

# Monetary Policy Report

September 2020



Rectification 22 September 2020

An incorrect figure has been corrected in the box on page 34 in Chapter 3.

## Monetary Policy Report

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

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

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

The Executive Board made a decision on the Monetary Policy Report on 21 September 2020. 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.

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<sup>1</sup> See "Monetary policy in Sweden" on the next page for a description of the monetary policy strategy and what can be regarded as an appropriate monetary policy.

# Monetary policy in Sweden

## MONETARY POLICY STRATEGY

- According to the Sveriges Riksbank Act, the objective for monetary policy is to maintain price stability. The Riksbank has defined this as a 2 per cent annual increase in the consumer price index with a fixed interest rate (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 five monetary policy meetings per year at which it decides on monetary policy. A Monetary Policy Report is published in connection with these meetings. Approximately two weeks after each monetary policy meeting, the Riksbank publishes minutes from the meeting, in which it is possible to follow the discussion that led to the current decision and to see the arguments put forward by the different Executive Board members.

## PRESENTATION OF 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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## CHAPTER 1 – Monetary policy support for economic recovery

The corona pandemic has had a dramatic impact on the global economy this year, with sharp falls in GDP in countries around the world. With the support of extensive economic policy stimulus from governments and central banks, the economic recovery has begun. Although the recovery will continue in the coming years, the effect on the global economy will be prolonged and future developments are fraught with down-side risks, in both the short and the longer term.

Outcomes and indicators point to the Swedish economy having left the acute crisis situation of the spring and now having started to recover. But it is still a long way back, and the situation on the labour market is worrying, with high unemployment as a result of the sharp decline in economic activity in the spring. In recent months, inflation has indeed been higher than expected, but on the whole, inflation looks to be low in 2020. It will take time before demand in the economy is back to a normal level, causing a delay before inflation is back close to 2 per cent more permanently.

To continue providing support to economic development and so that inflation rises towards the target in the longer term, monetary policy needs to help safeguard credit supply and maintain low interest rates in the coming years. The Executive Board assesses that the combination of measures taken by the Riksbank during the spring and summer is the most effective way of achieving this. The Riksbank will therefore continue to make extensive asset purchases and offer liquidity within all of the programmes launched so far this year, and will hold the repo rate unchanged at zero per cent.

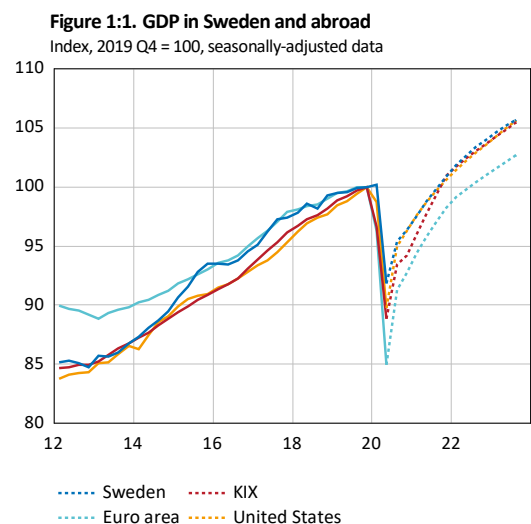
### Risk of setbacks as the global economy starts to recover

#### Long way back for the global economy

The pandemic has left its mark on economic development this year. The extensive restrictive measures to slow the rate of infection and allay people's concerns about falling ill paralysed economic activity in many countries around the world in the spring, resulting in substantial falls in production (see Figure 1:1).

In many areas, restrictions were gradually eased at the beginning of the summer after the number of new infections had declined to low levels. However, the number of newly registered cases has increased again, first in the United States in mid-July and more recently also in Europe. Although this is largely due to an increase in COVID-19 testing, the new outbreaks of infection are a cause for concern. The increase in infections has led to a slowdown in the phasing-out of restrictions (see Figure 1:2). The basis of the Riksbank's main scenario is that it will take until next year before infections decrease and a clear downward trend in restrictive measures becomes visible.

The economic recovery – which in most areas began in May – has continued over the summer, albeit at a slower pace. Outcomes show that global trade and industrial output recovered significantly in June, even though the level is still much lower than before the crisis. Retail sales turnover in both the



Note. KIX is an aggregate of the countries that are important to Sweden's international trade.

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

United States and the euro area are at higher levels than prior to the crisis, however. Various real-time indicators also support the picture of the decline reaching a trough in March and April and that economic activity has picked up since then.

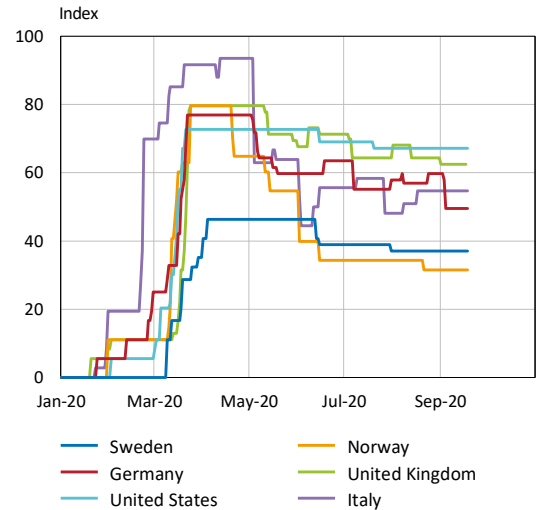
But although the recovery has started, it is clear that the GDP level is much lower than pre-crisis levels. The economic effects of the crisis have varied between sectors; some operations have closed down and companies have gone out of business, while others have experienced an increase in demand. It is the sectors that are more directly affected by the restrictions on social life that have been hit hardest. In industries such as transport, hospitality, culture and entertainment, tourism and travel agencies, as well as parts of the retail sales – especially sales of clothing and shoes – it is expected to take time for turnover to recover. GDP may also be affected in the longer term by structural transformation and changes to consumer behaviour as a result of the corona pandemic.

The powerful economic policy stimulus implemented by governments and central banks are important for the continued recovery in the global economy.<sup>2</sup> A pent-up consumption and investment need, combined with a high level of saving in the household sector to begin with, is also expected to create conditions for the upturn. But resource utilisation is not expected to reach approximately normal levels until the end of the forecast period. Future developments are fraught with risks to economic activity, but also considerable uncertainty over what long-term effects the pandemic will have on growth potential in the global economy. It is however too early to say whether the crisis will lead to, for example, persistently lower global trade, a larger number of long-term unemployed people and greater caution among households and companies.<sup>3</sup> In the Riksbank's main scenario, the coronavirus is assumed to have some such persistent effects on the economy to a certain extent. The article "Two alternative scenarios for economic development" in Chapter 3 also illustrates a worse scenario which gives rise to greater, more lasting negative effects.

The decline in demand caused by the pandemic has, together with low energy prices, meant that the KIX-weighted inflation rate in this year is expected to fall to just over 1 per cent. As the recovery progresses, inflation is expected to rise and in 2022 it is projected to be just below 2 per cent.

The situation in the financial markets has continued to improve. Key explanations for this development are the expansionary monetary policy in combination with measures from governments and authorities around the world. Equity prices have risen and yields on more risky bonds have fallen. At

**Figure 1:2. 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, such as closing of schools, 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.

Source: Oxford COVID-19 Government Response Tracker (OxCGRT)

<sup>2</sup> See the article "Measures taken by the central banks" in the Monetary Policy Report, April 2020 and the boxes "The Swedish Government's crisis measures" in the Monetary Policy Report, April 2020, "Fiscal policy support measures abroad" in the Monetary Policy Report, July 2020 and "Next Generation EU" in this report.

<sup>3</sup> The concerns about the long-term effects of the crisis are being discussed in many contexts. At the Federal Reserve Bank of Kansas City Economic Symposium at Jackson Hole in August 2020, for example, the working paper "Scarring Body and Mind: The Long-Term Belief-Scarring Effects of COVID-19" by Julian Kozlowski, Laura Veldkamp and Venky Venkateswaran was presented.



the same time, the exchange rate for the Swedish krona has appreciated, given the improved sentiment on financial markets.

#### From acute crisis to gradual recovery in the Swedish economy

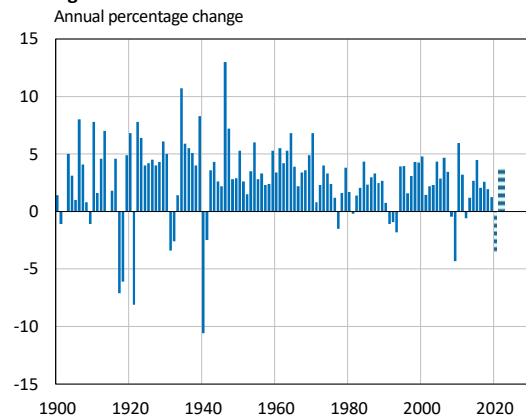
The negative effects of the crisis hit the Swedish economy hard during the second quarter. GDP fell by 8.3 per cent, which was the largest decline in an individual quarter since 1980, when Statistics Sweden's quarterly GDP surveys began. Compared with most other European countries and the United States, however, the downturn was somewhat milder in Sweden during the first half of the year.

Indicators and statistics that can be followed on a daily, weekly and monthly basis indicate that the economy has begun to recover. Similar to the monthly statistics for household consumption and foreign trade, Statistics Sweden's new activity indicators showed some upturn in monthly activity in the Swedish economy in June and July, after sharp falls in April and May.<sup>4</sup> The Economic Tendency Survey points to some recovery in companies' turnover in July, and the statistics on card transactions show that consumption increased in July and August.

Even though the recovery in GDP will be rapid to start with, the sharp fall means that GDP will not reach the trend development predicted by the Riksbank prior to the pandemic even at the end of the forecast period. In total, Swedish GDP is expected to fall by almost 4 per cent this year, which is on a par with the downturn during the financial crisis (see Figure 1:3). As the restrictions are eased going forward, demand is expected to grow and GDP to increase by on average 4 per cent a year in 2021 and 2022.

The corona crisis has also had a substantial impact on the Swedish labour market. In the spring, when many companies experienced a dramatic fall in demand, the number of redundancy notices increased dramatically. In addition, many temporarily employed persons were laid off and unemployment rose rapidly. The short-time work schemes have meant that many employees have been able to keep their jobs even in companies that have suffered production halts or large falls in demand. But the situation is still difficult and in many industries, it is uncertain how many of those on short-time work schemes and/or those who have been given notice of redundancy will lose their jobs going forward. Although the situation on the labour market appears to have stabilised over the summer, unemployment is nevertheless expected to continue to rise slightly, in light of falling employment in the second half of the year. At the end of the year, unemployment is projected to have risen to 9.6 per cent despite many being expected to leave the labour force in order to study, for example.

Figure 1:3. GDP in Sweden 1900–2022



Note. The series refers to data from historical monetary statistics for Sweden issued by the Riksbank up to end of 1950, after that by Statistics Sweden.

Sources: Statistics Sweden and the Riksbank

<sup>4</sup> For more details on Statistics Sweden's activity indicators, see the box "Monthly indicators to follow economic activity" in Chapter 3.

**Low inflation in the wake of the corona crisis**

The Riksbank’s measure of underlying inflation shows that more persistent inflation (which often excludes energy prices for example) has been relatively stable this year. The median of the various measures amounted to 1.6 per cent in August (see Figure 1:4). However, falling electricity and fuel prices have pushed down CPIF inflation significantly during the first half of the year. In August, CPIF inflation was 0.7 per cent. Adjusted for energy prices, inflation amounted to 1.4 per cent (see Figure 1:5).

The pandemic has led to more volatile inflation numbers. The prices of certain services, such as foreign travel and car rentals, have been particularly affected. Some of the price fluctuations have been due to actual price changes, while others have been a result of temporarily amended measurement methods (see the box “Temporary effects holding inflation down in 2020” in Chapter 3).

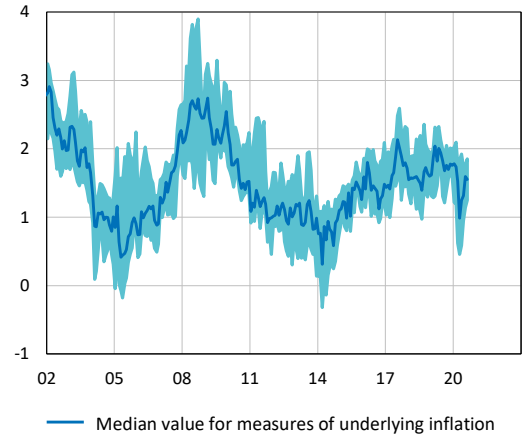
In recent months, CPIF inflation has indeed been higher than expected, but inflation is nevertheless expected to be low in 2020. Next year, price movements directly linked to the pandemic are expected to have less impact on the inflation numbers. Energy prices are expected to continue rising from their current levels, which will make a positive contribution to CPIF inflation, while the appreciation of the krona is expected to have a partially counterbalancing effect. As demand grows and inflation abroad rises, the Swedish inflation is also expected to rise slowly. But it will take time before resource utilisation in the economy is back to a normal level, which means there will also be a delay before CPIF inflation is back at 2 per cent more permanently. However, it is still difficult to know how the crisis will affect inflation in the longer run. The pandemic has triggered many structural changes, which can contribute to both higher and lower inflation and there is thus considerable uncertainty surrounding the inflation forecast.<sup>5</sup>

If the crisis were also to affect more long-term inflation expectations, there is a risk that the low inflation will last longer. As inflation has fallen, inflation expectations have also fallen somewhat in the past year (see Figure 1:6). But in light of the dramatic economic slowdown, the decline in longer-term inflation expectations, according to both surveys and market pricing, has so far been minor and expectations remain quite close to 2 per cent.

**Monetary policy for continued low interest rates**

Central banks around the world have taken powerful action to alleviate the negative economic consequences of the pandemic and avoid the crisis worsening due to problems on financial markets. Central bank policy rates are close to zero per cent and have been supplemented by other monetary policy measures. In addition to the policy rate, the measures at the disposal of

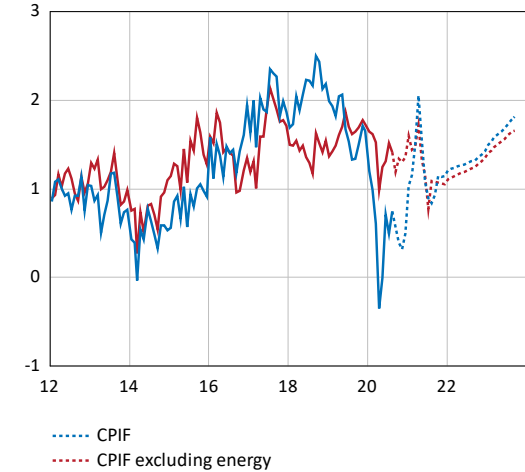
**Figure 1:4. Different measures of underlying inflation**  
Annual percentage change



Note. The field shows the highest and lowest outcomes 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).

