

# Account of monetary policy

2020



# Account of monetary policy in 2020

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The Riksbank is an authority under the Riksdag, the Swedish Parliament, with responsibility for monetary policy in Sweden. Since 1999, the Riksbank has had an independent position with regard to the Riksdag and the Government. This means that the six members of the Executive Board decide on monetary policy issues without seeking or taking instructions. Nor may any other authority determine how the Riksbank should decide on issues concerning monetary policy.

The way in which the Riksbank carries out the delegated task is followed up in various ways by the Riksdag. For instance, every year the Riksdag Committee on Finance examines whether the General Council of the Riksbank and the Executive Board can be discharged from liability for their administration during the past year. Every year, the Riksdag Committee on Finance also examines and assesses the monetary policy conducted by the Riksbank during the preceding years. The Riksbank compiles and publishes material for this assessment.

The material compiled by the Riksbank is thus a basis for assessment - not an assessment in itself. On the other hand, this does not mean that it is a pure compilation of figures. The account also includes analyses of outcomes, forecasts and events as the Riksbank believes that those who evaluate monetary policy should have access to the Riksbank's interpretation of the material. It is then up to the Committee on Finance, and others who wish to assess the material, to concur with the Riksbank's conclusions or to make another interpretation.

Chapter 1 investigates target attainment in 2020, while Chapter 2 gives an account of the monetary policy conducted over the year. Chapter 3 analyses the accuracy of the forecasts in 2018-2019 and alternative scenarios in 2020 and Chapter 4 reviews important monetary policy issues. The report also contains a number of articles, on subjects such as the long-term consequences of the COVID crisis and the Riksbank's development work.

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The Executive Board made a decision on the Account of Monetary Policy in 2020 on 23 March 2021. The report may be downloaded in PDF format from the Riksbank's website [www.riksbank.se](http://www.riksbank.se), where more information about the Riksbank can also be found.

# Monetary policy in Sweden

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## 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 (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 through 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 1 to 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 six 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 the monetary policy decision

The monetary policy decision is presented in a press release at 9:30 a.m. on the day following the monetary policy meeting. The press release also states how the individual Executive Board 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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# 1 Target fulfilment

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During 2020, developments in Sweden and the world were marked by the coronavirus pandemic. GDP and employment fell heavily but comprehensive measures by governments and central banks alleviated the effects and prevented a financial crisis. The Riksbank took a number of measures to ensure that banks can continue to provide credit to companies and households at low interest rates. Inflation undershot the target during the year, but the initiatives taken in monetary policy contributed to long-term inflation expectations being maintained.

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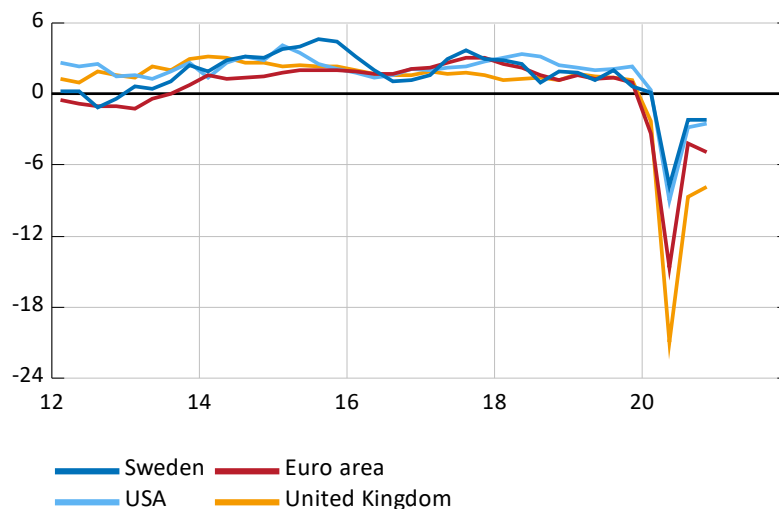
## 1.1 Economic developments and inflation 2020

### The pandemic marked developments in 2020

During 2020, developments in Sweden and the world were marked by the pandemic and its economic consequences. A heavy fall in GDP was unavoidable (see figure 1), despite exceptionally large fiscal and monetary policy measures were taken to alleviate the effects and prevent contagion effects from the affected sectors to other parts of the economy and the financial sector. The pandemic impacted the services sector particularly severely, particularly tourism-related businesses such as transportation, hotels and restaurants, culture and entertainment, tourism and parts of the retail trade.

**Figure 1. GDP growth in Sweden and abroad**

Annual percentage change, seasonally adjusted and calendar adjusted data

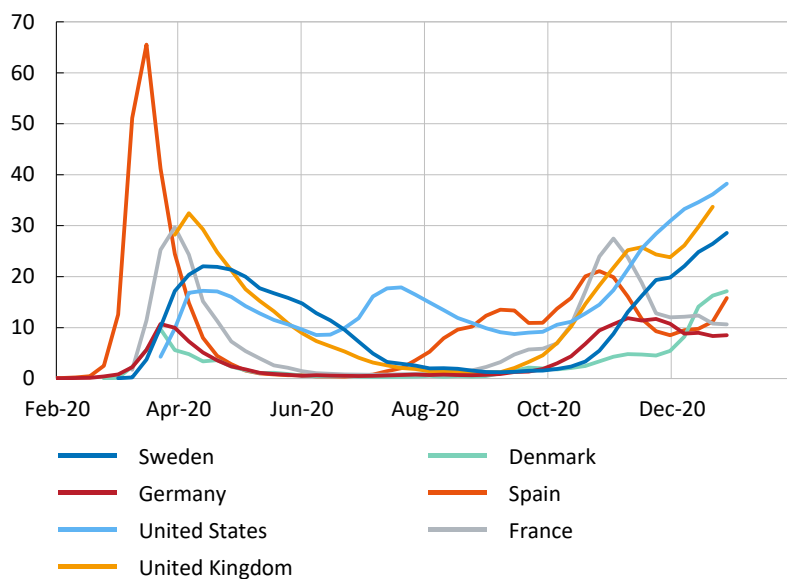


Sources: Bureau of Economic Analysis, Eurostat, Office for national statistics and Statistics Sweden.

During the early spring, the spread of infection increased rapidly around the world and after slowing down in the summer, a second wave of infection came in autumn 2020 (see figure 2). From the middle of March 2020, extensive restrictions were implemented to slow down the spread and, combined with people voluntarily adjusting their behaviour, this led to activity in the global economy slowing down substantially. Restrictions were eased slightly over the summer when the spread of infection decreased, but were then tightened again over the autumn when the spread of infection picked up again (see figure 3).

**Figure 2. Number of patients in hospital with COVID-19**

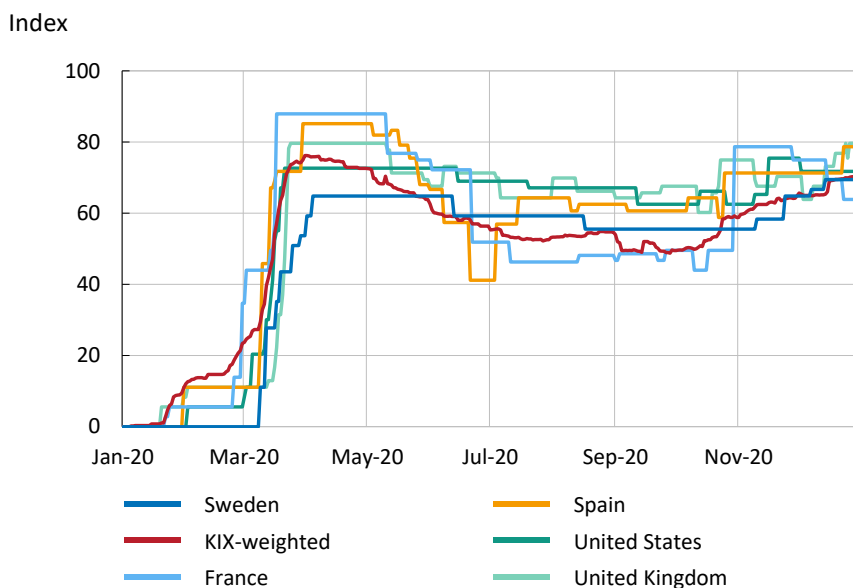
Number of patients per 100,000 inhabitants



Note. The series show the number of patients in hospital with COVID-19 in 2020, weekly data.

Sources: European Centre for Disease Prevention and Control (ECDC), national sources and the COVID Tracking Project.

**Figure 3. Measures of the extent of government restrictions to reduce the spread of infection**



Note. The index measures the extent of measures to combat the spread of COVID-19. The index consists of nine components that describe different types of restrictions, school closures, travel bans, etc. Each component usually has a three-point scale corresponding to “no measures”, “some kind of instruction” and “a ban”. The index corresponds to the average of all components. KIX-weighted refers here to an aggregate of 31 countries that are important for Sweden’s international trade for 2020.

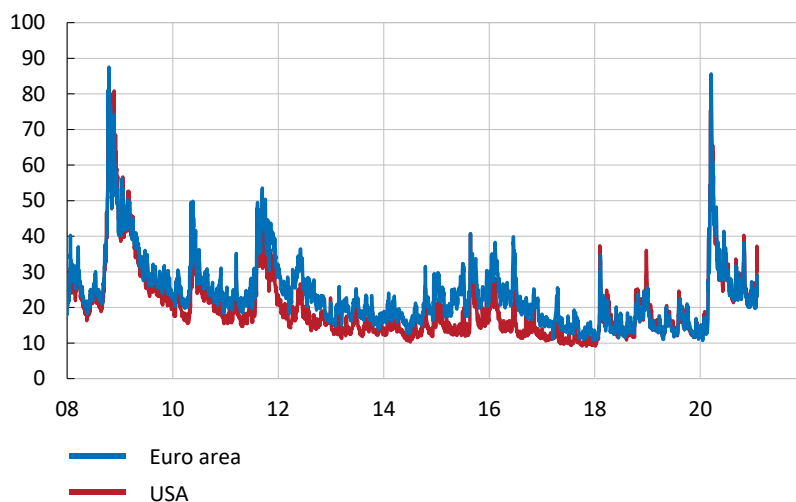
Sources: Oxford COVID-19 Government Response Tracker (OxCGRT) and the Riksbank.

The measures the Riksbank adopted over the year focused on preventing the crisis from worsening and in the worst case resulting in a financial crisis with an even greater economic downturn. This could in turn have led to more lasting low inflation. Thus, the measures had the twofold purpose of maintaining financial stability and economic stability, including the inflation target. However, they were not able to prevent falls in both economic activity and inflation. As the crisis had an unusual origin and a very rapid sequence of events, the target deviation was relatively large. This should be borne in mind when studying monetary policy target attainment for 2020.

Uncertainty over how the global economy would cope with the crisis was reflected by strong movements on the financial markets in the form of large price falls for high-risk assets such as shares and, increased volatility. The increases in the volatility measured on the stock markets were on a par with those experienced during the financial crisis (see figure 4).

**Figure 4. Volatility index for stock markets in the United States and euro area**

Per cent



Note. The volatility index shows the expected volatility on the US and European stock markets, based on options prices.

Sources: Chicago Board Operations Exchange, Deutsche Börse Group and Macrobond.

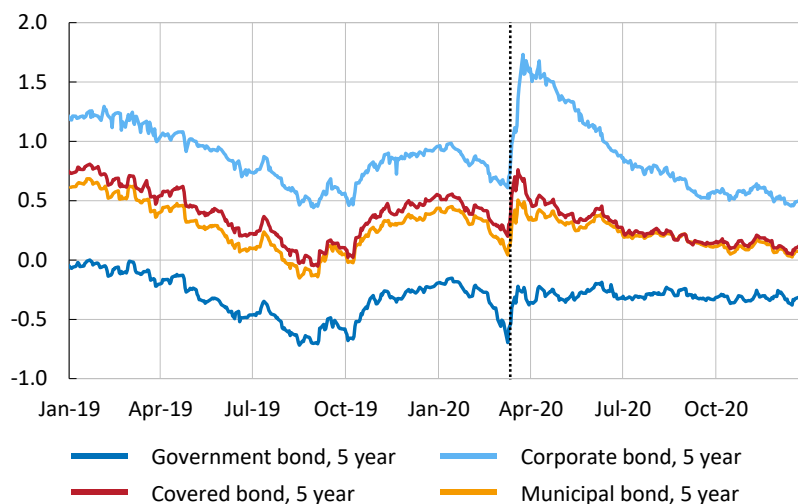
In Sweden, as in other countries, the crisis had a major impact on the income of many companies that suffered severe liquidity problems. This also increased the risk for their backers. Willingness to hold securities at longer maturities declined, and rates rose markedly (see figure 5). As a result of the rising rates and signs of friction on important financial markets, central banks needed to take rapid measures to prevent the crisis worsening.

Chapter 2 describes the crisis measures implemented by the Riksbank to ensure the credit supply would continue to function and that households and companies would continue to pay low interest rates. The strength of the overall measures taken in Sweden and abroad by governments and central banks to alleviate the economic consequences of the pandemic contributed in total to turning around developments on the financial markets and to avoiding a more profound and protracted recession in 2020.



**Figure 5. Yield rates for Swedish bonds with 5-year maturities**

Per cent



Note. Zero coupon rates calculated using the Nelson-Siegel method. The corporate bond series illustrates a heterogeneous group of bonds for companies with credit ratings of BBB or higher. Municipal bonds are issued by Kommuninvest i Sverige AB. The broken vertical line marks 11 March, when the WHO declared that COVID-19 was a pandemic.

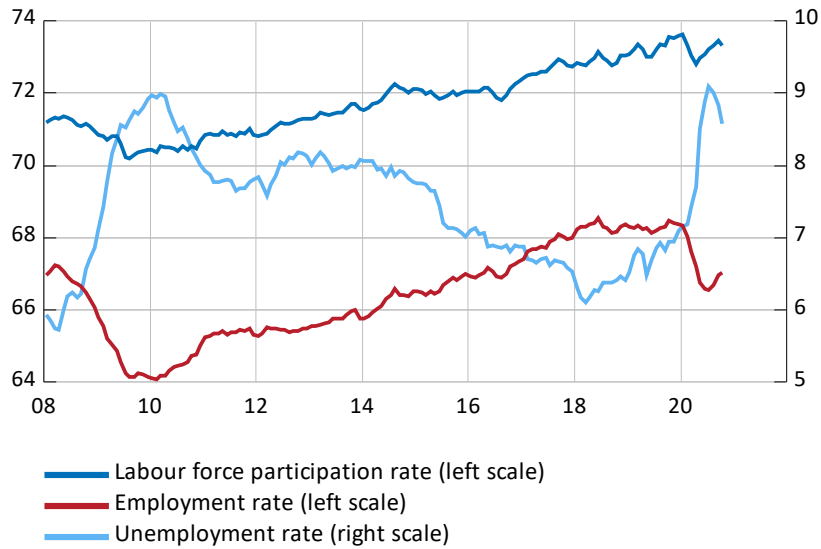
Sources: Macrobond, Refinitiv and the Riksbank.

### Unemployment increased in particular among young people and those born abroad

At the start of the pandemic, demand fell rapidly, which caused employment to fall and unemployment to rise strongly (see figure 6). Employment recovered and unemployment fell when the spread of infection declined over the summer. The decline in employment was also restrained by companies being able to furlough staff until June 2021. However, there are major differences between different segments. The hotel and restaurant sector and other service sectors contributed most to the decline in employment in 2020 (see figure 7). The first to be made redundant in a crisis are usually those with less secure employment. Temporary employment is more common among employees in the tourism industry and these industries employ many young people and people born abroad. The crisis has therefore impacted these groups particularly severely. In total, just over 60,000 fewer people were in temporary employment in 2020 than in 2019 after many had been made redundant in the first half of 2020. At the same time, the possibility for short-term work compensation meant that many with permanent employment could retain their jobs, and towards the end of 2020 the number of permanently employed was back at the same level as in 2019 (see figure 8).

**Figure 6. Labour force, employment and unemployment**

Per cent, seasonally-adjusted data, three-month moving average

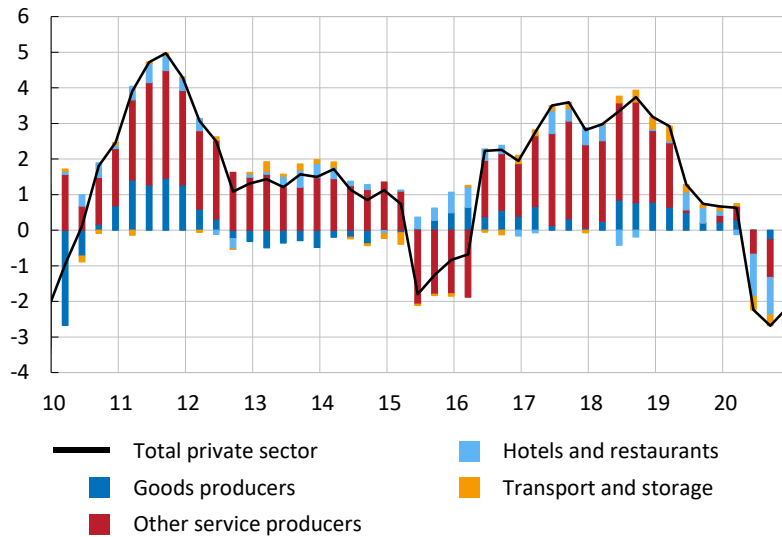


Note. Three-month moving averages. Percentage of population and labour force respectively, 15-74 years.

Source: Statistics Sweden.

**Figure 7. Change in number of employees in the business sector, by industry**

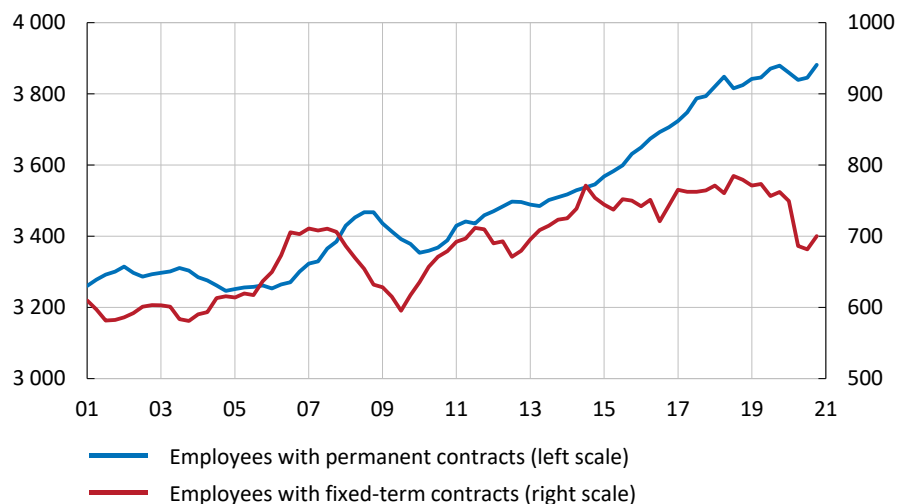
Percentage 12-month change and contribution in per cent, quarterly data



Source: Statistics Sweden (short-term employment statistics).

**Figure 8. Number of persons employed, by form of employment**

Thousands, seasonally-adjusted quarterly data



Source: Statistics Sweden.

In 2020, new three-year agreements were signed between the labour market parties, who agreed that centrally-agreed wages would increase by an average of about 2 per cent annually until the end of the first quarter of 2023. In addition, the agreements resulted in allocations to pensions corresponding to an increase in labour costs of a further couple of tenths of a percentage point. Wage growth is not just determined by centrally-agreed wages but also by local pay reviews. The size of these is affected by the demand situation on the labour market, which has been weak for many groups as a result of the pandemic. Wage growth amounted to about 2 per cent in 2020, according to short-term wage statistics.

### **Inflation below target, falling energy prices played a major role**

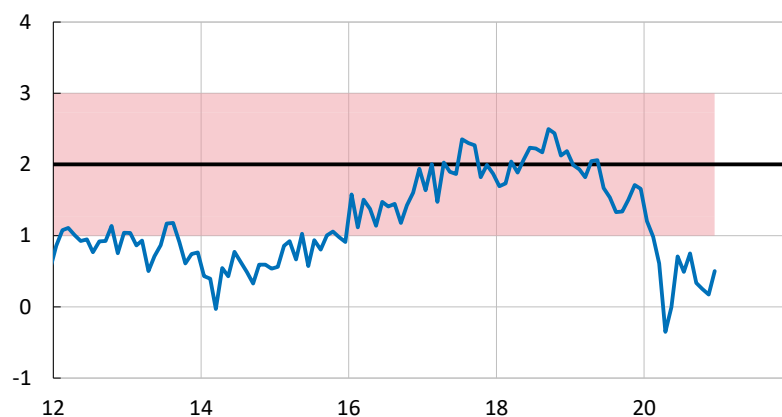
Inflation was between 0 and 1 per cent over most of 2020, after having been close to 2 per cent in the period 2017-2019 (see figure 9). It was primarily energy prices that increased unusually slowly in 2020. Inflation excluding energy did not fall as much and was on average 1.3 per cent (see figure 10 and table 1).

The decline in the rate of inflation was due to several factors. The unusually mild winter dampened the demand for electricity. This contributed to the gradual fall in electricity prices beginning in the autumn of 2019. In February 2020, the oil price also started to fall sharply, contributing to lower fuel prices. The falling energy prices pushed down inflation during the year as a whole. In addition, the inflation outcome was affected by the annual update of the weights in the CPI calculation. The effect of the weight adjustment for 2020 was unusually strong, and this reduced the rate of inflation by a good 0.2 percentage points over the year. The coronavirus pandemic affected inflation from April on and inflation was volatile thereafter. Some of these price movements were due to actual price falls, while others were the result of temporarily amended measurement methods.

Figure 11 and table 2 show the contribution to CPIF inflation from prices that have been particularly impacted by the pandemic. During the pandemic, households have changed their consumption patterns to an unusually large degree. Periodically, some services have hardly been consumed at all. These include package holidays, hotel stays, restaurant visits and various types of entertainment such as theatres, cinemas and sporting events. Consumption of products such as food, games, rental cars, products for home renovation and home electronics has instead increased, as people have stayed at home to a greater extent. The prices of the products consumed less have in many cases increased relatively slowly, while prices of many of the products consumed more have increased relatively rapidly. The weights in CPIF 2020 were largely based on how consumption was distributed in 2018. The inflation rate measured may thus underestimate the rate of increase in the prices paid by an average household.<sup>1</sup> At the same time, the restrictions mean that it has been impossible to consume some services and consequently it has been impossible to measure their prices, which has further increased uncertainty over the actual development of inflation.

**Figure 9. CPIF and variation band**

Annual percentage change



Note. The pink area shows the Riksbank's variation band and covers about three-quarters of the outcomes since January 1995. The variation band is a means of showing whether the deviation from the inflation target is unusually large.

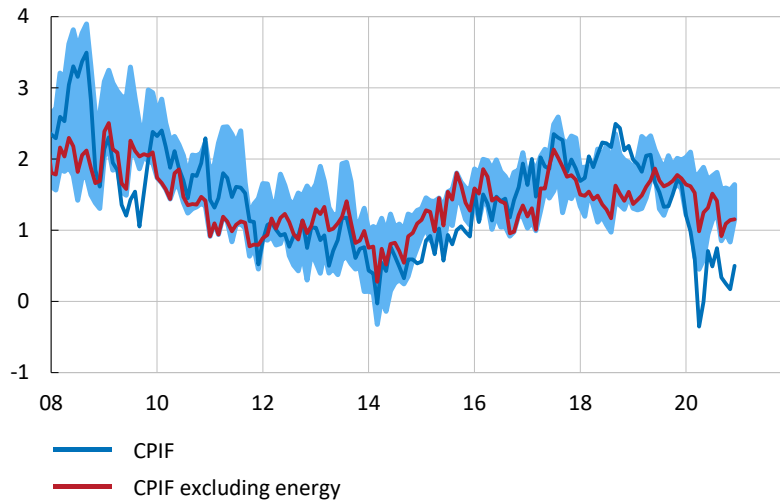
Sources: Statistics Sweden and the Riksbank.

