreciate slowly over the coming three years (see Figure 42).

Figure 42. Nominal exchange rate, KIX

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, the index has been calculated against 31 countries since the Russian rouble was excluded from it. A higher value indicates a weaker exchange rate. Outcomes are daily rates and forecasts refer to quarterly averages. Solid line refers to outcome, broken line represents the Riksbank's forecast.

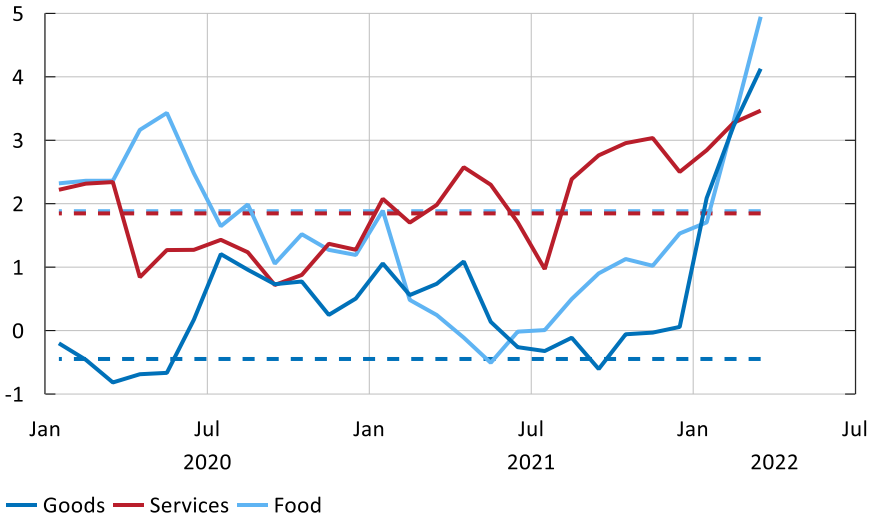
Source: The Riksbank.

Rapidly rising inflation this year

Inflation has risen rapidly over the past year and amounted to 6.1 per cent in March, which is the highest level measured since the beginning of the 1990s. The most important individual explanation is that prices of fuel and electricity have risen rapidly over the past year. But even adjusted for energy prices, inflation has risen. The CPIF excluding energy increased by 4.1 per cent in March, compared with March last year, which is also the highest level since the beginning of the 1990s. The upturn in inflation is broad and the rate of increase on prices of goods, services and food has risen over the past year and is high in relation to the historical averages (see Figure 43). In particular prices of goods and food have increased unusually quickly in recent months. The upturn in inflation has common elements in Sweden and abroad, including a more rapid rate of price increase on goods and services that were affected by the pandemic (see the article "Many indications that inflation will be high this year and next year", in this report).

Figure 43. Prices of goods, services and food

Annual percentage change



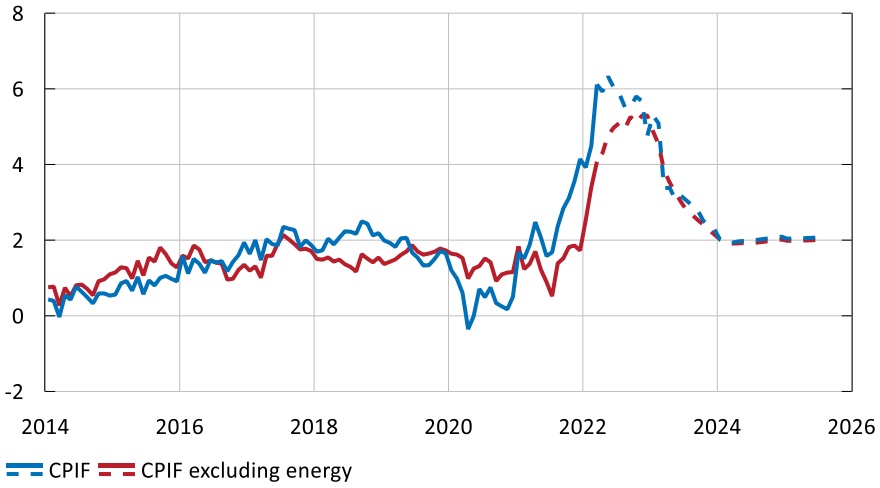
Note. Goods refers to goods prices excluding energy and food. Broken lines refer to average rate of change in the period 2000–2019. The mean values of the rate of increase for food prices and service prices are close and thus cannot be told apart in the figure.

Sources: Statistics Sweden and the Riksbank.

Inflation is expected to be around 6 per cent in the months ahead and then begin to fall back (see Figure 44). Although the war in Ukraine has means that energy prices have risen further, the rate of increase is nevertheless expected to fall towards the end of the year, which is supported by forward pricing on the electricity and oil markets. Energy prices began to increase faster back in autumn 2021. The fact that the rate of increase is now falling means that the rising energy prices going forward will to a lesser degree affect the annual comparative figures.

Figure 44. The CPIF and the CPIF excluding energy

Annual percentage change



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

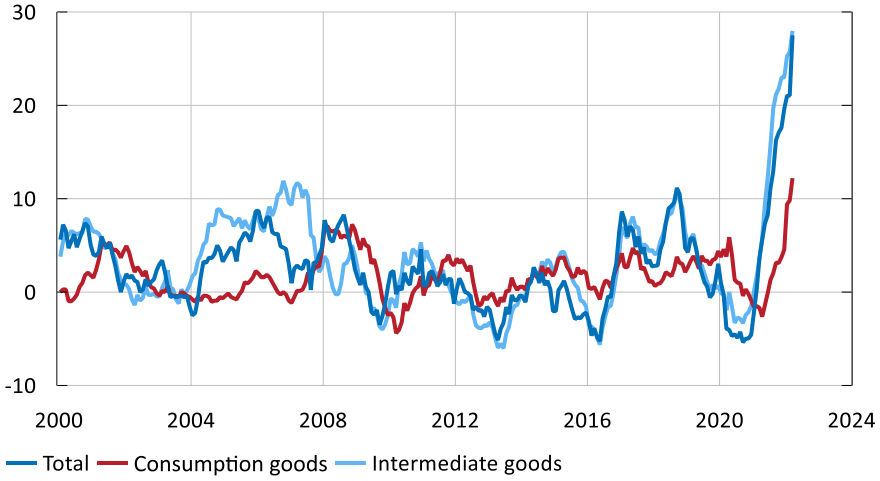
Sources: Statistics Sweden and the Riksbank.

At the same time, the rate of increase in the CPIF excluding energy will continue to rise from the current already high level and amount to just over 5 per cent towards the end of the year (see the article "Many indications that inflation will be high this year and next year"). It is primarily the rate of increase in prices of food and other goods that is expected to continue rising. One important reason for this is the war in Ukraine, which has meant that prices of both food and other commodities have risen on the world market. Even before war broke out, prices of many commodities had been pushed up on the world market as a result of the freight problems and supply disruptions that accompanied the rapid recovery when demand increased rapidly after the coronavirus crisis.

The rising prices on commodities and freights have caused prices in the producer channels to rise rapidly. Prices for energy and input goods have also accelerated over the last year, and the rate of increase in producer prices of consumer goods is also unusually high (see Figure 45). Moreover, the rising energy prices have had indirect effects on inflation via, for instance, rising prices for transport and other costs for companies.[36] According to survey data from the Economic Tendency Survey, the Purchasing Managers' Index and the Riksbank's Business Survey, prices are expected to increase rapidly in the period ahead in both trade and manufacturing sectors.[37]

Figure 45. Producer prices

Annual percentage change



Note. Refers to Sweden's domestic supply price index (ITPI), which is a composite of the domestic market price index (prices of goods produced and sold in Sweden) and the import price index.

Source: Statistics Sweden.

[36] See the article "High energy prices – how will other consumer prices be affected?" in Monetary Policy Report, February 2022, Sveriges Riksbank.

[37] See "I've never before experienced customers accepting price increases so easily", the Riksbank's Business Survey, February 2022, Sveriges Riksbank.

Inflation close to the target towards the end of the forecast period

All in all, the assessment is that inflation, both including and excluding energy, will remain high for a time, before gradually falling back. Prices of energy, food and other goods will rise rapidly this year. But the price increases this year are nevertheless expected to be of a one-off nature. This does not mean that the prices are expected to fall, but that they are not expected to continue rising at this pace. There is support for this assessment in forward pricing on the markets for energy, food and other commodities. The weakening of the krona over the past year also contributes to some extent to keeping inflation up this year.

Towards the end of next year, most of the direct inflation effects of the pandemic and the war will have waned. Additionally, tighter monetary policy will contribute to inflation falling back. Resource utilisation is approximately normal throughout the entire forecast period and inflation is assessed to be close to the target of 2 per cent from 2024.