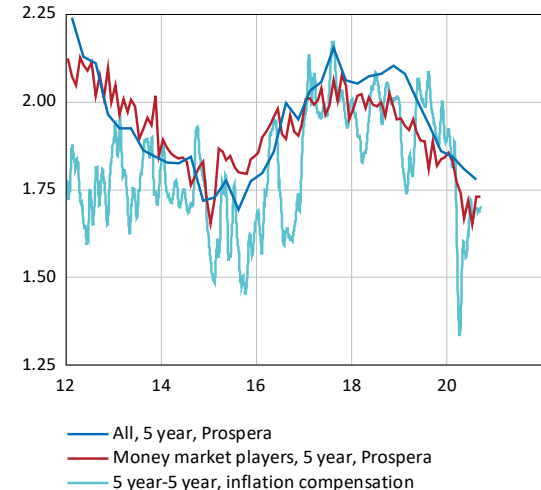
Sources: Statistics Sweden and the Riksbank

**Figure 1:5. CPIF and CPIF excluding energy**  
Annual percentage change



Sources: Statistics Sweden and the Riksbank

**Figure 1:6. Long-term inflation expectations**  
Per cent



Note. Inflation compensation refers to a 5-year period starting in 5 years’ time, calculated on the basis of bond yields, 15 days moving average.

Sources: Kantar Sifo Prospera and the Riksbank

<sup>5</sup> See, for instance, the article “Inflation outlook during the corona crisis” in Monetary Policy Report, July 2020.

central banks include expanding the balance sheet in order to facilitate credit supply, pushing down interest rate margins and increasing liquidity in the economy by creating a surplus supply of central bank liquidity.<sup>6</sup>

The monetary safety nets provided by the Riksbank in recent months are summarised in Table 1 below. They are aimed at keeping interest rates low and contributing to a well-functioning credit supply by supporting market functioning. This creates the conditions for a good recovery in the Swedish economy, which will help inflation to rise towards the target in the longer run. The programme for corporate lending via monetary policy counterparties comprises SEK 500 billion, of which 164.5 billion has so far been utilised. The framework for the Riksbank's asset purchases amounts to SEK 500 billion and so far, purchases have been made for a total of just over SEK 190 billion in the different asset categories.

Developments so far indicate that the measures have largely worked as intended. Interest rates for companies and households have remained low and credit supply in the economy has functioned well (see the article "How the Riksbank's measures have functioned during the corona crisis"). This is providing support to the economic recovery that is now under way.

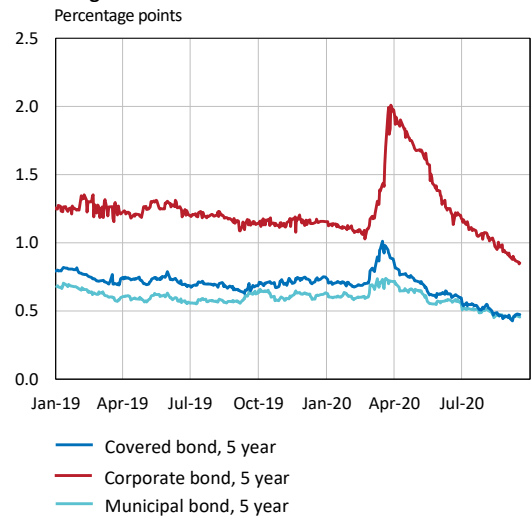
#### The Riksbank is buying securities and offering liquidity

Since July, developments both globally and in Sweden have been in line with the forecasts presented in the last Monetary Policy Report. Growth abroad has been slightly higher than expected during the summer, although development in some countries looks like it will be somewhat weaker in the autumn. In Sweden, developments in both GDP and the labour market have been slightly stronger and inflation has also increased to a small degree. All in all, however, the revisions to the economic prospects and outlook for inflation are minor.

The different programmes launched by the Riksbank since the coronavirus outbreak have had a calming effect on the markets, and bond yields have on the whole fallen (see Figure 1:7). A general increase in interest rates in the economy has been avoided and the possibilities for companies to borrow money from banks or issue bonds have improved compared to March.

Inflation is expected to rise during the forecast period, although the depth of the crisis means that it will take time before inflation is expected to be back at 2 per cent more permanently. However, developments going forward are still fraught with downside risks both in the short and the long term, and stability on the financial markets is dependent on support from central banks. To continue to provide support to economic development, monetary policy need to help maintain credit supply and keep interest rates low in the years ahead. The Executive Board assesses that the combination of measures

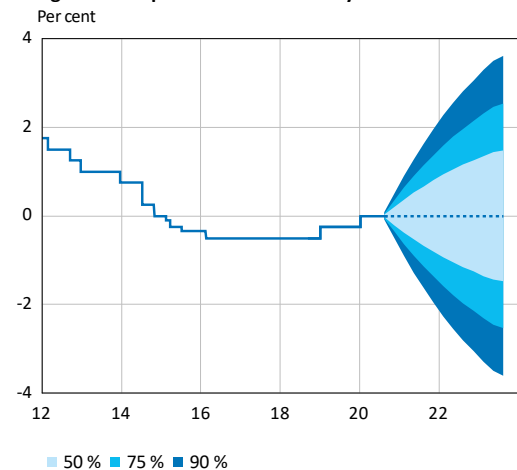
**Figure 1:7. Yield differential between different types of bonds and government bonds**



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.

Sources: Macrobond, Refinitiv and the Riksbank

**Figure 1:8. Repo rate with uncertainty bands**



Note. The uncertainty bands for the repo rate are based on the Riksbank's historical forecasting errors and the ability of risk-premium adjusted forward rates to forecast the future repo rate for the period 1999 up to the point when the Riksbank started to publish forecasts for the repo rate during 2007. The uncertainty bands do not take into account the fact that there may be a lower bound for the repo rate. Outcomes are daily rates and forecasts refer to quarterly averages.

Source: The Riksbank

<sup>6</sup> Other measures that in itself does not increase the balance sheet have also been implemented by the Riksbank for the same purpose. For example, the Riksbank offers loans to banks in weekly extraordinary market operations and has lowered the interest rate in the standing facility and eased the collateral requirements for loans to banks.

taken by the Riksbank during the spring and summer is the most effective way of achieving this. The Riksbank will therefore continue to make asset purchases and offer liquidity within all of the programmes launched so far this year, and will hold the repo rate unchanged at zero per cent. The repo rate is expected to remain at zero per cent for the entire forecast period (see Figure 1:8).

Within the framework of SEK 500 billion, purchases of government bonds, covered bonds and municipal bonds will continue during 2020 and the first half of 2021 (see Figure 1:9). On week 38, purchases of corporate bonds were initiated (see the box “The Riksbank’s purchases of corporate bonds”). More details of the bond purchases for the rest of 2020 were presented in July. How the breakdown into different types of bond will look in the first half of 2021 will be decided later. With effect from the second half of 2021, the size of the holdings is expected to be maintained via further purchases that will compensate for different types of assets reaching maturity (see Figure 1:10).

**Interplay between different policy areas important in order to support the Swedish economy during recovery**

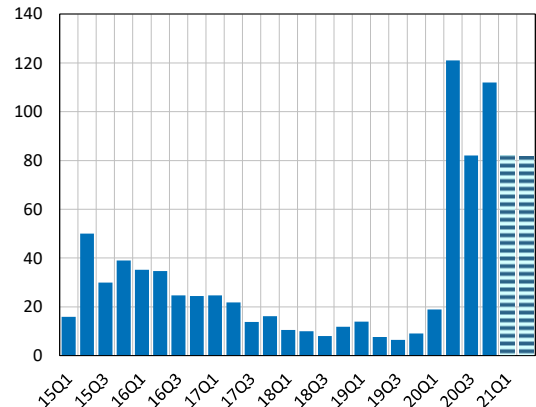
The measures taken by the government, the Riksbank and other authorities are aimed at alleviating the crisis and creating the conditions for an economic recovery. This year, the Riksdag (the Swedish Parliament) has decided on fiscal policy measures of historic proportions. The government’s efforts, combined with powerful automatic stabilisers, have helped limit the fall in GDP. At the same time, the Riksbank’s measures have kept interest rates low in the economy and facilitated credit supply. Low interest rates give fiscal policy a greater impact.

Comprehensive economic policy support will be needed over a long period of time to bring the economy back towards a more normal situation. Fiscal policy will then have an important role to play, as it is not possible to restore economic activity solely with monetary policy. For example, fiscal policy measures can be more accurately targeted at sectors in the economy in which the problems caused by the pandemic are particularly serious. As public debt is low, the conditions are in place for fiscal policy to effectively stimulate demand. In the budget bill, the government presented measures that will weaken the financial balance by SEK 105 billion. This is also a very extensive budgetary measure in a historical perspective and a key driver of the recovery that is expected in 2021.

**Uncertainty remains – continued preparedness to take action**

There are factors that could lead to both higher and lower inflation and thus make the Riksbank’s forecast uncertain (see Figure 1:11). Economic developments both globally and in Sweden in recent months have been largely as the Riksbank expected, and the forecasts remain largely unchanged in relation

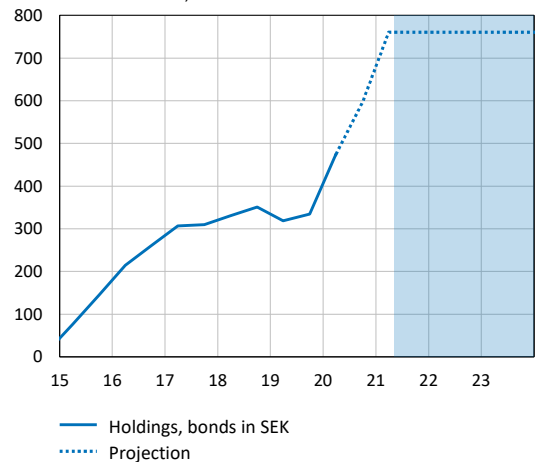
**Figure 1:9. Purchases of bonds in Swedish kronor**  
Nominal amounts, SEK billion



Note. Refers to purchases of government bonds, municipal bonds, covered bonds and corporate bonds. The broken bar is a forecast based on decided purchases and on the assumption that the total scope is utilised.

Source: The Riksbank

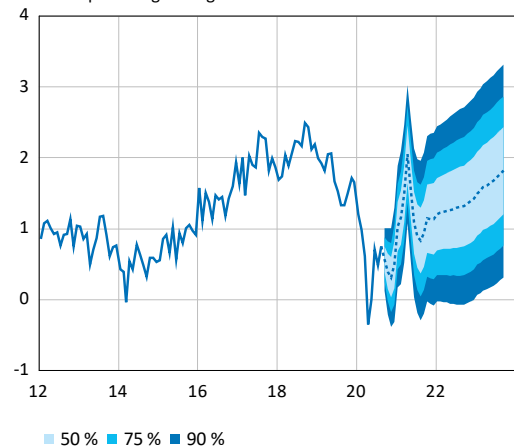
**Figure 1:10. The Riksbank’s holdings of bonds**  
Nominal amounts, SEK billion



Note. Forecast up to June 2021 refers to bond purchases that have been decided on, under the assumption that the entire framework is used. After that (shaded area) a projection based on an assumption of future decisions on purchases to an extent that compensates for maturities.

Source: The Riksbank

**Figure 1:11. CPIF with uncertainty bands**  
Annual percentage change



Note. The uncertainty bands are based on the Riksbank’s historical forecasting errors.

Sources: Statistics Sweden and the Riksbank

to those presented in July. But the considerable uncertainty surrounding the main scenario as a result of the pandemic and its economic consequences in the short and long term still remains. As an illustration of this uncertainty, a more optimistic and a more pessimistic scenario are presented in the article “Two alternative scenarios for economic developments” in Chapter 3.

The main scenario assumes that there will be comprehensive monetary policy stimulus in the form of low interest rates and ample liquidity in the banking system for the foreseeable future.

In a worse scenario, the need for stimulatory measures would be even greater. Asset purchases and measures to promote lending in the economy would then continue to be important tools to provide powerful support to the economy and inflation if the need increases. With a policy rate already at zero per cent, the scope for large rate cuts is limited. However, the possibility of a repo rate cut cannot be ruled out if it is judged effective, particularly if confidence in the inflation target were under threat. Several factors that are currently difficult to assess will determine whether it is appropriate to cut the repo rate to negative levels again. These factors include the development of the exchange rate, how fast the supply side of the economy recovers in relation to the demand side, and how a lower policy rate is assessed to affect interest rates in general and ultimately consumption and investment.

It is the circumstances of the crisis that determine which combination of fiscal and monetary policy is most appropriate to give the economy the best support. Demand in the economy can be effectively supported with fiscal policy, as public finances in Sweden are strong and interest rates are low. Monetary policy has plenty of scope to manage problems that might arise on the financial markets, such as poorer credit supply or rising risk premiums that push up interest rates met by households and companies.

A more optimistic scenario for economic developments would likely be linked to more rapid price increases in Sweden and abroad. There are also other factors, such as unexpectedly long-term shocks to the supply side of the economy as a result of the crisis, which could lead to significantly higher inflation than in the Riksbank’s main scenario. But inflation that overshoots the target during the forecast period need not be a reason to make monetary policy less expansionary in different ways. After a long period of below-target inflation, over-target inflation could help to anchor inflation expectations more firmly around 2 per cent, which would be good for price setting and wage formation.

The combination of appropriate measures is constantly being evaluated and will be adjusted to economic developments. The question of which monetary policy measures are taken always entails a balancing between the effects one wishes to attain and the possible side-effects that can arise at the same time.

### The Riksbank’s purchases of corporate bonds

The Riksbank has implemented a large number of measures to facilitate credit supply to households and companies, keep interest rates low and alleviate the economic effects of the corona pandemic. In March, the Executive Board decided that the purchases of securities would also include commercial paper and bonds issued in Swedish krona by Swedish non-financial corporations. In June, the Executive Board specified that the Riksbank will, between 1 September 2020 and 30 June 2021, offer to purchase corporate bonds to a nominal amount of SEK 10 billion.<sup>7</sup> At the end of August, the Executive Board decided on the details of the purchases, which were then initiated on week 38.

In March 2020, the market for corporate bonds was functioning increasingly poorly. The problems eased after the Riksbank announced its intention to purchase bonds. Although the market is now functioning better, the purchases of corporate bonds and commercial paper strengthen the Riksbank’s capacity to manage a situation in which the supply of credit were to deteriorate again.

The Riksbank will purchase bonds on the secondary market from its monetary policy counterparties. The bonds that may be considered must have a remaining maturity of up to five years and a credit rating equivalent to Baa3/BBB – or higher, issued the credit rating institutes used by the Riksbank. If there is no credit rating for the bond, the credit rating for the company issuing the bond will be used instead.