It is common for the measured rate of inflation to be pushed up or down as a result of temporary changes in certain prices, primarily energy prices. The Riksbank continuously analyses alternative measures of inflation to better determine to what extent the changes in inflation are temporary or lasting. Several measures of core inflation, which, among other things, excludes or reduces the significance of widely fluctuating prices, indicate that the more persistent rate of inflation was low during 2020, lying between 1 and 2 per cent (see figure 10 and table 1). However, the problems in measuring inflation in prices for services that are not being consumed also affect these measures and make them more uncertain than normal.

<sup>1</sup> See, for example, the article "Changed consumption during the pandemic affects inflation" in the Monetary Policy Report, February 2021.

**Figure 10. CPIF, CPIF excluding energy and core 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.

**Table 1. Inflation according to different measures**

Annual percentage change, annual average

	2018	2019	2020
CPIF	2.1	1.7	0.5
CPIF excluding energy	1.4	1.6	1.3
Core inflation (median)	1.6	1.8	1.4

Note. Core inflation refers to the median of a number of measures of core inflation. The measures included are the 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). See <https://www.riksbank.se/en-gb/statistics/macro-indicators/underlying-inflation/> for further information.

Sources: Statistics Sweden and the Riksbank.

**Table 2. Development of the CPIF and its components**

Annual percentage change, annual average

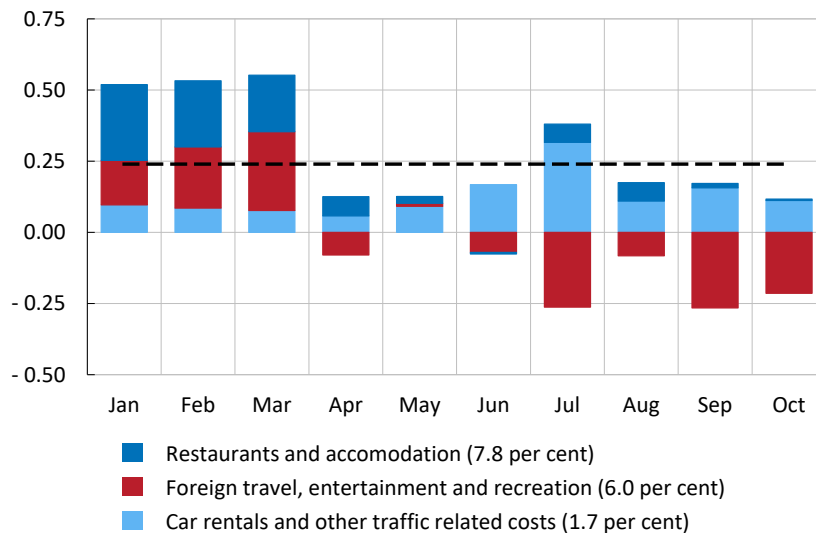
	Weight (per cent)	2000-2019	2019	2020
Services	46	1.8	2.0	1.4
Goods excluding foods	27	-0.4	-0.1	0.1
Food	18	1.9	2,6	2,1
Energy	7	3.9	3.2	-9.7
Capital stock	3	5.3	5.8	5.6
CPIF	100	1.6	1.7	0.5

Note. The weights are those applying for 2020.

Source: Statistics Sweden.

**Figure 11. Contribution to CPIF inflation from prices especially affected during the pandemic**

Percentage points



Note. The percentage in brackets refers to the product groups' weight in the CPIF. The broken line represents the mean value of the contributions from the three product groups since 2012.

Sources: Statistics Sweden and the Riksbank.

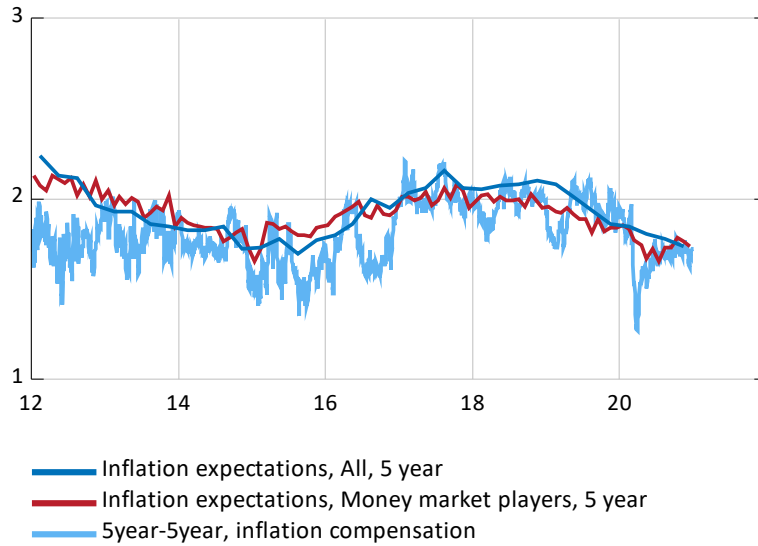
**Inflation expectations over the long term only marginally lower**

Monetary policy aims to stabilise inflation around the inflation target. This creates stability and predictability in price setting and wage formation and contributes to favourable economic development. It is important in attaining the target that economic agents trust that the central bank will return inflation to the target level when economic shocks have caused it to deviate. More short-term expectations usually follow actual inflation and fell back in step with the lower inflation over the year. Long-term inflation expectations, those based on market pricing in particular, initially fell back but recovered and, by the end of the year, were only a few tenths of a percentage

point below the target (see figure 12). This indicates that economic agents did not expect the pandemic to have any larger, persistent effects on inflation.

**Figure 12. Long-term inflation expectations, Sweden**

Per cent



Note. Inflation compensation refers to a 5-year period starting in 5 years' time, calculated on the basis of bond yields.

Sources: Kantar Sifo Prospera and the Riksbank

## 2 Monetary policy 2020

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Monetary policy over the year was characterised by the economic consequences of the coronavirus pandemic. After several years with relatively good growth and a rate of inflation close to the target, 2020 brought about a break in the trend. GDP fell heavily and inflation was below the target of 2 per cent. The monetary policy measures were primarily aimed at ensuring that lending in the economy functioned and that interest rates to households and companies remained low, among other means by extensive asset purchases and lending to companies via banks. The repo rate remained at zero per cent over the entire year.

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The consequences of the coronavirus pandemic marked the development of the economy and monetary policy in 2020. When the spread of infection picked up and restrictions started to be introduced in March and April, this led to large falls in production in Sweden and abroad, see figure 1. The labour market was hit hard. Above all, the service sector and industries such as tourism, hotels and restaurants were impacted. In addition, the pandemic and very low energy prices meant that inflation – which had been close to the target of 2 per cent for a time – was below the target, see figure 10. There was also concern that the long-term inflation expectations would fall, but the downturn in these was relatively moderate and they were close to 2 per cent over the entire year, see figure 12.

### 2.1 The Riksbank's forecasts and assessments

Ahead of the monetary policy meeting in February 2020, economic developments both in Sweden and abroad had largely been in line with the forecasts of the Monetary Policy Report from December 2019. The novel coronavirus in China certainly meant that uncertainty had increased slightly but it was difficult, at that point, to estimate the economic consequences of the virus as nobody knew how the continued spread of infection would develop. This was reflected in the forecasts. The revisions to the economic outlook and inflation prospects were minor in the slightly longer run. The repo rate was held unchanged at zero per cent and was also expected to remain unchanged over almost the entire forecast period in line with the forecast from December.

#### **The pandemic impacts with full force around the world**

At the start of March, the coronavirus started to spread at an increasingly fast rate around the world and, on 11 March, the WHO declared COVID-19 a pandemic. However, the economic consequences were difficult to interpret, as shocks to both supply and demand could be discerned. Companies were badly impacted with falling revenues and greater loan requirements. Uncertainty on the financial markets caused problems for the banks and financial agents.



In mid-March, the Riksbank judged that there was an impending risk of a substantial credit crunch with negative effects for liquidity supply and the possibilities of attaining the inflation target. Between 12 March and 21 April, the Riksbank held five extraordinary monetary policy meetings, as well as an ordinary meeting on 27 April. Decisions were taken on a number of measures to safeguard banks' continued funding capacity, secure lending to companies, maintain low interest rates for bank loans and securities borrowing, and support economic developments.

However, the repo rate was not cut. Rate cuts that, under normal circumstances, would have stimulated the economy would probably have been fairly ineffective when restrictions from authorities and other voluntary constraints were hampering normal consumption. There were also other arguments against taking the repo rate back into negative territory. For example, if the banks were to introduce negative deposit rates for households, there was a risk that these would react by making significant cash withdrawals, which, in turn, could lead to liquidity problems for the banks; see Monetary Policy Report, December 2019. In addition to various forms of liquidity support to banks, the Riksbank therefore decided to purchase various financial assets to a greater extent than previously to meet the challenges of the crisis and keep interest rates to households and companies low.

The pandemic led to uncertainty over economic developments becoming very high, which, among other things, was reflected by high volatility on the financial markets. It was no longer self-evident that historical economic correlations could be trusted and forecasts made in the normal way. The Riksbank therefore included no forecasts in its Monetary Policy Report in April but only two possible scenarios for future development.

It was also difficult to predict the effect of the different monetary policy measures the Riksbank had at its disposal. At the same time, it was necessary to act quickly, clearly and on a large scale to ensure that credit granting in the economy would continue to function. The Riksbank therefore took a long series of measures in a short time. A more sequential policy, in which one measure is taken at a time and its effects are evaluated after a period, was not considered appropriate in this situation. Altogether, the measures contributed, in various ways, to avoiding a credit stop on the financial markets and maintaining financial stability. Moreover, a larger and more lasting downturn in the economy was avoided, which was positive for inflation prospects. In other words, there was no conflict of interests between on the one hand maintaining financial stability, and on the other hand supporting the real economy, as well as maintaining price stability. Several lessons can be learned from the Riksbank's actions during the crisis, but one particularly important lesson is that it is difficult to distinguish between measures that maintain the stability of the financial system and measures that maintain general economic stability and price stability. The tools the Riksbank has at its disposal affect these areas in slightly different ways and it is difficult to know in advance which combination of measures optimally supports the economy. Speed, clarity and measures with a broad impact reduce the uncertainty, which in turn creates stability during a very difficult period.

## The Riksbank's measures: liquidity support and asset purchases

**Liquidity support to safeguard lending.** The financial unease caused by the pandemic increased demand for liquid assets and risked impairing credit granting. The banks' role as lenders is important for favourable economic development and also for monetary policy. If lending deteriorates, the impact of the repo rate on other interest rates in the economy may also be affected. The Riksbank therefore launched a programme in which it lent **Swedish kronor to the banks for onward lending to companies**. The terms were generous and included a variable interest rate corresponding to the Riksbank's repo rate. The banks could in turn lend to Swedish non-financial corporations. Lending to sole proprietors (unincorporated businesses) was also included in the programme. These loans were aimed at securing lending to companies, particularly to small and medium-sized enterprises. The loans thus supported lending by banks, although it was then up to banks themselves to conduct credit assessments.

Banks obtain some of their short-term funding in US dollars. In the initial phase of the pandemic, global demand for US dollars increased rapidly, making it difficult to get access to financing in dollars; see figure 13. To increase access to US dollars in the financial system, the Riksbank started offering **loans in dollars against collateral**. This was made easier by the Federal Reserve setting up so-called swap agreements with several central banks, including the Riksbank. In brief, this meant that the Riksbank and the Federal Reserve could swap their respective currencies with one another during a period of time and then swap them back. The Riksbank thereby increased its ability to provide the banks with US dollars if necessary.

In addition, the Riksbank launched a number of other measures to facilitate banks' funding. These included:

- Weekly **extraordinary market operations**.<sup>2</sup>
- Amendments to the interest terms in the **standing loan facility**.
- Amended regulations to increase flexibility regarding the **collateral** banks could use when borrowing from the Riksbank.
- The **group of counterparties** for the Riksbank's transactions was expanded to broaden the impact of the funding for lending programme.

**Asset purchases to maintain a low level of interest rates.** Purchases of **government bonds** dampen the general level of interest rates and long-term interest rates in the economy. The interest rate for government bonds with longer maturities includes what is known as a term premium, which compensates investors for the risk involved in purchasing bonds with longer maturities. When the Riksbank makes extensive purchases of government bonds, the term premium decreases and the general level of interest rates falls. The purchases also send a signal to the market that the Riksbank expects the repo rate to be low in the period ahead, which means that expectations

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<sup>2</sup> See Table 3.

of market participants regarding future short-term interest rates may also fall. In addition, lower government bond yields can contribute to lower yields for higher-risk bonds.

Purchases of **municipal bonds** can be seen as a complement to purchases of government bonds to affect longer market rates. But municipal bonds have a different position to government bonds among investors with regard to risk and liquidity, which makes the yield level slightly higher.

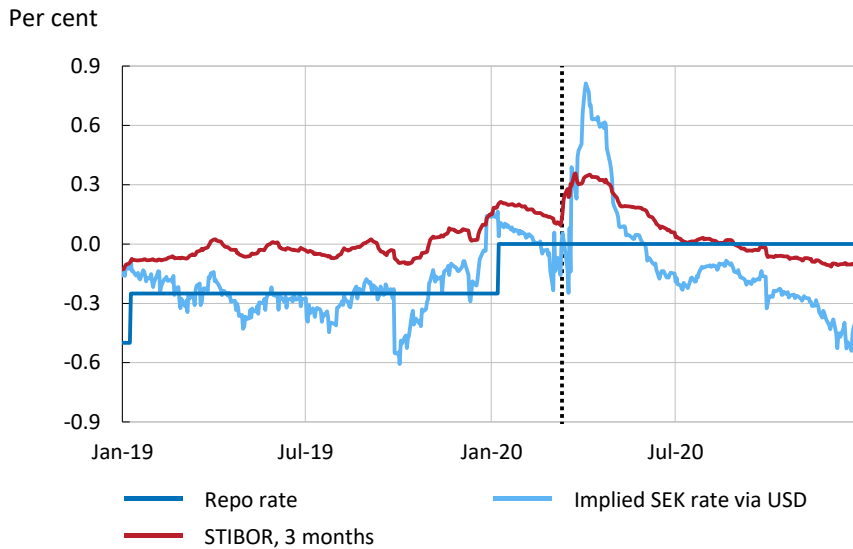
At the start of the pandemic, risk premiums for **covered bonds** increased, which is to say bonds guaranteed by a special cover pool, for example credits granted against collateral in property or tenant-owned apartments. This market is key to banks' lending, as most lending for housing purposes is funded via covered bonds. When risk premiums increased, there was therefore a risk that lending would decrease, with higher interest rates for households and companies as a consequence. Purchases of covered bonds can reduce the risk premiums and support lending in the economy.

Historically, Swedish companies have primarily obtained funding via bank loans, but recently the issue of **commercial paper** and **corporate bonds** have become more common; see figure 14. The Riksbank decided to purchase these asset types too, because risk premiums on corporate bonds had continued to rise, even after premiums on other bond markets had started to stabilise. For example, during the third week of March, companies in the Riksbank's Business Survey described the market for corporate bonds as "dead", a view that was also confirmed by the Riksbank's regular discussions with market participants.

It is primarily large companies that obtain funding on the bond market, but these companies also often have promised lines of credit from their banks. This means that if the bond market functions poorly, large companies will reduce their bond borrowing and instead turn to their bank to borrow money, which there were signs of during the spring, see figure 15. The banks' lending to major companies therefore risked squeezing out lending to smaller companies. By supporting the bond market, the Riksbank therefore contributed to maintaining credit granting in a broad sense and to counteracting disruptions to the pass-through of monetary policy.

Table 3 summarises the Riksbank's monetary policy measures during the pandemic, while figure 16 is a simplified illustration of how the measures acted to support lending and maintain a low general level of interest rates. Figure 17 and figure 18 show the Riksbank's purchases and holdings of various assets.

**Figure 13. The banks' costs for obtaining funds with dollars increased in the initial phase of the pandemic**

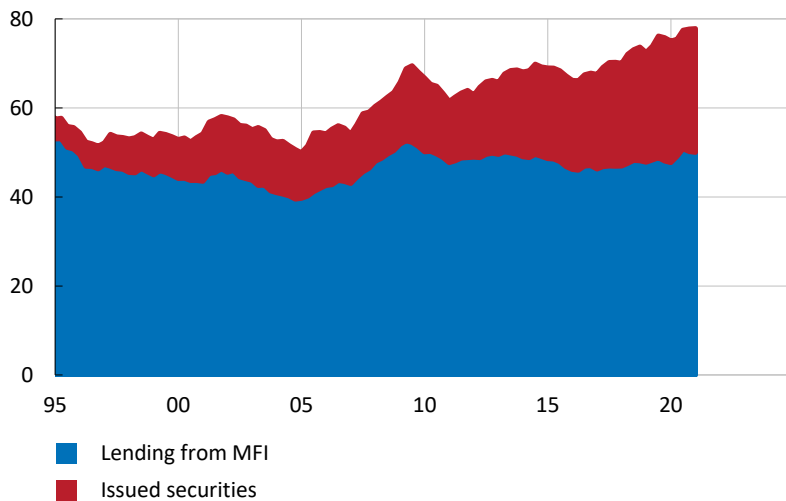


Note. The implied SEK interest rate is calculated using spot rates and forward exchange rates, as well as 3-month interest rates (USD LIBOR). The broken line marks the date, 11 March, on which the WHO declared COVID-19 a pandemic.

Sources: Bloomberg, Macrobond and the Riksbank.

**Figure 14. Borrowing among non-financial corporates**

Percentage of GDP, quarterly data

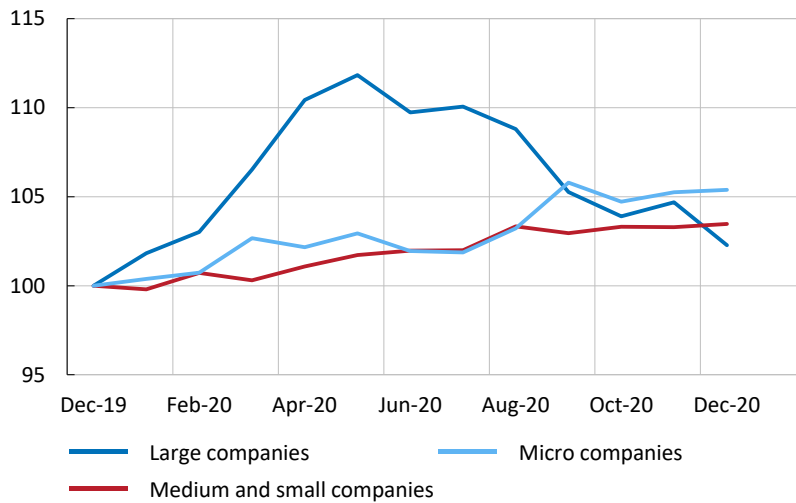


Note. Includes securities borrowing in both Swedish kronor and foreign currency.

Sources: Statistics Sweden and the Riksbank.

**Figure 15. Bank loans by company size**

Index, December 2019 = 100, monthly data



Note. Loans in all currencies. Outstanding loans to Swedish non-financial corporations. Size breakdown in accordance with European Commission Recommendation (2003/361/EC). Excluding loans to housing cooperatives.

Sources: Statistics Sweden and the Riksbank.

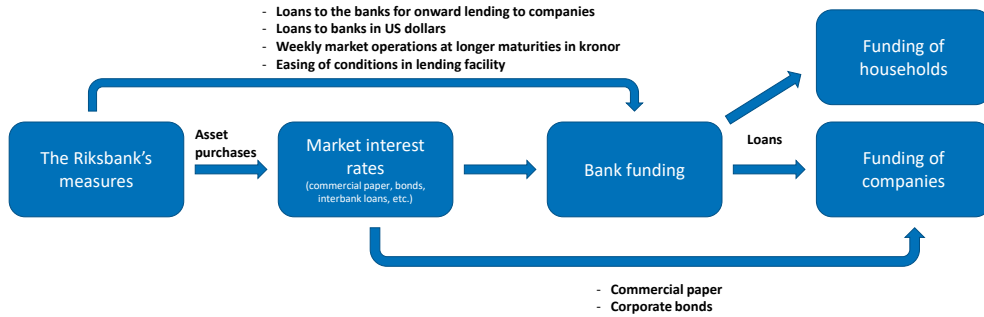
**Table 3. Monetary policy measures during the coronavirus pandemic**

Measure	Purpose
Funding for lending programme.	Supporting credit granting to non-financial corporations.
Purchases of government bonds, municipal bonds, covered bonds, treasury bills, corporate bonds and commercial paper.	Contributing to low interest rates throughout the economy and smoothly functioning credit granting, and in this way creating favourable conditions for the economy to recovery and inflation to rise towards the target.
Interest rate in standing loan facility cut.	Ensuring that the overnight rate on the market for Swedish kronor is close to the repo rate. Making it cheaper for the banks to get access to overnight loans.
Weekly market operations whereby banks are offered loans against collateral at three and six months maturities at the repo rate.	Strengthening the banks' access to liquidity in Swedish kronor to facilitate their funding and their role as granters of credit for Swedish companies.
Easing collateral requirements for borrowing from the Riksbank.	Reinforcing the banks' access to liquidity in Swedish kronor.
Loans in US dollars.	Reinforcing access to liquidity in US dollars in the Swedish financial system.

Note. For a detailed description of the Riksbank's measures during the coronavirus pandemic, see <https://www.riksbank.se/en-gb/press-and-published/updates-on-the-riksbank-and-the-coronavirus-pandemic/the-riksbanks-measures-in-connection-with-the-corona-pandemic/>.

Source: The Riksbank.

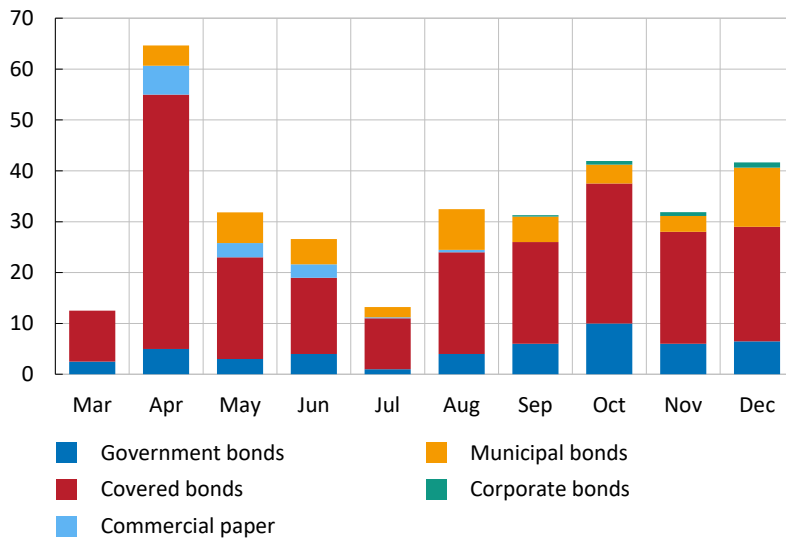
**Figure 16. The Riksbank’s measures and their impact on credit granting**



Source: Peter Gustafsson and Tommy von Brömsen, “The coronavirus pandemic: The Riksbank's measures and financial developments in spring and summer 2020”, Sveriges Riksbank Economic Review 2021:1.