FACT BOX – Linked data by Labour Force Surveys

The labour force surveys (LFS) provide the official unemployment statistics in Sweden. On 1 January 2021, Statistics Sweden made several change to LFS, which entailed a time series break, and data from 2021 was no longer comparable with previous years. On 24 February, the LFS published linked data for the period April 2005 to the end of December 2020, which means that the data is now comparable between years.[38]

The changes introduced in the LFS in January 2021 were partly a transition to using employer's returns at individual level (AGI) from the Swedish Tax Agency instead of register-based labour market statistics (RAMS) to assist in estimate, and partly adapting the LFS to the EU's new regulation on labour market statistics.[39] This entails, among other things, a narrower definition of employment and a new target population. In addition, the unemployment question was broadened from "have you applied for work in the last 4 weeks?" to "have you applied or tried to find work in the last 4 weeks?". To estimate the size of the time series break, Statistics Sweden carried out a double survey in 2021, where 80 per cent of the sample in the LFS was gathered using the new form, and the remaining 20 per cent using the earlier one. The LFS has then analysed data from the double survey together with new and old help information, and with econometric methods.[40] Linked data means that the number of people in the labour force has been revised down by on average around 1 per cent during the period April 2005 to December 2020 and the number of employed has been revised down by just over 1.1 per cent. The number of unemployed has thus been revised up and unemployment is on average 0.2 percentage points higher (see Figure 2 in Chapter 1). The new definition of target population has meant that the population has been revised down by around 0.4 per cent, which means that labour force participation and the employment rate are on average 0.4 and 0.5 percentage points lower historically. The number of hours worked has been revised down, by an average of 0.9 per cent.[41]

The LFS revision of historical data is primarily explained by the changed definitions of employed and target population in line with the new EU regulation, and by the changeover to AGI instead of RAMS as an aid to estimates. Statistics Sweden has also included an effect on unemployment from the change in form, which they assess is due to the reformulation of the question on unemployment having led to more people stating that they are seeking work, and thus now being included in the work force as unemployed. However, the Riksbank assesses that this effect is slightly

[38] LFS linkes data in three stages. In stage one, they will publish series broken down by age group and gender. In stage two, there are series for those born abroad and those born in Sweden and for unutilised labour supply, and in stage three there will be series for long-term unemployment broken down by educational level.

[39] For further information, see the fact box in April 2021 *Monetary Policy Report* and the article "The LFS reorganisation and the Riksbank's analysis of the labour market" in Monetary Policy Report, February 2021.

[40] See the method report "Länkning av AKU:s tidsserier" (Linking LFS time series), February 2022, on the LFS product page at www.scb.se.

[41] The National Accounts have not yet implemented the LFS linked data, but plan to revise data on work in the economy in connection with the publication of GDP for the first quarter in May.

greater than Statistics Sweden had assumed, and that the upturn in the unemployment figure measured in 2021 is to some extent due to the new survey.[42] To avoid resource utilisation measured with the Riksbank's various gaps being affected, the assessment of long-term sustainable unemployment has been adjusted upwards somewhat with effect from the first quarter of 2021.

[42] The change in unemployment as a result of the change in the form is relatively large, but not statistically significant in Statistics Sweden's estimates. The large uncertainty interval is due to the sample in the double measurement being small.

ARTICLE – Many indications that inflation will be high this year and next year

Over the start of 2022, inflation has risen significantly faster than expected and the upturn has been broad. In addition to energy prices, a clear upturn is now visible in food prices, prices for other goods and, to a certain extent, service prices. The war in Ukraine is contributing to higher inflation and this assessment is confirmed by various indicators pointing to further rises in consumer prices. In addition, various measures of underlying inflation have risen rapidly in recent months, indicating that inflation may become more lastingly high. The Riksbank now assesses that inflation will be higher for a longer period and will be above target over the next two-year period. How inflation develops in the slightly longer term largely depends on how the inflation expectations of companies and households are affected, which, in turn depends on how monetary policy is adjusted.

Higher inflation than expected

Energy prices started to rise from low levels in the second half of 2020, at the same time as higher freight costs, disruptions in deliveries and shortages of certain input goods created problems that were expected to affect consumer prices.[43] Costs also gradually increased in almost all sectors. Since last summer, the Riksbank has discussed uncertainty in the inflation forecast linked to how large the effects of higher costs for companies would be. The Riksbank has assessed that the higher costs would subsequently affect consumer prices and lead to higher inflation, particularly in 2022.[44] [45] However, the rise has been much larger and faster than the Riksbank and other analysts had expected. According to the forecast in the Monetary Policy Report from February, the Riksbank expected inflation according to the CPIF excluding energy to be 1.9 per cent in January. An average of forecasts from other analysts also

[43] See, among others, "As soon as you find one component, you realise you're missing another", The Riksbank's Business Survey, September 2021, Sveriges Riksbank.

[44] See, among others, "Higher inflation – temporary or persistent?", in Monetary Policy Report, November 2021, Sveriges Riksbank and "High energy prices – how will other consumer prices be affected?" in Monetary Policy Report, February 2022, Sveriges Riksbank.

[45] Apart from the indirect effects of higher costs in companies, the Reports also discussed another type of effect that could arise if inflation expectations were to change more lastingly. This kind of effect, usually called a secondary effect, affects inflation through such things as higher wage demands.

amounted to 1.9 per cent but the outcome was 2.5 per cent, an unusually large forecast error one month ahead.[46] The outcomes in February and March were also much higher than expected, resulting in even larger forecasting errors.

One way of aggregating information from various early indicators of inflation is to use models that include, for instance, summarising indices of a number of different indicators. Before the pandemic broke out in 2020, the Riksbank regularly included forecasts from such short-term models in its Monetary Policy Reports.[47] Since 2020, the information content in the model-based forecasts has decreased. Among other things, it is difficult for the models to manage the sudden fluctuations and new seasonal patterns created by changed consumption patterns during the pandemic. Ahead of the January, February and March 2022 outcomes, a number of model forecasts pointed to rising inflation, but no model forecast came close to forecasting the unusually rapid rise in consumer prices that occurred. The impact of developments such as higher producer prices on consumer prices was thus significantly greater than historical correlations indicate.

Which prices have contributed to the rapid increase in inflation in Sweden?

Several prices for food and other goods are contributing to the rise in inflation being broad. There are also signs that some service prices are rising faster than normally. Figure 46 shows the proportion of the price index in the CPIF whose average rate of increase is now above the average since 2000.[48] The price index is divided into food, other goods and services.[49] The figure shows that the proportion of food prices that is rising faster than normal has increased rapidly from a very low level recently. The rate of increase for food prices was negative as recently as May 2021. Just now, the development of prices for coffee and tomatoes sticks out, along with prices for salmon, flour and bread.

The proportion of prices for goods that is increasing more rapidly than normal is also high and rose earlier than food prices did. The upturn is broad here too, as the rate of increase for 21 of the 27 subindices included in this aggregate are now higher than usual (see red line). Some examples of products that have risen unusually much in price are furniture and furnishings, bicycles, cars, leisure goods and household utensils.[50] The rate of increase in goods prices was also negative in parts of 2021, in line

[46] Bloomberg publishes one-step ahead forecasts (forecasts one month ahead) every month from a number of forecasters. The number of analysts varies slightly from month to month but amounted to 11 in January. Analysts include the major Swedish banks and other private financial agents.

[47] The variant usually included in the Monetary Policy Reports models the CPIF excluding energy directly. Explanatory variables include indicators, as well as variable that capture the time series dynamic, such as delayed effects of the dependent variable and seasonal variation.

[48] The calculations are based on 65 subindices, according to the Riksbank's classification. Together, they make up the CPIF excluding energy. The average rate of increase of each subindex has been calculated for the period January 2000 to March 2022.

[49] We disregard energy prices here. All subindices in this aggregate are clearly increasing faster than the average.

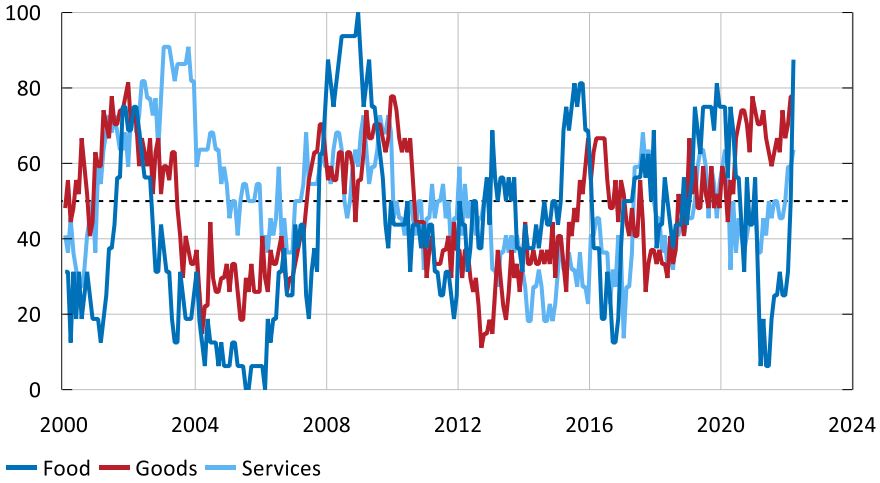
[50] In December 2021, one of the world's largest furniture companies, IKEA, announced an increase in prices of half of its range by an average of 9 per cent. This announcement referred to higher costs for transport and logistics.

with the historical average, and was close to zero as recently as December 2021. In March, the annual percentage change amounted to 4.1 per cent.