The bond purchases can be made in various ways. To establish the Riksbank’s presence on the market, the purchases will initially be made through so-called bilateral purchase procedures. This is the most common form of purchase on the Swedish market for corporate bonds and means that the Riksbank contacts counterparties directly to make the purchases. In a later stage, the Riksbank may also purchase bonds at auctions that the bank carried out via bid procedures. These two methods give the Riksbank a good opportunity to manage the circumstances and sources of poorer liquidity that can prevail on the market when purchases are made. The total purchase volume per week and the total purchase volume since the purchases began will be reported every week on the Riksbank’s website under “Purchases of corporate bonds”. The Riksbank’s total holdings will be reported every quarter. The distribution of the holdings among different sectors and average remaining maturities will also be reported on a quarterly basis, starting from the turn of the year.

The aim is to build up a holding of corporate bonds that proportionately reflects the total volume of securities covered by the Riksbank’s purchase programme. In this way, the purchases can affect the market in a broad and market-neutral manner and thereby have the desired monetary policy impact.

Risks linked to sustainability can affect the conditions for the Riksbank to carry out its mission and work is under way to develop methods to identify such risks. Within the programme for corporate bonds, the Riksbank may in the future take sustainability into consideration when choosing corporate bonds. As data becomes available, the Riksbank will also measure and report greenhouse gas emissions from the companies whose bonds are included in the portfolio being built up.

Details of the Riksbank’s corporate bond purchases can be found in the annex to the minutes of the Executive Board decision on 31 August 2020.

<sup>7</sup> The Swedish market for corporate bonds is described in general in an article in the July Monetary Policy Report.

Table 1.1. The Riksbank's measures during the corona crisis

Measure	Scope	So far purchased/used	Details
Programme for loans to banks for onward lending to companies	Up to SEK 500 billion	164.5 billion	First decision 12 March. Initiated 20 March. Extended to also cover sole proprietors on 6 April. Temporary extension of the counterparty circle was decided on 26 March. The maturity was extended on 30 June to up to four years. In addition, the interest supplement that applies if the requirement for onward lending to Swedish non-financial corporations is not met, was cut from 0.20 percentage points to 0.10 percentage points.
The framework for the Riksbank's asset purchases	Up to SEK 500 billion	190.4 billion	First decision 16 March. The purchase programme was extended on 27 March, 27 April, 15 May and 30 June. The programme runs until 30 June 2021. Was extended from SEK 300 bn to SEK 500 bn on 30 June.
Within the framework: Purchases of government bonds, municipal bonds and covered bonds		Total of 188.8 billion, of which 23.5 billion government bonds, 25.3 billion municipal bonds and 140 billion covered bonds.	Purchases of government bonds were initiated on 18 March, purchases of covered bonds were initiated on 25 March, purchases of municipal bonds were initiated on 28 April.
Within the framework: Purchases of corporate securities	The Riksbank is offering to make weekly purchases of commercial paper up to a maximum holding of SEK 32 billion up to 30 September and purchases of corporate bonds of 10 billion up to 30 June 2020.	Current holdings of commercial paper 1.48 billion and corporate bonds 0.15 billion.	First decision 19 March. Purchases of commercial paper were initiated on 2 April. The programme was extended on 3 April and 8 May. Purchases of corporate bonds were initiated on week 38.
Reduced the lending rate in the standing facility	Cut from 0.75 to 0.10 percentage points. This creates a narrow symmetrical interest rate corridor around the Riksbank's repo rate.		Decisions on 16 March and 30 June.
Weekly extraordinary market operations to increase access to liquidity	Unlimited	28.7 billion	First decision 16 March. Lending against collateral for three months. The supplement to the repo rate of 0.20 percentage points was removed from these loans on 30 June. The loans are offered at a variable rate corresponding to the Riksbank's repo rate. In addition, the Riksbank on 30 June decided to within this framework also offer credits with a maturity of six months.
Easing of the requirements regarding the collateral when borrowing from the Riksbank	—		On 19 March decision to lift the rule on special limits for covered bonds until 30 December 2024.
Loans in US dollars	Up to USD 60 billion	USD 2 billion	First decision 19 March. On 15 September decision to continue offering loans in US dollars up to 30 March 2021.

Note. Municipal bonds refers to bonds issued by Swedish municipalities, regions and Kommuninvest i Sverige AB. So far purchased/used refers to utilisation up to and including 18 September. All basis for decision for the different measures can be found on the Riksbank's website: <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/>.

## ARTICLE – How the Riksbank’s measures have worked during the corona crisis

Like many other central banks, the Riksbank's monetary policy during the corona crisis has been focused on ensuring that the interest rates faced by companies and households are kept low and that the credit supply in the economy functions. This creates the conditions for a good recovery in the Swedish economy, which will help inflation to rise towards the target in the longer run. Important measures adopted include purchases of various types of interest-bearing securities and loans to banks for onward lending to companies. Developments so far indicate that the measures have largely functioned as intended. In addition, initiatives in other policy areas are interacting with the Riksbank's measures to maintain the credit supply to Swedish companies. For example, government loan guarantees are making it easier for fundamentally healthy small companies with liquidity problems to gain access to credits.

### Turbulence on the financial markets at the start of the crisis

When the corona crisis broke out in earnest in the spring, strong turbulence arose on the financial markets in the form of major stock market falls and very high volatility, among other things. As the crisis struck directly at companies' revenues, many of them rapidly found themselves facing severe liquidity problems. This also increased the risk for their financial backers. The household sector was also impacted by falling wealth values and increased unemployment.

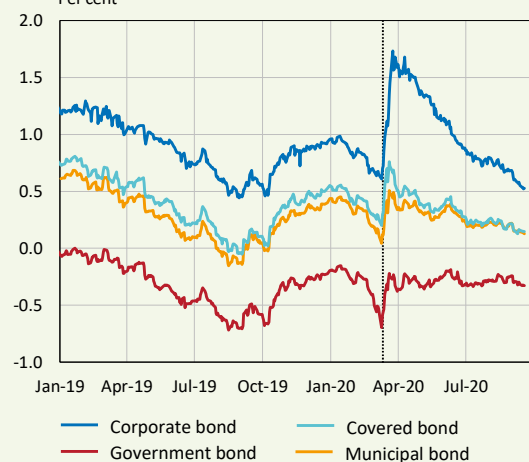
Market rates and companies' access to credits were thereby affected by the financial unease. One effect was heightened demand for liquid assets, otherwise known as a *dash for cash*.<sup>8</sup> In particular, this concerned safe assets in US dollars with short maturities and central bank reserves.

Interest in holding fixed-income instruments with long maturities decreased for many investors. Rates for these securities rose to varying extents (see Figure 1:12).

The higher risk the instruments had, the more the yields rose. The markets for corporate bonds and covered bonds encountered particularly large problems. The yield for corporate bonds rose most of all. There were several reasons for this. As the corona crisis had a negative effect on many companies' earnings, there was an increase in the credit risk for holders of the instruments issued by these companies, that is, the risk of not getting back the money they had invested. This caused the premium for credit risk demanded by the participants to rise. A further effect was that the market largely consisted only of sellers, which caused liquidity to deteriorate substantially. Those participants wishing, despite everything, to purchase corporate bonds therefore demanded a higher liquidity premium, reflecting how it may become difficult to dispose of instruments if they need to be

sold. One sign of this was that the difference between the rates for purchasing and selling, known as the bid-ask spread, increased strongly (see Figure 1:13).<sup>9</sup>

Figure 1:12. Bond yield rates with 5 years to maturity  
Per cent



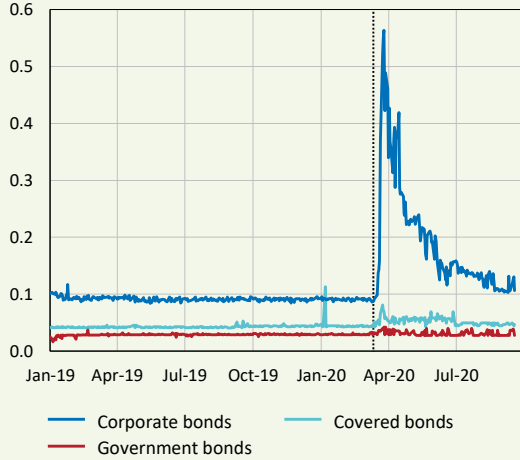
Note. Zero coupon rates calculated using the Nelson-Siegel method. The corporate bond series illustrates a heterogeneous group of bonds for companies with credit ratings of BBB or higher. Municipal bonds are issued by Kommuninvest i Sverige AB. The broken vertical line marks 11 March, when the WHO declared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

Sources: Macrobond, Refinitiv and the Riksbank

<sup>8</sup> For a description of this phenomenon, see, for example, "Interim Financial Stability Report, May 2020", Bank of England.

<sup>9</sup> The price of a bond has an inverse relationship to its yield; the lower the price, the higher the yield.

**Figure 1:13. Bid-ask spread**  
Percentage points

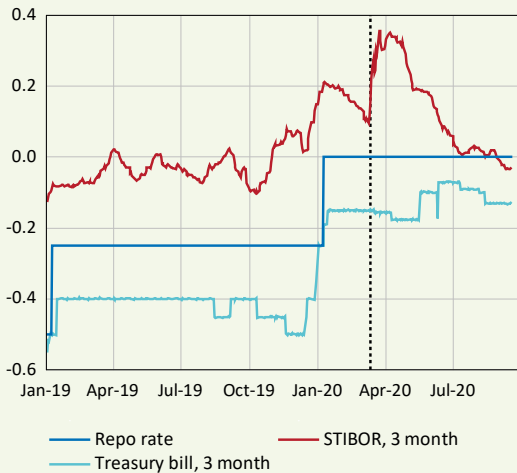


Note. The broken vertical line marks 11 March, when the WHO declared that COVID-19 was a pandemic.  
Source: ASTRID (Reuters)

Many funds that owned corporate bonds and found themselves facing liquidity problems chose to sell covered bonds, which were easier to dispose of on the market. In this way, the rising yields spread from corporate bonds to covered bonds.<sup>10</sup>

The increased unease on the market was also expressed in the gap between different short fixed-income investments. While short-term government securities' yields fell somewhat, a clear upswing took place in the interbank rate, which is the interest rate the banks pay for loans to one another (see Figure 1:14).

**Figure 1:14. The repo rate and market rates**  
Per cent



Note. The broken vertical line marks 11 March, when the WHO declared that COVID-19 was a pandemic.  
Sources: Macrobond, Refinitiv and the Riksbank

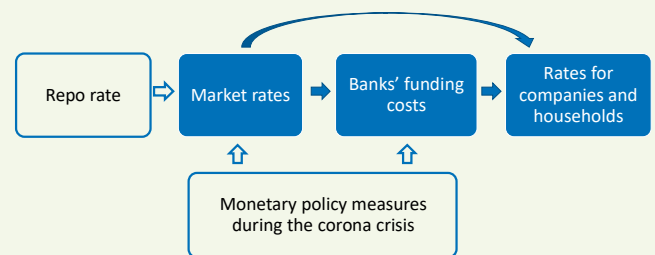
In summary, the initial phase of the corona crisis meant that interest rates on long-term loans rose, as did the premiums

for higher-risk fixed-income instruments. In a situation where many companies had already entered into acute liquidity problems, there was a risk of clear credit tightening for both households and companies in the Swedish economy. Such a development could have further exacerbated the crisis. The Riksbank therefore adopted measures that contributed towards holding down the interest rates faced by Swedish companies and households and that made it easier for the banks to continue to provide companies and households with credit.

**How do the monetary policy tools work?**

Figure 1:15 describes in a simplified manner how different monetary policy tools can affect the level of interest rates in Sweden. The blue boxes in the diagram illustrate the transmission from the repo rate to the interest rates that companies and households ultimately face. The monetary policy tools that have been in focus for the Riksbank during the corona crisis can support this transmission by directly affecting different paths between the repo rate and final interest rates. As we will see, the efficiency of the measures may depend on the prevailing circumstances.

**Figure 1:15. Effect of monetary policy measures on interest rates in Sweden**



*Purchases of government bonds* aim to affect longer interest rates in general in the economy through having a direct effect on the yield on government securities. Via what is known as the signalling channel, purchases can contribute towards signalling that the repo rate will be low in the period ahead. And via what is known as the premium channel, the term premium, which is the extra return demanded by investors if they are to hold long instead of short fixed-income instruments, can fall. This is because the Riksbank is reducing access to bonds on the secondary market through its purchases. In a turbulent situation where investors wish to shift their holdings from long to short fixed-income instruments, this premium channel can be particularly effective. Under the condition that premiums for liquidity and credit risk are not substantially changed, the lower yields for government bonds spread onwards to other bond markets. Purchases of government bonds thus have a broad impact on market rates.

<sup>10</sup> For a more detailed description, see Financial Stability Report 2020:1, Sveriges Riksbank.



*Purchases of municipal bonds* affect longer market rates in approximately the same way as purchases of government bonds. But the municipal bonds do not have the same position among investors as government securities as regards risk and liquidity, which is reflected in a slightly higher yield level (see Figure 1:12). The purchases can be seen as a complement to purchases of government bonds to affect market rates and have a broad impact in the Swedish economy.

*Purchases of covered bonds* affect rates on the market for these bonds through approximately the same mechanisms as purchases of government bonds. The effect becomes that the premium that the investors wish to pay, in addition to the yield on government securities, falls. This can be particularly significant if turbulence arises on the financial markets. As the major Swedish banks fund a large part of their lending by issuing covered bonds, the Riksbank's purchases have a direct effect on the banks' funding costs and, ultimately, also on final interest rates to households and companies.

*Purchases of commercial paper* in the form of bonds and certificates can be particularly effective in a stressed market situation.<sup>11</sup> As the Swedish secondary market is relatively small and underdeveloped, and it is difficult to sell these instruments, the knowledge that the Riksbank is active on the market can reduce the liquidity premium demanded by purchasers of the instruments.<sup>12</sup> Historically, Swedish companies have primarily obtained funding via bank loans. In recent years, however, wholesale funding through the issue of commercial paper has increased strongly. Purchases of commercial paper conducted by the Riksbank on the secondary market are aimed at holding down the cost of companies' market-based funding, as illustrated by the bow-shaped arrow in Figure 1:15 from market rates to final interest rates.

*Loans to banks for onward lending to companies* aim to keep the volume of bank loans to companies up, as a further part of maintaining the credit supply in the economy. The Riksbank lends money to the banks against collateral, on the condition that they increase their lending to companies. This condition is not absolute, but the interest rate becomes particularly low if the banks increase corporate lending.

#### **Further complementary measures during the crisis**

In addition to the measures described above, the Riksbank has adopted further complementary measures by offering the banks liquidity, holding their funding costs down and counteracting rising interbank rates. Its objective has been to avoid a credit crunch in the Swedish economy and reduce the risk of the corona crisis developing into a financial crisis. The Riksbank has offered weekly extraordinary market operations, in the form of loans against collateral of 3 and 6

months' maturity to the banks without special conditions for lending to companies, to more generally hold the banks' funding costs down.

In addition, the Riksbank has amended the interest terms in the standing loan facility, meaning that the banks pay a lower interest rate for overnight loans. The requirement for collateral in loans to the banks has also been eased by allowing a larger proportion of covered bonds to be accepted, including those issued by the banks themselves. This lets the banks borrow more from the Riksbank.