**Figure 17. The Riksbank’s purchases of securities in 2020**

SEK billions, nominal amount

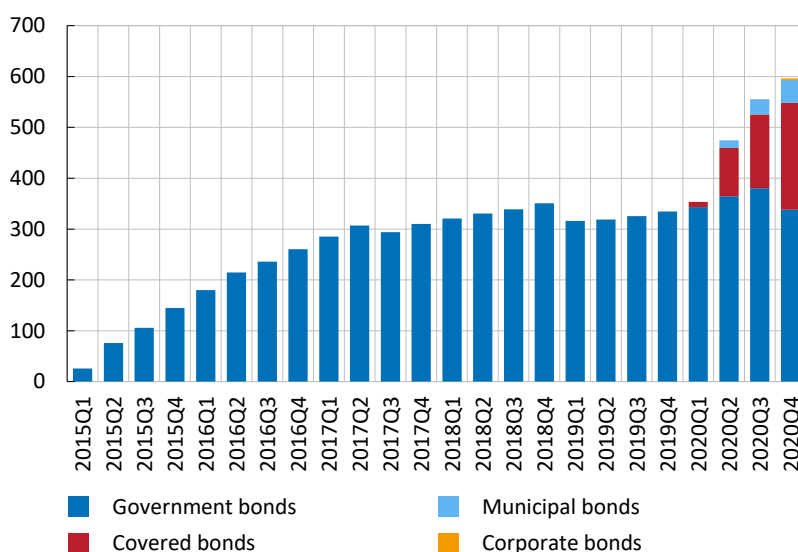


Note. The figures show the total purchases made within the scope of the asset purchase programme initiated in March 2020.

Source: The Riksbank.

**Figure 18. The Riksbank’s holdings of securities by asset type**

Nominal amount, SEK billion, end of respective quarter



Note. Holdings of securities, excluding commercial paper, issued in Swedish kronor.

Source: The Riksbank.

### Reduced spread of infection and signs of economic recovery

At the start of the summer, the spread of infection decreased and restrictions started gradually to be lifted. Borders were opened, people started to move more freely and shops could be opened. Restrictions abroad were eased slightly earlier and faster than the Riksbank had assumed in its Monetary Policy Report in April. Signs of an economic recovery were visible. Outcomes for industrial production and the retail trade indicated that GDP in the United States bottomed out in April and the European Commission’s barometer for household confidence and the Purchasing Managers’ Index showed a clear improvement in Europe in May and June.

Indicators of activity in the Swedish economy on a daily and weekly basis indicated that output and demand had also stabilised in Sweden and, in some parts of the economy, there were even signs of an increase in May and June. The measures to facilitate lending and ensure that interest rates would remain low turned out to have the desired effect. Rates on the Swedish fixed-income markets had returned relatively rapidly to earlier levels; see figure 5.

In the Monetary Policy Report in July, output was thus deemed to have started to recover with the assistance of comprehensive economic policy measures, even if the way back would be long and fraught with uncertainty, not least concerning the more long-term effects of the pandemic. Quite simply, the scope and the special nature of the pandemic made it difficult to determine how rapidly the economy would recover. There was thus a clear need for the powerful measures taken to remain for a good while. It was clarified how earlier decisions on the purchase of corporate bonds would be implemented. The assessment of the main scenario was the economy would show

an upturn in the second half of the year, but that it would take a long time before resource utilisation returned to normal levels and inflation was once again close to its target of 2 per cent.

The favourable development with a reduced spread of infection continued over the summer and, in the Monetary Policy Report for September, it was deemed that the monetary policy measures had contributed towards alleviating the negative economic effects of the pandemic and had created the conditions for an economic recovery. A general rise in interest rates in the economy had been avoided and inflation was expected to rise during the forecast period, although the depth of the crisis meant that it would take time before inflation would return to 2 per cent more permanently.

Continued development was considered, above all, to be fraught with downside risks in both the short and longer terms. The stability of the financial markets was dependent on continued support from central banks, governments and other authorities. Monetary policy therefore needed to continue to contribute to efficient credit granting and a low general level of interest rates. The combination of measures used during the spring and summer was deemed to be the most effective for this purpose.

### **A second wave of increased infection hits Europe hard**

During the autumn, Sweden and many other countries in Europe were affected by a second wave of increased infection. Tighter restrictions started to be reintroduced in many areas and the economic recovery came to a halt and became more uncertain. In the Monetary Policy Report in November, growth prospects were therefore revised downwards for the next six months, both for Sweden and the rest of the world. Inflation was expected to be lower over the next few years. Falling energy prices and other temporary factors had pushed inflation down more than expected during the year. In 2021, inflation was expected to recover slightly and slowly rise towards the target as resource utilisation increased. The Riksbank's assessment was that it would take until 2023 until CPIF inflation would lastingly attain 2 per cent.

The Swedish krona depreciated temporarily against several currencies during the initial phase of the pandemic but thereafter appreciated to stronger levels than prior to the pandemic.<sup>3</sup> This had several causes, including the relatively good prospects for the Swedish economy and Swedish public finances over the spring and summer. In addition, the large risk appetite among investors continued over the autumn, which probably also contributed. The krona appreciation meant that the real exchange rate was now deemed to be close to its long-run level.

To counteract the economic downturn and facilitate the recovery, in November the Riksbank decided to make monetary policy even more expansionary, by expanding the envelope for asset purchases and extending the time period for them. In that the Riksbank, together with the Government, had extended its support measures, the forecasts for the slightly longer run were left largely unchanged. Developments during

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<sup>3</sup> Note that in Figure 22, which shows the development of the krona, the temporary weakening of the krona is not visible.

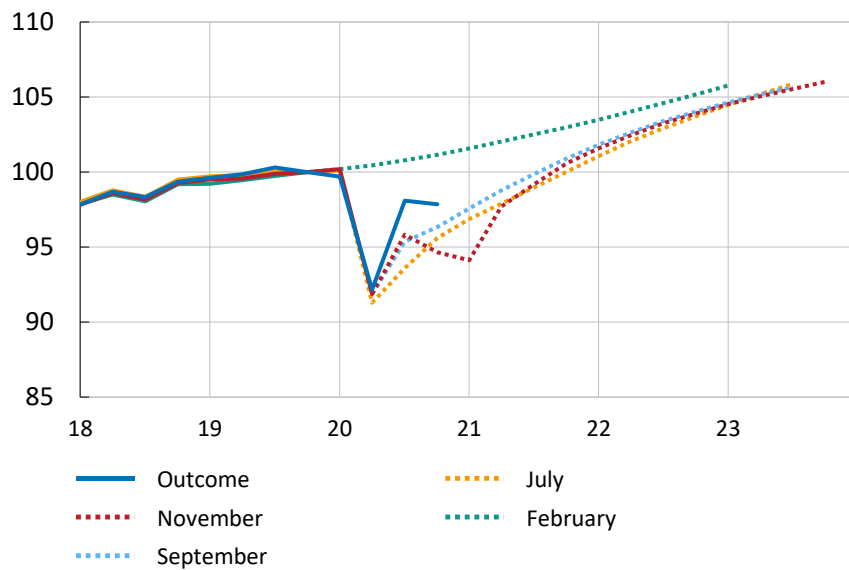


the autumn emphasised the importance of not phasing out the support measures too quickly.

Figure 19 to figure 23 show the forecasts for the central variables that formed the basis for the monetary policy decisions in 2020. Note that there were no forecasts in the Monetary Policy Report in April, but only scenarios. These are shown in chapter 3.

**Figure 19. GDP level, forecasts 2020**

Index, 2019 Q4 = 100, seasonally adjusted data

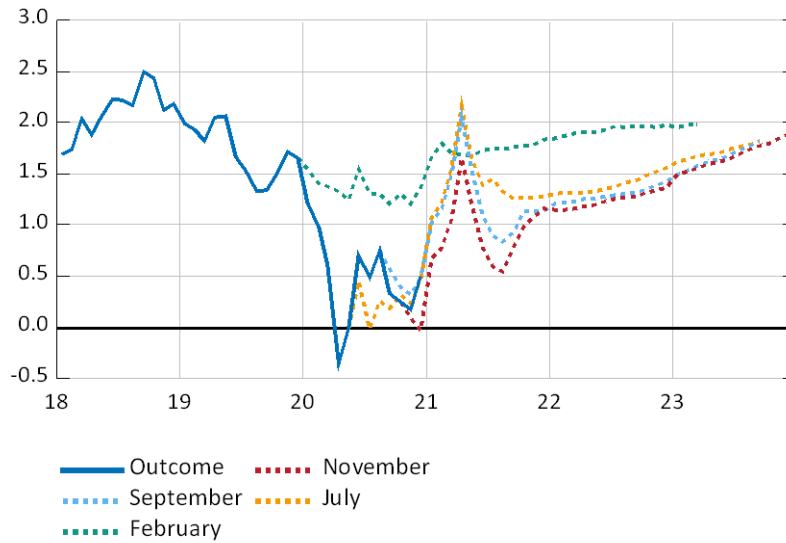


Note. Several outcome lines are shown in the figure. This is because the outcomes have been revised by Statistics Sweden.

Sources: Statistics Sweden and the Riksbank.

**Figure 20. CPIF, forecasts 2020**

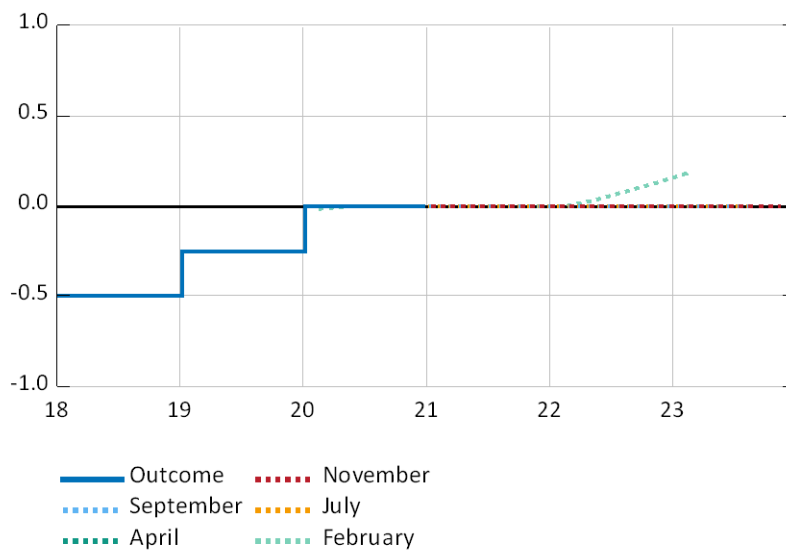
Annual percentage change



Sources: Statistics Sweden and the Riksbank.

**Figure 21. Repo rate, forecasts 2020**

Per cent

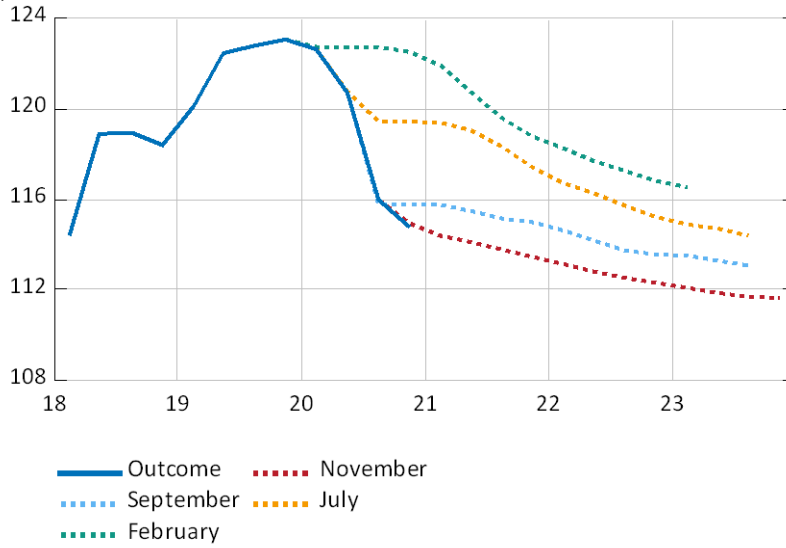


Note. Outcome data are daily rates and forecasts are quarterly averages. In April only a scenario of the repo rate with a one year horizon was published.

Source: The Riksbank.

**Figure 22. Competition-weighted nominal exchange rate, KIX, 2020 forecasts**

Index, 18 November 1992 = 100

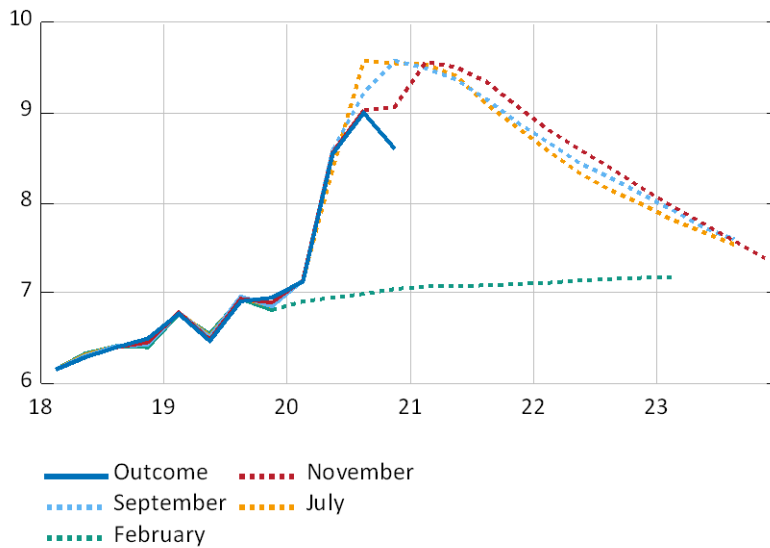


Note. The KIX (krona index) is a weighted average of the currencies in the countries that are important for Sweden's international trade.

Sources: National sources and the Riksbank.

**Figure 23. Unemployment, forecasts 2020**

Per cent of the labour force, 15–74 years, seasonally-adjusted data



Note. Several outcome lines are shown in the figure. This is because the series have been seasonally adjusted and the seasonal adjustment can change when a new outcome is published.

Sources: Statistics Sweden and the Riksbank.

## 2.2 The Executive Board's discussions and monetary policy considerations

The Executive Board's discussions and monetary policy considerations were largely steered by the development of the pandemic and its consequences for the economy. However, ahead of the **monetary policy meeting in February**, the spread of the coronavirus was still limited and the Executive Board was able to note that the economic outlook and inflation prospects were approximately the same as in December. The Executive Board was unanimous in its decision to hold the repo rate unchanged at zero per cent, in line with the forecast from December 2019.

### **The Executive Board took comprehensive measures to facilitate lending and counteract rising interest rates**

By the next ordinary **monetary policy meeting in April**, the effects of the pandemic had hit the world hard. Various restrictions to curb the spread of infection had substantially reduced activity in the global economy. Ahead of this meeting, the Executive Board had therefore already resolved in favour of comprehensive monetary policy measures on a number of different occasions between the ordinary meetings in February and April. The aim was to facilitate lending in the economy and counteract any rise in interest rates paid by households and companies as uncertainty increased and the economic effects of the pandemic became increasingly substantial.

The pandemic had led to major fluctuations on the financial markets. At times, some markets functioned poorly, making it more difficult for banks and companies to fund their activities and for monetary policy to have an impact. The Executive Board was in agreement that monetary policy needed for the time being to focus on measures to supply liquidity to the financial system and improve market functionality. This would create the conditions for a more rapid recovery once the economy could open up again and would improve the scope for attaining the inflation target. Several members of the Executive Board stressed the importance both of the measures taken within different policy areas and not least of fiscal policy.

**At the monetary policy meeting in June**, the Executive Board observed that the pandemic had had severely negative consequences for the global economy. Swedish GDP was expected to fall as much as it did in the financial crisis, unemployment to rise and inflation to be below the target. It was emphasised that uncertainty over future developments remained very high, even if there were signs a recovery was underway in several areas. The risks of setbacks were pointed out, as well as the risk that the pandemic could have long-term negative effects on the economy. It also emphasised that the measures by governments and central banks around the world were important for the continued recovery.

### **The Executive Board deems that the measures have had the intended effects but that monetary policy needs to remain expansionary**

The pandemic continued to dominate developments in the global economy over the summer months, even though the spread of infection in Sweden and large parts of Europe had slowed down. At the **monetary policy meeting in September**, the Executive Board emphasised that the measures by governments and central banks around the world had contributed to calming the markets and restraining the economic downturn, and that the recovery could start. The Riksbank's measures had had the intended effects. Credit granting continued to function and interest rates for households and companies were low. But it also noted that the pandemic was not yet over. The way back would be long and fraught with uncertainty, not least concerning the long-term effects of the pandemic. The economic recovery would be dependent on strong economic policy support.

During the autumn, when Sweden and other countries were impacted by a second wave of increased infection, restrictions were tightened anew. The economic outlook and inflation prospects were thereby revised downwards. Inflation in Sweden was low and a good bit below target, but several members of the Executive Board pointed out that the development of inflation was hard to interpret. They alluded to major measurement problems because household consumption had changed substantially during the crisis and because it was not possible to measure some prices. Nevertheless, it noted that it was positive that long-term inflation expectations were close to 2 per cent and emphasised the importance of households and companies continuing to have confidence that inflation would return to target. Several members of the Executive Board expressed concern for the potential long-term effects of the crisis, not least the risk of prolonged high unemployment. The nature of the crisis, which meant that some sectors were hard particularly badly, meant that fiscal policy had an important role to play in mitigating its effects.

At the **monetary policy meeting in November**, the Executive Board considered that monetary policy would need to continue to be expansionary for a long time to facilitate the economic recovery and enable inflation to rise towards the target. All Executive Board members wished to leave the repo rate unchanged at zero per cent and increase the pace of asset purchases in the near term. A majority of Executive Board members considered it appropriate to extend the asset-buying envelope by SEK 200 billion, to extend the programme until the end of 2021 and to include treasury bills in the programme. One Executive Board member was of the view that, although expanding asset purchases was a good course of action, an expansion of SEK 100 billion would have sufficed. Another member of the Executive Board did not consider that purchases needed to be expanded at the present time. The member considered that the proposed purchases would not make monetary policy more expansionary and that monetary policy could probably remain as expansionary with fewer purchases. Neither did these Executive Board members think it was justified to include treasury bills in the purchasing programme.

## 2.3 Monetary policy decisions in 2020

11 February **Ordinary meeting.** The repo rate was held unchanged at zero per cent.

12 March **Extraordinary meeting.** The Executive Board decided that banks that are monetary policy counterparties may borrow altogether up to a total of SEK 500 billion at a maturity of 2 years, at a variable interest rate corresponding to the repo rate. The loans are granted against the same collateral as for the requirements for credit in RIX. To receive loans, the counterparty's lending to companies at the time of valuation must have increased by at least one fifth of the amount the counterparty has borrowed from the Riksbank, otherwise the cost of the loan will be increased by up to 0.2 percentage points.

16 March **Extraordinary meeting.** The Executive Board decided that the interest rate on the Riksbank's standing lending facility as of 18 March 2020 would be cut to amount to the applicable repo rate plus 0.20 percentage points; that weekly extraordinary market operations, with full allocation and a maturity of three months, aimed at the Riksbank's monetary policy counterparties would be offered with effect from 18 March; and that the Riksbank would implement extended purchases of bonds of up to SEK 300 billion during the period March to December 2020. If necessary, the purchases would include Swedish nominal and real government bonds, in addition to the previously decided purchases of government bonds during this period, bonds issued by Swedish municipalities and Kommuninvest i Sverige AB, as well as covered bonds issued by Swedish institutions. The Riksbank also changed the limitations that apply to the collateral pledged by counterparties for credit with the Riksbank, meaning that the permitted share of covered bonds in a counterparty's total collateral volume would be raised from 60 per cent to 80 per cent, with effect from 18 March 2020.

17 March **Decision by circulation.** The Executive Board decided that, on 18 March 2020, the Riksbank would purchase nominal Swedish government bonds for a nominal amount totalling SEK 2.5 billion in addition to the previously decided purchases of government bonds during the period July 2019–December 2020.

19 March **Extraordinary meeting.** The Executive Board decided that the Riksbank, over the period 19 March 2020 to 18 September 2020, would offer loans of up to USD 60 billion to monetary policy counterparties against collateral; that it would depart from the internal financial regulations, allowing the Riksbank to implement transactions in connection with general lending in US dollars during this period, even if these would be in conflict with the internal regulations regarding the gold and foreign currency reserves' market risk and the lowest permitted shares of the respective currencies in the foreign exchange reserves; that for monetary policy purposes it would purchase corporate bonds and commercial paper meaning that during the period March–December 2020, it would purchase bonds and certificates issued in Swedish krona by Swedish non-financial corporations within the scope of the programme for asset purchases; to raise the highest permitted share of covered bonds in a counterparty's total collateral for credit at the Riksbank from 80 per cent to 100 per cent;

to raise the highest permitted collateral value for covered bonds issued by an individual issuer, or group of individual issuers, from 50 per cent to 100 per cent of the total collateral value for covered bonds pledged as collateral, and to accept covered bonds issued by the counterparty, or by an institution with close links to the counterparty, as collateral for credit with the Riksbank.

20 March      **Decision by circulation.** The Executive Board decided that, on 25 March 2020, the Riksbank would purchase covered bonds issued in Swedish kronor by Swedish institutions to a nominal amount of SEK 10 billion.

23 March      **Decision by circulation.** The Executive Board decided that the Riksbank, within the corporate loan programme via monetary policy counterparties, on four occasions between 27 March and 17 April 2020, would offer a total of SEK 400 billion to monetary policy counterparties against collateral for the purpose of increasing their lending in Swedish krona to Swedish non-financial companies.

26 March      **Extraordinary meeting.** The Executive Board decided that, on 2 April, the Riksbank would initiate purchases of commercial paper issued in Swedish krona by Swedish non-financial corporations to a nominal amount of SEK 4 billion; that it would allow Swedish credit institutions under the supervision of Finansinspektionen to become temporary monetary policy counterparties; and that such temporary monetary policy counterparties would be allowed to participate in the programme for lending to companies via monetary policy counterparties.

27 March      **Decision by circulation.** The Executive Board decided that, between 30 March and 30 April 2020, the Riksbank would purchase covered bonds issued in Swedish krona by Swedish institutions for a nominal amount of SEK 50 billion; that, on Wednesday, 1 April 2020, it would purchase covered bonds issued in Swedish krona by Swedish institutions for a nominal amount of SEK 20 billion; and that, between 30 March and 30 April 2020, it would purchase nominal Swedish government bonds for a nominal amount totalling SEK 5 billion over and above the previously-decided purchases of government bonds during the period July 2019–December 2020.

3 April        **Decision by circulation.** The Executive Board decided that, between 8 April and 31 May, the Riksbank would offer to purchase, from monetary policy counterparties, commercial paper issued in Swedish kronor by Swedish non-financial corporations in a nominal amount of SEK 32 billion; and that, on 8 April 2020, it would offer purchases from monetary policy counterparties of commercial paper issued in Swedish kronor by Swedish non-financial corporations for a nominal amount of SEK 4 billion.

6 April        **Decision by circulation.** The Executive Board decided to offer further loan opportunities within the Riksbank's programme for loans in Swedish krona against collateral to monetary policy counterparties, including temporary monetary policy counterparties, for onward lending to Swedish non-financial corporations with continued weekly offers of SEK 50 billion per week from the week beginning 20 April until the total framework amount of SEK 500 billion had been lent or until the Riksbank assessed that there was no longer a need for further offers. The Executive Board

also decided to extend the programme to include onward lending to Swedish sole proprietors.