The share of the service price index that has risen faster than normal has also increased but not at all to the same extent as prices for food and other goods. Among services, for example, prices for hotel rooms have risen rapidly, which is partly connected to the re-opening of the economy after the pandemic.

Figure 46. Proportion of above-average price increases since 2000

Per cent



Note. Goods refers to goods prices excluding energy and food. The food prices group includes 16 subindices and the goods prices group includes 27 subindices. The results for service prices is based on 22 subindices. Broken line indicates 50 per cent. On average, over the entire period, about 50 per cent of the subindex in each respective group is increasing faster than its average and about 50 percent is increasing more slowly.

Sources: Statistics Sweden and the Riksbank.

Various measures of underlying inflation have risen, which may indicate more permanently high inflation

One important part of the analysis of inflation is the attempt to assess how large a part of inflation is temporary and how much is more permanent. In addition to the aggregate and various subindices in the CPIF, the Riksbank also therefore analyses various measures of underlying inflation in an attempt to reduce the importance of prices that usually vary greatly. The idea is that the part of inflation that usually changes relatively slowly (is more persistent) can say more about the future development of inflation than current CPIF inflation does.[51] Recently, all of the various measures of underlying inflation that the Riksbank calculates and monitors have risen rapidly.[52] The median of the measure, which has varied relatively little over the last

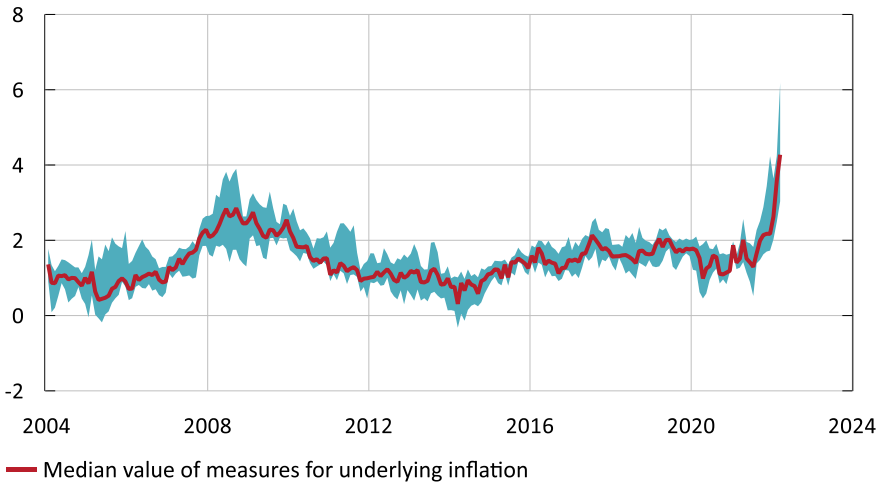
[51] See, among other things, "Why measures of core inflation?" in Monetary Policy Report, October 2018.

[52] The Riksbank usually reports a number of measures of underlying inflation. This includes CPIF excluding energy, CPIF excluding energy and perishables, persistence-weighted inflation (CPIFPV), factors from principal component analysis (CPIFPC) and weighted mean inflation (Trim1). Trim85 is also included among these measures. There, 7.5 per cent of the highest and the lowest rates of price change have been removed for

ten-year period, rose from 2.6 per cent in January to 3.6 per cent in February and 4.3 per cent in March, which is a historically rapid rise over such a brief period (see Figure 47).

Figure 47. Different measures of underlying inflation

Annual percentage change



Note. The field shows the highest and lowest outcome among 7 different measures of underlying inflation: CPIF excluding energy, UND24, Trim85, CPIF excluding energy and perishables, persistence-weighted inflation (CPIFPV), factors from principal component analysis (CPIFPC) and weighted mean inflation (Trim1).

Sources: Statistics Sweden and the Riksbank.

The rise in prices in Sweden and abroad – are there any common elements?

If one studies the development of Swedish consumer prices over time in relation to the corresponding prices abroad, it becomes clear that the covariation, or correlation, is most tangible with regard to *energy prices*. The correlation is highest if Swedish consumer prices for energy in a certain month are matched with energy prices abroad in the same month. This correlation also holds over the last two-year period.[53] The rate of increase in consumer prices for energy in Sweden, the euro area, the United Kingdom and the United States bottomed out in mid-2020 and then started to rise relatively quickly.

The covariation is also clear if one studies price developments on *food*. Similarly to energy prices, the most recent rise in food prices was relatively simultaneous in Sweden and abroad, but it took place from different levels (see Figure 48). Like energy prices,

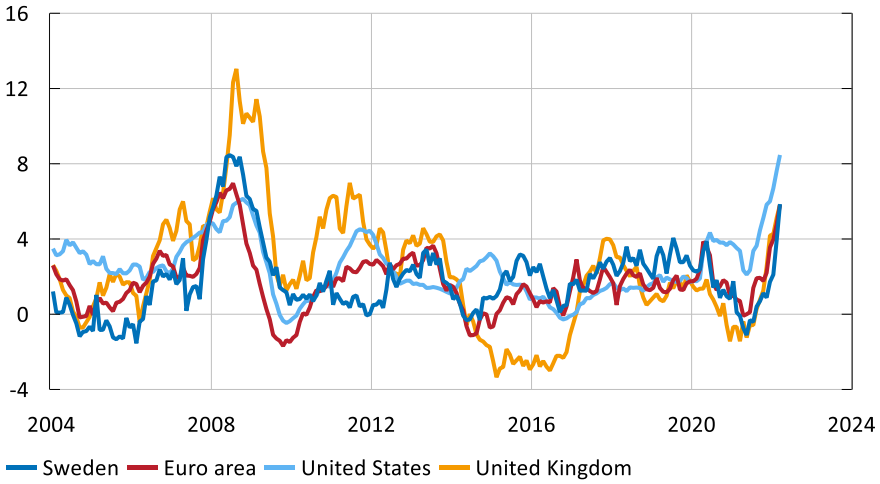
the sub-groups included in the CPIF each month. A measure known as UND24 is also included. In this, all of the components are retained but are given a different weight to the one they have in the CPIF. The new weight depends on how much the prices have varied over the last 24 months.

[53] The analysis studies annual percentage changes in various subindices. Turning points in annual rates have been identified using different equalisation methods such as HP filters and the trend cycle component from the seasonal adjustment procedure x12. These turning points are often much easier to identify later on and significantly more difficult to pinpoint in real time.

the annual percentage change in commodity prices for food started to rise in the second six months of 2020.[54] In spring/summer 2021, consumer prices on food also started to rise gradually in Sweden and abroad. The rise in food prices is probably partly due to rising energy costs, which usually affect the entire supply chain in the food industry, from farming to transport, processing, storage and sale.

Figure 48. Food prices in various countries and regions

Annual percentage change

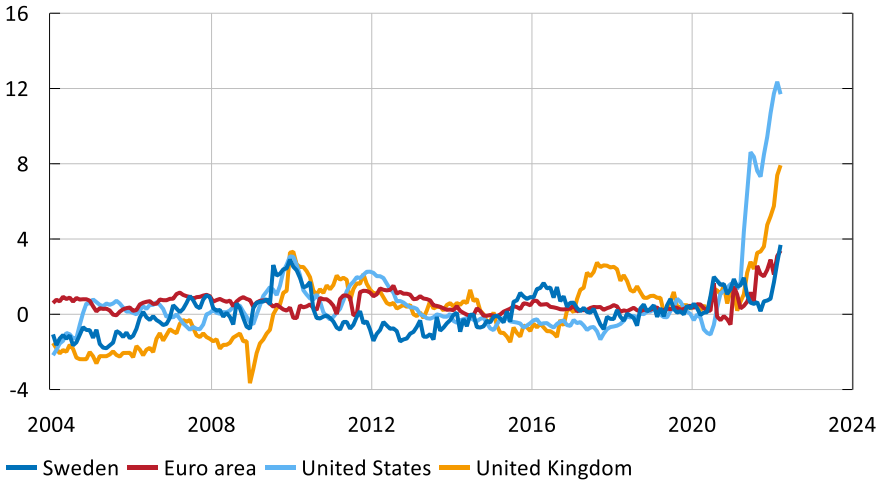


Note. Inflation measured as the HICP for Sweden and the euro area and the CPI for the US and the UK.

Sources: Eurostat, UK Office for National Statistics and US Bureau of Labor Statistics.

Figure 49. Goods prices in various countries and regions

Annual percentage change



Note. Refers to goods excluding energy and food. Inflation measured as the HICP for Sweden and the euro area and the CPI for the US and the UK.