One further measure the Riksbank has adopted is to offer loans to the banks in US dollars, which aims to secure the banks' access to liquidity in foreign currency but which can also help keep their funding costs down. The offer of a large volume of loans in US dollars has been made possible through a so-called swap agreement with the US central bank, the Federal Reserve.

Table 1:1 includes a complete list of the measures adopted and the extent to which they have been utilised so far.

#### **The measures have helped keep the level of interest rates low and support the credit supply**

One sign that the measures have functioned as intended is the development of the bond market. Following the upturn in March, the long-term market rates for riskier asset types have fallen in Sweden (see Figure 1:12). The downturn on the corporate bond market is particularly clear. The difference between rates for purchasers and sellers, the bid-ask spread, has fallen a great deal on this market, indicating that part of the decline reflects a decreased liquidity premium (see Figure 1:13). Government bond yields have stayed approximately unchanged compared with the period before the crisis (see Figure 1:12).

Overall, the clearest effect of the Riksbank's bond purchases has been the reduced gap between other bond rates and government security rates.

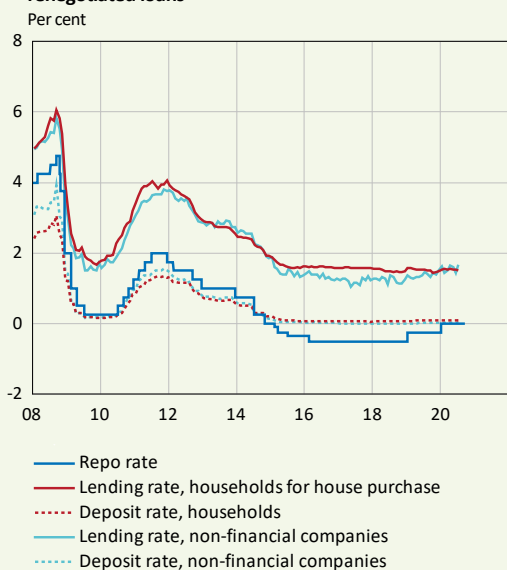
The Riksbank's measures have also had a clear effect on the money market. Since the start of the crisis, the interbank rate has fallen substantially to a level close to or slightly below the repo rate (see Figure 1:14).

The Riksbank's measures have thus contributed to holding market rates and the banks' funding costs down, which has ultimately benefited companies and households in the form of low lending rates. This is confirmed by the interest rates faced by Swedish companies and households not having changed notably since the start of the crisis (see Figure 1:16). This is supporting the economic recovery and contributing to inflation rising towards the target in the longer run.

<sup>11</sup> Commercial paper with maturities shorter than 1 year at date of issue are known as certificates. If the maturity is longer, they are known as bonds.

<sup>12</sup> See the article "The Swedish market for corporate bonds", Monetary Policy Report, July 2020, Sveriges Riksbank.

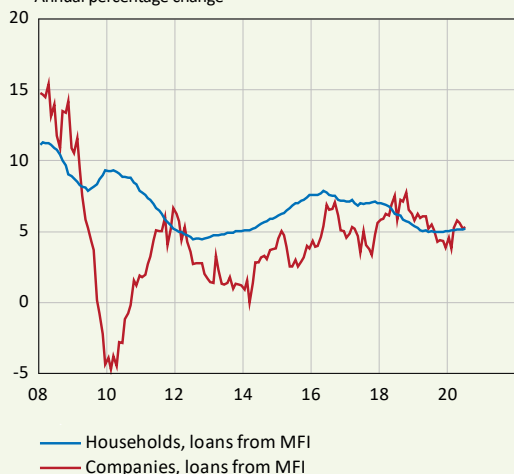
**Figure 1:16. Repo rate together with the average deposit and lending rate to households and companies, new and renegotiated loans**



Note. MFIs' average deposit and lending rates are a weighted average of all interest rates for different maturities.  
Sources: Statistics Sweden and the Riksbank

As we saw earlier, yields on corporate bonds have fallen back substantially, which has contributed to holding down costs for companies' market-based funding (see Figure 1:12). There are also signs that the measures have contributed to keeping the credit supply going in the Swedish economy. The development of total lending to households and companies has been stable throughout the crisis (see Figure 1:17).

**Figure 1:17. Lending to households and companies**  
Annual percentage change

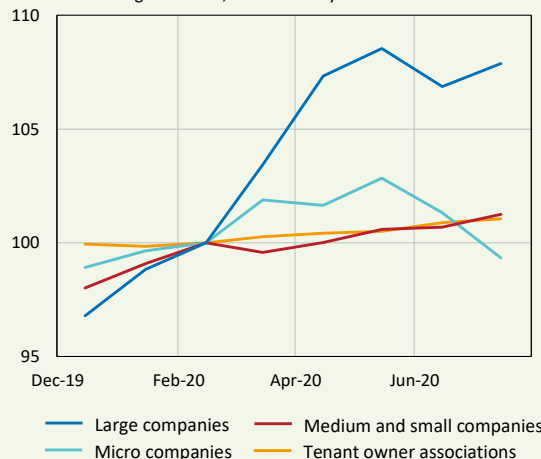


Note. Lending by MFIs to households and non-financial corporations adjusted for reclassifications and bought and sold loans.  
Source: Statistics Sweden

**Initiatives in other policy areas important for maintaining the credit supply to Swedish companies**

The Riksbank's lending to the banks for onward lending to companies includes all non-financial corporations and sole proprietors. The Riksbank has also widened the circle of counterparties, giving smaller banks that primarily have small and medium-sized enterprises as customers the opportunity to borrow from the Riksbank for onward lending to companies. However, it is clear that the banks' lending has primarily increased to larger companies (see Figure 1:18).

**Figure 1:18. Bank lending to Swedish companies**  
Outstanding bank loans, index February 2020 = 100



Source: KRITA (Statistics Sweden)

Lending to smaller companies, the group of companies that has encountered the greatest problems with its liquidity supply, has not increased to the same extent. There are several conceivable explanations for this.<sup>13</sup> Firstly, demand for credit among these companies may have been low, as taking on more debt entails risk. Secondly, the banks' willingness to lend money to these companies has been limited, for various reasons.

Access to credit for viable small and medium-sized enterprises could be facilitated by having the state intervene and guarantee part of the banks' loans to these companies, for example. Such programmes have already been launched by the government and Swedish National Debt Office and interact with the Riksbank's measures concerning the credit supply to Swedish companies.

<sup>13</sup> See E. Frohm, J. Grip, D. Hansson and S. Wollert, "Two-tier credit developments during the corona pandemic", Economic Commentaries No. 6 2,020, Sveriges Riksbank.

## CHAPTER 2 – Stabilisation of financial conditions

The economic consequences of the pandemic have continued to affect developments on the financial markets since the July Monetary Policy Report. The economic recovery over the summer is reflected by the improved situation on the financial markets. In addition, the continued highly expansionary monetary policy, together with measures from authorities around the world, is contributing to a recovery in the financial conditions, both in Sweden and globally. The improved sentiment has contributed to rising equity prices and falling interest rate differentials between risky and safer assets. In Sweden, interest rates have remained low and companies' financing situation has improved. The Swedish krona has continued to appreciate since the Monetary Policy Report was published in July, driven by the improved sentiment on the financial markets. The situation on the financial markets remains sensitive to the effects of the pandemic and conditional on the countries' highly comprehensive economic policy measures.

### Recovery but uncertainty persists

Over the spring and summer, developments on the financial markets have been dominated by the pandemic and its consequences for the global economy. In March, equity prices fell around the world and differentials between yields for risky and safer assets increased. Clear signs of impaired functioning were apparent on several markets. For example, the difference between purchase and sale prices increased on many markets.<sup>14</sup> Various programmes of monetary and fiscal policy measures then contributed to a recovery on the markets over the summer. But, even if the financial conditions and market functioning have improved since March and April, the situation on the financial markets continues to be deemed sensitive to the effects of the pandemic and conditional on the central banks and other authorities continuing to support the credit supply and the economic recovery.

The rising equity prices and falling rates on the bond markets are the main factors contributing to the improvement in the financial conditions both in Sweden and abroad since the monetary policy decision in July. The low level of interest rates, captured by the factors *Bond market* and *Money market* in Figure 2:1, for example, is the main explanation for the financial conditions in Sweden being deemed expansionary. Since the start of the year, the Swedish krona has appreciated, meaning that the contribution made by the krona to making the financial conditions expansionary has decreased.<sup>15</sup>

#### Continued highly expansionary monetary policy globally

During the crisis, many central banks around the world adopted strong measures to stabilise the financial markets with the aim of keeping the level of interest rates low and supporting the credit

#### Developments on the financial markets since the Monetary Policy Report was published in July

Equity prices in Sweden and abroad have risen.

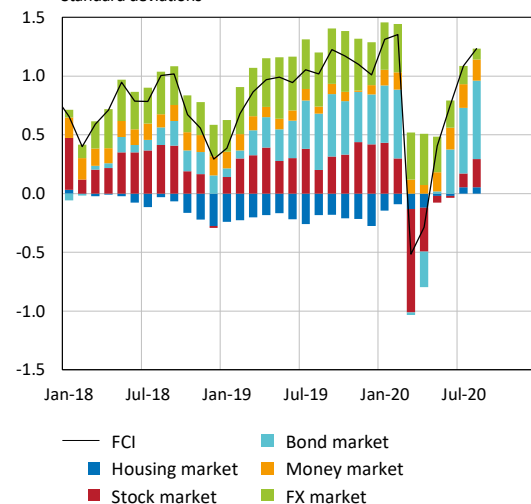
Yields on safer bonds have been stable and differentials between risky and safer assets have decreased. Yields on many asset types are on low levels from a historical perspective.

Companies' financing situation has improved.

The krona has appreciated in tandem with the improvement of sentiment on financial markets worldwide.

Figure 2:1. Financial conditions index, FCI

Standard deviations



Note. A higher value indicates more expansionary financial conditions.

Source: The Riksbank

<sup>14</sup> See, for example, *Monetary Policy Report*, April 2020. Sveriges Riksbank.

<sup>15</sup> For details on this index, see J. Alsterlind, M. Lindskog and T. von Brömsen, "An index for financial conditions" *Staff memo* February 2020, Sveriges Riksbank. Note that, unlike previously, the index now also includes yields on corporate bonds

supply to households and companies. Policy rates in many countries are close to zero per cent and large-scale purchases of financial assets and lending programmes, aimed at stimulating banks' lending to households and non-financial companies, have been initiated. The monetary policy measures deployed mean that many central banks' balance sheets are growing rapidly (see Figure 2:2).

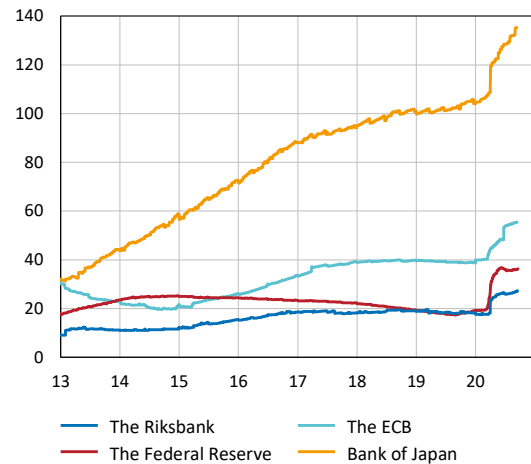
The European Central Bank (ECB) has initiated several different programmes of measures, including a special programme to purchase assets for EUR 1,350 billion (PEPP). By the end of August, the ECB had purchased government bonds, commercial paper and covered bonds for a value of just over EUR 500 billion under the framework of PEPP. In addition, the ECB has extended its previously active programme for asset purchases (APP) and lending to households and companies via the banks (TLTRO-III).<sup>16</sup> The largest part of APP was purchased before the pandemic but, of the total holding of about EUR 2,800 billion, about EUR 200 billion has been purchased since the end of February.<sup>17</sup> TLTRO-III is a series of quarterly targeted lending operations. In the first round since the outbreak of the pandemic, the banks borrowed just over EUR 1,300 billion in TLTRO-III. This can be compared to a total of approximately EUR 100 billion in the three rounds of lending prior to the pandemic.

At its monetary policy meeting in September, the ECB held the measures decided on earlier unchanged.

The US central bank, the Federal Reserve, has also initiated comprehensive purchases of assets and has opened several lending programmes and facilities aimed at supporting the credit supply to households and companies. Like the ECB, the Federal Reserve purchased a large part of its asset holdings before the pandemic but, since February, the total holding has increased by about USD 2,500 billion to the current level of USD 6,300 billion. Most of these holdings consist of government bonds and mortgage backed securities, but the central bank has also purchased commercial paper, municipal bonds and other assets in its lending facilities.<sup>19</sup> In March, the Federal Reserve lowered the interval for the policy rate to 0–0.25 per cent. At its monetary policy meeting in September, the Federal Reserve left the previously adopted measures unchanged and indicated that the policy rate will remain close to zero for a long time to come.

The Federal Reserve has also presented the results of a comprehensive review of the central bank's monetary policy framework. Among other things, it will now strive to achieve the target of 2 per cent inflation on *average*, calculated over a longer period (see the box "The Federal Reserve's new monetary policy strategy").

**Figure 2:2. Central banks' balance sheet totals**  
Per cent of GDP



Source: Macrobond

### The Federal Reserve's new monetary policy strategy

At the annual conference of the US central bank (the Federal Reserve or Fed) in Jackson Hole, United States, Chairman Jerome Powell presented the results of the last year and a half's review of the central bank's monetary policy framework. The members of Fed's policy committee, the FOMC, were unanimous in its decision for a revised policy document: "Statement on Longer-Run Goals and Monetary Policy Strategy".<sup>18</sup> The Fed's monetary policy mandate to promote both maximum employment and price stability, and the adjustments only concern the strategy for achieving these objectives.

The new policy document emphasises maximum employment as a broad, inclusive objective. Monetary policy decisions shall be based on an assessment of the extent to which actual employment *falls short of* maximum employment (the earlier formulation concerned *deviations* from maximum employment). In this way, the Federal Reserve is now expressing the view that a labour market close to full employment can be maintained without necessarily causing rapidly rising inflation and thus a need for tighter monetary policy.

As regards price stability, Flexible Average Inflation Targeting (FAIT) has been launched. This means that the Fed will strive to achieve the target of 2 per cent inflation *on average over time*, with the time frame not being precisely defined. The document notes that the strategy implies that, following periods with inflation falling short of 2 per cent, monetary policy will strive for inflation to exceed the inflation target for a period.

The updated strategy also points out that the low-interest rate environment entails a monetary policy challenge for the Fed, as it does for other central banks around the world, as the probability of policy rates reaching the effective lower bound has increased against the previous situation.

Moving forward, the Fed plans to conduct a review of its monetary policy strategy, tools and communications every five years.

<sup>16</sup> PEPP stands for Pandemic emergency purchase programme, APP stands for Asset purchase programme, TLTRO stands for Targeted longer-term refinancing operations.