21 April       **Extraordinary meeting.** The Executive Board resolved to initiate purchases of municipal bonds and to purchase bonds issued by Swedish municipalities and regions and by Kommuninvest i Sverige AB for a total nominal amount of SEK 15 billion between 27 April and 30 June 2020.

27 April       **Ordinary meeting.** The repo rate was held unchanged at zero per cent. The Executive Board decided on the purchase, between 1 May and 30 September 2020, of covered bonds issued in Swedish kronor by Swedish institutions to a nominal amount of SEK 85 billion and nominal Swedish government bonds for a nominal amount totalling SEK 18 billion in addition to the previously decided purchases of government bonds during the period July 2019–December 2020.

8 May         **Decision by circulation.** The Executive Board decided that the Riksbank's programme for purchases of commercial paper issued in Swedish kronor by Swedish non-financial corporations as from 11 May 2020 should also include commercial paper with a remaining maturity of up to six months at the time of each auction. In addition, the Executive Board decided to continue, between 1 June and 30 September, to offer to purchase, from monetary policy counterparties, commercial paper issued in Swedish kronor by Swedish non-financial corporations, and that holdings of commercial paper acquired within the framework of the current purchasing programme up until 30 September 2020 must not exceed SEK 32 billion.

15 May       **Decision by circulation.** The Executive Board resolved to purchase bonds issued by Swedish municipalities and regions and by Kommuninvest i Sverige AB for a total nominal amount of SEK 15 billion between 1 July and 30 September 2020.

30 June       **Ordinary meeting.** The Executive Board decided to hold the repo rate unchanged at zero per cent. The Executive Board also decided that the programme for purchasing bonds for monetary policy purposes would be extended to 30 June 2021, and would include purchases of securities issued in Swedish kronor to a total nominal amount of up to SEK 500 billion, including the framework amount decided on earlier; that within the scope of this asset purchase programme, between 1 October and 31 December, the Riksbank would purchase Swedish nominal and real government bonds to a total nominal amount of SEK 20 billion in addition to the previously decided purchases of government bonds over the period July 2019–December 2020; to purchase bonds issued by Swedish municipalities and regions and by Kommuninvest i Sverige AB for a nominal amount of SEK 15 billion; to purchase covered bonds issued by Swedish institutions to a nominal amount of SEK 65 billion; to offer to purchase from monetary policy counterparties commercial paper issued in Swedish kronor by Swedish non-financial corporations to such a nominal amount that the Riksbank's holdings in commercial paper acquired within the scope of the purchase programme during the current purchase period did not exceed SEK 32 billion; that, regarding the purchase of commercial paper issued in Swedish kronor by Swedish non-financial corporations as from 1 July 2020, the Riksbank should apply a limit rule according to



which the Riksbank should not, at each time of purchase, own more than 70 per cent of an individual issuer's total outstanding volume of commercial paper in Swedish kronor; that the Riksbank would offer, within the scope of this purchase programme between 1 September 2020 and 30 June 2021, to also purchase, from monetary policy counterparties, bonds issued in Swedish kronor by Swedish non-financial corporations to a nominal amount of SEK 10 billion; to extend the maturity for loans to monetary policy counterparties, including temporary monetary policy counterparties, within the scope of the programme for onward lending to non-financial corporations (funding for lending programme) to up to four years; to reduce the interest supplement applied to loans within the scope of the lending programme if the requirement for onward lending was not met from 0.20 percentage points to 0.10 percentage points; to establish that these adjustments would also apply to credits already granted within the scope of the funding for lending programme; that the interest rate on the Riksbank's standing lending facility as from 2 July 2020 should amount to the applicable repo rate plus 0.10 percentage points; That, as of 6 July 2020, the Riksbank would offer its monetary policy counterparties loans with a three-month or six-month maturity with full allocation within the framework of weekly market operations against an interest rate corresponding to the repo rate at the time.

31 August **Decision by circulation.** The Executive Board decided, when purchasing bonds issued in Swedish kronor by Swedish non-financial companies between 1 September 2020 and 30 June 2021, to apply bilateral proceedings and bid procedures in accordance with the instructions conferred by the Executive Board's decision of 30 June 2020, bearing in mind that (a) the offer to purchase referred to non-subordinated bonds with a remaining maturity of up to five years, (b) the purchases should only cover bonds as well as companies with a credit rating not lower than the lowest acceptable credit rating equivalent to Baa3/BBB-, (c) on the purchase date there should be no indications that any of these credit ratings may fall below the lowest acceptable credit rating level, (d) the Riksbank should not, at each time of purchase, own more than 50 per cent of an individual issuer's total outstanding volume of corporate bonds in Swedish kronor, and (e) the Riksbank should not, at each time of purchase, own more than 50 per cent of an individual bond issue. In addition, the Riksbank decided that the first purchases of corporate bonds should be made with the aid of bilateral proceedings in the week beginning 14 September 2020.

15 September **Decision by circulation.** The Executive Board decided, over the period 19 September 2020 until 31 March 2021, to continue to offer loans amounting to a maximum of USD 60 billion, against collateral, to monetary policy counterparties.

21 September **Ordinary meeting.** The Executive Board decided to hold the repo rate unchanged at zero per cent.

6 November **Decision by circulation.** The Executive Board decided, when purchasing bonds issued in Swedish kronor by Swedish non-financial companies, to purchase securities issued by companies classified in the National Accounts as (a) non-financial corporations, (b) intra-group financial institutions, or (c) investment firms, and which have a large number of owners. In addition, the Executive Board decided that the Riksbank could only purchase securities issued by intra-group financial institutions

and investment firm under the condition that the issuer was neither under the supervision of Finansinspektionen nor registered with Finansinspektionen, and that it was not included in a corporate group mainly conducting financial operations; when purchasing corporate bonds, to consider the credit rating of the issuer's parent company in cases where the issuer had no credit rating of its own and the parent company guaranteed the issuer's obligations; that purchases of corporate bonds should include bonds with a remaining time to maturity of at least six months at the time of each auction.

26 November **Ordinary meeting.** The Executive Board decided to hold the repo rate unchanged at zero per cent. The Executive Board also decided that the Riksbank's programme for purchasing assets for monetary policy purposes would be extended to 31 December 2021, and would include purchases of securities issued in Swedish krona to a total nominal amount of up to SEK 700 billion. That, within the scope of this programme, in addition to offering to purchase, from monetary policy counterparties, bonds issued in Swedish kronor by Swedish non-financial corporations pursuant to the decision on 30 June 2020, between 1 January and 31 March (a) to purchase Swedish nominal and real government bonds and the Swedish state's green bonds to a total nominal amount of SEK 13.5 billion, (b) to purchase Swedish treasury bills to a total nominal amount of SEK 10 billion, (c) to purchase bonds issued by Swedish municipalities and regions and by Kommuninvest i Sweden AB for a nominal amount of SEK 23.5 billion, which also may also include purchases of green municipal bonds, (d) to purchase covered bonds issued by Swedish institutions to a nominal amount of SEK 70 billion, and (e) to offer to purchase, from monetary policy counterparties, commercial paper issued in Swedish kronor by Swedish non-financial corporations to such a nominal amount that the Riksbank's holdings in commercial paper acquired within the scope of the purchase programme do not at any one occasion exceed SEK 32 billion. In addition, the Executive Board decided that, when purchasing corporate bonds with effect from January 2021, only to offer to purchase bonds issued by companies deemed to comply with international standards and norms for sustainability.

## 3 The Riksbank's forecasts and monetary policy in recent years

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International developments corresponded relatively well with the Riksbank's forecasts until the start of 2020, at the same time as the strong economic development in Sweden slowed down somewhat more abruptly than expected. However, the pandemic fundamentally changed the economic outlook in just a couple of weeks in March 2020. To illustrate the major uncertainty over developments, both in the near term and in the longer term, the Riksbank supplemented its forecasts over 2020 with alternative scenarios. Compared with the forecasts and scenarios the Riksbank produced during the pandemic, GDP and unemployment have been impacted to a lesser extent than feared. One important explanation for this is the comprehensive economic policy support that governments, central banks and other authorities have implemented, both in Sweden and abroad.

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The content of this chapter differs slightly from last year's account of monetary policy. As before, the chapter includes a description of the Riksbank's forecasts in recent years. However, as section 3.1 describes in more detail, the coronavirus pandemic changed the conditions for the target attainment of monetary policy in 2020. Because of this, the description of the Riksbank's forecasts in section 3.2 focuses, above all, on the period until March 2020. As a consequence of the pandemic, uncertainty over the assessments of developments in the near term and in the longer term increased dramatically, as reflected by the Riksbank in various scenarios. This is described in section 3.3

### 3.1 Even well-founded forecasts can be wrong, as becomes particularly clear in crises

As the effects of monetary policy on the economy mainly arise after a couple of years, the Riksbank bases monetary policy on forecasts for inflation and the rest of the economy a couple of years ahead. One way of approaching the question of whether monetary policy contributed to good target attainment is therefore to study the accuracy of the Riksbank's forecasts. This provides a picture of the monetary policy conducted and the assessments upon which it was based.

The objective is obviously that the Riksbank's forecasts shall be correct so that monetary policy decisions are based on an accurate picture of economic developments going forward. However, unforeseen events occur all the time in the economy, which means that deviations from the inflation target are more the rule than the exception. Some statistics are also revised, leading to outcomes that were taken for granted

when the forecasts were made may subsequently be changed. All these factors together mean that even well-founded and carefully prepared forecasts often turn out to be wrong.

An extreme example of this is when crises occur. Sometimes, these are completely unexpected and sometimes they are preceded by increased uncertainty and risks. Regardless of which, it is impossible to determine exactly when they will occur. As they entail deep economic downturns, forecasts made before a crisis are dramatically inaccurate when viewed after the fact. Crises thereby weaken the link between target attainment for monetary policy and the forecasts upon which monetary policy was based in previous years. If activity in the economy falls, completely unexpectedly, due to a crisis and inflation falls far below target, monetary policy in the years before the crisis will certainly have affected the initial conditions but will have little significance for target attainment during the crisis years.

In addition, crises change the conditions for target attainment. In crises, the central bank needs to focus on managing problems in the financial sector, or preventing problems spreading there, as such problems exacerbate the downturn in the economy. Crisis measures are thus not adopted primarily out of concern for financial agents but to help make falls in output and employment smaller than they would otherwise have been. In turn, this improves the possibility of attaining the inflation target in the longer term. However, unlike monetary policy in normal times, which looks a couple of years ahead, the focus for measures in a crisis is, above all, to support the economy in the near term and to reduce the risks of significantly worse development in the short term – regardless of how large and rapid the measures that are taken, it is not possible to entirely prevent a downturn. This makes the relationship between the central banks' measures and economic developments more direct than in normal times.<sup>4</sup>

In addition, in practice, it becomes impossible to separate the measures implemented to fulfil the target for monetary policy from those implemented to maintain financial stability, as the targets coincide – see also the article “The coronavirus crisis illustrates the need for flexibility in a new Sveriges Riksbank Act”.

### 3.2 The conditions for the forecasts, monetary policy and target attainment for 2020 were completely changed by the pandemic

Developments in 2020, the evaluation year, were thus marked by the consequences of the pandemic (see Chapter 1). The account of monetary policy provides a basis for the evaluation of monetary policy over the last three years, which is the reason a section on forecasts 2018–2019 is included. As the pandemic totally changed the condi-

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<sup>4</sup> However, even in normal times, some effects of monetary policy can arise relatively rapidly. This applies, for example, when changes in the exchange rate affect the prices of imported goods.

tions for the economy, the description focuses on how the forecasts related to economic developments until the starting point for the pandemic in the spring of 2020.<sup>5</sup> Figure 32–figure 39 at the end of the report show the actual developments and the Riksbank's forecasts during the years 2018, 2019 and start of 2020 for a number of central variables. The purpose of the figures is to illustrate, in a general manner, the Riksbank's view of the future over the period and to compare it with outcomes. It is therefore not necessary to distinguish individual forecasts.

### **Developments abroad were captured relatively well in the forecasts from the start of 2019 until the coronavirus pandemic 2020**

Sweden is a small, open economy, which means that developments abroad are highly significant. To capture developments overall, the Riksbank weighs different countries together based on their significance for Sweden's foreign trade with the help of the KIX krona index. Developments in the euro area are clearly the most significant, and these have a weight of almost 50 per cent in the index.

In 2018, growth in the euro area and the rest of the world in general was restrained after a period of relatively strong development. It was expected that international economic activity would slow down somewhat. However, the major political uncertainty in the wake of the trade conflict between the United States and China and the twists and turns over the United Kingdom's withdrawal from the European Union contributed to international growth slowing down more sharply in 2019 than had been suggested by the forecasts made by the Riksbank in 2018. This also contributed to inflation abroad being lower than expected in 2018. However, the Riksbank's forecasts in 2019 captured the development of both growth and inflation abroad relatively well, until the coronavirus pandemic hit.

### **The strong economic development in Sweden slowed down somewhat more sharply than expected in 2019**

The Riksbank expected that the Swedish economy would slow down in 2018, after a long period of strong developments in the labour market and good GDP growth, and that growth would approach a historically normal rate of around 2 per cent. Like those abroad, the Swedish economy slowed down slightly more sharply than expected. One important reason for this, apart from the downturn in international economic activity, was the Swedish housing market. The fall in housing prices in the autumn of 2017 led to a sharp reduction in Swedish housing investment, and also affected household consumption negatively.

In 2019, GDP growth remained just below 2 per cent, which was in line with the forecasts that the Riksbank made over the year. The assessment was that economic developments had entered a more mature phase with lower growth than the previous years. However, the slowdown was faster than expected, which can be illustrated by

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<sup>5</sup> However, these forecasts and outcomes have been examined in the account of monetary policy for previous years, which is why the description here is abbreviated compared with the corresponding section of last year's report.

the forecasts for unemployment.<sup>6</sup> For all that, the slowdown took place from a relatively strong economic situation and, overall, the view was not that a recession was to be expected.

In 2018 and early 2019, inflation in Sweden was close to the Riksbank's inflation target of 2 per cent. The forecasts that the Riksbank made from the spring of 2018 and on reflected the assessment that energy prices would increase more slowly in the period ahead and that inflation would therefore fall. This proved correct. But inflation fell a little faster than in the Riksbank's assessment. However, various measures of the more permanent part of inflation suggested that this was a temporary slowdown and that CPIF inflation would rise again in 2019, which it also did. The overall slight overestimation of inflation by the Riksbank in 2019 was due, to some extent, to the krona exchange rate affecting inflation to a lesser extent than expected, even though the exchange rate was noticeably weaker than in the Riksbank's forecasts. Unit labour costs – a common measure of domestic cost pressures – increased unexpectedly rapidly. But companies did not pass on the increased costs to consumers by raising prices.<sup>7</sup>

The development of the repo rate turned out to correspond quite well with the Riksbank's forecasts in 2018, even if the repo rate was raised a little later than expected. Monetary policy decisions in 2019 were taken against the background of a somewhat contradictory picture. Both internationally and in Sweden, the economy developed largely as expected over the year. However, uncertainty over international economic activity affected sentiment and the risks of weaker growth increased at the same time as interest rates fell abroad. The economic outlook was revised downwards somewhat, but did not portray a recession. Inflation fell temporarily but subsequently rose, as expected, back to the target. In December 2019, the repo rate was raised to zero per cent in line with the forecasts made over the year.

### 3.3 The considerable uncertainty over the economic situation and its development changed the forecasting work

The coronavirus pandemic thus fundamentally changed the economic prospects for Sweden and the rest of the world in just a couple of weeks in March 2020. It was obvious that the measures to limit the spread of infection led to a fall in demand and disruptions on the supply side that hit the economies hard. However, it was very difficult to estimate the size of the economic downturn. Much of the Riksbank's analysis work during the year therefore needed to focus on the economic consequences of the pandemic (see also the article "The Riksbank's development work").

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<sup>6</sup> The serious quality problems with the background data for the official labour market statistics identified by Statistics Sweden certainly make it difficult to evaluate the forecasts for unemployment. But an overall assessment of labour market statistics from various sources also indicates that that economic activity slowed down faster than expected.

<sup>7</sup> One reason that companies have been cautious about raising prices could be concern that competitors may not follow suit with price increases – see the Riksbank's Business Survey, May 2019.

## **The economy moved quickly and it was difficult to gain a picture of developments**

The rapid change in economic developments in spring 2020 entailed major challenges for the forecasting work, including the work on creating a picture of the current economic situation and developments in the near term. The economy moved very quickly and the statistics and indicators the Riksbank uses in normal cases did not provide a sufficiently up-to-date picture, as they are published once a month or once a quarter and often with a delay. To be able to make rapid assessments of the effects of the coronavirus pandemic on production and the labour market, the Riksbank therefore extended its collection of high-frequency data, known as real-time indicators.<sup>8</sup> The Riksbank also had more frequent contacts with the large companies included in the bank's regular business surveys, and used telephone interviews to supplement real-time indicators.

Apart from the pandemic changing the economic situation rapidly, another challenge for the forecasting work was to understand the way in which the economy was affected in the short and long term. It was affected by a shock that was difficult to relate to previous economic crises, as it differed in nature from the shocks that have previously occurred. As the pandemic was the grounds for the crisis, the forecasts needed to be based on assumptions of the spread of infection and it therefore became important to understand more about the details of this. It was also evident that some segments were hit particularly hard. To assess the effect of this on the economy as a whole, these segments needed to be analysed in greater detail. To get an idea of the possible development in the longer term, it was also necessary to consider how great an impact the period of restrictions and lockdowns could have on production capacity and the labour market (See the article "Long-term effects of the pandemic on the Swedish economy").

## **Scenarios illustrated the uncertainty of the forecasts in 2020**

Normally, the Riksbank's forecasts can be seen as a weighing together of scenarios for economic developments, in which the different weights denote the probabilities of the scenarios occurring. However, as a result of the coronavirus pandemic, it was evident that the assessments of economic developments both in the near term and in the longer run, depended on a number of domestic and global factors that were genuinely uncertain, and whose effects on the economy were difficult to assess. In addition to publishing the actual forecast in a main scenario, the Riksbank therefore chose to also describe alternative scenarios, as a means of reflecting the considerable uncertainty over future developments. The scenarios illustrated how different assumptions affected the assessment of how deep the economic downturn might be and how long the coronavirus pandemic would impact the economy. However, the purpose was not to foresee future developments as correctly as possible.

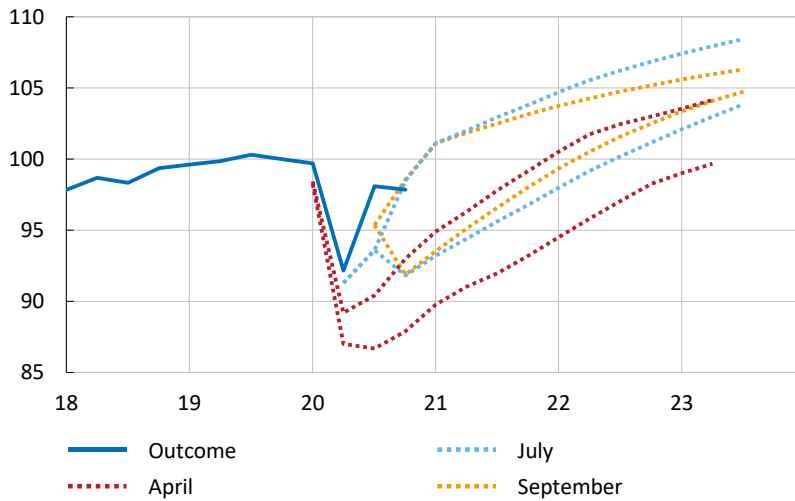
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<sup>8</sup> For more about this, see J. Ewertzh et al, "Real-time indicators provide information support during rapid cyclical turnarounds", Economic Commentaries No. 3 2020, Sveriges Riksbank.

In the Monetary Policy Reports published in April, June and September, the Riksbank published two alternative scenarios on each occasion, in addition to a main scenario.<sup>9</sup> The alternative scenarios were made to illustrate a potential economic development where the effects of the pandemic were less or greater than in the main scenario. Figure 24–figure 26 below illustrate the alternative scenarios for the level of GDP, unemployment and inflation at the time of each report. The main scenarios, which thus showed a development between the two alternative scenarios, were previously described in figure 19, figure 20 and figure 23 in Chapter 2. The main assumptions that formed the basis for the alternative scenarios are gathered in table 4 and table 5 below.

**Figure 24. GDP level, alternative scenarios**

Index 2019 q4 = 100, seasonally adjusted data



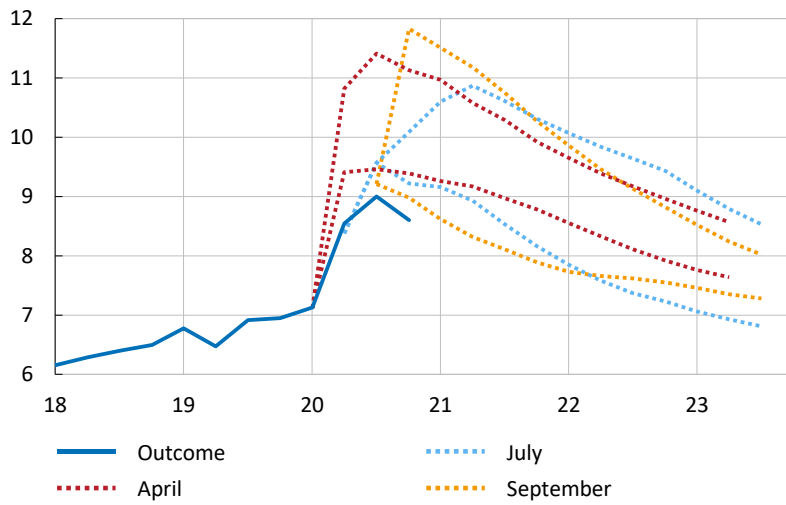
Sources: Statistics Sweden and the Riksbank.

<sup>9</sup> However, the Monetary Policy Report published in April 2020 did not contain a main scenario, only two scenarios and a few quantified assessments of future developments.



**Figure 25. Unemployment, alternative scenarios**

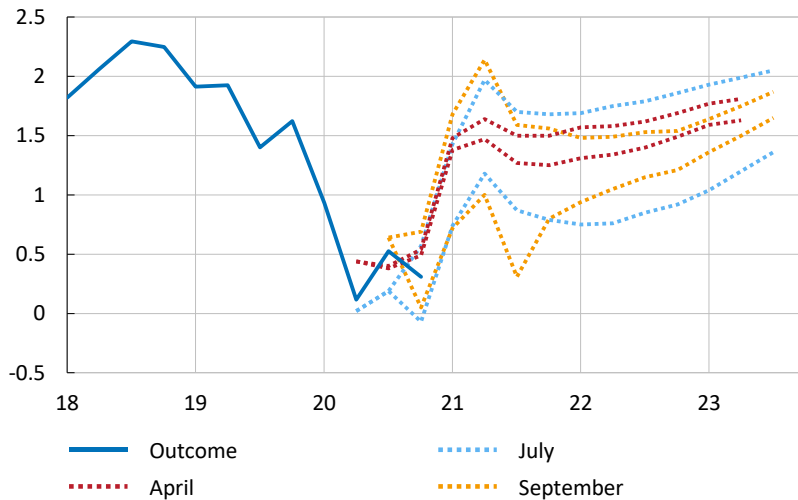
Per cent



Sources: Statistics Sweden and the Riksbank.

**Figure 26. CPIF, alternative scenarios**

Annual percentage change



Sources: Statistics Sweden and the Riksbank.