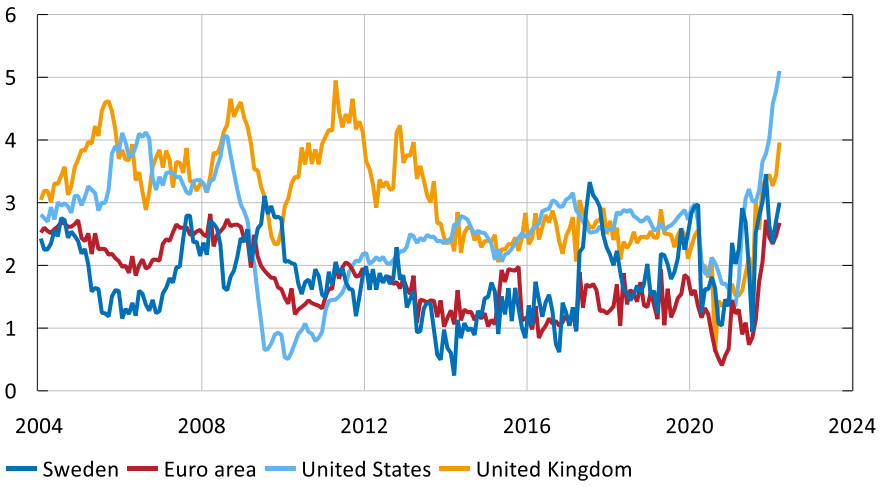
Sources: Eurostat, UK Office for National Statistics and US Bureau of Labor Statistics.

[54] According to the Economist's commodity price index for food.

The covariation between *prices for other goods than food* in Sweden and abroad is not at all as clear over time (see Figure 49). The average rates of increase for the period are also different. Exchange rates can explain differences between countries/regions in this case, as can the way prices are measured, differences in consumption patterns and differences in methods of quality adjustments.[55] The recent rise has not been particularly simultaneous either. Prices had already started to rise in the United States in summer 2020. Towards the end of 2020, prices for goods started to rise in the euro area, albeit at a much slower rate. A little later, prices for goods started to rise in the United Kingdom, but there the rate of increase was steeper. In Sweden, the rate of increase rose in the second half of 2020 and first half of 2021 but then slowed down and became negative in most of the second half of 2021. In 2022, however, prices for goods increased rapidly in Sweden. The rise in prices can primarily be explained by strong global demand in combination with various supply problems. Higher energy prices have contributed to increased transport costs, at the same time as other commodity prices have risen. Bottlenecks in the global supply chain have also contributed to higher freight costs. Similarly to food prices, part of the rising prices for goods can thus be explained by so-called indirect effects of rising prices on important input goods.

Figure 50. Service prices in various countries and regions

Annual percentage change



Note. Inflation measured as the HICP for Sweden and the euro area and the CPI for the US and the UK.

Sources: Eurostat, UK Office for National Statistics and US Bureau of Labor Statistics.

The correlation between the development of *service prices* in Sweden and other countries is positive and clearer than for goods prices, but not as strong as for energy and food prices (see Figure 50). The rate of increase in service prices started to rise around the end of 2020/start of 2021 in Sweden and abroad and the development is probably connected to the lifting of pandemic restrictions entailing rapidly rising demand for

[55] For a discussion of price comparisons between countries, see O. Tysklind, "Quality adjustments and international price comparisons", Staff Memo, January 2020.

services. In Sweden, the upward trend has been uneven due to large weight adjustments in subindices with large seasonal variations such as foreign travel. In general, the price increase on services is so far not as large as that for food and other goods. However, in the United States, service prices have increased much more than in other countries and wage growth has also increased rapidly.

The war in Ukraine is pushing inflation further upwards

Even before the war broke out in Ukraine, food prices had started to rise. The war in Ukraine is expected to contribute to even higher food prices as the supply of wheat, for example, will fall (see also the article "Economic consequences of the war in Ukraine"). Continued disruptions on the energy market are also expected to affect the food industry. Prices for natural gas, which is an input good in the production of fertiliser, and electricity and fuels, which are also important input goods in agriculture, have risen since the war broke out.

Other examples of products becoming more expensive due to sanctions imposed by western countries on Russia are wood products, packaging and plastics of various kinds. This is because several of the input goods used in the manufacture of such products are produced in Russia. The war in Ukraine is expected to create new price impulses, with even higher inflation this year.

Various indicators also point to higher inflation in the near term

According to the Riksbank's Business Surveys, which were conducted in February, before Russia's invasion of Ukraine, costs for input goods, transport, energy and labour are increasing. Several companies have already raised their sales prices and, compared to the September survey, more companies are now planning to increase sales prices going forward to compensate for the higher cost pressures and other developments. According to the Economic Tendency Survey, the share of companies in the retail trade and service sector planning to raise their prices has risen further. The rate of price increase for input goods according to the Purchasing Managers' Index (PMI) seems to have stabilised at record high levels in both the manufacturing sector and the service sector. The rate of increase in producer prices for consumer goods is also still rising (see Figure 45). Different indicators are thus unambiguously pointing towards higher consumer prices in the coming period.

According to interviews with companies conducted by the Riksbank at the start of April, there have already been large price rises, but selling prices are expected to be raised further. The companies also say that acceptance of price rises is generally greater now, both towards subcontractors and from customers.[56] This was a tendency that had already been clear before the war broke out.

[56] The interviews were conducted after Russia's invasion of Ukraine with a smaller selection of companies. A total of 19 companies and trade organisations were interviewed concerning the effects of the war on their operations and pricing at the moment. The results of the next ordinary business survey will be published in June.

The Riksbank's assessment for the next two years

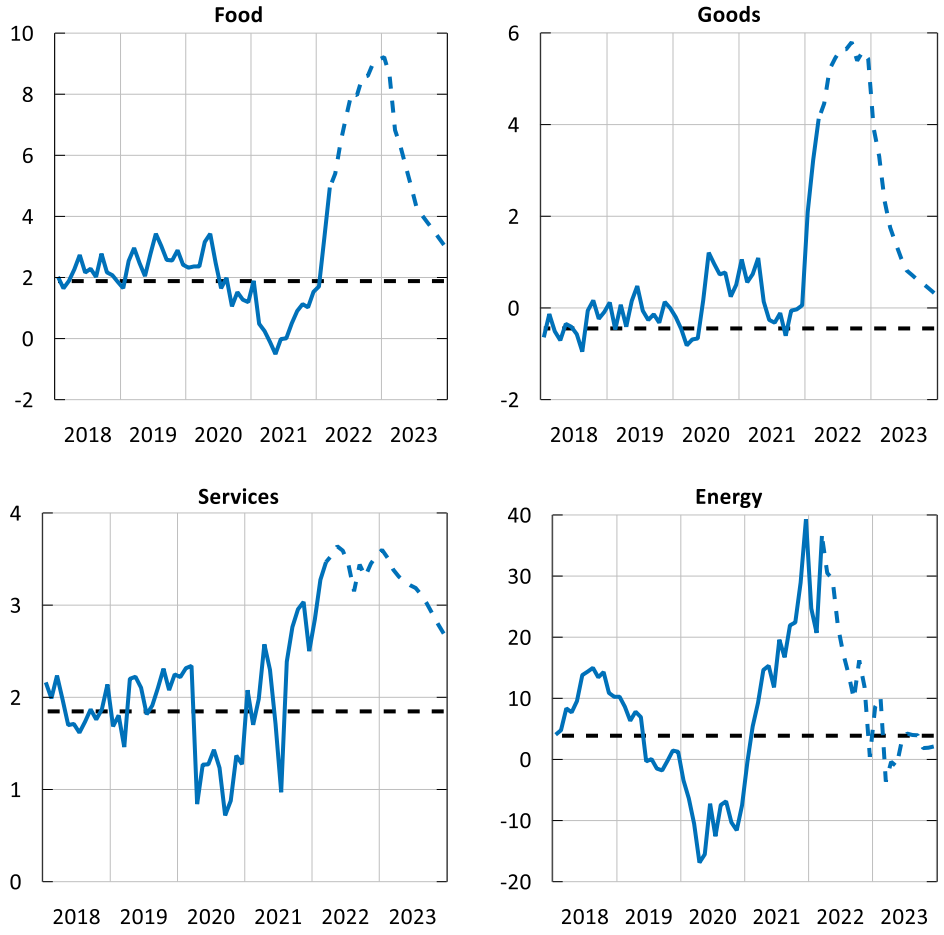
Several different indicators, such as price plans in the Economic Tendency Survey and producer prices, thus suggest that the large price rises that have taken place in commodities and producer channels in recent years have not yet fully been passed along to consumers. In addition, the war in Ukraine entails new price impulses. Consumer prices are thereby expected to rise further and the Riksbank has carried out a major revision of the inflation forecast until 2023 against the forecast from February (see Figure 7 in Chapter 1). The rate of increase in prices for food and other goods has been rapid but is expected to rise further and peak in the second half of this year (see Figure 51). The rate of increase in service prices is expected to remain on a higher than normal level this year and next year, while the rate of increase in energy prices will slow down somewhat sooner.

The assessment does not mean that prices of food, goods and energy will fall going forward, but they are not expected to continue rising as fast. There is support for this assessment in forward prices in the markets for food, other commodities and energy.

How inflation develops in the slightly longer term depends on how the inflation expectations of companies and households are affected by this and on how monetary policy is adjusted. Various measures of underlying inflation have risen recently, which could be an indication that inflation may become more permanently high. So far, however, it is difficult to see any clear signs of so-called secondary effects in Sweden, where higher inflation expectations, in turn, are generating higher prices and wages. The upturn in more long-term inflation expectations is relatively modest so far, and there are no signs of rapidly rising wages. The rise in service prices, which would perhaps primarily be affected by such a development, has also been more limited than the rise in other prices.