<sup>17</sup> Statistics for the ECB's asset purchases and lending programme are available from the ECB's website: <https://www.ecb.europa.eu/mopo/implementation/omo/html/index.en.html>.

<sup>18</sup> The document has been published on the Federal Reserve's website:

<https://www.federalreserve.gov/monetarypolicy/review-of-monetary-policy-strategy-tools-and-communications-statement-on-longer-run-goals-monetary-policy-strategy.htm>.

<sup>19</sup> Statistics on the Federal Reserve's asset purchases and lending programme are available on the Federal Reserve's website: <https://www.federalreserve.gov/releases/h41/current/>.

**Stabilisation on the money and government bond markets**

A large part of the Swedish banks’ funding takes place in other currencies than Swedish kronor, above all US dollars and euros. The banks convert part of this foreign funding to Swedish kronor using various financial contracts. The cost for the banks to receive krona funding in this way can be illustrated by what are known as implied SEK interest rates (see Figure 2:3). In March, demand for US dollars rose rapidly, contributing to rising interest rates on the international money markets. The implied SEK interest rates also rose in conjunction with this. When the banks’ access to foreign currency improved, the implied SEK interest rates fell back to pre-crisis levels.

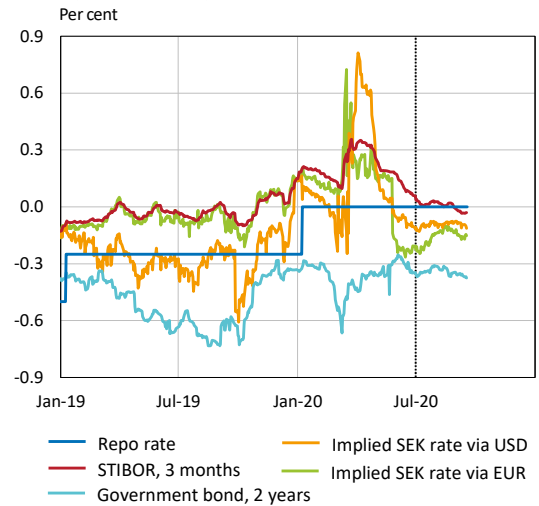
These interest rates are also significant for the banks when they calculate STIBOR, the interest rates for collateral-free interbank loans in Swedish kronor. STIBOR also rose in March but, like the implied SEK interest rates, has fallen since then and is currently on levels lower than prior to the pandemic (see Figure 2:3). Swedish interbank rates with maturities of up to three months are currently lower than the repo rate, which is also partly a consequence of the Riksbank’s measures to promote liquidity.

Yields on Swedish government bonds remain more or less unchanged since the monetary policy decision in July (see Figures 2:3 and 2:4). Yields for government bonds abroad are also relatively unchanged since July. Government bond yields in Sweden and the rest of the world remain low from a historical perspective, which indicates that the market participants expect policy rates to remain low for a long time to come. Central banks’ asset purchases are also contributing to keeping interest rates low (see the article “How the Riksbank’s measures have worked during the corona crisis”).

At the beginning of the crisis, government bond yields rose in some countries, such as Italy, Portugal and Spain (see Figure 2:5). This was probably due to market participants’ concerns over high public debt levels and the states’ future ability to pay. With greater risks both for the financial markets and for the real economic prospects of the European economies, the risks for the financial systems of these countries are also rising. The already low profitability of the European banks will probably be affected negatively by higher credit losses, at the same time as the banks’ margins are under pressure from prolonged low interest rates and structural challenges.

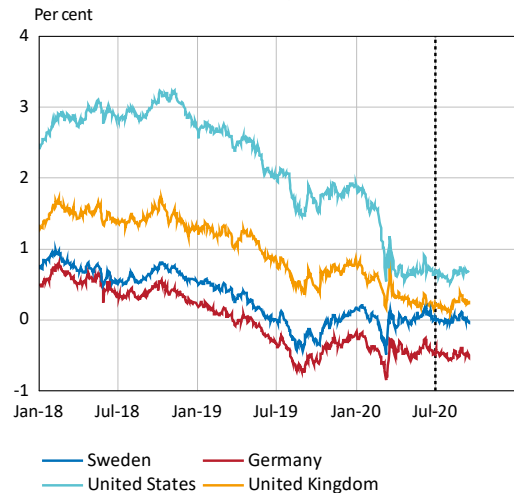
However, over the summer, both interest rate differentials between European government bonds and the costs of insuring against credit losses in European banks have gradually fallen and are approaching pre-pandemic levels. The EU Member States’ agreement on a fiscal policy support package, in which some of the measures will be funded through joint EU bonds, contributed to this development (see the box on “Next Generation EU” in Chapter 3 for more details of the EU fiscal support package).

**Figure 2:3. The repo rate and market rates**



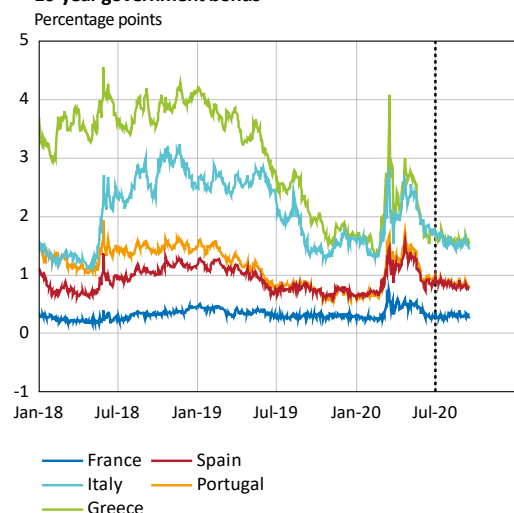
Note. Zero coupon rate with 2-year maturity calculated from government bonds. The implicit SEK interest rates are calculated by using the covered interest rate parity condition, based on spot and forward rates, as well as the domestic 3-month interest rate (EURIBOR and USD LIBOR). The broken line marks the date of the Monetary Policy meeting in June. Sources: Bloomberg, Macrobond and the Riksbank

**Figure 2:4. Government bond yields with 10 years to maturity**



Note. Implied zero-coupon yields from government bonds for Sweden, Germany and United Kingdom. 10-year benchmark bonds for the United States. The broken line indicates the Monetary Policy meeting in June. Sources: The national central banks, US Treasury and the Riksbank

**Figure 2:5. Yield differential between European and German 10-year government bonds**



Note. Benchmark bonds. The broken line indicates the Monetary Policy meeting in June. Source: Macrobond

**Yields on risky bonds have fallen**

Combined fiscal and monetary policy measures are helping to make possible a relatively rapid macroeconomic recovery and thereby an improvement of sentiment among financial agents. Due to this, yields on corporate bonds have fallen internationally since the initial increase in March (see Figure 2:6).

The difference between corporate bond yields and government bond yields reflects the risk and liquidity premiums in the credit markets. These premiums rose substantially at the beginning of the crisis, even for liquid bonds issued by companies with good credit ratings. After central banks and other authorities adopted powerful measures, the premiums returned to low levels.

Even though liquidity and market functionality have improved substantially since March and April, the situation on the financial markets remains sensitive to the effects of the pandemic and conditional on continued comprehensive economic policy measures.

On the Swedish markets for higher-risk bonds, a similar development has taken place. The yield differential between government bonds, on one hand, and covered bonds, corporate bonds and municipal bonds, on the other, has decreased from the levels seen in March and is now on lower levels than at the start of the year (see Figure 2:7). The Riksbank’s asset purchases, both announced and initiated, have contributed to the low level of yields on both safer and risky bond markets (see the article “How the Riksbank’s measures have worked during the corona crisis”).

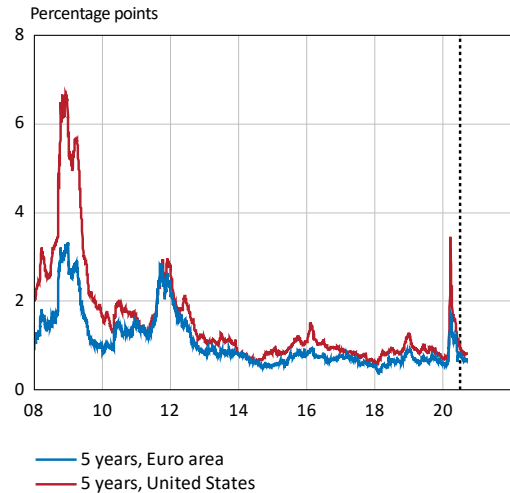
**Recovery on the stock markets**

After having risen strongly in April and recovered much of the significant fall in February and March, equity prices increased further over the summer, above all in the United States. Several of the major equity indices in the United States have recovered from the downturn connected to the corona crisis (see Figure 2:8).

The price index in Sweden has also recovered rapidly and is now back on the levels prevailing at the start of the year. The upturn on the equity markets indicates that market participants have become less pessimistic about future macroeconomic developments and expect economic policy measures to contribute to a rapid recovery. Investors’ expectations that the low level of interest rates will continue to prevail for a long time to come are also contributing to higher valuations on stock exchanges around the world.

However, there are noticeable differences in the recoveries of the different sectors included in the indices. For example, equities in tech companies and companies working with online commerce have increased heavily in price since the spring, while other sectors, such as the badly-hit hotel and air travel sectors, are far below pre-crisis levels.

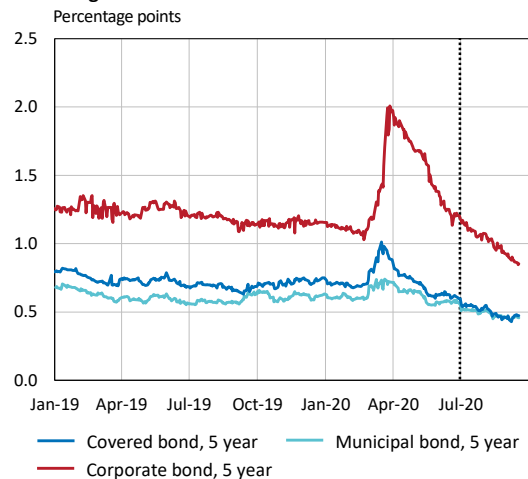
**Figure 2:6. Difference between yields on corporate bonds and government bonds in the United States and euro area**



Note. Yield differentials refer to 5-year benchmark issued by companies with good credit ratings respectively benchmark sovereign bonds. The vertical line indicates the Monetary Policy meeting in June.

Source: Macrobond

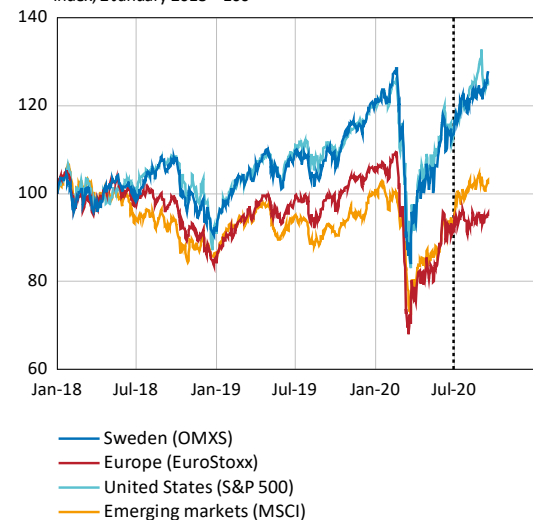
**Figure 2:7. Yield differential between different types of bonds and government bonds**



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 line marks the time of the Monetary Policy meeting in June.

Sources: Macrobond, Refinitiv and the Riksbank

**Figure 2:8. Stock market movements in domestic currency**  
Index, 2 January 2018 = 100



Note. The broken line indicates the Monetary Policy meeting in June.

Source: Macrobond

The European stock markets have not recovered to the same extent as the US ones or Swedish ones and neither has the broad index for emerging markets (MSCI).

Uncertainty over future economic developments remains high and the situation on the stock markets is sensitive to the effects of the pandemic. The high valuations on the stock markets entail an increased risk of major downturns in equity prices, which, in turn, could lead to worsened economic development. In September, equity prices started to fall again, above all in the United States. The downturns were clearest in the tech sector and in the companies whose equities had risen particularly strongly over the summer.

### **Good financing situation for the Swedish banks**

As the situation on the global money markets has improved, the Swedish banks' funding costs have decreased, which can be seen in STIBOR and the implied SEK interest rates, which have fallen to lower levels than before the pandemic (see Figure 2:3).

Yields on covered bonds have also fallen back and the yield differential against government bonds is currently lower than it was prior to the pandemic, something to which the Riksbank's purchases of covered bonds has contributed (see Figure 2:7). However, if the economic crisis following the pandemic becomes prolonged, risks to financial stability will increase. Credit losses in the banking sector then risk increasing to such an extent that banks may have problems maintaining the credit supply. This is reflected in the cost for investors of insuring themselves against credit risks in Swedish banks not having returned fully to normal levels.

### **Improved financing situation for companies**

Swedish non-financial corporations mainly obtain funding via bank loans, even if wholesale funding has grown in recent years to about one-third of total borrowings.

In March and April, companies' costs for wholesale funding increased substantially. The reason for this was that investors demanded more compensation for purchasing bonds when liquidity and credit risk increased in conjunction with the crisis. After the Riksbank and other authorities adopted measures to support the credit supply to companies, yields for corporate bonds have fallen and yield differentials against government bonds are now on lower levels than prior to the crisis (see Figure 2:7).

However, the amount of issued corporate bonds and, in particular, commercial paper has fallen in relation to pre-crisis levels and has been partly replaced by borrowing by the banks. Since the monetary policy meeting in July, issue volumes have increased, but the level is still lower than before the pandemic.

The banks also become less willing to lend money to companies in uncertain times. However, after having risen slightly in the opening months of the crisis, the interest rate for outstanding bank loans to non-financial corporations fell from

June to July (see Figure 2:9). Interest rates fell for companies in all size categories.<sup>20</sup>

However, surveys still indicate that companies are experiencing a tighter funding situation than before the crisis. For example, in the National Institute of Economic Research's survey, the proportion of companies considering it more difficult or considerably more difficult to fund their operations has increased in comparison with prior to the pandemic. However, in the survey for July, a lower proportion than in June considered it more difficult than normal to obtain funding, while a higher proportion considered the funding situation to be normal.

Bank lending to non-financial corporations has also increased at a slightly faster rate since the start of the year (see Figure 2:11). Taken together, the funding situation for Swedish companies seems to have improved over the summer. The Riksbank is closely monitoring developments in companies' financing situation.<sup>21</sup>

The average lending rate to households has been very stable during the crisis (see Figure 2:10). On average, the interest rate from banks and other Monetary Financial Institutions was approximately 1.5 per cent in July, which means an almost unchanged level compared with both June and since the start of the year. The growth rate in lending volumes for mortgages was 5.4 per cent in July, which is an unchanged growth rate compared with the previous month and marginally higher than that at the start of the year (see Figure 2:11).