**April: considerable uncertainty over the economic effects of the restrictions during the spring and the continued course of the pandemic**

From the end of February 2020, the number of people that became ill with COVID-19 in Sweden and abroad accelerated, and extensive measures to limit the spread of infection were introduced in many countries (see figure 2 and figure 3). At the time of the monetary policy decision in April it was clear that the consequences of the restrictions would be substantial, and it was evident that the economic outlook and inflation prospects for Sweden and the rest of the world had changed completely. However, there was considerable uncertainty over the course of the pandemic and it was

impossible to say how deep and how prolonged the economic downturn would be. For this reason, the Riksbank chose to reason about developments on the basis of two different scenarios, rather than one single forecast.<sup>10</sup>

Both of the scenarios in April assumed a deep fall in Swedish GDP during the spring. In one scenario, the measures taken to limit the spread of infection were assumed to remain in place to a large extent also over summer 2020, and a recovery was not expected until the fourth quarter. Moreover, a downturn on the housing market would further aggravate the crisis, and more bankruptcies, higher unemployment and lower investment were assumed to have negative effects on production and employment in the longer run. The second scenario assumed that the spread of infection in Sweden and other countries would begin to decline and that the restrictions would be fewer during the summer. The recovery could then start a quarter earlier, and the effects on GDP and unemployment would be much less than in the first scenario, both in the short and long term.

### **July: continued easing of the restrictions during the autumn, or tightening because of increased spread of infection?**

When the Riksbank published the Monetary Policy Report in July, the economic effects of the crisis in Sweden and abroad during the spring had become clearer. It was evident that the negative consequences of the pandemic were very large, despite substantial economic policy stimulation around the world (see Chapter 2 for a description of all of the measures taken by the Riksbank). The economic downturn in the euro area had become larger than the scenarios in April assumed, but there were signs that an international recovery was progressing faster than expected. Various indicators pointed to the Swedish economy being hit hard during the spring, but developments did not appear to be quite as bad as in the scenarios in April. However, the National Accounts for the second quarter were not known at the time of the July decision.

As the spread of infection had declined during the spring and early summer, many countries had begun to withdraw their restrictions. The easing had occurred somewhat earlier and faster than the April scenarios had assumed. However, the period ahead remained very uncertain. The Riksbank's main scenario was based on an assumption that the restrictions would be gradually reduced, although it was probable that there would be temporary setbacks around the world. Following the heavy fall in the spring, there was thus scope for a gradual economic recovery from the start of the second half of 2020. As the fall in the Swedish economy had not been as deep as that in other countries, and the restrictions were not as extensive, the upturn in the Swedish economy was expected to be less than that abroad. Despite the recovery and a gradual rise in employment, however, it was not probable that unemployment would return to its pre-pandemic level, even three years ahead.

An alternative scenario illustrated a development with a new, larger wave of infection later in 2020, where both the Swedish economy and the economies abroad would be

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<sup>10</sup> The Riksbank emphasised that neither of the scenarios reflected the Riksbank's assessment of the most probable development, and nor should they be interpreted as the most favourable and the worst scenario possible. The assessment was that developments could be both better and worse than in the scenarios.

affected by restrictions being tightened again. The more protracted period with low economic activity in this scenario would also lead to production and unemployment being more negatively affected in the longer run. The new downturn would also entail a fall in prices and new production on the housing market. In contrast, a second alternative scenario illustrated an economic development that was more favourable than that in the main scenario, where the heavy fall was followed by a faster upturn during the second half of the year. The scenario was based on the assumption that the restrictions would be lifted to an increasing extent over the summer and that the spread of infection would decline to a low level during the autumn. Sentiment among households and companies could then improve rapidly.

### **September: risks of a new economic downturn and considerable uncertainty over the long-term effects of the crisis on the economy**

The economic recovery that began in May in most areas continued over the summer, albeit at a slower pace. The restrictions were eased, but not at quite the same pace as the Riksbank had assumed in the main scenario in July. Nevertheless, the economic development abroad was in line with the main scenario. With regard to Sweden, outcomes and indicators pointed to the economy having begun a recovery. But the situation on the labour market was worrying, with high unemployment as a result of the sharp decline in economic activity in the spring.

From the end of the summer, the number of those infected began to increase again, first in the United States and later also in Europe. The phasing out of the restrictions slowed down at the same time in many countries. In September, the Riksbank observed that developments were worrying and the main scenario was based on the assumption that it would not be until the turn of the year that the spread of infection would slow down and one could see a clear downward trend in the restrictions once again. Economic developments were fraught with risks of an even worse development, and also by uncertainty regarding what long-term effects the pandemic might have on growth potential in Sweden and abroad. The Riksbank's main scenario was based on the coronavirus crisis to some extent having this type of lasting effect. Even though the recovery was expected to be rapid when the restrictions began to be eased, the sharp fall during the spring meant that GDP would not reach the trend development predicted by the Riksbank prior to the pandemic even at the end of the forecast period.

To illustrate the uncertainty, the Riksbank also described a scenario with larger lasting effects on the economy. This scenario assumed that the spread of infection would increase significantly later in 2020 and that the restrictions in society would be tightened again, rather than being roughly unchanged for the remainder of the year, as assumed in the main scenario. A long period with very low activity in the economy was expected to put further pressure on companies, resulting in further bankruptcies and increased unemployment. Production in the long run would therefore also be affected more and more unemployed would lose their link to the labour market. In this scenario, the negative development also had consequences for the housing market. A more optimistic scenario assumed that the spread of infection would decline to very low levels in the autumn and largely cease in 2021. Such a development would cause

the downturn in economic activity over the spring of 2020 to have minor or no effects on long-term production capacity.

**Despite the spread of infection being as described in the pessimistic scenarios, production and employment have so far been impacted less than was feared**

As figure 24–figure 26 show, there were major differences in the economic developments outlined by the Riksbank in the different scenarios in April, July and September. This reflects the purpose of the scenarios, which was to illustrate the considerable uncertainty regarding both the course of the pandemic and its economic effects. If one compares the forecasts in the main scenarios (see figures in Chapter 2) and the alternative scenarios with the outcomes for GDP and unemployment in 2020, once conclusion is that the recovery after the deep fall in the spring was much quicker than expected. In fact, it was slightly faster than in the Riksbank's optimistic scenarios, that is, the scenarios with a more rapid recovery than in the main scenario. At the same time, the course of the pandemic has in practice been more in line with the assumptions in the pessimistic scenarios (see table 4).<sup>11</sup>

One explanation for this development is the comprehensive economic policy support that governments, central banks and other authorities have implemented, both in Sweden and abroad. It is not possible to entirely prevent an economic downturn in the wake of a crisis of this nature, and this has not been the aim of the crisis measures. The aim has been to alleviate the economic effects of the pandemic on companies and households, and to support the recovery in various ways. The Riksbank's measures have to a large extent been aimed at stabilising the conditions on the financial markets, so that problems there will not cause an even deeper and more protracted economic decline. One sign that the economic support from the public sector has been successful is that production and unemployment have been affected less than was feared by the Riksbank and others.

The support measures have probably contributed to households and companies expecting that the effects of the crisis will be temporary. The positive news regarding new vaccines that came during the summer and autumn may also have contribute to upholding sentiment. All in all, economic activity has therefore not fallen as much as it probably would have done if households and companies expected a more protracted crisis. Some segments, which have lost a large share of their sales, have nevertheless been hit hard, including service sectors such as hotels and restaurants and parts of the retail trade, such as clothing and shoes.

In total, household consumption has been roughly in line with the Riksbank's forecasts during the pandemic, while exports and investment recovered faster than expected after the fall in the spring.<sup>12</sup> The recovery in exports was not merely a Swedish phenomenon; the same development could also be seen in other countries and in global

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<sup>11</sup> A more detailed review and evaluation of the Riksbank's forecasts, where the Riksbank is compared with other forecasters, is contained in Evaluation of the Riksbank's forecasts, Riksbank Studies March 2021, which is published at the same time as the Account of Monetary Policy in 2020.

<sup>12</sup> See Evaluation of the Riksbank's forecasts, Riksbank Studies March 2021

trade. Housing investment increased relatively rapidly, driven by a strong housing market. Both housing prices and household indebtedness continued to rise (see figure 27 and figure 28). Debts as a share of households' disposable incomes, what is known as the debt-to-income ratio, was almost 200 per cent at the end of 2020.

Unlike the Riksbank's pessimistic scenarios, the crisis thus had no negative contagion effects to the housing market. Apart from a price fall in March and April, prices of tenant-owned apartments, single-family dwellings and second home rose in 2020. This is an unusual development in relation to previous economic downturns, when prices have fallen more and recovered more slowly. Housing prices have risen in most comparable countries, which indicates that there are common factors driving this development. Households have probably changed their consumption patterns during the pandemic and become more willing to invest money in their housing. Prices of larger homes have increased in particular. At the same time, economic policy measures have held back mortgage rates and held up employment to an unusually large degree. Unemployment in groups with good spending power has been relatively low (see, for instance figure 31 in the article "Long-term effects of the pandemic on the Swedish economy"). Moreover, the easing of the amortisation requirement may have affected price developments.

### **Inflation during the pandemic has been difficult to assess, but in line with the Riksbank's forecasts**

There are several reasons why it has been difficult to make assessments of the development of inflation during the pandemic. As the consumption of certain goods and services ceased almost entirely during the spring, these prices were periodically missing from the CPI calculations and they needed to be replaced with artificial values. This contributed to increasing uncertainty over the actual development of inflation.<sup>13</sup> It was also difficult to determine in advance the total effect of the pandemic on inflation. Prices tend to fall when demand for goods and services declines, which indicated low inflation. But disruptions to production, trade and transport due to the pandemic led to a reduction in the supply of certain products, which normally causes inflation to rise.

The Riksbank's assessment was that the effect of the lower demand would dominate, at least in the short term. The average inflation in 2020 was in fact low and in line with the Riksbank's forecasts. The fact that inflation expectations in the longer run were not affected more by the dramatic economic slowdown and the low inflation in 2020 are probably linked to expectations that the effects of the pandemic in general are temporary and to the extensive support measures mentioned above (see Chapter 2 for details of the inflation outcome and inflation expectations). Expectations have probably also been aimed at the low energy prices in 2020 being a temporary effect.

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<sup>13</sup> A further measurement problem linked to households' changed consumption patterns during the pandemic is the changes in the weights used in the calculation of the CPI to weigh together different prices in a representative 'basket' of goods and services. See the article "Changed consumption during the pandemic affects inflation" in the Monetary Policy Report, February 2021.

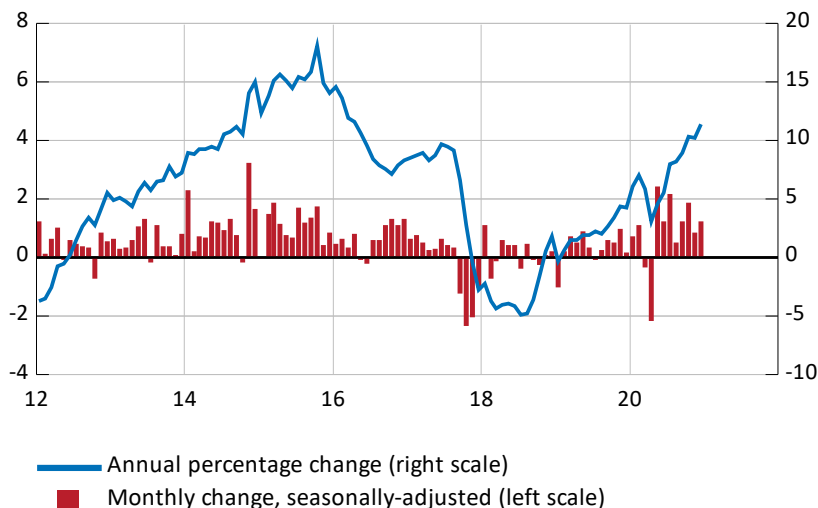
### Continued support from monetary policy important

Even if the economy has so far recovered unexpectedly quickly, it is too early to draw any conclusions on the effects of the pandemic and how they relate to the forecasts and scenarios in the longer run. There is still considerable uncertainty over the size and duration of the changes in household and company behaviour. And the pandemic is not over yet. The vaccination process has begun in Sweden and in many countries, which increases the probability that the effects of the pandemic will gradually decline and the recovery will accelerate. But the logistical challenges with regard to vaccination are considerable, and there is still a risk of setbacks when it comes to the spread of infection and immunity.

As the pandemic is not over yet, it is also too early to draw any conclusions about monetary policy on the basis of comparisons of the outcome for 2020 with the Riksbank's scenarios and forecasts. The measures taken by the Riksbank in March and April 2020 contributed to maintaining the credit supply and to holding interest rates charged to households and companies low (see Chapter 2). The size of the measures reflected the fact that it was necessary to act quickly and powerfully to stabilise the markets and the fact that there was great uncertainty regarding the size and duration of the economic effects of the pandemic. During the summer, the economy recovered from the sharp decline in the spring faster than expected, largely thanks to extensive economic policy support. But the spread of infection was more similar to the assumptions in the pessimistic scenarios. The Riksbank considered it important to conduct its monetary policy so that measures were in place that would ensure the recovery had sufficient support in 2021, too. The relatively weak economic development in the final months of 2020 illustrates that there is still a considerable need for this.

**Figure 27. House prices according to HOX Sweden**

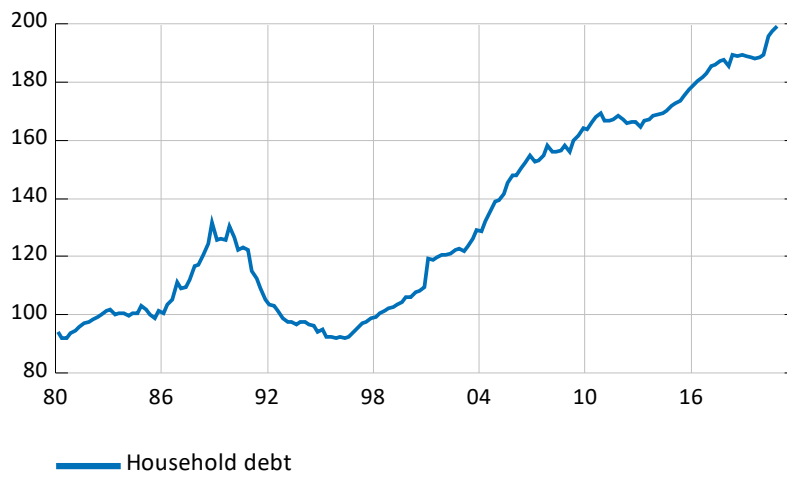
Per cent



Sources: Valueguard and the Riksbank.

**Figure 28. Household debt**

Per cent of annual disposable income



Note. Total household debt as a share of disposable household income added together over the last four quarters.

Sources: Statistics Sweden and the Riksbank

**Table 4. Summary of the assumptions in the alternative scenarios with a slower recovery**

APRIL	JUNE	SEPTEMBER
Measures to subdue the spread of infection unchanged for most of the summer.	Second wave of increased infection in the United States and Europe in the fourth quarter of 2020. No major outbreaks in 2021.	The degree of immunity is low and infection rises at the end of 2020.
Recovery is delayed and does not start until the fourth quarter.	After easing in the summer, new measures are introduced to restrict physical contacts when infection picks up again in the fourth quarter. However, these measures are less comprehensive than in the spring.	New restrictions and voluntary limitations on physical contact affect social life both in Sweden and abroad.
More bankruptcies, higher unemployment and lower investment have a significant impact on GDP in the long term.	A more protracted period of low economic activity leads to more bankruptcies, persistently higher unemployment and reduced investments, affecting output in the longer term.	Major stimulation measures by governments and central banks support growth but cannot prevent a new economic downturn. Additional monetary policy measures may also need to be implemented.
The crisis is exacerbated by a clear decline on the Swedish housing market.	Higher unemployment and more pessimistic sentiment affects the housing market, where prices fall and new construction declines.	A more protracted period of low economic activity leads to more bankruptcies, long-term higher unemployment and reduced investment, affecting output in the longer term.
		Higher unemployment and more pessimistic sentiment affect the Swedish housing market, where prices fall and new construction declines.

Note. The designations of the scenarios in the respective Monetary Policy Reports were 'Scenario B' in April, 'Scenario with a second wave of infection' in July and 'Scenario with a second wave of infection' in September.

Source: The Riksbank.



**Table 5. Summary of the assumptions in the alternative scenarios with a more rapid recovery**

<b>APRIL</b>	<b>JUNE</b>	<b>SEPTEMBER</b>
Measures to subdue the spread of infection start to be eased before the summer.	Control measures and restrictions on society are lifted increasingly over the summer in Sweden and abroad.	The spread of infection falls to very low levels during the autumn and has basically stopped in 2020.
Recovery starts in the third quarter.	The spread of infection decreases to a low level in the autumn and most restrictions are lifted.	Social life returns to normal to a large extent and sentiment rapidly improves among households and companies.
More bankruptcies and unemployed persons have some impact on GDP in the long term.	Sentiment among households and companies improves rapidly.	Continued economic policy stimulation supports the recovery. Price rises on the financial markets also contribute to increasing demand and the funding situation of companies improves.
Moderate effects on the Swedish housing market.	The economic downturn over the spring has a minor effect on output in the long term.	The downturn in economic activity over the spring of 2020 has minor or no effects on long-term production capacity.
		House prices continue to rise.

Note. The designations of the scenarios in the respective Monetary Policy Reports were 'Scenario A' in April, 'Scenario with faster recovery' in July and 'Scenario with faster economic upswing' in September.

Source: The Riksbank.

## 4 Important monetary policy issues

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The Riksbank's primary monetary policy task is securing confidence in the inflation target. One reason why this is so important is that it is a necessary condition for monetary policy to have the scope to counteract future economic downturns with the aid of policy rate cuts. The external monetary policy debate over the year concerned the level of the repo rate, the purchases of commercial paper and the distributional effects of monetary policy. This chapter describes the Riksbank's views regarding these areas and also takes up a number of more long-term issues that require analysis.

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### 4.1 The purpose of the inflation target

The main task of monetary policy is to maintain confidence in the inflation target of 2 per cent. There is strong political support for the inflation target and it can be regarded as one of our general economic objectives.<sup>14</sup> The objective does not entail inflation always being at 2 per cent. This is not actually possible, as there are constant changes in the economy that make inflation vary in a way that cannot be predicted with sufficient precision, or even counteracted in the short term. The important thing is that households and companies have confidence that deviations from the target will not last too long. Another way of expressing this is that the long-term inflation expectations in the economy shall be anchored at 2 per cent.

#### **Common expectations contribute to favourable economic development**

The primary purpose of an inflation target is to act as a benchmark for price setting and wage formation in the economy – it becomes what is usually called a nominal anchor. When inflation does not vary so much and economic agents have a collective view of how prices will develop in the future, it becomes easier to plan for the long term. This, in turn, improves the possibility of achieving a favourable economic development with good, stable growth.

There are good economic reasons for having a target of 2 per cent and not lower. One reason is that the conditions for wage formation to effectively distribute resources in the economy can deteriorate when average inflation is too low. The reason for this is that, in practice, it is difficult to cut nominal wages. If inflation is low and nominal wages cannot be lowered, then it becomes difficult to adjust relative wages between different professions, companies and sectors. This makes it more difficult to attract

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<sup>14</sup> For a more detailed review of the role played by the political system in the introduction of the inflation target and the political support the target has had since then, see Account of Monetary Policy 2019, Chapter 4.

labour to the parts of the economy where they have the most benefit. This can ultimately lead to both higher unemployment and poorer productivity growth in the economy. These problems can be mitigated if there is some underlying inflation.

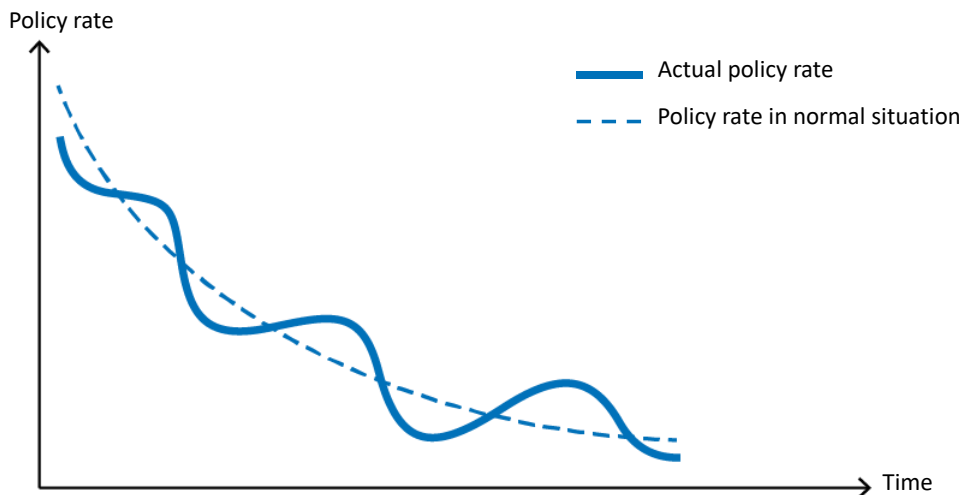
### Inflation target creates scope to counteract economic downturns

In recent years another purpose of the inflation target has become increasingly clear: That the inflation target is maintained is a necessary condition for monetary policy to have the scope to counteract economic downturns with the aid of interest rate cuts.

The essential problem is that general real interest rates in the world have fallen for structural reasons and are now historically low. This means that all interest rates, including central banks' policy rates, have fallen parallel to one another and are now on average at historically-low levels.<sup>15</sup>

Figure 29 provides a schematic illustration of how the conditions for monetary policy have thus changed. The broken line shows the policy rate in a normal situation, or the average, that has followed the real interest rate downwards. When central banks conduct monetary policy via the policy rate, they change it in a way that can be illustrated with the solid line. A rate lower than the normal situation stimulates demand and inflation, while a rate that is higher has the opposite effect. Central banks must therefore consider the general normal interest rate when they set their policy rate.

**Figure 29. When general interest rates fall, the policy rate needs to follow**



Source: The Riksbank.

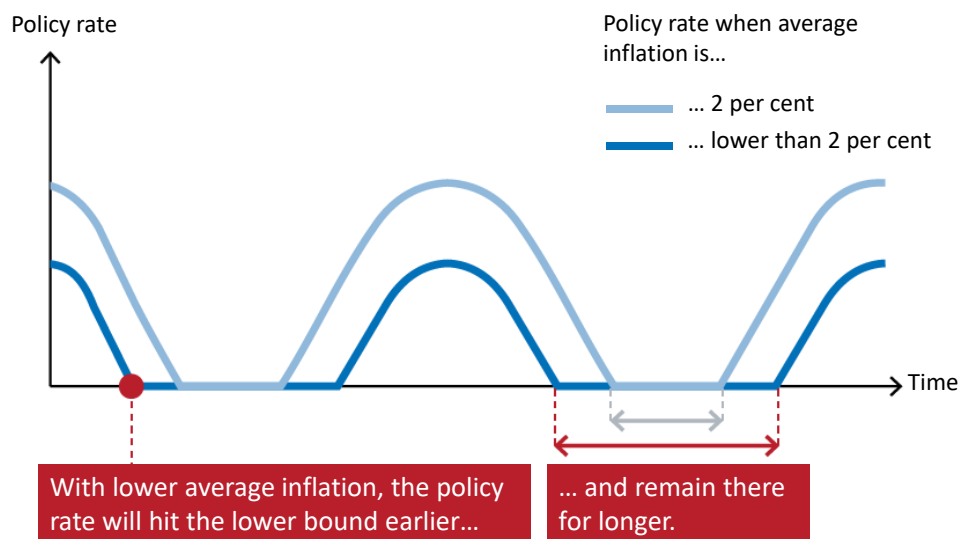
As the normal interest rate is currently at a historically low level, the central bank's policy rate needs to be very low to have an expansionary effect. This is why the policy

<sup>15</sup> Compared with the situation a few decades ago, inflation is also lower, which has meant that nominal interest rates have fallen, in addition to what is entailed in the decline in real interest rates.

rates in many countries are currently at or close to a lower bound for the nominal interest rate.<sup>16</sup> A key circumstance here is that the average nominal rate level (regardless of whether it is central bank policy rates or general global interest rates) is affected by how high inflation is on average. If average inflation is very low, say close to zero, instead of being on the target of 2 per cent on average, interest rates will also, on average, be 2 percentage points lower.<sup>17</sup>

This in turn means that if inflation and inflation expectations were to fall and remain below the target for a long time, the scope to cut interest rates would also decline (see figure 30). The policy rate will then hit its lower bound sooner, meaning it cannot be cut further, and needs to remain there for a longer period of time. It will thus become even more difficult to make monetary policy as expansionary as it would need to be to counteract economic recessions. These concerns are part of the reason behind the changes in strategy made by the US Federal Reserve in August 2020, and which are discussed further below.