Figure 51. Forecasts for various subindices in the CPIF 2022 and 2023

Annual percentage change



Note. Goods refers to goods prices excluding energy and food. The weight for food prices in the CPIF, according to the Riksbank's classification, amounts to 18.2 per cent for 2022, while prices for other goods weigh 28.9 per cent. The weight for service prices is 43.7 per cent and the weight for energy prices is 5.9 per cent. The capital stock index, which has a weight of 3.4 per cent, is not shown here. Horizontal broken lines represent mean values for the period 2000–2019. Solid line refers to outcome, broken line represents the Riksbank's forecast.

Sources: Statistics Sweden and the Riksbank.

ARTICLE – Economic consequences of the war in Ukraine

Russia's invasion of Ukraine has caused a humanitarian disaster in one of Europe's most heavily populated countries. Alongside the human suffering in Ukraine, this act of war has also triggered the fastest growing refugee crisis in Europe since the Second World War.

It is difficult to gain an overview of the economic consequences, which will largely be determined by decisions yet to be made on European security and trade policies. It is uncertain how much access there will be to several important raw materials such as oil, natural gas and cereals. World market prices for fossil fuels have risen and energy prices in Europe have risen significantly. Higher prices for energy and food are pushing inflation up in a situation where the rate of price increases is already high in several countries.

Several factors suggest that growth in the European Union and Sweden will be lower this year compared with expectations before the outbreak of the war. However, it is difficult to assess how much growth will be restrained and how long-term the effects will be. To illustrate this uncertainty, two different scenarios for the future development are discussed below, together with the economic policy trade-offs that may become relevant.

Russia and Ukraine are important commodity exporters

EU economic exchanges with Russia are dominated by trade in fossil fuels. The value of imports from Russia of coal, petroleum products and natural gas has been about twice as large in recent years as the value of all other imports of goods from Russia (see Figure 52). About 30 per cent of Member States' total imports of fossil fuels have come from Russia and several individual countries, such as, Austria, Germany and Poland, have had more than half of their imports of natural gas from Russia.

In addition, Russia is an important exporter of fertiliser, sunflower oil and cereals, as well as some metals that are hard to replace in the production of certain specific goods.[57] Other EU trade relations with Russia are comparatively small and direct

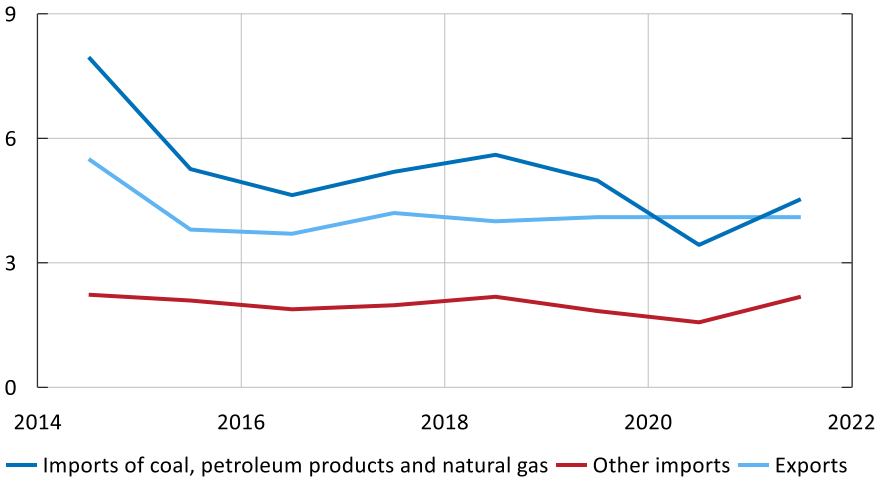
[57] Russia is an important exporter of palladium, nickel and platinum, which are used in the production of catalytic converters, semiconductors and batteries.

financial exposures towards Russia are limited.[58] Ukraine is a significantly smaller trading partner for the EU than Russia but, despite this, is a major exporter of certain specific goods, such as fertiliser, sunflower oil and cereals.

Following Russia's annexation of Crimea in 2014 and the subsequent aggression in eastern Ukraine, the EU agreed on economic sanctions against Russia. Since then, Sweden's trade with Russia has decreased considerably, particularly as regards imports of fossil fuels. Last year, Sweden imported Russian crude oil for a total value of SEK 7 billion, corresponding to 8.5 per cent of total crude oil imports. In comparison, it can be mentioned that, in 2014, Russia was responsible for almost half of Sweden's supply of crude oil. Russia's significance as a Swedish export market is fairly small, not least considering the country's population and relative proximity. In 2021, less than 1.5 per cent of Sweden's goods exports were to Russia.

Figure 52. EU trade in goods with Russia

Percentage of total EU imports/exports of goods



Note. The statistics refer to the trade in goods between Russia and the 27 countries that are Member States of the European Union as of February 2020 (EU27). The value of this trade is expressed in euros and is shown as a proportion of the value of the overall external imports and exports, respectively, of goods by the EU27.

Sources: Eurostat and the Riksbank.

Extensive economic sanctions against Russia

Following Russia's invasion of Ukraine on 24 February of this year, the European Union, United States, United Kingdom and several other countries have imposed comprehensive economic sanctions against Russia. These comprise trade restrictions and increased import duties, restricted possibilities for investment in Russia, and sanctions against individuals and a number of Russian banks and financial institutions. Among other things, several Russian banks have been excluded from EU and US

[58] EU exports to Russia are significantly less comprehensive than imports from Russia. Last year, Russia stood for about 4 per cent of total EU goods exports. In comparison, the two most important export markets for the EU, the United States and United Kingdom, stood for 18.3 and 13.0 per cent of goods exports, respectively.

capital markets and from SWIFT, which conveys information on payments between banks and financial institutions.[59] It has also been made illegal to conduct transactions with the Central Bank of the Russian Federation.[60] In addition, the European Union, United States, United Kingdom and Canada have closed their airspace to Russian aircraft.[61]

Australia and the United States have prohibited imports of fossil fuels and the UK has the goal of making the country entirely independent of Russian coal and oil by the end of the year.[62] The EU has decided to sanction imports of coal, which corresponds to about 6 per cent of the value of total imports of fossil fuels from Russia. Several governments within the EU also advocate measures to restrict imports of natural gas and oil, and the Baltic countries have already halted their imports of Russian natural gas. However, the EU has not taken any joint decision on an import embargo for natural gas and oil.[63] Such a decision would probably entail significant costs for both households and companies.[64] Russian gas is particularly difficult to replace because Russia is such a dominant supplier to several European countries and because there is a lack of capacity for shipping liquefied natural gas in the quantities that would be needed under an import embargo. The European Commission has presented a plan involving the rapid phase-out of Russian fossil fuels rather than an immediate shut-off.[65]

Alongside the economic sanctions decided by various governments, a large number of companies have decided to terminate or heavily reduce their trade with Russia and to shut down operations in the country.

[59] Society for Worldwide Interbank Financial Telecommunication, SWIFT, is a member-owned company with its registered office in Belgium which aims to provide a worldwide system for the secure electronic transmission of financial information.

[60] The United States and United Kingdom have also prohibited transactions with the Russian Ministry of Finance and the Russian National Wealth Fund.

[61] This list of sanctions is not exhaustive and, in most cases, the sanctions are also directed against Belarus and persons and companies with links to Belarus.

[62] Australia's prohibition covers petroleum products, coal and gas, while the United States has prohibited the import of liquefied natural gas, crude oil and certain other petroleum products. The Canadian government has also introduced an embargo on imports of crude oil from Russia, even though Canada has no such imports.

[63] Two major Russian banks, Sberbank and Gazprombank, have been exempted by the European Union from the sanctions aimed at other banks and financial institutions. Sberbank and Gazprombank mediate a large part of the payments for Europe's imports of fossil fuels from Russia.