### Inflation expectations close to levels ahead of pandemic

Market-based measures of long-term inflation expectations fell clearly in the United States and euro area in March but have since approached the levels prevailing before the pandemic broke out (see Figure 2:12). This development is in line with that of survey-based inflation expectations. However, after the Federal Reserve introduced a new inflation target (see the box "The Federal Reserve's new monetary policy framework"), market-based measures rose noticeably in the United States.

In Sweden, different measures of inflation expectations have stayed relatively unchanged over the summer. According to Kantar Sifo Prospera's survey in September, money market participants expect higher inflation over the coming years in comparison with their expectations at the monetary policy meeting in July.

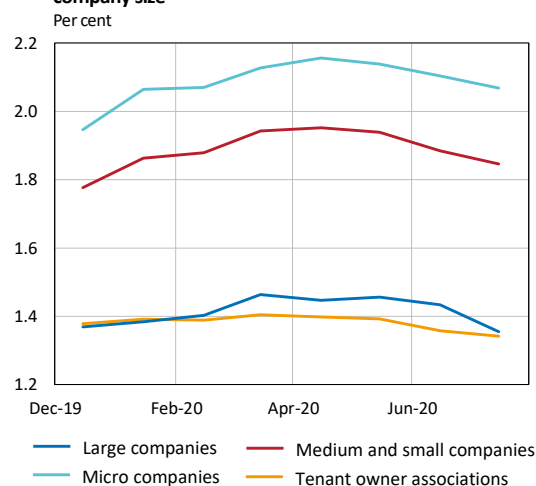
### Stronger krona primarily driven by global risk sentiment

The krona has appreciated substantially since April, measured using the trade-weighted krona index KIX (see Figure 2:13). This

<sup>20</sup> Figure 2:10 illustrates the average lending rate for *new and renegotiated* loans to non-financial corporations. This rate rose slightly in July compared with June and therefore diverges from the change in interest rates in Figure 2:9. The interest rates in Figure 2:9 refer to outstanding loans, while the interest rates in Figure 2:10 only refer to new and renegotiated lending. It is also worth noting that the lending rate to non-financial corporations in Figure 2:10 is relatively volatile from a historical perspective and is close to the pre-pandemic level.

<sup>21</sup> For more analysis of companies' financing situation, see E. Frohm, J. Grip, D. Hansson and S. Wollert "Companies' access to external funding", *Economic Commentary* June 2020, Sveriges Riksbank.

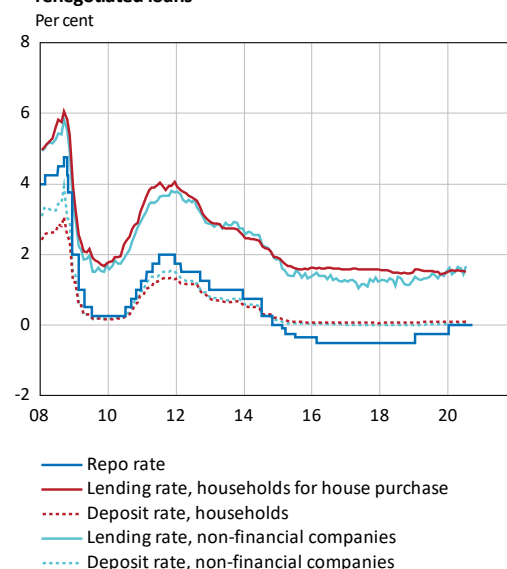
**Figure 2:9. Interest rates on bank loans broken down by company size**



Note. Refers to outstanding loans in all currencies. The interest rate is a volume-weighted mean.

Source: KRITA (Statistics Sweden)

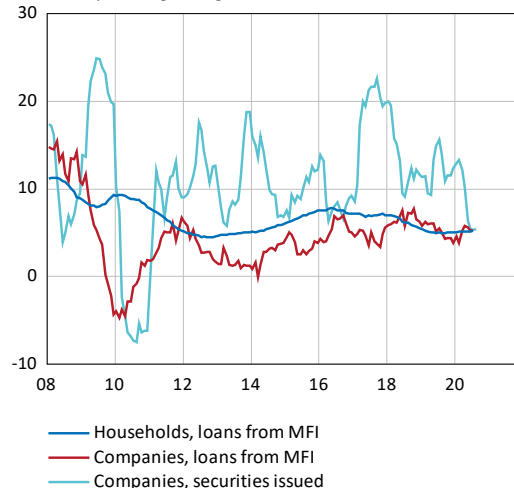
**Figure 2:10. Repo rate together with the average deposit and lending rate to households and companies, new and renegotiated loans**



Note. MFIs' average deposit and lending rates are a weighted average of all interest rates for different maturities.

Sources: Statistics Sweden and the Riksbank

**Figure 2:11. Lending to households and companies**



Note. Lending by MFIs to households and non-financial corporations adjusted for reclassifications and bought and sold loans. Securities issued by non-financial corporations have been adjusted for currency impact.

Source: Statistics Sweden

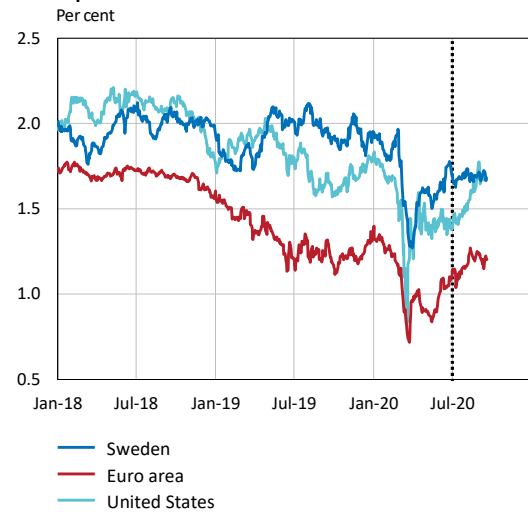


appreciation follows the depreciation that took place in the initial phase of the pandemic. Like previously over the year, the krona has largely been affected by global economic prospects and uncertainty on the financial markets. The improved sentiment visible on the financial markets has also coincided with the appreciation of the krona.

One of the currencies that the krona has appreciated most against is the US dollar, which depreciated substantially against many currencies over the same period. In contrast to the Swedish krona, the US dollar usually appreciates in times of unease when market participants prefer safe assets. The financial conditions in the world have improved during the summer and this has meant that the high demand for dollars has eased, which has probably contributed to the dollar weakening against the euro and the Swedish krona. In addition, the depreciation of the dollar is also a consequence of the Federal Reserve deploying heavy liquidity support measures and interest rate cuts. The dollar and several other currencies that are closely linked to the dollar are included in the trade-weighted index KIX and its depreciation could therefore explain a large part of the krona's appreciation.

However, since the start of the year, the krona has also appreciated against most other currencies included in the KIX index. Over the spring, the policy rate in several countries has been cut so that the gap against Sweden has closed. This has contributed to the krona strengthening against these countries' currencies. In trade-weighted terms, the krona is at its strongest level since the start of 2018.

**Figure 2:12. Market measure of long-term inflation expectations**



Note. Inflation expectations refer to a 5-year period starting in 5 years' time. For the United States and Sweden, these are calculated on the basis of bond yields and refer to the CPI. For the euro area, they are calculated on the basis of inflation swaps and refer to the HICP. The broken line marks the time of the Monetary Policy meeting in June.

Sources: Bloomberg, Macrobond and the Riksbank

**Figure 2:13. Nominal exchange rate, KIX**  
Index, 18 November 1992 = 100



Note. The KIX (krona index) is a weighted average of the currencies in 32 countries that are important for Sweden's international trade. A higher value indicates a weaker exchange rate. The broken line indicates the Monetary Policy meeting in June.

Sources: National sources and the Riksbank

## CHAPTER 3 – Clear signs of continued recovery

The corona pandemic continues to have a substantial impact on developments in the global economy. The restrictions on social life to reduce the spread of infection, and changes in the behaviour of households and companies, have led to a considerable fall in global GDP. The recovery that began in May has continued during the summer, albeit at a slower pace. The Riksbank's main scenario assumes that the restrictions will remain relatively unchanged for the rest of the year, but that a clear downward trend in them will be visible in 2021. The recovery in the global economy can therefore continue although it will take until the end of next year before GDP is back at its pre-crisis level. However, the assessment is characterised by considerable uncertainty as regards the development of the pandemic.

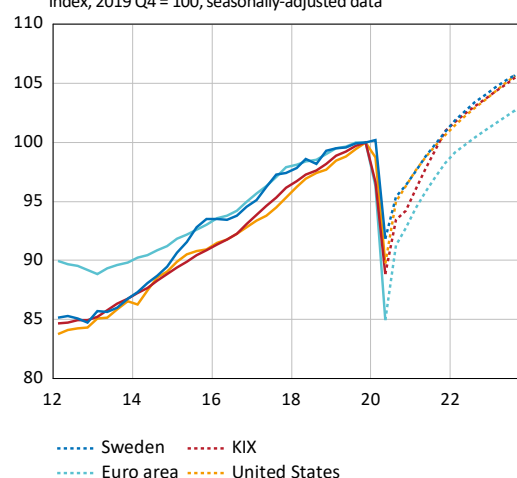
Swedish GDP had declined by 8.3 per cent during the second quarter, compared with the first quarter. This was the largest decline recorded in a single quarter since 1980, when Statistics Sweden's quarterly data began. However, indicators and high-frequency statistics suggest that the economy has started to recover. As restrictions are eased going forward, demand is expected to grow rapidly and GDP to increase on average by almost 4 per cent per year in 2021 and 2022. The pandemic has left its mark on the labour market. In the spring, the number of redundancy notices increased dramatically, many employees were put on short-time work schemes. During the summer, however, the number of redundancy notices has decreased significantly and the situation on the labour market seems to have stabilised somewhat. In light of the wave of redundancy notices in the spring, and continued weak demand, unemployment is nevertheless expected to continue rising this year and reach around 9.5 per cent at the end of the year. Falling energy prices, but also other temporary effects, have pushed down inflation considerably during the first half of the year. The corona crisis has contributed to inflation being more volatile and service prices have been particularly affected. In 2021, inflation will rise but the upturn will be subdued, partly by a somewhat stronger krona. As restrictions are eased and demand recovers, inflation will rise slowly towards the target.

### The pandemic has resulted in sharp GDP falls around the world

The corona pandemic has resulted in a sharp slowdown in the global economy and GDP has fallen rapidly (see Figure 3:1). Above all, the pandemic has led to major declines in private consumption and investment. Global trade, global industrial output and the retail trade all experienced large falls in March and April (see Figures 3:6 and 3:7).

Restrictions aimed at reducing the spread of infection were at their peak in April. Thereafter, the number of newly registered infections decreased, especially in Europe, resulting in less extensive restrictions (see Figure 3:3). This is enabling the global economy to recover. However, a new increase in cases, first in the United States in July and later in Europe, will probably limit the possibilities of further easing restrictions for the rest of the year. This will hold back growth somewhat. Some emerging economies, such as India and Brazil, are in a later infection phase,

**Figure 3:1. GDP in Sweden and abroad**  
Index, 2019 Q4 = 100, seasonally-adjusted data



Note. KIX is an aggregate of the countries that are important to Sweden's international trade.

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

and the high number of infections there is restricting social life to a considerable extent and thereby also economic growth.

Economic activity has also fallen in Sweden over the first two quarters of this year. The fall is roughly equivalent to those in the other Nordic countries, but less than other countries in the rest of Europe (see Figure 3:2). The less severe fall than in most other European countries is probably partly due to Sweden not having the same level of restrictions. However, it is probably also because tourism, which has been hit hard by the pandemic, does not constitute as large a proportion of the economy in Sweden as it does in other countries.

### Comprehensive monetary and fiscal policy package supporting global recovery

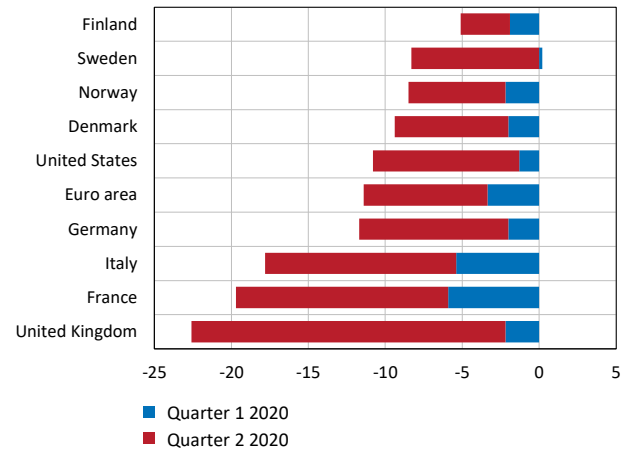
Comprehensive fiscal and monetary policy measures have been implemented in most countries to mitigate the economic decline and stabilise financial markets. In the United States, fiscal policy measures corresponding to 9 per cent of GDP have so far been implemented (see the box “Fiscal policy support measures abroad” in Monetary Policy Report, July 2020).<sup>22</sup> During the summer, negotiations between Republicans and Democrats have also been taking place on further stimuli, but so far without success. Major fiscal policy measures have also been implemented in the EU. The size of these differs from one country to the next, however, with the measures having the greatest budgetary effect being in Germany, followed by France, Spain and Italy (see Figure 3:4). The extent of deferments, other liquidity measures and guarantees differs between countries.

At the end of May, the European Commission proposed an EU-wide EUR 750 billion borrowing programme, called “Next Generation EU”. The proposal in a revised form was then voted through on 21 July. The proposal that was adopted by the Heads of State and government in July entails an extraordinary, joint EU fiscal policy investment and corresponds to just over 5 per cent of the EU’s GDP. A decision on subsidy allocation will be taken during the period 2021–2023, but the outward payments of this money will probably be spread over a period of several years. The investment is expected to provide a positive contribution to GDP growth in the union (see the box “Next Generation EU”).

This major stimulatory package will lead to a sharp rise in public debt, which was already high in several large economies before the outbreak of the pandemic (see Figure 3:5). However, the higher growth expected as a result of the measures taken, together with low interest rates, may counteract an unsustainable development of national debt-to-income ratios. In contrast to many other countries, Sweden has a low public debt and is therefore well placed to be able to cope with the negative economic effects of the pandemic.

**Figure 3:2. GDP in Sweden and abroad**

Quarterly changes, per cent, seasonally-adjusted data



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

### Next Generation EU

Next Generation EU (NGEU) is a joint European fiscal policy support package aimed at mitigating the negative economic effects of the pandemic and bolstering the recovery. The package shall be financed by the European Commission lending up to EUR 750 billion, the equivalent of just over 5 per cent of the Union’s GDP, on the financial markets. According to the European Commission’s original proposal, EUR 500 billion would be used for subsidies and guarantees to projects and action programmes in Member States. The remaining EUR 250 billion was reserved for on-lending to Member States. The basic principle in the EU has so far been for the Union’s budget to be financed via fees from individual Member States and via certain revenues that go directly to the Union. Loan-financed contributions and on-lending to the extent proposed by the Commission are therefore something new. EU Heads of State and government met to decide on the proposal in July and after several days of negotiations, they agreed to go forward with an amended version of the support package. Among the amendments were a reduction in the total costs for subsidies and guarantees to EUR 390 billion and an increase in the amount for on-lending to EUR 360 billion. A proposal for a new long-term budget for 2021–2028 was also agreed on at the summit. The proposals will now be considered by both national parliaments and the European Parliament.