**Figure 30. More difficult to conduct expansionary monetary policy with lower average inflation than the target**



Source: The Riksbank.

<sup>16</sup> In economic theory one previously assumed that the interest rate could not be cut below zero, as cash has a zero yield and the general public would then rather hold cash. Instead of a zero limit, one now assumes that there is an effective lower bound that is negative, and which depends on, for example, the cost of handling cash and how much the monetary policy impact declines at different interest rate levels, see for instance J. Alsterlind, H. Armelius, D. Forsman, B. Jönsson and A.-L. Wretman, "How far can the repo rate be cut?" Economic Commentaries No. 11, 2015, Sveriges Riksbank. However, it is unclear exactly where this boundary lies.

<sup>17</sup> This correlation is described by what is known as the Fisher equation, named after the American economist, Irving Fisher, who is well-known for, among other things, his work on the theory of interest and debt deflation during the first decades of the 20th century. The Fisher equation is normally expressed as  $i = r + \pi$ , where  $i$  is the nominal interest rate,  $r$  the real interest rate and  $\pi$  (expected) inflation.

## 4.2 The monetary policy debate

### Repo rate level

In December 2019, the Riksbank raised the repo rate to zero per cent after inflation had been close to the target since 2017. The forecast was that the repo rate would remain at zero per cent in the coming years. The coronavirus pandemic then broke out in spring 2020 and one question in the monetary policy debate has been whether the repo rate should be cut below zero again.

The assessment made by the Riksbank over the year was that a lower policy rate, which under normal circumstances can be expected to stimulate household consumption, for instance, would be less effective and appropriate in a situation where both recommendations from public authorities and people's self-imposed restrictions prevented normal consumption. The effect of the pandemic on inflation was moreover assessed to be essentially temporary and not likely to affect the Riksbank's capacity to attain the inflation target in the long run, which reduced the need to cut the repo rate.

Other arguments against cutting the policy rate below zero have been put forward in the economic policy debate. If negative interest rates were to be perceived as a more permanent situation, the banks might introduce negative deposit rates for households and companies. These could react by making large withdrawals from their bank accounts, which could in turn lead to liquidity problems for the banks, as deposits account for an important part of the banks' financing.

Although such reactions need to be included in the assessment, they do not need to arise if the deposit rate is only somewhat negative, which is indicated by experiences in Denmark, for instance.<sup>18</sup> The deliberations with regard to advantages and disadvantages of a negative policy rate are difficult and complicated. The Riksbank's overall assessment is that a negative policy rate will continue to be a monetary policy alternative in a world where general interest rates are historically low, particularly if confidence in the inflation target were threatened.

### Asset purchases

Another question that has been discussed concerns the asset purchases, in particular the purchases of commercial paper and corporate bonds. The starting point for the discussion was that these securities both have a higher risk than those the Riksbank had purchased prior to the coronavirus crisis, and also a different nature than, in par-

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<sup>18</sup> At the end of 2019, Danish banks began to introduce negative interest rates on household deposits above a certain level. With regard to Danish companies, the interest rate was negative on around 80% of deposits at the end of 2020. Analyses from Danmarks Nationalbank indicate that negative deposit rates lead to companies increasing their investments and new recruitment, see "Corporations deleverage and invest when charged negative interest rates on bank deposits", Danmarks Nationalbank Analyses, No. 10, November 2020. For a summary of the total experiences of negative interest rates so far, see L. Brandão-Marques, M. Casiraghi, G. Gelos, G. Kamber and R. Meeks, "Negative Interest Rates – Taking Stock of the Experience So Far", Departmental Paper No. 2021/003, IMF.

ticular, government bonds, in that they are issued by individual companies. The argument put forward is that if it is necessary to supply credit to companies when the banks are unwilling to give loans to them, this credit should be supplied within the scope of fiscal policy and decided by the Government and the Parliament, the Riksdag.

The purchases of commercial paper and corporate bonds on the secondary market in 2020 can be characterised as a targeted measure in that they aimed to ensure that the market was functioning and to counteract a rise in risk premiums. By being active on the markets for commercial paper and corporate bonds, the Riksbank could contribute to improving conditions for companies to issue new paper and bonds. This prevented larger companies, which normally have access to market financing, from crowding out small and medium-sized enterprises' access to bank loans. The fact that the Riksbank supports the supply of credit and ensures that liquidity functions well to avoid robust companies having to close down, or prevents the crisis from developing into a financial crisis, is decisive for economic stability in general, and for both price stability and financial stability. The Riksbank's purchases of commercial paper have thus fulfilled an important function to secure the supply of credit during a very turbulent period. It is central that the Riksbank is able to continue to act this way in the future (see the article "The coronavirus crisis illustrates the need for flexibility in a new Sveriges Riksbank Act"). At the same time, it is of course important to carefully consider in advance the advantages and possible disadvantages with the measures taken, as monetary policy now often needs to use other tools than the more traditional policy rate.

It should be emphasised that the Riksbank's purchases of commercial paper are made according to clearly specified criteria. They are carried out in accordance with the principle of market neutrality and do not comprise targeted support directly to individual companies. The Riksbank also purchases solely on the secondary market and after a quarantine period, which means that a period of time must pass between the security being issued and the Riksbank purchasing it. One reason for the purchases has been that many companies now obtain most of their funding by issuing such securities. In Sweden, one third of companies' funding comes from the bond market. The Riksbank's holdings are very small, however, and at the turn of the year amounted to 0.4 per cent of outstanding corporate bonds issued in Swedish krona. Purchases of commercial paper are also used by other central banks, such as the European Central Bank, the Federal Reserve, the Bank of England and the Bank of Canada.

### **The distributional effects of monetary policy**

Another question that was discussed over the year was whether monetary policy has contributed to increased inequality. The background to this is that the expansionary policy, combined with other factors, could have contributed to rising prices on stock markets and housing, which benefits those who own these assets.

Here it should be emphasised from the start that the purpose of expansionary monetary policy is to alleviate economic downturns that affect employment and result in a

lower inflation rate than is desirable. Regardless of the potential effects on wealth distribution in society, such a policy is better for practically everyone, compared with if monetary policy remained passive.

When the Riksbank makes its monetary policy more expansionary or tighter this affects the decisions made by economic agents. This in turn has effects on production, employment and inflation. As the economic situation for households differs as regards the size of savings, the assets owned and their employment situation, for example, monetary policy will also affect the distribution of incomes and wealth.

Over a longer period, which covers both economic downturns and upturns, the effects of monetary policy on incomes and wealth will largely offset one another. But even if one merely takes into account what happens in an economic downturn, when the central bank conducts expansionary monetary policy, the overall distributional effects are not evident.

#### **Expansionary monetary policy affects asset prices...**

When interest rates fall, this affects households' capital income, saving in various assets and liabilities. As their interest payments become lower, households with a high level of debt benefit from this. At the same time, households with a large amount of savings in the bank are disadvantaged. The central bank's measures to hold down the level of interest rates, both via the policy rate and asset purchases, can at the same time contribute to prices of various assets increasing. This means that the value of wealth will increase among households with assets and their incomes will become higher if they sell their assets.

In general, capital income has the greatest significance for the households with the highest incomes, particularly those at the very top of the distribution. This also applies to wealth where equities and similar financial assets are concentrated in the households with the greatest wealth.<sup>19</sup> Real assets such as housing are certainly more evenly distributed among households, but rising prices for housing, taken together, seem to have contributed to a more uneven distribution of wealth in Sweden after the financial crisis.<sup>20</sup>

#### **...but also keeps up employment and economic activity**

However, this is only one side of the coin. The expansionary monetary policy has, for instance, also contributed to a stronger labour market and higher economic activity in relation to what would otherwise have been the case. As noted above, this is something that benefits everyone in practice, regardless of potential effects on the distribution of income in society.

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<sup>19</sup> This applies to households' personal wealth. If the consolidated assets owned by households via the pensions system are also included, the distribution becomes more even.

<sup>20</sup> See J. Lundberg and D. Waldenström, "Wealth inequality in Sweden: What can we learn from capitalized income tax data?", *Review of Income and Wealth* 64(3), 2017.

Higher employment and lower unemployment of course also have distributional effects. For most households, income from work comprises the major part of their income, and it is primarily the difference between incomes among those who have work and those who do not that is significant. In addition, whether or not one has a job affects the size of the pension received from the public pension system and also determines access to a contractual pension. Sometimes, pension assets of this kind are included in household wealth, so employment therefore also plays a large part from this perspective.<sup>21</sup> Higher employment also strengthens public finances. This gives the government greater opportunities to take further economic policy measures, for instance, ones that aim to even out inequalities.

It is thus not evident in advance what the total distributional effect is. Studying this empirically also entails several practical difficulties. One complication is that one needs to study the effects via many different channels at the same time. Moreover, some of these channels have a long time horizon and are difficult to chart empirically. An expansionary monetary policy can, for instance, contribute to increasing investment and make productivity rise. In the long run, this can lead to higher wage increases that benefit wage earners relative to those who own assets (which of course need not be completely separate groups), and thus contribute to a more even distribution of income.

The results from international empirical research are mixed.<sup>22</sup> Some studies show that lower interest rates contribute to a more even distribution of incomes, while others reach the opposite conclusion. The results of studies of central bank asset purchases are also mixed, with some finding that distribution becomes more even, some that it becomes more uneven and some that the overall distributional effect of asset purchases is close to nothing. The same thing applies to the effect of monetary policy on the wealth distribution.

With regard to Sweden, a further practical problem is that information on individual households' assets and liabilities are no longer gathered, since the wealth tax was abolished in 2007. This makes it difficult to carry out an empirical analysis of the effects on distribution of income of monetary policy and other economic policy in Sweden. However, in January 2021, the Government decided that a special investigator shall look into how individual-based statistics on household assets and liabilities could be produced and used to give an adequate picture of households' financial positions. Such statistics would of course make it easier to analyse inequality issues.

It is also important to take into account *how* higher asset prices contribute to a more uneven distribution, to the extent that this is the case. This would most likely occur in the form of incomes and wealth increasing primarily in the upper parts of the distribution. A less expansionary monetary policy could certainly contribute to slowing down asset prices, but this would be at the cost of higher unemployment. Although the

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<sup>21</sup> It can be noted that one reason for the Federal Reserve's changes in strategy in August was that a strong labour market has beneficial distributional effects, see J.H. Powell, "New Economic Challenges and the Fed's Monetary Policy Review", speech at Jackson Hole, 27 August, 2020.

<sup>22</sup> See, for instance, A. Colciago, A. Samarina and J. de Haan, Central Bank Policies and Income and Wealth Inequality: A Survey", *Journal of Economic Surveys*, 33(4), 2019.



overall final result could be a more even distribution, the situation would in practice be worse for groups that are already weak.

### **Monetary policy is not suited to manage distributional effects**

There are some further aspects that are important in this context. One is that asset prices are of course affected by many other factors than monetary policy. Real interest rates around the world have been falling for a couple of decades and are now at historically low levels. This is probably an important explanation why asset prices, in particular housing prices, have risen in a longer perspective and are currently high. Long-term real interest rates are something that central banks need to take into account but cannot control, and as long as they are low, the policy rates will on average remain low over the business cycle.

The fact that housing prices have risen substantially for so long also reflects the fact that the Swedish housing market is not functioning very well. There are a number of structural problems that have led to supply not keeping up with demand. These include weak competition in the construction sector, a small supply of land to build on, complex planning processes and a tax system that likely contributes to a lower than desirable mobility in the housing market. It is important to remedy these structural problems to attain a more balanced long-term development in prices on the housing market. The fact that housing prices rise when monetary policy needs to be expansionary and inflation is lower than desirable is thus not the main problem.

As shown in the review in the section "The purpose of the inflation target" above, maintaining the inflation target is also a necessary condition for monetary policy to have the scope to counteract economic downturns with rate cuts. To make monetary policy less expansionary than it needs to be to maintain the target, for the sake of distributional effect, would risk making the interest rate tool less effective in the future.

As monetary policy affects the economy broadly and has distributional effects that partly counteract each other, it is poorly suited to use for redistribution purposes. Fiscal policy has the most effective tools and is also responsible for counteracting undesirable distributional effects.

## **4.3 Questions for the future**

Since the global financial crisis, many central banks have found it difficult to achieve their inflation targets more sustainably, despite very low policy rates. In many countries, these low rates have been complemented by purchases of various assets to make policy more expansionary. This has helped, but has not been able to prevent inflation tending to be lower than is desirable. Some central banks' forecasts, including the Riksbank's, indicate that inflation will continue to undershoot the target for several years to come.

After the pandemic, most central banks' policy rates are now at or close to their effective lower bound. At the same time, the central banks are purchasing more and larger volumes of financial assets, and their balance sheets have therefore grown rapidly.

The increasingly overshadowing task for governments and central banks at the moment is to manage the effects of the pandemic and try to prevent permanent damage to the economy. But, in a world where interest rates continue to be very low, the challenges facing monetary policy will remain even after the worst of the pandemic has been dealt with.

### **Important to maintain confidence in the target and maintain the monetary policy room for manoeuvre**

Monetary policy is facing two major challenges. The first is maintaining confidence in the inflation target so that it can continue to function as a benchmark for price-setting and wage formation. The second is trying to ensure that monetary policy can fight recessions effectively and sustain employment in difficult times. As noted above, these challenges are linked: If inflation and inflation expectations fall and become entrenched at a level much lower than the target, this will also reduce the scope to cut the interest rate to counteract future economic downturns to a corresponding degree. Another consequence is that it would be more common with a negative repo rate, in order to make monetary policy sufficiently expansionary.

These challenges play an important role in the reviews of the monetary policy framework that have been carried out and are being carried out in several countries. The US central bank, the Federal Reserve (Fed), made some changes to its strategy in August 2020, and the European Central Bank (ECB) and Bank of Canada, for example, are carrying out reviews that are expected to be completed in 2021. As our own experiences correspond well to those of other countries, there is also reason for us in Sweden to continue to consider questions relating to the monetary policy framework and toolbox.<sup>23</sup>

### **Central theme in Federal Reserve's review**

One of the changes made by the Fed was to allow monetary policy to aim to overshoot the target of 2 per cent for a period of time if inflation has previously been lower than 2 per cent.<sup>24</sup> Previous target deviations should thus be compensated for by deviations in the other direction, in contrast to conventional inflation targeting where such deviations are seen as bygones that do not need to be compensated for.

What the Fed is concerned about is that if inflation does not reach the target on average even over a long period of time, this risks sooner or later spilling over to long-term inflation expectations in the economy. This in turn risks reducing the possibility to use rate cuts to counteract economic downturns in the future, for the reasons described above. It is therefore important to make it clear that the aim is to keep average inflation at 2 per cent, that is, that the Fed intends to apply what they call 'aver-

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<sup>23</sup> Several members of the Executive Board have discussed this question recently in various speeches, for instance Anna Breman (23 February 2021), Stefan Ingves (8 December 2020), Per Jansson (16 December 2020) and Cecilia Skingsley (7 October 2020).

<sup>24</sup> For a description of the Fed's changes in strategy and the background to this, see for example J. H. Powell, "New Economic Challenges and the Fed's Monetary Policy Review", speech on 27 August, 2020, Federal Reserve.

age inflation targeting'. However, they have not committed to any specific time period for calculating the mean value. The new strategy has therefore been termed 'flexible average inflation targeting'.

### **Communication challenges when interest rates are low**

For years, many central banks have combined low policy rates with what is known as quantitative easing, to make monetary policy more expansionary. This means that the central banks have purchased large volumes of securities on the secondary market to push down various market rates and increase liquidity in the economy. In some situations, the central bank also needs to take on risk that the market is unwilling to take on, and target measures at specific markets where problems have arisen, or risk arising. During 2020, targeted measures by several central banks stabilised important financial markets to prevent the coronavirus pandemic from causing a crisis in the financial system.<sup>25</sup>

### **Communication regarding asset purchases**

One challenge is how the policy of quantitative easing should best be communicated. Good communication with the general public about the monetary policy conducted contributes to increasing confidence in the policy and thereby also to making it more effective. If quantitative easing is to become a common element of monetary policy going forward, it is important that the general public have understanding of, and confidence in, this tool.

The Riksbank shares this challenge with many other central banks. In the United Kingdom, the independent body that evaluates the Bank of England's operations, the Independent Evaluation Office (IEO), has examined the bank's communication regarding quantitative easing and given recommendations as to how it could be improved.<sup>26</sup>

The IEO recommends a simple and 'story-based' communication on quantitative easing. Instead of describing it as central banks "inject liquidity" or "print money", they recommend that quantitative easing is described as a continuation of conventional monetary policy in terms of pushing down long-term interest rates for the purpose of supporting the economy, keeping employment up and inflation at more desirable levels. This is a more intuitive description, which is more familiar to the general public and will probably also contribute to counteracting the impression that quantitative easing only transfers wealth to the rich and the banks.

### **Communication regarding the inflation target**

There are also challenges with regard to communication concerning the inflation target. For a long time, when the problem was that inflation was too high, the message

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<sup>25</sup> For a detailed review of the measures taken by the Riksbank in 2020 as a result of the pandemic, see Chapter 2 of this report and P. Gustafson and T. Von Brimstone, "The coronavirus pandemic: The Riksbank's measures and financial developments in spring and summer 2020", Sveriges Riksbank Economic Review 2021:1.

<sup>26</sup> See "IEO evaluation of the Bank of England's approach to quantitative easing", Bank of England, January 2021.

was that high and varying inflation is bad for the economy and the individual, and that an inflation target leads to better economic developments. That was a message that most people found intuitive.

Now that problem is not that inflation is too high, but that it is tending to be too low. This also creates problems, but they are not as easy to communicate. The mechanisms described in the section “The purpose of the inflation target” above are relatively complex. Increasing understanding of these mechanisms and clarifying that an economy functions better with some inflation are important tasks for central banks going forward.

These problems would be alleviated if the central banks did not need to conduct such an expansionary monetary policy to try to keep inflation at the target level. For quite a long time, structural forces such as globalisation and international demographic conditions have contributed to holding back inflation. One hypothesis is that these forces are now gradually starting to subside and turn around. They are mainly linked to the populations of China and the western world now ageing, after the opposite being the case for a number of decades.<sup>27</sup> It still remains to be seen, of course, to what extent this hypothesis is true and global inflationary pressures will increase.<sup>28</sup>

### **Interaction between monetary policy and other policy areas more important**

In a situation where interest rates are low and the policy rate tool is limited by the effective lower bound, there may be reason to raise one’s eyes from pure monetary policy and how it can be changed and reformed. There is also good reason to analyse the interaction between monetary policy and other policy areas.

### **Fiscal policy**

Recently, central banks have had difficulty making monetary policy sufficiently expansionary to affect demand, sustain employment and keep up inflation. One conclusion from the international debate is therefore that fiscal policy may have to play a greater stabilisation policy role than it has in recent decades.<sup>29</sup>

One question that will probably be much discussed in coming years is what forms the interaction between fiscal policy and monetary policy should take, and perhaps also

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<sup>27</sup> See C. Goodhart and M. Pradhan (2020), *The great demographic reversal*, Palgrave MacMillan, for more detailed reasoning.

<sup>28</sup> There are also other reasons why inflationary pressures may increase. One that is currently much discussed is the extensive fiscal policy stimulation around the world, particularly in the United States, combined with signals from central banks that they are prepared to tolerate an inflation rate above the target for a period of time.

<sup>29</sup> For an analysis of the role of fiscal policy in a low interest rate environment, see for instance J. Furman and L. Summers, “A Reconsideration of Fiscal Policy in the Era of Low Interest Rates”, essay presented at the conference “Fiscal policy advice for Joe Biden and Congress”, Brookings and the Peterson Institute for International Economics, 1 December 2020.

whether it can somehow be formalised. This includes, among other things, the role total economic policy should play in attaining the inflation target, as a societal economic objective.

### **Macroprudential policy and financial regulations**

Another important interaction is the one between monetary policy and the policy to maintain financial stability. In a world where real interest rates are low and monetary policy needs to be expansionary for a long time, there are major challenges to be met.

The low level of interest rates is largely due to the historically low global real interest rates. This is also one of the explanations why various asset prices are high, even if the expansionary monetary policy has contributed to asset prices rising further. If these rise for too long and in a way that is decoupled from developments in the rest of the economy, such financial imbalances can ultimately result in a financial crisis.

There are many indications that global real interest rates will remain low for a fairly long time. Moreover, the weak inflationary pressures and the effects of the pandemic on economic activity mean that monetary policy needs to remain expansionary to be able to maintain confidence in the inflation target – which in turn is important for the reasons described above. Under these circumstances, it is important that the risk of financial balances being built up can be managed by macroprudential policy and financial regulations.

### **Wage formation**

The Industrial Agreement was first signed more than twenty years ago. Since then, the parties in the manufacturing sector set the 'benchmark' that becomes the norm for wage bargaining in other areas. The social partners have signed agreements that have attempted to combine higher real wages with improved competitiveness. This trade-off has, through the standardisation, gained a decisive influence on wage increases throughout the entire economy.

The benchmark and standardisation have been discussed since the introduction of the Industrial Agreement. Critics have claimed that the system with a benchmark and standardisation can make it more difficult to attain changes in relative wages. Proponents of the system, on the other hand, have claimed that there is evidence at both professional and individual level that it is possible to change relative wages. Whether the current system with a benchmark and standardisation allows changes in relative wages to a sufficient degree is an important question that deserves further analysis and discussion.

Another question that has been discussed is the link to the inflation target. Monetary policy and wage formation are in many ways dependent on one another. The parties' inflation expectations are an important starting point for the wage bargaining. With regard to monetary policy, the decisive factor is that the social partners believe that monetary policy will be conducted with the aim of attaining the inflation target. At the same time, wage developments are very important for how cost pressures will develop. In this way, they affect the prospects for monetary policy to attain the inflation

target. It is important for the long-term credibility of monetary policy that the inflation target can actually be attained. The interaction between monetary policy and wage formation is an important issue to analyse, for both the Riksbank and other authorities and institutions whose task is to contribute to the smooth functioning of the Swedish economy.

### **Climate aspects more important for monetary policy, too**

One question that will become increasingly relevant going forward is how climate change will affect the conditions for the economy in general and thus monetary policy.<sup>30</sup> Global warming entails new types of risk for economic developments. Examples are extreme weather such as droughts, flooding and hurricanes becoming more common, or that the effects of gradual warming lead to reduced harvests or rising sea levels.