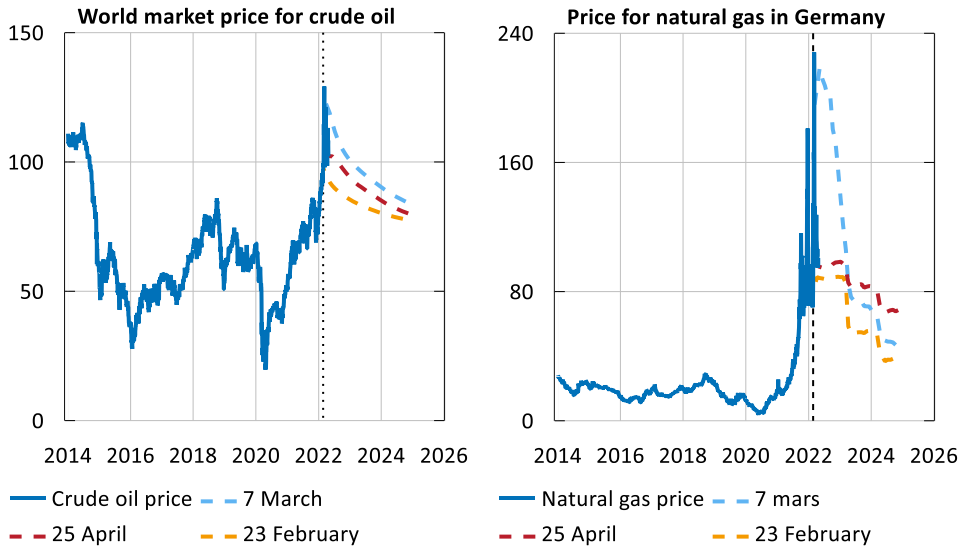
[64] It is difficult to determine the magnitude of the costs that would arise due to an import embargo. Some analyses that have focused on the German economy indicate a fall in Germany's GDP of between 0.5 and 6.5 per cent. See Bachmann et al. (2022), "What if? The economic effects for Germany of a stop of energy imports from Russia", ECONtribute Policy Brief no. 028, Gemeinschaftsdiagnose 1-2022, which has been jointly produced by five German forecasters https://www.ifw-kiel.de/fileadmin/Dateiverwaltung/IfW-Publications/-ifw/Gemeinschaftsdiagnose/Langfassungen/gd_2022_1.pdf, and Bundesbank's latest monthly report https://www.bundesbank.de/en/tasks/topics/war-against-ukraine-energy-embargo-could-significantly-weaken-german-economy-889696.

[65] The European Commission's plan, called REPowerEU, involves imports of Russian natural gas decreasing by two-thirds this year. To replace this shortfall, the Commission plans to increase imports from other countries, such as Algeria, Norway and the United States, and to speed up the expansion of solar and wind power. See https://ec.europa.eu/commission/presscorner/detail/en/ip_22_1511. However, industry analysts say that it may be difficult to increase the supply of energy from renewable sources quickly and that, over the short term, the European Union may be forced to accept the increased use of oil and coal imported from other suppliers than Russia.

Higher prices for energy and food

In the first days after the outbreak of war, stock market prices fell worldwide and market rates decreased. On the foreign exchange markets, the US dollar and Swiss franc appreciated, at the same time as the Swedish krona and other currencies from small, open economies depreciated. In addition, there were steep rises in prices for fossil fuels (see Figure 53) and electricity.

Figure 53. World market price for crude oil and price for natural gas in Germany
Brent, USD per barrel (left) and euro per MWh (right)



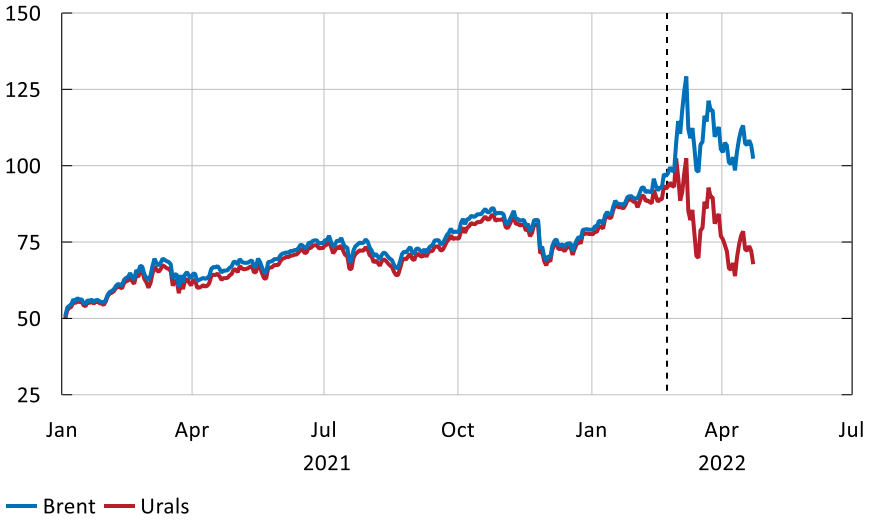
Note. Solid line refers to outcome, broken line refers to forward pricing at the specified date. Broken vertical line marks 23 February 2022, the day before Russia's invasion of Ukraine.

Sources: Intercontinental Exchange and the Riksbank.

Equity prices and market rates rose again fairly soon, however, and the effects of the war on the financial markets are deemed to have been limited, so far. Energy prices remain high, even though they receded after the heavy rises at the start of March, and price movements remain large. The outbreak of the war has created considerable uncertainty over Europe's future energy supply and energy prices are being clearly affected by news of the course of the war and by measures that could affect Russian exports of fossil fuel. Even though the EU sanctions have been designed to make it possible to continue imports of natural gas and oil, there are still business risks linked to continued trade for the companies directly involved. Since the start of the war, the price of Russian oil has fallen, while Brent crude has become more expensive (see Figure 54).

Figure 54. Price of crude oil, Brent and Ural

USD per barrel



Note. Brent and Ural refer to two different benchmark prices used in crude oil trading. Brent is currently the world's leading benchmark price for crude oil; the name originally comes from a specific oilfield in the North Sea called Brent. Ural is a benchmark price used for the pricing of Russian crude oil intended for export. Broken line marks 23 February 2022, the day before Russia's invasion of Ukraine.

Source: InterContinental Exchange.

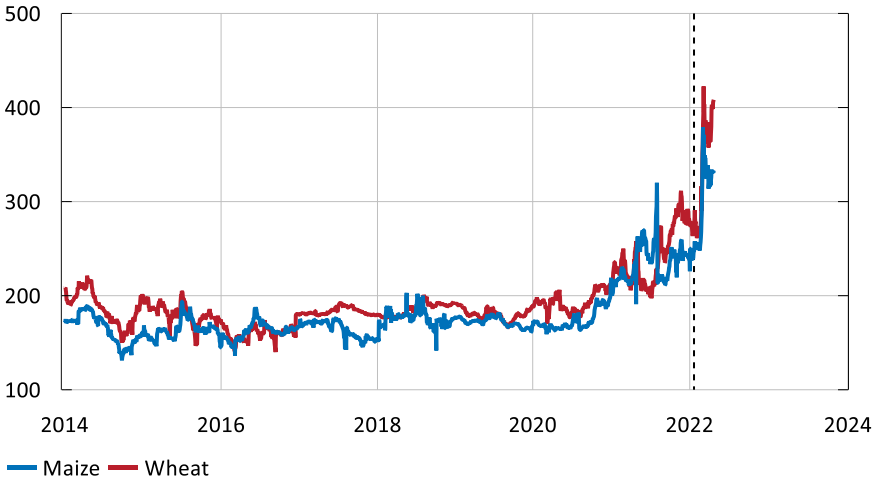
The conflict in Ukraine is also contributing, through several different channels, towards pushing up world market prices for food. As Russia and Ukraine are important exporters of cereals, maize and fertiliser, prices for these products have risen (see Figure 55). In return, higher prices for fertilisers and energy are leading to higher costs for farmers and food producers. In emerging market economies, many households spend a large proportion of their incomes on food and, for them, rising food prices often entail a direct threat of starvation. One country that has been particularly badly impacted by the war in Ukraine is Egypt, which is one of the world's largest importers of wheat.[66]

For households in the EU and Sweden, higher prices for energy and food will lead to lower purchasing power. In March, consumer prices for energy rose by over 40 per cent in the euro area, compared with the level one year previously, and food prices are now also being affected by the conflict. Higher prices for energy and food have also contributed to expectations that several central banks in Europe will take steps to restrain demand and defend their inflation targets.

[66] In addition, Egypt has been a popular destination for Russian and Ukrainian tourists and the war has therefore led to falling incomes. In March, the International Monetary Fund announced that Egypt's government had requested assistance to cope with the crisis.

Figure 55. Price of maize and wheat

EUR per tonne



Note. Broken line marks 23 February 2022, the day before Russia's invasion of Ukraine.

Source: Euronext.

Migration and higher defence expenditure

Public finances in EU Member States are being affected by the war in Ukraine in several ways. In addition to increased transfers to households to compensate for higher energy prices, costs for receiving refugees are also increasing. According to the UN Refugee Agency, UNHCR, around 5 million people have fled Ukraine since the start of the invasion and most of these have travelled to the EU. At the start of March, the Council of the European Union decided to activate the Temporary Protection Directive, which grants Ukrainians fleeing the war the possibility to seek temporary protection within the Union. This decision applies until 4 March 2023 and, among other things, provides Ukrainian refugees with access to essential healthcare and some financial assistance, as well as the right to work.[67] The refugee crisis is increasing public expenditure in the form of transfers to migrants and aid organisations, and is raising public consumption.[68]

One further factor that is affecting public finances is that several countries in the vicinity of Russia are now deciding to rearm. The invasion has forced a reassessment of Europe's security policy situation and earlier choices have rapidly been re-evaluated. At least seven governments in Europe have so far announced increased defence expenditure and there are clear indications in a couple more countries that increases are being considered. Of greatest economic significance is the German government's proposal to allocate EUR 100 billion immediately to a fund for defence procurement

[67] The decision also means that refugees have the right to assistance with housing and that child refugees have the right to go to school. The Temporary Protection Directive can be extended for up to three years. For more information, see https://ec.europa.eu/home-affairs/policies/migration-and-asylum/common-european-asylum-system/temporary-protection_sv.