To access the support package, Member States must present plans for the investments and reforms they intend to implement and these plans will then be evaluated by the European Commission. NGEU will be integrated into the EU’s next long-term budget, which runs from 2021 to 2028, but the aim is to take all decisions on NGEU subsidy allocations during the period 2021–2023. However, the actual disbursements to various projects and action programmes will be spread over several years. The plan is for the money borrowed to be paid back starting from 2028 and to be fully repaid no later than 2058.

How the costs for the support package are to be distributed among Member States is yet to be decided but it is highly likely that Sweden will be one of several net contributors. The combined effect of NGEU on the Swedish economy depend both on the distribution of subsidies and costs among Member States and on indirect effects via increased demand for Swedish exports.

<sup>22</sup> This refers to fiscal policy measures with a direct budgetary effect, that is to say discretionary decisions leading to higher public expenditure and/or lower revenues.

**Monetary policy has also taken forceful action in the face of the pandemic**

Central banks around the world have implemented extensive measures to combat the negative economic effects of the pandemic. They have, for example, maintained credit supply and liquidity on the financial markets, primarily via purchases of government bonds and other bonds as well as collateralised loans. These measures have pushed down interest rates for companies and households and credit supply has been maintained. Central banks that had positive policy rates, for example the Federal Reserve and Bank of England, have reduced them to close to zero. The Riksbank and the ECB, whose policy rates were already close to zero prior to the pandemic, have kept the rates unchanged.

**Clear signs of continued recovery**

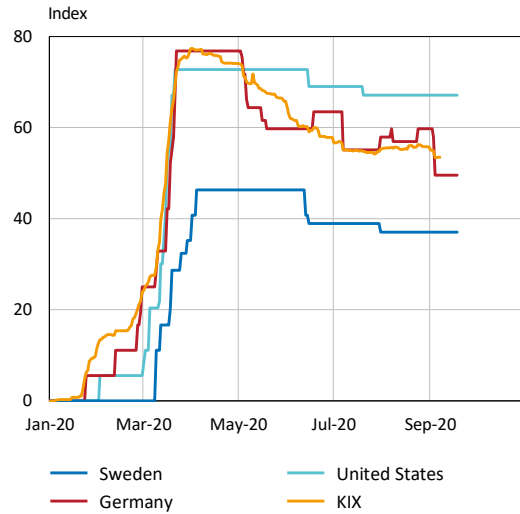
In May and June, a recovery in global trade and global industrial output began, albeit from low levels (see Figure 3:6). Retail trade for the euro area and the United States has recovered and the turnover is now close to the pre-crisis levels. Retail trade in the Nordic countries appears to have managed better in general, particularly Norway (see Figure 3:7). New consumption patterns, with lower consumption of services and increased consumption of goods, combined with a heavy fall for Norwegian border trading in Sweden, explains much of this development.

The recovery in retail trade is also supported by various real-time indicators, that show that the decline was greatest in March and April and has since then approached more normal levels (see Figure 3:9). However, recovery has been significantly slower for industries more directly impacted by the restrictions implemented to stop the spread of the pandemic, such as hotels and restaurants, tourism and travel agencies.

Overall, various indicators confirm that the global economy bottomed out in April, and that the economies then started to recover in May, thanks to the lifting of restrictions. The upward trend has then continued over the summer, albeit at a slower pace. The recovery, which is starting from a very low level, is also being supported by more expansionary fiscal and monetary policy and a pent-up need for consumption and investment. The household savings ratio in the euro area and the United States is at historically high levels, which can provide a boost to consumption going forward.

The Riksbank assumes that restrictions are expected to be approximately on the same levels for the rest of the year to then be phased out as the spread of infection decreases. This will restrain growth somewhat towards the end of the year but thereafter the growth rate in global GDP will be relatively high. Households and companies will be slightly more cautious than usual, and GDP is therefore not expected to be back at its pre-pandemic level until the end of 2021, despite the easing of restrictions in the slightly longer term.

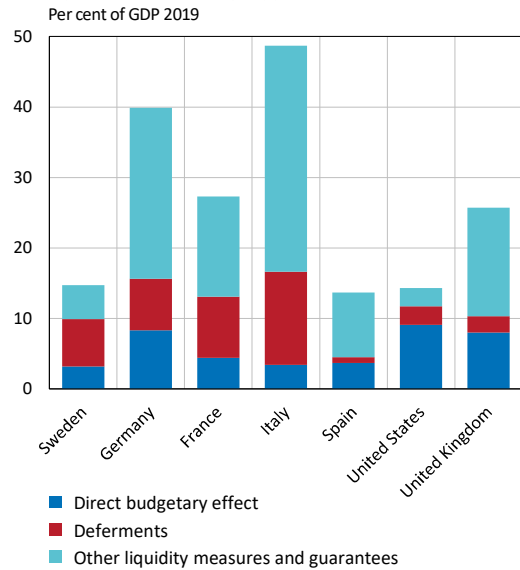
**Figure 3:3. Measures of the extent of government restrictions to reduce the spread of infection**



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, such as closing of schools, 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.

Source: Oxford COVID-19 Government Response Tracker (OxCGRT)

**Figure 3:4. Fiscal policy support measures 2020**



Note. Direct budgetary effect: discretionary decisions involving higher public expenditure and/or lower revenue. Deferments: measures that lead to a reduction in the budget balance in 2020 but that will be compensated for later. Other liquidity measures and guarantees: measures that do not necessarily lead to a reduced budget balance but may involve future expenditure when compensating credit losses. Total pledged deferments and liquidity measures and guarantees are shown for Sweden. Bruegel’s assessment per 5 August of what is utilised by corresponding item is shown for all other countries except Sweden.

Sources: Bruegel, the Swedish Government Offices and the Riksbank

Overall, trade-weighted (KIX-weighted) GDP is expected to fall by just over 6 per cent this year before growing by just under 6 per cent in 2021 and just over 4 per cent in 2022. However, there is considerable uncertainty regarding the spread of infection and restrictions, and therefore also regarding the recovery in the global economy (see the article “Two alternative scenarios for economic development”). GDP may also be affected in the longer term by structural transformation and changes to consumer behaviour as a result of the corona pandemic.

**Development of the pandemic not the only threat to the recovery**

Even though COVID-19 is dominating developments in the global economy, there are other risks that increase the uncertainty for its recovery. Examples of such risks are greater tension between the United States and China, the absence of a free trade agreement between the United Kingdom and the EU after the transition period that runs until the end of December this year, increased geopolitical tensions, the transition to more regional trade and high public debt among many large economies.

**Continued recovery in the euro area, but increased infections a cause for concern**

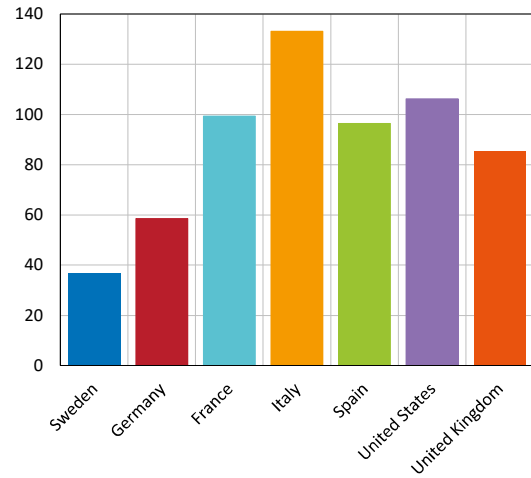
In the euro area, GDP fell heavily in the first two quarters this year. The fall in the second quarter was 11.8 per cent, compared with the first quarter (see Figure 3:2). However, monthly data indicates that a recovery started in May. The retail sales and industrial production rose sharply in May, and another major improvement occurred in June (see Figures 3:7 and 3:8). In July, retail sales declined somewhat while industrial production continued to increase from low levels. High-frequency data, such as Google Mobility Data indicate a continued, albeit it significantly smaller, improvement in July and August (see Figure 3:9).<sup>23</sup>

When the number of new registrations of infection declined, some restrictions were withdrawn in May and June. However, when the number of new infections began to rise again in July and August, some countries limited mobility once again, Spain in particular. The fact that more infections are being detected is largely due to an increase in testing. However, the proportion of positive COVID-19 tests has also increased more recently, especially in Spain and France. At the same time, the number of deaths has not risen to any great extent. The new restrictions in Spain do not so far seem to have had any clear impact in the high-frequency activity data, but the risk is that more countries will need to reintroduce restrictions that once again reduce economic activity.

Confidence is an important factor influencing economic activity. The increases that have occurred in high-frequency data are well in line with developments in household and business confidence indicators. The European Commission’s barometer for

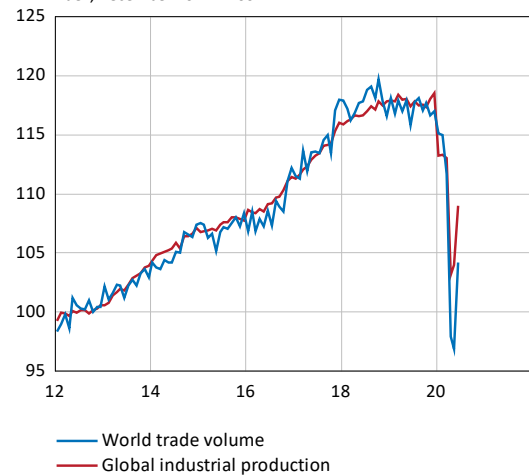
<sup>23</sup> Due to seasonal variation, however, high-frequency data such as Google Mobility Data should be interpreted with caution.

**Figure 3:5. General government gross debt 2019**  
Per cent of GDP



Source: The IMF

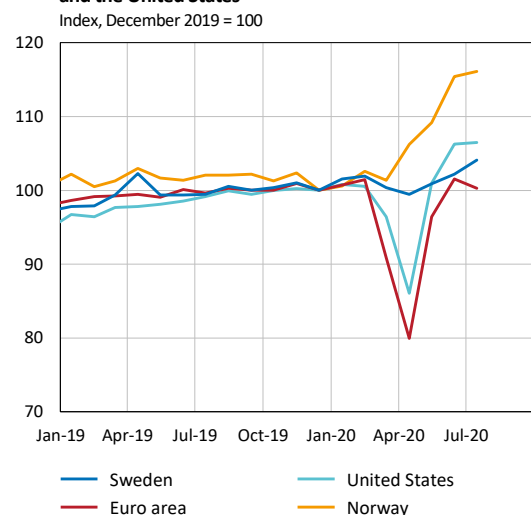
**Figure 3:6. World trade volume and global industrial production**  
Index, December 2012 = 100



Note. World trade refers to trade in goods.

Source: CPB Netherlands Bureau for Economic Policy Analysis

**Figure 3:7. Retail trade sales in Sweden, Norway, the euro area and the United States**  
Index, December 2019 = 100



Note. Refers to fixed prices.

Sources: Eurostat, Statistics Sweden and U.S. Census Bureau

both industry and the service sector rose rapidly in June, July and August, a positive development even if the level is still well below normal. The Purchasing Managers' Index also indicates a rapid improvement in the economy in June and July, but was tempered slightly in August. The rapid increase in household confidence in May and June has slowed, however, and is still on a historically low level. Together with high-frequency data, this indicates continued recovery in economic activity, albeit at a significantly lower pace, during the fourth quarter this year.

### Labour market measures have mitigated the increase in unemployment in the euro area

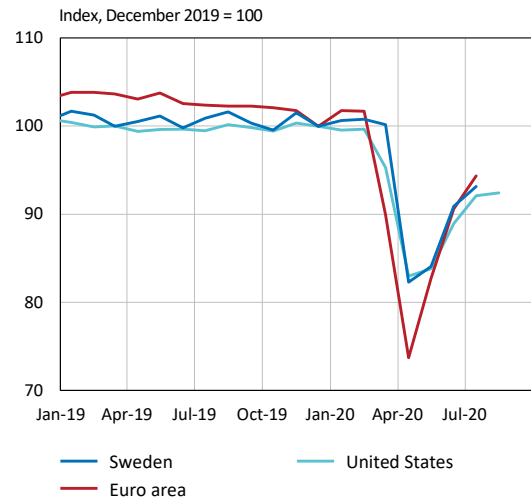
The labour force has increasingly started to return to workplaces and production has increased. Unemployment has risen, however, and amounted to 7.9 per cent in July, which is nevertheless a relatively small upturn bearing in mind the large fall in GDP in the first half of the year (see Figure 3:10). The smaller increase in unemployment in the euro area compared to the United States depends on euro area countries directing their measures to a greater extent at reducing unemployment while the focus in the United States has been on expanding compensation systems. Not least in Germany, the number of people in short-time layoffs has increased sharply, that is to say those who have kept their jobs and retained a large proportion of their salaries, but reduced their working hours.<sup>24</sup>

As the spread of infection decreases and the confidence increases going forward, a rise in household consumption and corporate investment is predicted. But there is considerable uncertainty. A new wave of infection and failure to develop a vaccine could delay the recovery in the global economy, including the euro area (see the article "Two alternative scenarios for economic developments").

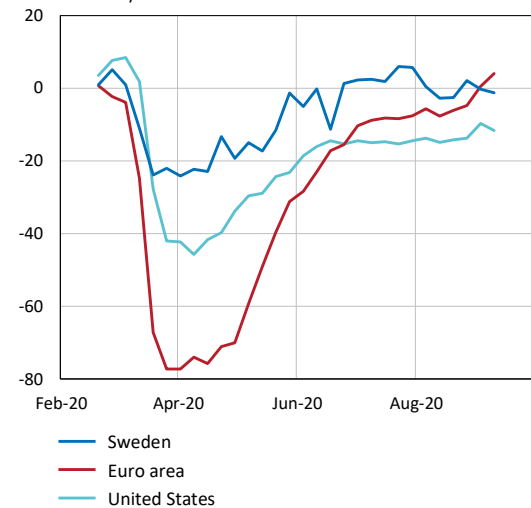
Economic policy has become more expansionary. The European Central Bank (ECB) has implemented measures to keep interest rates low and to maintain liquidity in the economy. In the forecast, monetary policy is projected to remain very expansionary over the entire forecast period. Extensive fiscal policy measures have been introduced in a number of individual countries and in addition to this, initiatives have been taken at the European level to support the economy in different ways. These include primarily "Next Generation EU", which was approved on 21 July (see the article "Fiscal policy support measures abroad" in Monetary Policy Report July 2020 and the box "Next Generation EU").

GDP in the euro area is expected to fall by around 8 per cent this year and then rise by almost 6 per cent in 2021 and slightly less than 4 per cent in 2022. It will take until the end of 2022, however, before GDP returns to its pre-pandemic level (see Figure 3.1). However, it is expected to take even longer before resource utilization reaches approximately normal levels.