If extreme weather becomes more common, this can lead to greater fluctuation in food, housing and energy prices, which in turn may affect inflation and inflation expectations. Extreme weather may also lead to the destruction of facilities and infrastructure, broken production chains, etc. with ensuing negative consequences for output and employment. The effects of this type of catastrophe are normally more short-term and evident, while the more long-term effects on the economy of gradual warming are more difficult to oversee and analyse.

If climate change increases the risk of catastrophe, makes economic developments more uncertain and worsens growth prospects, it may lead to a lower long-term real interest rate.<sup>31</sup> One consequence of this could be that the policy rate is more often at its lower bound and the monetary policy room for manoeuvre is thus limited. Catastrophes in themselves, which often require a more expansionary monetary policy, can mean that a policy rate at the lower bound will become more common.

The financial markets play an important role in the management of climate risk. They can at the same time be affected by climate factors, which can create risks in the financial system.<sup>32</sup> The value of the banks' collateral may shrink as a result of climate-related catastrophes and loan losses may rise. This can reduce their capital, diminish their liquidity and thereby weaken the banking system's potential to supply credit. If the financial system is weakened, it may also become more difficult for monetary policy to make an impact. There is thus good reason to take climate risks into account as these can affect how the Riksbank manages its core tasks – financial stability and price stability.

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<sup>30</sup> For a more detailed review, see the articles "How is the Riksbank's work affected by climate change?" in the Monetary Policy Report, November 2020.

<sup>31</sup> See E. Bylund and M. Jonsson, "How does climate change affect the long-term real interest rate?", Economic Commentaries No. 11, 2020, Sveriges Riksbank.

<sup>32</sup> For an overview of the academic literature on the interaction between climate change and financial markets, see for instance S. Giglio, B.T. Kelly and J. Stroebe, "Climate Finance", NBER Working Paper, No. 28226, December 2020.

The climate crisis is based on a market failure, what is known as a negative externality caused by emitting carbon dioxide.<sup>33</sup> The most effective measures to limit climate carbon emissions fall within the remit of other policy areas than monetary policy. However, the Riksbank and other central banks can contribute to counteracting climate change with the means at their disposal.

In December 2020, the Executive Board decided on a sustainability strategy for the Riksbank that also includes ecological aspects.<sup>34</sup> It means that the Riksbank will act to promote a sustainable development in line with the aims of the Riksdag and the Government, on condition that this is compatible with the overall policy assignment of maintaining price stability and promoting a safe and efficient payment system. Central banks can also take a sustainability perspective in their asset purchases, the collateral required in monetary policy transactions and in the management of foreign exchange reserves. It may also be a question of participating in various networks that work on climate-related issues, for instance, the International Monetary Fund, the Basel Committee and the Network for Greening the Financial System (NGFS).

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<sup>33</sup> See, for instance, C. Olovsson, "Global warming from an economic perspective", Sveriges Riksbank Economic Review 2020:1.

<sup>34</sup> "[Sustainability strategy for the Riksbank](https://www.riksbank.se/globalassets/media/riksbanken/hallbarhetsstrategi/engelska/sustainability-strategy-for-the-riksbank.pdf)", Sveriges Riksbank, <https://www.riksbank.se/globalassets/media/riksbanken/hallbarhetsstrategi/engelska/sustainability-strategy-for-the-riksbank.pdf>

## ARTICLE – The coronavirus is highlighting the need for flexibility in the new Sveriges Riksbank Act

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At the end of November 2019, the Riksbank Committee submitted its final report to the Government with a number of proposals for amendments to the Sveriges Riksbank Act.<sup>35</sup> However, the inquiry and the report were written before the outbreak of the coronavirus pandemic. During the crisis ensuing from the pandemic, the Riksbank has used a number of different tools to support the Swedish economy. The aim has been to bolster the economy and avoid a crisis in financial markets exacerbating the economic downturn and causing a deeper decline and a longer period of below-target inflation. The development illustrates the relevance of several of the objections to the legislative proposal submitted by the Riksbank in its consultation response to the report.<sup>36</sup>

The assessment of the Executive Board is that, if the Committee's proposal had become law, the Riksbank would have had more limited room for manoeuvre during the COVID crisis than is currently the case. The monetary policy toolbox would have been smaller and it would have taken longer to take the necessary decisions. It would have led to costs for the Swedish economy, partly because more companies would have gone bankrupt and more employees would have lost their jobs. There is therefore reason to review the legislative proposal, not least in light of the experiences from the past year. The starting-point should be that a new Sveriges Riksbank Act must create the conditions for powerful and effective monetary policy in the environment it now operates in.

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### The Riksbank needs to be able to use its tools in a flexible way

According to the Riksbank Committee's final report, the new Sveriges Riksbank Act shall have a structure in which the Riksbank is given specific objectives, tasks and powers in different areas. What constitutes monetary policy shall be defined by a

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<sup>35</sup> En ny riksbankslag (A new Sveriges Riksbank Act), SOU 2019:46.

<sup>36</sup> See the consultation responses of the Executive Board and the General Council to the report A new Sveriges Riksbank Act (SOU 2019:46), DNR 2019-01285, Sveriges Riksbank. See also the two separate statements of opinion on the inquiry by the Riksbank Committee experts Anders Vredin and Christina Wejshammar. In addition to comments on the proposals and their implications for monetary policy, the consultation responses also contain comments on the Committee's proposals that affect the Riksbank's other tasks, organisation and scrutiny.



number of monetary policy powers allocated to the Riksbank. These powers consist of different tools (or instruments, using the vocabulary of the Committee) and possible limitations in the use of these tools. Similarly, the Riksbank shall have a number of tasks in its work on financial stability and powers to use certain tools. However, the powers in the various areas overlap each other and, according to the proposal, the Riksbank shall decide in each individual case whether the main purpose of using a specific tool is a monetary policy one or whether it is linked to financial stability. To draw the boundary between the areas, the Riksbank shall apply detailed criteria and, depending on the main purpose, the processes leading up to decisions shall differ.

The Riksbank has needed to use a number of different tools during the COVID crisis (see also Chapter 2). Just like during the global financial crisis, however, it is difficult to clearly distinguish which measures have primarily been a question of monetary policy and which have been primarily aimed at promoting financial stability. Monetary policy and financial stability are interconnected, something which becomes particularly clear in times of crisis. Major disruptions in financial markets have consequences for economic activity in general, which also affect the ability to achieve the price stability objective. Furthermore, monetary policy measures have an effect via the financial system and can affect the degree of financial stability.

The boundaries, criteria and assessments that the Committee wishes to introduce and which shall govern when and how various tools may be used are difficult to apply in practice. According to the Committee, a measure implemented because of “limited turmoil” in the market where banks obtain their funding will be classified as monetary policy. If instead there is “substantial turmoil”, it is considered to be a financial stability measure. This is a division which in practice will become very difficult to attain, as it will depend on a subjective assessment of what is “limited” or “substantial” turmoil. This division is not meaningful either, as “substantial turmoil” in financial markets will always affect inflation and economic developments in general as well. Moreover, during a crisis, turmoil can go very rapidly from being “limited” to “substantial” and in time also back to being more “limited”.

Overall, the experiences of the last decade or so have made it clear that monetary policy is considerably more than just setting the level of an interest rate for short-term transactions between the Riksbank and banks. Other dimensions in the Riksbank’s operational framework are also a part of monetary policy. Furthermore, the Riksbank needs to be able to use more tools than just the repo rate (see the description of the Riksbank’s measures in Chapter 2). The Sveriges Riksbank Act needs to provide considerable flexibility in how these tools can be used and avoid establishing a specific order of priority among them. Depending on the situation, necessary monetary policy measures may include purchases of various financial assets and lending to banks that increases the Riksbank’s liabilities. The sequence in which the measures need to be employed can vary. Technical and detailed limitations linking different items on the Riksbank’s balance sheet to different purposes, as the Committee proposes, restricts the ability to conduct monetary policy in an effective manner. It must be possible to adapt the Riksbank’s balance sheet to monetary policy needs at that particular time.

As experience has shown, problems in financial markets risk leading to major negative consequences for output, employment and inflation. The need to stabilise these markets, however, is not just a question of deciding in a given situation what type of turmoil exists, how substantial the turmoil is and thus what measures shall be employed. The seeds of turmoil can always be found in these markets and it is therefore also important to reduce in advance the risks of problems and crises arising. If it is already clear from the outset that the central bank has the tools and mandate to use them in a flexible way, this may have a stabilising effect in itself and thereby reduce the risk of crises arising at all.

## Independence in monetary policy needs to be maintained, as does the requirement for collaboration where necessary

That the Committee considers there to be a need for a clear boundary between monetary policy measures and financial stability measures largely stems from the argument that the Riksbank has a stronger independent status in the area of monetary policy.<sup>37</sup> Clarifying the Riksbank's tasks and powers is therefore, according to the starting-point of the Committee, important for democratic anchoring and to elucidate the Riksbank's possibilities to collaborate with other authorities. Regarding the measures that, in the Riksbank's view, fall within the framework of supporting the financial system, the requirements for collaboration with other authorities and the government are greater than for measures that are considered to fall within monetary policy.

The high degree of independence that central banks like the Riksbank should have stems from previous negative experiences, when economic policy as a whole did not come to grips with high and fluctuating inflation, which also had negative effects on economic developments in general. One way of gaining credibility for the ambition to control inflation is to ensure that monetary policy can be conducted "at arm's length" from economic policy in general. Under EU legislation, the ECB and national central banks have a high degree of independence in the area of monetary policy. In concrete terms, this means that the Riksbank is subject to the prohibition on instructions that is enshrined in EU law, according to which other authorities may not give instructions to the Executive Board of the Riksbank when it performs monetary policy tasks.<sup>38</sup> The Act does not specify exactly what these tasks are, however.

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<sup>37</sup> The Riksbank having a high degree of independence was also a starting-point of the review, according to the Riksbank Committee's terms of reference.

<sup>38</sup> As a national central bank within the EU, the Riksbank shall be institutionally independent in the area of monetary policy under the Treaty on the Functioning of the European Union (TFEU). This implies that the Executive Board of the Riksbank shall neither seek nor take instructions when performing tasks allocated to it under the Treaty and the Statute of the European System of Central Banks (ESCB). In addition to this, the Riksbank's autonomous status is also built on a functional independence, according to which the bank, given a specific monetary policy objective, shall decide independently how the objective shall be achieved, a financial independence to be able to perform the tasks without being governed by appropriations, and a personal independence for the Riksbank's management. Furthermore, the Riksbank is a separate legal entity divorced from the state, which means that the Riksbank can have its own assets and liabilities and conclude agreements.

The Court of Justice of the European Union (CJEU) has recently passed judgement on what is included in the concept of monetary policy in two cases relating to the issue of the ECB's asset-buying programmes. The CJEU noted that the ECB's ability to affect price development largely depends on how monetary policy decisions are transmitted via financial markets and affect the various sectors of the economy. If the transmission of monetary policy deteriorates due to disruptions in the financial system, it may affect the efficacy of the ECB's measures. The conclusion of the CJEU was therefore that the bond-buying programmes were within the framework of the ECB's monetary policy mandate.

One problem with the Committee's proposal for a boundary is that it is not compatible with the approach taken in EU law. Financial stability is crucial for the transmission of the Riksbank's monetary policy. A detailed division will therefore create problems for those who are to interpret the act in such a key issue as setting limits for the Riksbank's independence.

The Committee has also proposed that a principle of proportionality be incorporated into the Riksbank's decision-making. According to the principle, which is based on EU law and the Swedish Administrative Procedure Act, a measure may be taken if the intended result is in reasonable proportion to the costs and risks of the measure to the finances of the Riksbank and the state. Employing such a principle reduces the risk of the Riksbank over-interpreting its independence and makes it clear that decisions have to be transparent and well motivated for those scrutinising the Riksbank. The requirement that decisions shall abide by this principle is sufficient to avoid giving the Riksbank too much freedom to act under the protection of its monetary policy independence.<sup>39</sup>

The principle of proportionality also has a bearing on the requirements for the Riksbank to collaborate with other authorities. The importance of such collaboration is another reason behind the Committee's proposal for boundaries between the Riksbank's various tasks and tools. However, the Riksbank has a strong interest in collaborating with other authorities to be able to assess whether the measures it is considering are appropriate and effective. This assessment will also be an important component of proportionality testing. The proposal for boundaries is therefore not needed for the Riksbank to be able to collaborate with the government and authorities that also have a responsibility for financial stability without contravening the prohibition on instructions.<sup>40</sup>

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<sup>39</sup> As the Executive Board writes in its consultation response, however, the principle of proportionality should be formulated in the same way as it is in EU law.

<sup>40</sup> However, it should be clear that the Riksbank, when taking decisions in issues that have been the subject of collaboration, does so independently. Under administrative law, this means that decisions are taken **after** consultation, not **in** consultation. The same system should apply in the reversed case, where other authorities make decisions after consultation with the Riksbank.

## The monetary policy toolbox needs to have appropriate content

The Executive Board essentially supports the Committee's proposal on the objective of monetary policy continuing to be price stability, and on how the details of the objective shall be formalised. But the last ten years have shown that monetary policy, to be able to achieve the objective, needs to have access to a toolbox with contents that are appropriate under different conditions and in situations that can be difficult to specify in advance. It is therefore unfortunate that the Committee's proposal contains limitations that both affect the definition of monetary policy, which would be narrowed compared with what it is today, and the Riksbank's powers, i.e. how the tools and the balance sheet may be employed. Examples of such limitations include:

- According to one proposal, the Riksbank may only purchase securities other than government securities if there are "exceptional reasons". These reasons are not defined in closer detail, however, which can create problems when the boundary between different measures is to be drawn, and when the need for collaboration with other authorities is established. It is also unclear whether, and if so, how the requirement for exceptional circumstances differs with the assessment according to the principle of proportionality as proposed by the Committee.
- According to the Committee, it shall only be possible to strengthen the foreign exchange reserves with reference to financial stability. This implies a limitation of monetary policy, as it must also be possible to strengthen the foreign exchange reserves when foreign currency has been lent for monetary policy purposes.
- According to the Committee's assessment, the Riksbank may not make lending to banks conditional on them increasing their lending to companies. However, such conditional lending is an important tool that is also widely used in several countries to mitigate the effects of the COVID crisis.
- The Committee proposes that the Riksbank be granted a statutory power to offer loans and enter repurchasing agreements to counteract serious shocks to the financial system, referred to by the Committee as general liquidity support. That the Riksbank continues to be able to offer such support is good, but the legal conditions for this tools become unclear if the tool is to be confirmed by law in the way proposed by the Committee. Both loans and repurchasing agreements are also in the monetary policy toolbox, in Sweden as well as in other countries. What the Committee proposes, however, is a new concept, general liquidity support, divorced from monetary policy, which is unparalleled in the EU and many other countries.<sup>41</sup>
- The payment system, particularly the Riksbank's system for electronic payments (RIX), is a necessary instrument for monetary policy to have an impact

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<sup>41</sup> If the Riksbank needed to use an instrument called general liquidity support, without this being part of monetary policy, it would have to be approved on the EU level to ensure that it does not contravene EU government support regulations and the prohibition of monetary financing. This is a consequence of the proposed division into different toolboxes for monetary policy and financial stability policy.

on all parts of the financial system. According to EU legislation, the task of promoting a smoothly functioning payment system falls within the framework of the Riksbank's independence. The Committee has proposed an amendment to the Swedish Instrument of Government so that it corresponds to EU legislation, but with the limitation that the independence will only apply if the task is within the framework of the cooperation within the European System of Central Banks. ESCB. The proposal means therefore in practice that the Riksbank will not retain independence in issues in this area that lie outside of the ESCB cooperation, despite there being a strong link between payment system and the implementation of monetary policy.

## A modern Sveriges Riksbank Act needs to give monetary policy the scope to manage new challenges

A result of the ambition to regulate the various tasks and powers of the Riksbank in detail is that the legislative proposal has become very extensive. In addition, the interpretations of some concepts are unclear, as is how certain assessments are to be undertaken. Circumstances will also change as a result of rapid technical development, the emergence of new financial players, new financial markets and new forms of payment, which will require recurrent revisions of the Act. To avoid too many revisions of this kind, the Act should be more focused on principles and enable the Riksbank to act promptly with all its monetary policy toolbox, as well as intervene with new tools and in new ways should the need arise. It is impossible to predict exactly how the policy will need to be designed. How the Riksbank exercises its independence can nevertheless be tested by performing regular reviews. The scope for the Riksdag to monitor the Riksbank and require accountability, both for monetary policy and for the Riksbank's other operations, is already considerable. Scrutiny and evaluation can always be improved and strengthened, however. The Riksbank largely supports the Committee's proposal for changes in this area, which would mean, for instance, that several different bodies have a mandate to scrutinise the Riksbank's operations. It is important that the evaluation and scrutiny are effective and that the ban on instructions is not transgressed.

Since the financial crisis of 2008–2009, there has been a discussion on what can be considered to be a new normal for monetary policy. Expectations of a return to the conditions and the policy that prevailed prior to the global financial crisis have been unfulfilled time and again. Recently, there has also been an increasingly intensive discussion about the tools available when the next recession or crisis occurs – especially bearing in mind the very low level of interest rates to begin with. The monetary policy measures described as unconventional have now been in place in various forms for many years and may very well be needed for much longer than previously thought. Validating in law detailed rules for what is to be regarded as monetary policy, in contrast to financial stability policy, and limitations in how the Riksbank's balance sheet may be used, are not the right way to build up resilience in the Swedish economy.

A better strategy would be to modernise and deal with the ambiguities in the current Sveriges Riksbank Act by means of less extensive amendments. These amendments

should be aimed at strengthening the structures for the existing collaboration among authorities in the financial area, instead of seeking to micro-regulate the Riksbank. The Riksbank should continue to have the scope to take on various challenges in a powerful and effective way to ensure that monetary policy can contribute to healthy economic development.

## ARTICLE – Long-term effects of the pandemic on the Swedish economy

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In a short time, the pandemic has led to a large economic crisis, but the longer-term effects of the pandemic on the economy, and their magnitude, are difficult to assess. The consequences depend on how long the pandemic continues, on the economic policy response and on how large and how permanent the changes in the behaviour of households and companies will be. There has been some recovery in the economy and on the labour market, but developments are still uncertain. In addition, all previous economic crises have led to persistent effects on economic growth potential and employment. This article describes a number of mechanisms through which the pandemic may have persistent effects on the labour market, productivity and inflation in Sweden.

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### Effects on the labour market

#### **More long-term unemployed persons will reduce the employment level in the long term**

Experience shows that deep or prolonged economic crises can reduce the long-term sustainable level of employment and increase long-term unemployment.<sup>42</sup> This is partly because deep crises can change the way the labour market functions and because long periods of high unemployment can lead to what are known as hysteresis effects. In other words, unemployment may remain at a higher level for a long time after the crisis. This is because long periods of unemployment can reduce the know-how and skills of unemployed persons and make it more difficult for them to find new jobs even when demand for labour rises again. Long-term unemployed persons also lose important contacts in working life, making it more difficult for them to find a job. Long-term unemployment rose significantly in 2020.

What might indicate less serious hysteresis effects in this crisis than in others is that the hardest-hit service sectors (retail, hotels and restaurants) are relatively dynamic, have substantial staff turnover and have relatively low educational and job-specific requirements. It may therefore be easier to re-employ people in these sectors, which could accelerate post-pandemic recovery. But it would also require labour demand in these sectors to return to previous levels, which is uncertain as the changes in consumption patterns that have occurred during the pandemic may be long-lasting. The

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<sup>42</sup> The long-term levels of employment and unemployment are the levels deemed to be achievable under the prevailing institutional conditions without the rest of the economy becoming unbalanced. These levels can vary over time.

extensive support measures are reducing the hysteresis effects but, in a major crisis, it is usually difficult to avoid them completely, regardless of the policy measures implemented.<sup>43</sup>

Labour force participation also tends to decrease in deep recessions, but at least so far in the pandemic, it has remained on a high level. This is positive as it enables higher employment in the longer term.

### **The pandemic makes it more difficult to enter the labour market**

Employment has decreased and unemployment has risen mostly among young people and foreign-born persons during the pandemic (see figure 31). This is because the hard-hit sectors employ many in these groups and because those with time-limited employment or who have been employed for a short time lose their jobs first in a crisis. At the same time, short-time work compensation schemes have helped many of those who are more established on the labour market to keep their jobs, which can be seen in the low unemployment rate among foreign-born persons aged 25–54 years.

The risk is that it will take longer for foreign-born persons to establish themselves on the labour market as it is more difficult to participate in, for example, language courses and labour market policy measures. Higher sickness absence and distance learning at schools and universities may have negative effects on education and on young people's future prospects.<sup>44</sup> Young people are more flexible, however, and fare better in the longer run than older people who lose their jobs as it is easier for young people to retrain. Entering the labour market during a recession has long-term negative effects on an individual's employment and income.<sup>45</sup> The effects may now be even more substantial as sectors with a large number of entry-level jobs have been hit the hardest. However, the effects will wear off after a while.

But the structural problems on the labour market that manifest themselves in terms of many low-educated and foreign-born persons having difficulty finding jobs, will remain after the pandemic and there is a risk of them being reinforced. There are few jobs on the Swedish labour market for people with no upper secondary education or knowledge of Swedish. It may become even more difficult for low-educated foreign-born persons to gain a firm foothold in the labour market as competition for jobs will become tougher when unemployment is higher.

<sup>43</sup> See also I. Häkkinen Skans, "The coronavirus crisis and the labour market - effects in the short and long term", Economic Commentary no. 1, Sveriges Riksbank, 2021 and the article "The long-term effects of the pandemic on output and employment", Sveriges Riksbank, Monetary Policy Report, July 2020.

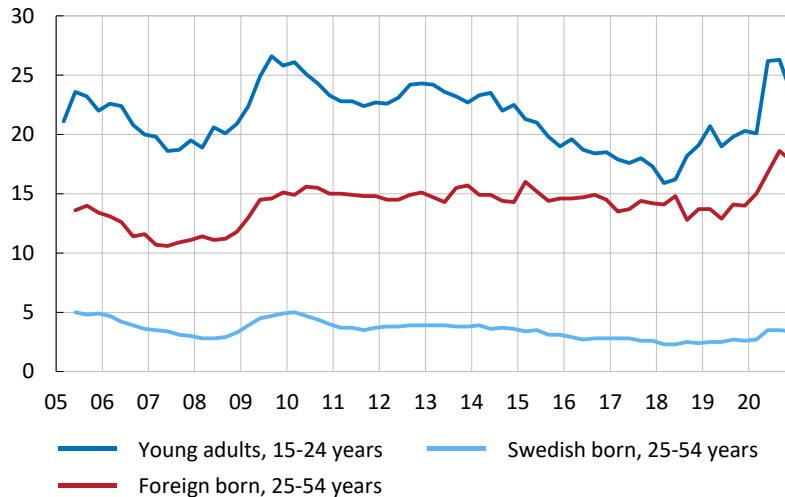
<sup>44</sup> See, for example, A. Sjögren (ed.), Children and youth during the Corona pandemic: Lessons from research on childhood environment, schooling, education and labour market", Institute for Evaluation of Labour Market and Education Policy (IFAU) Report 2021:2.

<sup>45</sup> See, for example, M. Engdahl, M. Godard and O. Nordström Skans, "Early Labor Market Prospects and Family Formation", IZA Discussion Paper 12092, 2019, D. Müller, "Lost Opportunities: Market Work during High School, Establishment Closures and the Impact on Career Prospects", in Social Networks and the School-to-Work Transition, Economic Studies 189, Uppsala University, 2020 and O. Åslund and D.-O. Rooth, "Do when and where matter? Initial labour market conditions and immigrant earnings", The Economic Journal, 117, pp 422-448, 2007.