[68] The longer the conflict continues and the greater the number of Ukrainians who choose to stay in the EU for a longer period, the greater too will be the effects on the supply of labour in the EU.

and to increase ordinary allocations to defence to over 2 per cent of GDP in the period ahead. In 2019, Germany's defence budget amounted to about 1.3 per cent of GDP.

As yet, it is unclear at what rate and to what extent defence allocations in the European Union will increase and how this rearmament will be funded. However, the details of the German government´s proposal indicate a willingness to rely on increased borrowing this year and for a couple of years to come.[69] The Swedish government's objective is for defence spending to increase to 2 per cent as soon as practically possible.[70]

Two scenarios for economic development

What will the economic consequences be in the slightly longer term? How will the prospects for economic activity and inflation be affected? One key issue, of course, will be the development of the military conflict in Ukraine and, in turn, how this affects economic exchanges between Russia and the countries applying sanctions. As has been mentioned, several governments in the EU advocate immediate joint measures to restrict EU imports of oil and natural gas. Such a decision would further impede growth. An important related issue concerns the re-evaluation of security policy now taking place, which could also have far-reaching economic consequences on a global level. Voices are being raised in Europe and North America for increased self-sufficiency in strategically important sectors and the focus on globalisation and cost efficiency seen in recent decades is being questioned.

The Riksbank's main scenario assumes that the current sanctions against Russia will remain in place over the forecast period and that the EU will not implement a joint, immediate embargo on imports of Russian oil and gas. The main scenario also assumes that the price of oil and other commodities will develop approximately in line with current forward pricing. However, the possibility of developments in the period ahead moving in a completely different direction cannot, of course, be ruled out. To illustrate this uncertainty, descriptions are presented here of two scenarios based on different assumptions on the military conflict and the various choices being discussed.[71] In several respects, the main scenario is compatible with the assumptions in the first of these two scenarios, in which prices for crude oil and other commodities soon subside. At the same time, however, the main scenario assumes that households and companies are affected by the considerably uncertainty currently prevailing, and that their decisions on consumption, saving and investment reflect this.

[69] Historical data on various countries' military expenditure is published by the Stockholm International Peace Research Institute (SIPRI). The proportion of GDP allocated to defence increased in many countries in 2020 as the pandemic had caused significant falls in GDP. See also the blog post "Explainer: The proposed hike in German military spending" by Alexandra Marksteiner at SIPRI (https://sipri.org/commentary/blog/2022/explainer-proposed-hike-german-military-spending).

[70] The Swedish budget for 2022 allots SEK 76.6 billion to the expenditure area defence and crisis preparedness. This corresponds to around 1.3 per cent of GDP. The government target of an increase to 2 per cent was announced by Prime Minister Magdalena Andersson at a press conference on 10 March. The Prime Minister also announced that the allocation would be raised as soon as it became possible to convert the increases efficiently into a stronger defence capability.

[71] Both scenarios, like the Riksbank's main scenario, assume that the members of the EU and NATO avoid a military escalation leading to their armed forces becoming combatants in the war.

Scenario: Rapid military de-escalation, limited economic effects

In the first scenario, a decisive de-escalation of the military conflict between Russia and Ukraine takes place in 2022. Either the intensity of fighting decreases across Ukraine as a whole or is geographically restricted so that it continues to affect a smaller part of the country's territory. The number of Ukrainians fleeing the country decreases and a large proportion of those who have already fled make their way back again.

The sanctions against Russia remain in place but most EU countries allow imports of oil and natural gas to continue for another couple of years. During this time, investments are made to reduce dependence gradually on fossil fuels from Russia. To simplify this transition, efforts are made to increase imports from other suppliers and, at the same time, there is an increase in Russian exports of fossil fuel to countries elsewhere in the world, particularly in Asia. Prices for energy and other commodities subsequently decline again, reaching, by the start of next year, approximately the same levels as before the outbreak of war.

Significant rearmament takes place in Europe and some efforts are made to increase the degree of self-sufficiency, for example in energy and food. However, the present global trading system largely remains intact. Growth this year is lower than was expected before the outbreak of the war but, as of next year, the macroeconomic consequences are relatively minor.

In the scenario, inflation rises further this year from the current high levels. Several governments in the EU therefore introduce new measures to mitigate the effects on household purchasing power and to help companies in energy-intensive sectors survive. The extent of these measures varies from country to country and depends both on how much support is needed and on how much further public expenditure the public finances allow.

Monetary policy cannot prevent prices for energy and other commodities from rising faster than other prices and wages. Nevertheless, in the scenario, monetary policy in Europe moves in a tighter direction. One reason for this is the lingering effects of the pandemic, which continue to affect consumer prices. Another reason is that the central banks wish to avoid a situation in which higher energy prices more substantially affect long-term inflation expectations so that these rise clearly above the inflation targets. However, the fact that energy prices eventually subside again makes this task easier. Most central banks in Europe, including the Riksbank, therefore succeed in bringing inflation back to the inflation target with comparatively moderate rate rises.

Scenario: Import embargo and greater economic resilience

In the second scenario, the governments of Europe decide to increase the economic pressure on Russia further and stop, in principle, all imports from the country this year. The background is a continued high level of conflict in Ukraine and increasing numbers of Europeans becoming convinced that new security policy choices are necessary and require economic sacrifices. Imports of gas and oil from other producers,

such as Norway and the United States, increase. Despite this, prices rise to approximately the levels listed on the spot and forward markets in the first week of March (see Figure 53). In Germany and several other countries, natural gas is rationed and many manufacturing companies are periodically forced to reduce or halt production.

In the scenario, the EU and its allies go significantly further in their efforts to reduce their dependence on Russia and a number of other countries deemed unreliable. On both sides of the Atlantic, the authorities take decisions aimed at increasing economic resilience and self-sufficiency. Among other things, they attempt to encourage companies in strategically important sectors to move production and supply chains closer to their own territory or to friendly countries.

The high energy prices and rationing lead to a recession in the euro area and to US GDP growth also being lower. In 2024, a gradual recovery takes place, but productivity growth is slowed down due to changes in global trading patterns. A greater focus on security and self-sufficiency leads to less focus on cost efficiency and it becomes more difficult for companies to take advantage of economies of scale. All of this leads to higher costs which, in turn, risk further pushing up the rate of price increase.

In this scenario, many sectors and households are badly impacted by rapidly rising costs and disruptions in production due to rationing. Households' real incomes thus become significantly lower than in the first scenario. However, the worsened economic development is partly due to conscious choices, in which security and resilience are prioritised ahead of increased purchasing power. In the European countries with relatively strong public finances, the authorities implement comprehensive support measures and these mitigate the economic problems, at least in the short term. However, several governments in the EU find that their scope for manoeuvre is limited by high public debt and they are consequently forced to make some difficult trade-offs. In these countries, the crisis worsens further due to increased economic uncertainty and decreased confidence.

As inflation is rising sharply, monetary policy in Europe must be aimed primarily at defending the inflation targets. Several central banks face difficult decisions as growth is slowing down at the same time and uncertainty over underlying inflationary pressures therefore increases. For the ECB, the situation becomes even more complicated as energy prices in different euro area countries are being affected to different degrees by the import embargo on Russian oil and gas and because the fiscal room for manoeuvre varies significantly among Member States. The rapid rate of price increase means that the monetary policy tightening in most European countries becomes significantly more stringent in this scenario compared with the scenario with a rapid military de-escalation.

Sweden imports a comparatively small amount of fossil fuel from Russia and also has strong public finances. In the scenario, these factors help slightly dampen the direct effects of the sanctions on price formation and economic activity. Even so, Swedish energy prices depend on the world market price of oil and on electricity prices in neighbouring countries. In addition, Sweden's economy is heavily dependent on economic developments abroad and, in the scenario, Swedish monetary policy is also

faced by a situation with rapid price rises and slowing growth. However, this lower growth is largely due to lower productivity, which tends to push up the rate of price growth.

Secondary effects of the higher energy prices are strong and, in the scenario, long-term inflation expectations rise substantially. There is, therefore, a risk that a large number of companies and households will start to plan for inflation to persistently become higher than 2 per cent and thereby take economic decisions that are not compatible with the inflation target. To defend the target, the Riksbank is forced to hike the policy rate at a relatively rapid rate. Tighter monetary policy contributes towards restraining resource utilisation and cost pressures and to inflation eventually being returned to 2 per cent.

Higher inflation and restrained growth in the main scenario

The Riksbank's main scenario is largely compatible with the first of the two scenarios discussed above. The war and sanctions contribute to growth in Europe becoming lower and the rate of price increases becoming higher than forecast in the Monetary Policy Report from February. For households, higher prices for energy, food and other expenses lead to slower growth in real incomes, which is expected to lead to lower consumption. Higher energy prices also mean higher costs for companies, putting pressure on their profitability. Reduced profitability and increased uncertainty restrain investment, at least in the short term. Taken together, the Riksbank expects that growth in Europe will be restrained fairly clearly this year due to the war and sanctions against Russia. The forecast for GDP growth in the euro area in 2022 has been reduced by about one percentage point compared with the forecast from February. The Swedish economy is also being affected by the war, which is one of the reasons that Swedish GDP is now expected to grow more slowly. The downturn is being counteracted by increased public expenditure for migration and by measures aimed at protecting households and companies from higher costs.

Forecast tables

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

Table 1. Repo rate forecast

Per cent, quarterly averages

	2022Q1	2022Q2	2022Q3	2023Q2	2024Q2	2025Q2
Repo rate	0,00 (0,00)	0,16 (0,00)	0,51 (0,00)	1,18 (0,00)	1,57 (0,13)	1,81

Source: The Riksbank.

Table 2. Inflation

Annual percentage change, annual average

	2020	2021	2022	2023	2024
CPIF	0,5 (0,5)	2,4 (2,4)	5,5 (2,9)	3,3 (1,9)	2,0 (2,2)
CPIF excl. energy	1,3 (1,3)	1,4 (1,4)	4,6 (2,2)	3,1 (2,1)	2,0 (2,1)
CPI	0,5 (0,5)	2,2 (2,2)	6,0 (2,9)	5,0 (2,0)	2,8 (2,4)
HICP	0,7 (0,7)	2,7 (2,7)	5,6 (3,0)	3,3 (1,7)	2,0 (2,1)

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

Sources: Statistics Sweden and the Riksbank.

Table 3. GDP and demand

Annual percentage change unless otherwise specified

	2020	2021	2022	2023	2024
Household consumption	−4,7 (−4,7)	5,8 (5,2)	3,4 (4,0)	1,4 (2,9)	1,6 (2,0)
Public consumption	−1,3 (−1,3)	2,8 (3,7)	1,6 (1,4)	1,7 (0,6)	1,6 (1,1)
Gross fixed capital formation	−0,3 (−0,3)	6,1 (7,3)	2,6 (4,1)	0,4 (2,0)	0,6 (1,5)
Stock investments*	−0,7 (−0,7)	0,4 (0,3)	0,2 (0,2)	−0,1 (−0,2)	0,0 (0,0)
Exports	−4,6 (−4,6)	7,5 (6,8)	4,8 (3,1)	3,1 (4,4)	3,3 (3,3)
Imports	−5,6 (−5,6)	9,4 (8,2)	5,3 (2,9)	2,5 (4,3)	3,2 (3,3)
GDP	−2,9 (−2,9)	4,8 (5,2)	2,8 (3,6)	1,4 (2,0)	1,4 (1,7)
GDP, calendar-adjusted	−3,2 (−3,2)	4,7 (5,0)	2,8 (3,7)	1,6 (2,2)	1,5 (1,7)
Final domestic demand*	−2,5 (−2,5)	4,8 (5,1)	2,6 (3,2)	1,2 (1,9)	1,3 (1,6)
Net exports*	0,2 (0,2)	−0,4 (−0,2)	0,0 (0,2)	0,4 (0,2)	0,2 (0,1)
Current account (NA), percentage of GDP	6,1 (6,0)	5,5 (6,3)	5,2 (6,5)	5,5 (6,6)	6,0 (6,6)

* Contribution to GDP growth, percentage points

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

Sources: Statistics Sweden and the Riksbank.

Table 4. Production and employment

Annual percentage change, unless otherwise stated

	2020	2021	2022	2023	2024
Population, aged 15–74	0,4 (0,4)	0,0 (−0,3)	0,1 (0,1)	0,2 (0,2)	0,3 (0,3)
Potential hours worked* **	0,8 (0,7)	0,7 (−0,2)	−0,3 (0,5)	0,5 (0,4)	0,4 (0,4)
Potential GDP	1,9 (1,8)	1,8 (1,8)	1,6 (1,8)	1,6 (1,7)	1,6 (1,7)
GDP, calendar-adjusted	−3,2 (−3,2)	4,7 (5,0)	2,8 (3,7)	1,6 (2,2)	1,5 (1,7)
Hours worked, calendar-adjusted* **	−3,8 (−3,8)	2,3 (1,2)	1,9 (2,8)	1,1 (1,8)	0,3 (0,9)
Employed persons	−1,4 (−1,3)	1,1 (−0,1)	2,1 (1,9)	0,5 (1,2)	0,4 (0,7)
Labour force	0,3 (0,3)	1,4 (0,4)	0,7 (0,6)	0,3 (0,6)	0,3 (0,5)
Unemployment*	8,5 (8,3)	8,8 (8,8)	7,6 (7,7)	7,4 (7,2)	7,4 (7,0)
GDP gap**	−3,7 (−3,7)	−1,0 (−0,6)	0,1 (1,2)	0,1 (1,8)	0,0 (1,8)
Hours gap**	−4,1 (−4,0)	−2,5 (−2,6)	−0,3 (−0,3)	0,2 (1,0)	0,1 (1,5)

* Per cent of labour force
** Deviation from the Riksbank's assessed potential levels, in per cent
*** As a result of a changeover in statistics, the forecast for 2022 is affected by a break in the time series. For more information, see the fact box at the end of Chapter 3.

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

Sources: Statistics Sweden and the Riksbank.

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

Annual percentage change, calendar-adjusted data unless otherwise stated

	2020	2021	2022	2023	2024
Hourly wage, NMO	2,1 (2,1)	2,7 (2,7)	2,8 (2,7)	3,2 (3,1)	3,1 (3,2)
Hourly wage, NA	4,8 (4,8)	2,7 (2,8)	3,2 (2,4)	3,1 (3,0)	3,1 (3,2)
Employers' contribution*	−0,6 (−0,7)	0,7 (0,4)	0,0 (0,0)	0,0 (0,0)	0,0 (0,0)
Hourly labour cost, NA	4,1 (4,1)	3,5 (3,3)	3,2 (2,4)	3,1 (3,0)	3,1 (3,2)
Productivity	0,7 (0,7)	2,3 (3,8)	0,9 (0,8)	0,6 (0,4)	1,1 (0,8)
Unit labour cost	3,5 (3,5)	1,9 (0,2)	2,3 (1,6)	2,6 (2,6)	2,0 (2,3)

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

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

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

Table 6. International forecasts

Annual percentage change unless otherwise specified

GDP	PPP weights	KIX weights	2020	2021	2022	2023	2024
Euro area	0,12	0,47	−6,5 (−6,5)	5,4 (5,2)	2,9 (3,9)	2,4 (2,6)	1,9 (1,6)
United States	0,16	0,09	−3,4 (−3,4)	5,7 (5,7)	3,2 (3,6)	2,0 (2,4)	1,7 (1,8)
Japan	0,04	0,02	−4,5 (−4,5)	1,7 (1,8)	2,1 (3,1)	1,8 (1,4)	1,1 (0,9)
China	0,19	0,09	1,7 (1,6)	8,5 (8,5)	4,4 (5,2)	5,1 (5,3)	5,1 (5,3)
KIX weighted	0,75	1,00	−4,8 (−4,9)	5,4 (5,2)	2,9 (4,0)	2,5 (2,8)	2,3 (2,2)
The World (PPP)	1,00	—	−3,1 (−3,1)	6,1 (5,9)	3,7 (4,5)	3,4 (3,7)	3,4 (3,4)

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

CPI	2020	2021	2022	2023	2024
Euro area (HICP)	0,3 (0,3)	2,6 (2,6)	6,8 (4,5)	2,7 (1,8)	2,0 (1,8)
United States	1,2 (1,2)	4,7 (4,7)	7,4 (5,6)	3,2 (2,7)	2,5 (2,4)
Japan	0,0 (0,0)	−0,2 (−0,2)	1,6 (0,7)	1,0 (0,8)	0,7 (0,6)
KIX weighted	1,1 (1,1)	2,7 (2,7)	5,9 (3,8)	2,9 (2,1)	2,2 (2,1)

	2020	2021	2022	2023	2024
International policy rate, per cent	−0,3 (−0,3)	−0,3 (−0,3)	0,0 (−0,2)	0,9 (0,0)	1,5 (0,2)
Crude oil price, USD/barrel Brent	43,3 (43,3)	70,7 (70,7)	102,4 (83,8)	93,3 (77,2)	85,8 (72,8)
Swedish export market	−8,1 (−8,1)	9,1 (8,7)	6,7 (6,3)	4,2 (4,5)	3,9 (3,6)

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

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

Table 7. Summary of financial forecasts

Per cent unless otherwise stated, annual average

	2020	2021	2022	2023	2024
Repo rate	0,0 (0,0)	0,0 (0,0)	0,4 (0,0)	1,2 (0,0)	1,6 (0,2)
10-year rate	0,0 (0,0)	0,3 (0,3)	1,4 (0,6)	1,9 (1,0)	2,2 (1,3)
Exchange rate, KIX, 18 Nov 1992 = 100	118,5 (118,5)	114,3 (114,3)	117,8 (119,5)	116,8 (118,3)	115,5 (116,5)
General government net lending*	−2,7 (−2,6)	−0,2 (−0,4)	−0,2 (0,0)	0,3 (0,6)	0,2 (0,7)

* Per cent of GDP

Note. Outcome and forecast for general government net lending are based on EDP statistics published at the end of March by Statistics Sweden.

Sources: Statistics Sweden and the Riksbank.

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