**Figure 31. Unemployment among young people, foreign-born persons and Swedish-born persons**

Per cent of the labour force, seasonally adjusted data



Source: Statistics Sweden.

### Faster pace of structural transformation means higher unemployment but also higher productivity

Structural transformation is normally faster during economic crises. Although this is positive for productivity and prosperity in the long term, it also causes higher unemployment for a period. Earlier crises show that this period can be long as it takes time for the labour market to adapt. The magnitude of the effect of the pandemic on structural transformation is difficult to assess and depends in part on how permanent the changes in the behaviour of households and companies will be.<sup>46</sup> Demand in many sectors has recovered somewhat from the sharp fall in the spring of 2020. For example, manufacturing companies reported some recovery and an increase in new orders and production in the autumn.<sup>47</sup>

Services that presuppose physical proximity, gather many people together or are linked to travel have been hit hardest in the COVID crisis. Demand for many such services, for example, restaurant, hairdressing and culture services, will probably largely recover as many people are interested in and want to consume such services, but have refrained from them due to the risk of infection and the restrictions. Sectors in which structural transformation was already underway prior to the crisis will probably not recover as well. An example of this is physical retail outlets, which are being replaced by growing e-Commerce. There are also sectors where it is more difficult to predict whether behavioural changes will be permanent or not. For example, the travel sector may be affected more lastingly if digital meetings replace much of business travel.

<sup>46</sup> See I. Häkkinen Skans, "The coronavirus crisis and the labour market – effects in the short and long term", Economic Commentary no. 1, Sveriges Riksbank, 2021 and the article "The long-term economic effects of the pandemic are uncertain", Sveriges Riksbank, Monetary Policy Report, November 2020.

<sup>47</sup> See The Riksbank's Business Survey, December 2020, Sveriges Riksbank.

## **The effects of the pandemic on the labour market will be long-lasting**

The assessment of the Riksbank is that the pandemic will have long-lasting negative effects on the labour market. Unemployment is expected to rise and employment and the number of hours worked are expected to fall. However, the effects will not be permanent but will wear off after a while. The magnitude of the effects is difficult to judge in the current situation as it depends on how long the pandemic goes on, how much unemployment rises during the pandemic, what measures are implemented to mitigate the effects on the labour market and the way the support measures are phased out. Reforms that promote a more inclusive labour market, greater mobility and possibilities for education and workplace training could counteract high unemployment in the long term.

## **Effects on production and productivity growth**

During the coronavirus pandemic, some companies have experienced disruptions in global supply and production chains, which may lead to “re-shoring”, that is companies reorganising their value chains so that some production is moved from abroad to Sweden or more adjacent countries.<sup>48</sup> Productivity growth is expected to be affected negatively in such a scenario, as companies will no longer be able to take full advantage of the specialisation of work tasks in global value chains. The negative effects on productivity growth of re-shoring may to a certain extent be countered by increased digitalisation making it easier to disseminate knowledge and new technology globally even though production takes place more locally. More local production also makes labour more expensive, but this may lead to companies investing more in labour-saving technology in the longer term, which will cause productivity growth to increase again.

In a short time, the pandemic has forced companies to come up with more efficient solutions, such as more flexible workplaces and new digital tools, which can increase productivity growth. Increased digitalisation of the retail sector is another example of how the pandemic can reinforce a structural transformation that is already underway. Faster structural transformation usually leads to higher productivity growth.

But it is normal for deep economic crises to lead to reduced risk appetite and reduced investment and thus have long-term negative effects on productivity growth. Although investment has not yet decreased as much as feared, it is too early to say whether the pandemic is affecting the long-term investment of companies. In addition, prolonged high unemployment leads to the labour force becoming less productive. Furthermore, the increased sickness absence in schools may harm the abilities and skills of students, which will also have negative effects on the productivity of the labour force in the long term.

Greater digitalisation and faster structural transformation as a result of the pandemic will increase long-term productivity growth. At the same time, however, reduced globalisation, reduced investment and long-term high unemployment tend to reduce

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<sup>48</sup> See The Riksbank's Business Survey, May 2020, Sveriges Riksbank.

productivity growth. In the Riksbank's view, therefore, it is not currently possible to assess whether total long-term productivity growth will be higher or lower as a result of the pandemic.

## Effects on inflation

The pandemic has contributed to low inflation in 2020 but its effects on inflation in the slightly longer term are difficult to assess.<sup>49</sup> High unemployment and low resource utilisation cause companies' costs to increase more slowly and dampen price growth. This would suggest that inflation will be low over the next few years. The key question is to what extent this will spill over to potential productivity or to long-term inflation expectations. In the very long term, however, the weak development in the real economy, which is nevertheless assessed as temporary, should not affect inflation and the Riksbank's ability to uphold the inflation target.

There is also a risk that the pandemic will lead to higher inflation in the longer run. Concerns over the potential of the powerful monetary and fiscal policy measures the world over to cause higher inflation due to the increase in liquidity and indebtedness have been highlighted in the debate. There are several examples of such sequences in history. Re-shoring can also cause inflation to rise as a result of increased production costs and subdued productivity. Finally, lower growth in the labour force, due to an ageing population, could lead to poorer public finances and higher inflation, a development possibly hastened by the pandemic.<sup>50</sup>

The Riksbank's overall assessment is that the weak demand and low resource utilisation in Sweden and abroad indicate dampened inflationary pressures in the years to come. But there are also of factors that may lead to higher price growth in the longer term.

## Appropriately designed economic policy measures can support the recovery

The comprehensive economic policy measures introduced during the pandemic have mitigated the negative effects on the economy. How such crisis measures are designed is important since it will often lead to lower costs in the long run if they manage to help companies survive the crisis and keep unemployment down.

Appropriately designed economic policy measures can also support the economic recovery. The monetary policy measures are keeping interest rates low for households and companies and thereby support general economic development. Expansionary monetary policy also contributes to higher employment and lower unemployment. A

<sup>49</sup> See, for instance, the article "Inflation outlook during the corona crisis", Sveriges Riksbank, Monetary Policy Report, July 2020.

<sup>50</sup> See the discussion in C. Goodhart and M. Pradhan, "The great economic reversal: Ageing societies, waning inequality and an inflation revival", Palgrave Macmillan, 2020. This book's main message is that the previously highly favourable demographic conditions, particularly in China, and rising degree of globalisation are in the process of changing. In this case, the labour force's opportunities to negotiate conditions will improve, leading to higher wage growth, higher inflation and greater equality.

combination of expansionary fiscal policy that stimulates investment and structural reforms, in part to improve the job-finding rate for low-educated and foreign-born persons, could lead to higher employment, higher productivity and higher growth in the longer run.

## ARTICLE – The Riksbank's development work

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The focus of the Riksbank's monetary policy development work in 2020 was naturally on the coronavirus pandemic and its economic consequences. To quickly obtain information about developments in the economy, the Riksbank began collecting real-time indicators and supplementing the business survey with more frequent interviews. In addition, the Riksbank has analysed the macroeconomic effects of the pandemic, on, for example, the labour market and inflation. Extensive effort has also been put into analysing and implementing new monetary policy tools.

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### Focus on the economic effects of the coronavirus pandemic

In 2020, the Riksbank has worked on trying to understand and analyse the economic consequences of the coronavirus pandemic. When the crisis hit, the Riksbank needed to start collecting what is known as real-time data, data that is not published with a time-lag, in order to quickly gain an understanding of the economic consequences of the pandemic. Regular and frequent telephone interviews were also initiated with the Swedish companies included in the Riksbank's Business Survey to find out their views on the current economic situation.

A short-term effect of the pandemic was that it became more difficult to measure inflation, as many products were no longer consumed. Trying to understand how changed consumption patterns affected inflation became an important part of the monetary policy analysis. During the year, the Riksbank has also tried to analyse the effects of the crisis on productivity and employment – not just in the near term but also in the longer run.

Because of the substantial economic effects of the crisis, analyses and the implementation of new monetary policy tools became a key component of the Riksbank's development work during the year. Among the new tools adopted by the Riksbank in 2020 were the funding for lending programme (loans to banks for onward lending to companies) and purchases of corporate debt securities, covered bonds and municipal bonds. When it came to evaluating the effect of the monetary policy measures on banks' lending, the Riksbank's new KRITA database, developed in cooperation with Statistics Sweden, proved particularly useful.

As regards other development work during the year, the Riksbank continued its analysis of several of the long-term macroeconomic trends observed prior to the pandemic, including weak productivity growth, falling global real interest rates and the digitalisation of the economy. The Riksbank also performed several analyses of the economic

consequences of climate change. The work to better understand the driving-forces behind the exchange rate was described in detail in the 2019 report and continued in 2020. The Riksbank also began using a new macroeconomic model in its forecasting work during the year.

**Table 6. Studies conducted in 2020 related to monetary policy.**

Year of publication 2020, unless otherwise specified

Articles in Monetary Policy Reports
"Inflation not fully comparable between countries", February.
"What has happened to the financial conditions since the autumn of 2018?", February.
"The Riksbank's balance sheet is growing", April.
"The central banks' measures", April.
"Are those on short-term work schemes unemployed?", April.
"More difficult to calculate inflation", April
"The Swedish market for corporate bonds," July.
"Economic development according to two alternative scenarios", July.
"Inflation outlook during the corona crisis", July.
"The long-term effects of the pandemic on output and employment", July.
"How the Riksbank's measures have worked during the corona crisis", September
"Two alternative scenarios for the development of the economy," September.
"How is the Riksbank's work affected by climate change?", November.
"Distributional effects of the Riksbank's measures", November.
"The long-term economic effects of the pandemic are uncertain", November.
Economic Commentaries
N. Engström, "New challengers on the mortgage market – Increased competition and possible pressure on interest rates", No. 1.
I. Häkkinen Skans, "Why are labour force participation and employment increasing among older people?", No. 2.
J. Ewertzh, T. Falk, M. Hesselman, I. Hull, M. Löf, O. Stigland and M Tibblin, "Real-time indicators provide information support during rapid cyclical turnarounds", No. 3.
H. Armelius, C. A. Claussen, D Vestin, "Money and monetary policy in times of crisis", No. 4.
Y. Akkaya, C-J. Belfrage, V. Corbo and P. Di Casola, "GDP growth in Sweden relative to other countries in the wake of Covid-19", No. 5.
E. Frohm, J. Grip, D. Hansson and S. Wollert, "Two-tier credit developments during the coronavirus pandemic", No. 6.
E. Bylund and M. Jonsson, "How does climate change affect the long-run real interest rate?", No. 11.
M. Lindskog and I. Strid, "Efficient vaccination against COVID-19 entails major macroeconomic benefits", No. 13.
J. Johansson, M. Löf and O. Tysklind, "Changed consumption during the pandemic affects inflation", No. 14.

**Economic Commentaries**

I. Häkkinen Skans "The corona crisis and the labour market - effects in the short and the long term", No. 1 2021.

**Sveriges Riksbank Economic Review**

E. Frohm and S. Ingves "The future isn't what it used to be – perspectives on changes in the Swedish economy", No. 1.

B. Andersson, M. Jonsson and H. Lundvall, "The new macroeconomic landscape after the global financial crisis", No. 1.

H. Lundvall, "What is driving the global trend towards lower real interest rates?", No. 1.

P. Bacchetta and P. Chikani, "On the weakness of the Swedish krona", No 1 2021.

M. Gislén, I. Hansson and O. Melander, "Dollar liquidity from the Federal Reserve to other central banks", No. 1 2021.

P. Gustafsson and T. von Brömsen, "The coronavirus pandemic: The Riksbank's monetary policy and financial developments in spring and summer 2020", No.1 2021.

O. Melander, "Effects on financial markets of the Riksbank's government bond purchases 2015–2017", No. 1 2021.

**Staff Memo**

O. Tysklind, "Quality adjustments and international price comparisons", January.

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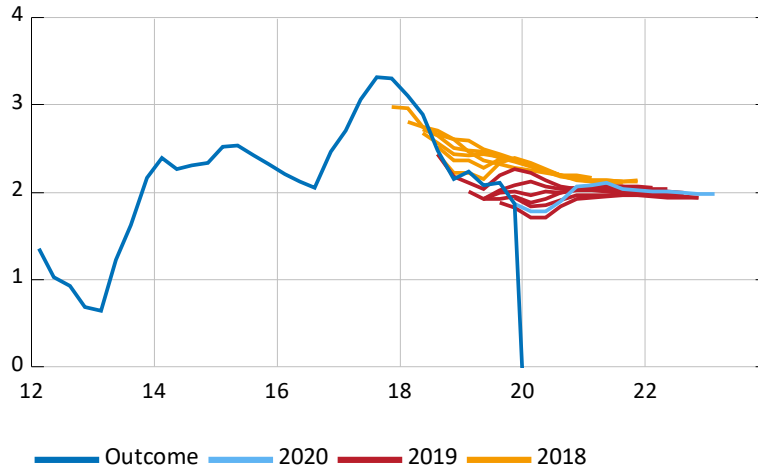
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## Appendix- Figures

**Figure 32. GDP abroad, outcome and forecasts**

KIX-weighted, annual percentage change

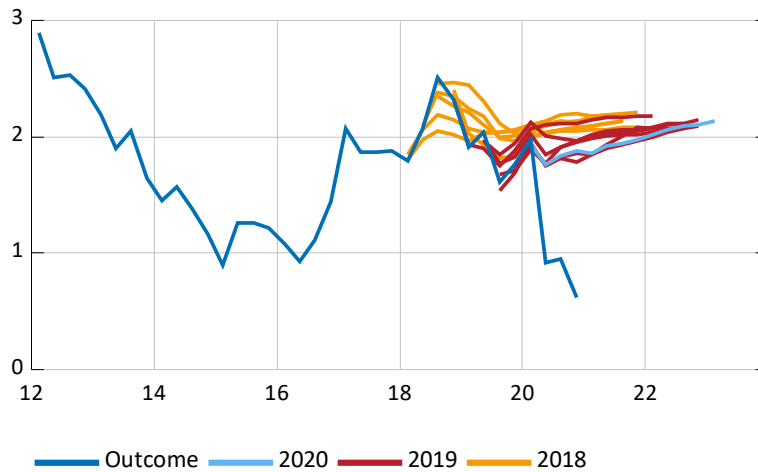


Note. The yellow and red lines represent the Riksbank's forecasts 2018 and 2019. The light blue line represent the Riksbank's forecast for February 2020. KIX refers to an aggregate of countries that are important for Sweden's international transactions.

Sources: National sources and the Riksbank.

**Figure 33. Inflation abroad, outcome and forecasts**

KIX-weighted, annual percentage change

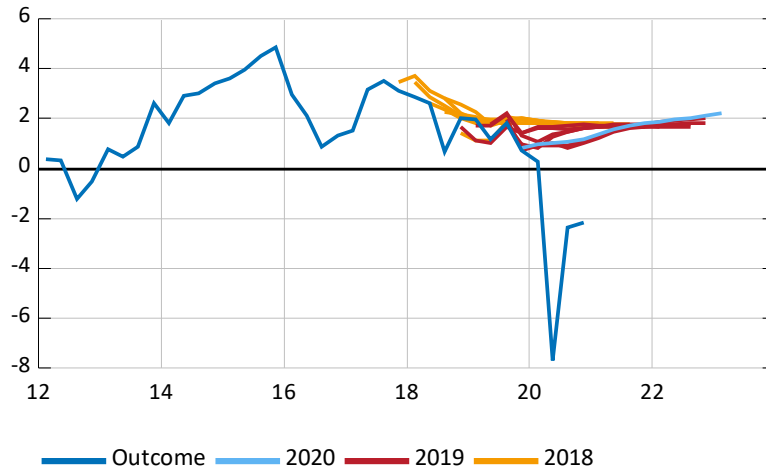


Note. The yellow and red lines represent the Riksbank's forecasts 2018 and 2019. The light blue line represent the Riksbank's forecast for February 2020. KIX refers to an aggregate of countries that are important for Sweden's international transactions.

Sources: National sources and the Riksbank.

**Figure 34. GDP, outcome and forecasts**

Annual percentage change, calendar-adjusted data

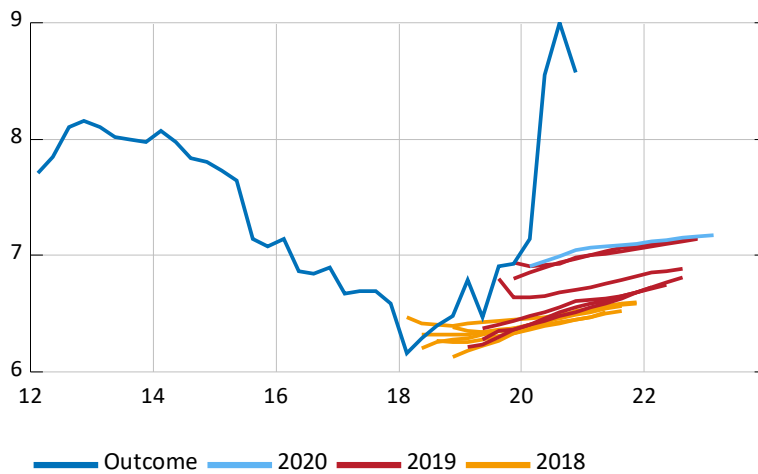


Note. The yellow and red lines represent the Riksbank's forecasts 2018 and 2019. The light blue line represent the Riksbank's forecast for February 2020.

Sources: Statistics Sweden and the Riksbank.

**Figure 35. Unemployment, outcome and forecasts**

Per cent of the labour force, aged 15-74, seasonally-adjusted data

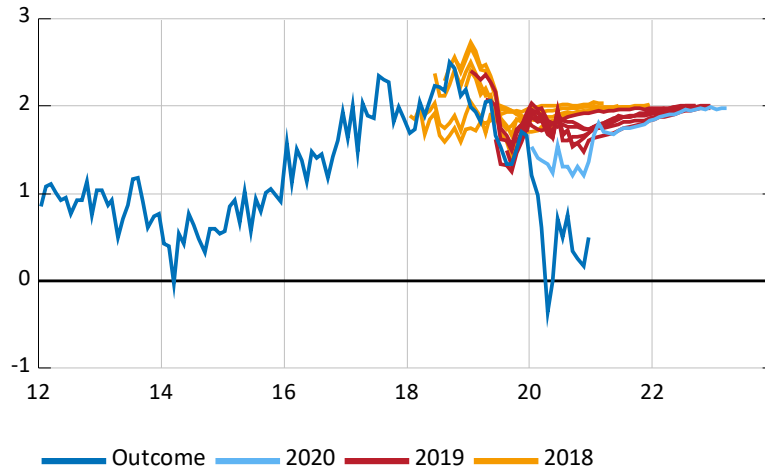


Note. The yellow and red lines represent the Riksbank's forecasts 2018 and 2019. The light blue line represent the Riksbank's forecast for February 2020.

Sources: Statistics Sweden and the Riksbank.

**Figure 36. CPIF, outcome and forecasts**

Annual percentage change

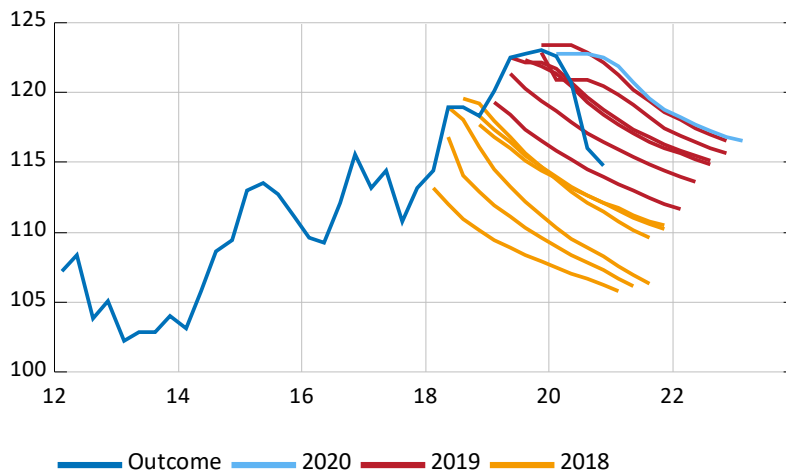


Note. The yellow and red lines represent the Riksbank's forecasts 2018 and 2019. The light blue line represent the Riksbank's forecast for February 2020.

Sources: Statistics Sweden and the Riksbank.

**Figure 37. KIX-weighted nominal exchange rate, outcome and forecasts**

Index, 18 November 1992 = 100

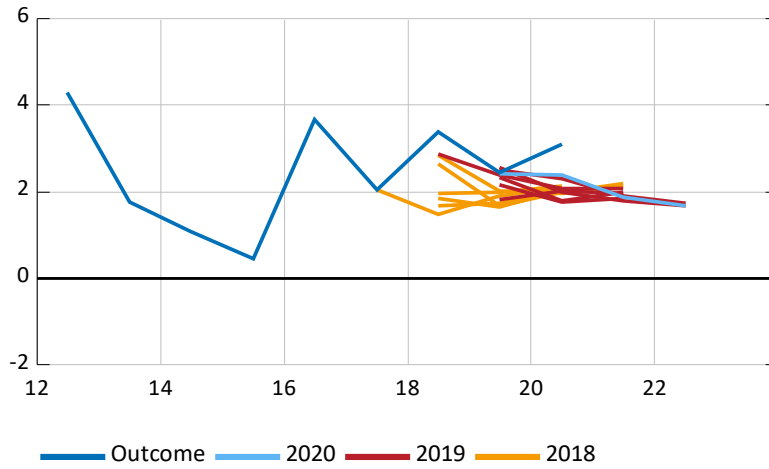


Note. The yellow and red lines represent the Riksbank's forecasts 2018 and 2019. The light blue line represent the Riksbank's forecast for February 2020. The KIX (krona index) is a weighted average of the krona exchange rate against currencies in countries that are important for Sweden's international transactions. A higher value indicates a weaker exchange rate.

Sources: National sources and The Riksbank.

**Figure 38. Unit labour cost, outcome and forecasts**

Annual percentage change

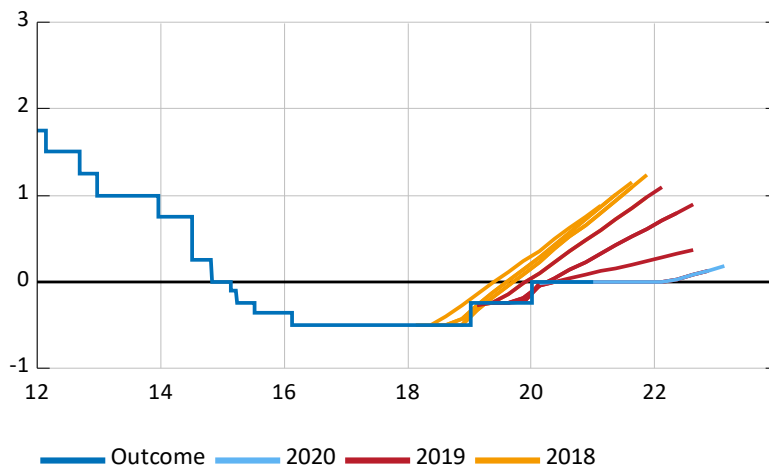


Note. The yellow and red lines represent the Riksbank's forecasts 2018 and 2019. The light blue line represent the Riksbank's forecast for February 2020.

Source: Statistics Sweden and the Riksbank.

**Figure 39. Repo rate, outcome and forecasts**

Per cent



Note. The yellow and red lines represent the Riksbank's forecasts 2018 and 2019. The light blue line represent the Riksbank's forecast for February 2020. Outcomes are daily data and forecasts refer to quarterly averages.

Source: The Riksbank.



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