**Figure 3:8. Industrial output in Sweden, the euro area and the United States**



**Figure 3:9. Visits in retail trade and recreation**  
Percentage deviation from the median value during the period 3 January–6 February



<sup>24</sup> In the case of short-time layoffs, the state has paid part of the difference.

### Signs of recovery in US growth

GDP in the United States fell sharply during the first half of 2020. The largest decline came in the second quarter, when GDP fell by 9.1 per cent in relation to the first quarter (see Figure 3:2).

Outcomes for industrial output and the retail sales suggest that growth in the US economy bottomed out in April. Since then, there has been a recovery, particularly in the retail sales, which is now at higher levels than prior to the pandemic (see Figures 3:7 and 3:8).

The restrictions on social life were strictest in April. Since then, the restrictions have been gradually phased out. However, the number of infections increased again sharply in July, which has led to some states being forced to reintroduce restrictions. For the country as a whole, however, restrictions have thus been only marginally lifted in recent months. The spread of infection is still at a high level, although there has recently been a clear decline.

The statistics on industrial output and the retail trade indicate that growth has begun to increase and during the third quarter an upturn in economic activity is expected. This development is also confirmed by the Federal Reserve Bank of New York's weekly activity index, which is based on ten different indicators. The index points to economic activity was at its weakest in the end of April.

The speed of the recovery in the short term will depend on how quickly the restrictions are eased and how lasting the fall in the production of goods and services is in particularly vulnerable sectors. This is at present very uncertain. Overall, GDP in the United States is expected to fall by just over 4 per cent this year, before growing by around 4 per cent in 2021 and almost 3.5 per cent in 2022. Despite comprehensive support from both fiscal and monetary policy, GDP will not recover to its pre-crisis levels until the end of 2021.

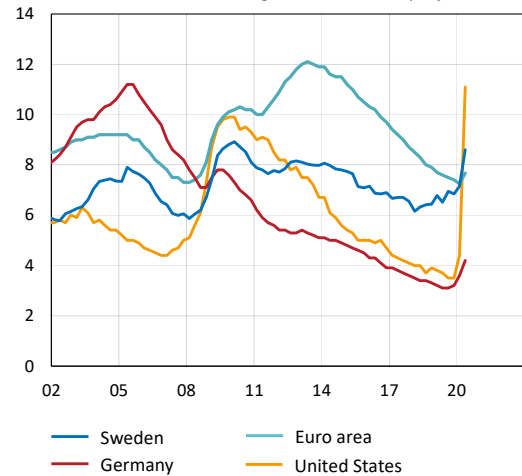
The pandemic has hit the US labour market hard. A good 60 million people, equivalent to about 40 per cent of the labour force, have at some time applied for unemployment benefit from mid-March to the end of August. Until April, in addition, many left the labour market (see Figure 3:11). However, there are signs that developments have turned and that the labour market is beginning to recover somewhat. Employment has increased again and many have returned to the labour market, although the labour force participation still is significantly lower than in the beginning of the year.

Unemployment peaked at 14.7 per cent in April, but has since then fallen back to 8.4 per cent in August. Unemployment is expected to continue declining for the remainder of the year as the economy recovers. At the end of 2022, however, unemployment is expected to be above its pre-crisis level and there will still be spare capacity in the labour market.

The US primaries have concluded and both the Democrats and the Republicans have held their party conventions, where their respective presidential candidates have been nominated prior to the elections to be held in November. The opinion polls

**Figure 3:10. Unemployment rate in various countries**

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



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

**Figure 3:11. Labour force participation in the United States**

Per cent of the population, 16 years and older



Source: U.S. Bureau of Labor Statistics

indicate figures are fairly even between the two candidates, which creates some uncertainty. At present it is difficult to assess the economic effects of the election.

### Rapid recovery in China

Following a heavy fall in GDP of 10 per cent during the first quarter, compared with the fourth quarter of 2019, the Chinese economy made a recovery during the second quarter. GDP rose by almost 12 per cent as a quarterly rate and is now back at the same level as prior to the pandemic. The strong upturn at the end of the second quarter was mainly due to a sharp upturn in investments and production in the construction sector. The government's aim to maintain economic growth has led to credit growth picking up again, which can result in problems with indebtedness and increased financial risks.

During the summer, the relationship between China and the United States deteriorated, as China introduced new security legislation with regard to Hong Kong. This led to US sanctions against Chinese party members and Chinese counter-sanctions against US citizens. Although there is still a good tone between the superpowers with regard to the first part of the trade agreement concluded in January, there is still a possibility that tensions between the countries will increase going forward, which creates risks for Chinese growth. All in all, the Riksbank assesses that GDP will grow by 2 per cent this year and just over 9 per cent in 2021.

### Low yet gradually rising inflationary pressures abroad

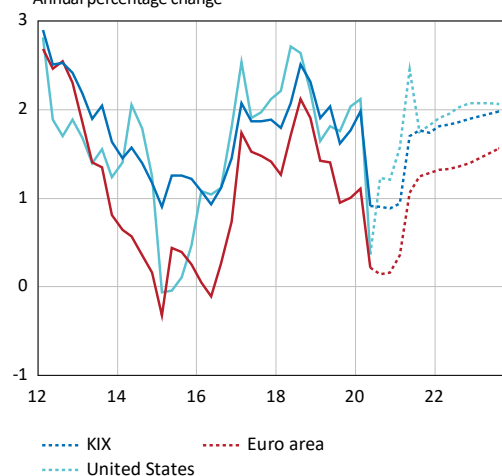
KIX-weighted inflation abroad is expected to fall to just over 1 per cent this year. The downturn is primarily due to low energy prices and a subdued demand in the economy. Next year, inflation is expected to rise and in 2022 it is expected to be just below 2 per cent (see Figure 3:12).

Inflation is low in the euro area, even negative in August when inflation measured with HICP was  $-0.2$  per cent. Energy prices fell by around 8 per cent on an annual rate, at the same time as the rate of increase in food prices continued to slow down. Underlying HICP inflation, which is adjusted for energy, food, alcohol and tobacco, fell to 0.4 per cent in August, probably an effect of the delayed summer sales of clothing and shoes. The cut in VAT in Germany in July has subdued inflation in the euro area.

The forecast is that inflation in the euro area will rise when resource utilisation increases in the coming years, and it will amount to just over 1.4 per cent at the end of the forecast period.

Inflation in the United States, measured in terms of the CPI, has risen after the heavy decline in April and May and is now at 1.3 per cent. Energy prices contributed considerably to the decline, but they have now increased somewhat, and thus the contribution is less negative than earlier during the spring. Underlying inflation has also showed a clear increase to 1.7 per cent, as demand has begun to return with regard to many of the

**Figure 3:12. Consumer prices in various countries and regions**  
Annual percentage change



Note. KIX is an aggregate of the countries that are important to Sweden's international trade.

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

**Figure 3:13. Nominal exchange rate, KIX**  
Index, 18 November 1992 = 100



Note. KIX (krona index) is a weighted average of the currencies in 32 countries that are important for Sweden's international trade. A higher value indicates a weaker exchange rate. Outcomes are daily data and forecasts refer to quarterly averages.

Source: The Riksbank



product groups affect by falling demand at the beginning of the pandemic. Measured with the consumption deflator (PCE), inflation increased marginally from 0.9 per cent in June to 1.0 per cent in July. Inflation is expected to remain low this year but inflationary pressures will increase as the US economy recovers and resource utilisation gradually normalises, in combination with rising oil prices. Inflation is expected to be close to 2 per cent at the end of the forecast period.

### Small movement in krona in recent years

The Swedish krona has appreciated significantly during the spring and summer, primarily against the US dollar. Relatively good prospects for the Swedish economy and Swedish public finances, as well as an improvement in risk sentiment on the financial markets, are possible contributing factors (see Chapter 2). It is always difficult to make forecasts for exchange rates, especially in the short term, and this is true not least under the prevailing circumstances. However, the krona appreciation during the spring and the summer has meant that the real exchange rate is now assessed to be close to the level considered reasonable in the light of long-term determinants, such as productivity in Sweden in relation to the rest of the world. This indicates a forecast where the krona exchange rate is close to the current level for the entire forecast period (see Figure 3:13).<sup>25</sup>

## Swedish economy has been hit hard

### Historical GDP fall second quarter

The corona pandemic contributed to an historically large decline in Swedish GDP in the second quarter, a fall of 8.3 per cent compared with the first quarter (see Figure 3:2). This was the largest decline recorded in a single quarter since 1980, when Statistics Sweden's official measurements began. It was first and foremost household consumption and exports that declined in the wake of the measures implemented to slow down the spread of infection in Sweden and abroad. The relatively mild closure of Swedish society and a relatively small tourism industry have probably contributed to the decline nevertheless being smaller than in many other European countries (see Figures 3:1 and 3:2). The outcome was well in line with the Riksbank's forecast in the July Monetary Policy Report.

### Indicators point to economy beginning to recover

The activity indicator, which measures monthly activity in the economy (see the box "Monthly indicators to follow economic activity"), fell heavily in April and further in May, but after that indicates in line with the monthly statistics for household consumption and foreign trade an upturn in June and July.

**Figure 3:14. Demand indicators**

Index, december 2019 = 100, seasonally-adjusted data



Note. The Riksbank's revision of exports and imports of goods.

Sources: Statistics Sweden and the Riksbank

### Monthly indicators to follow economic activity

The pandemic is having a major impact on the Swedish economy. Following the development of the economy requires statistics that are published often. Statistics Sweden therefore started publishing two new monthly indicators in June, the activity indicator and the sales indicator. The activity indicator describes the monthly development of activity in the entire Swedish economy which is published about six weeks after the end of the month. It is thus an early indicator of GDP developments and complements the quarterly calculations of GDP in the National Accounts. However, it has a much smaller base than the GDP calculations and is therefore less reliable. The sales indicator is based on VAT figures and data from the Production Value Index (PVI) to provide a monthly outline of turnover in the business sector. The sales indicator is published around four weeks after the end of the month, that is about two weeks prior to the activity indicator.

<sup>25</sup> For discussions of the long-term real exchange rate and how the Riksbank makes forecasts for the exchange rate, see the article "Development of the Swedish krona in the longer term" in the Monetary Policy Report October 2018 and E. Askestad, A.M. Ceh, P. Di Casola, P. and A. Ristiniemi, "Forecasting the krona", Economic Commentaries No. 12 2019, Sveriges Riksbank.

However, the activity indicator is still almost 5 per cent lower than it was in December 2019 (see Figure 3:14).

The confidence indicators for August imply on the whole that a recovery is under way. According to the Economic Tendency Survey, overall sentiment in the Swedish economy improved further, but is still at a very low level after falling a good 30 index points in April. The Economic Tendency Survey's sub-index at the same time indicates that companies in the manufacturing industry, as well as the retail and services sectors are continuing to become less pessimistic. In addition to the published monthly data, more high-frequent indicators that can be followed on a daily and weekly basis, are still pointing to some upturn in parts of production and demand in August and September. The National Institute of Economic Research's special company surveys, which take place every second week, indicate for example some recovery in companies' turnover in August, and statistics on card transactions show a picture of consumption having increased in August and September.

The recovery in the Swedish economy is expected to continue during the third quarter, but GDP is on average expected to fall in total by almost 4 per cent this year compared to 2019. As the restrictions to prevent the spread of infection are gradually lifted, demand will increase both in Sweden and abroad, supported by an expansionary economic policy. Although the recovery appears to be going quickly, the heavy fall in the spring means that it will not be until the end of 2021 before GDP is back at the pre-crisis level (see Figure 3:15). The large fall also means that GDP will not reach the trend development during the forecast horizon that the Riksbank had forecast prior to the pandemic. All in all, GDP is expected to grow by an average of almost 4 per cent per year in 2021 and 2022.

### Consumption increasing, but continued restrictions hampering tourism

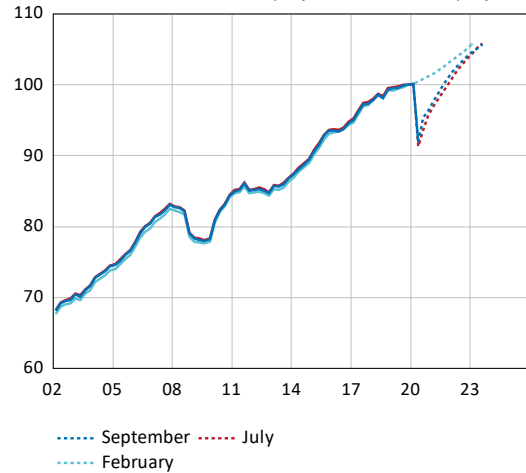
Household consumption declined substantially during the second quarter. The restrictions to social life introduced did not just entail a decline in mobility, they also led to a decline in household demand for goods and services. A broad uncertainty over the direction the economy is taking reinforced the decline in consumption and contributed to households saving a larger share of their incomes.

As the acute phase of the crisis has subsided, households have adapted to the new conditions and consumption has risen again. Turnover in the retail sales has been back at the pre-crisis level since June, and in July turnover was strong. The strong turnover in the retail sales can be partly explained by Swedes having holidayed in Sweden to a larger degree than previous summers. Other parts of consumption, on the other hand, remain much weaker than normal, especially household consumption of hotels, cafés, culture and transports.

During the second half of the year, consumption is expected to continue increasing at a faster pace than normal. Daily and

**Figure 3:15. GDP in Sweden**

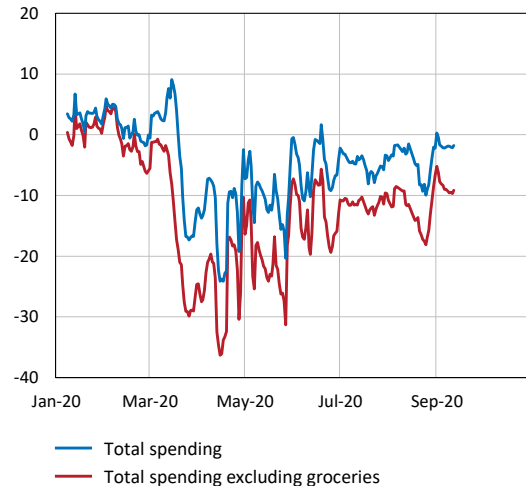
Index, 2019 Q4 = 100, seasonally-adjusted data, seasonally-adjusted data



Sources: Statistics Sweden and the Riksbank

**Figure 3:16. Turnover based on card transactions**

Annual percentage change, 7 days moving average



Sources: Swedbank Pay and Swedbank Research

weekly data for August and September shows that card transactions are now almost 2 per cent lower than one year ago, which can be compared with April, when they were just over 13 per cent lower (see Figure 3:16). However, various restrictions continue to hold back consumption and output. For instance, cancelled cultural and sporting events entail a large loss of income for tourism in metropolitan areas. Household consumption is therefore not expected to reach the pre-crisis level until the end of next year (see Figure 3:17).

#### Foreign demand increasing apace with decline in infection

The pandemic caused a synchronised decline in international demand and a very heavy fall in Swedish exports during the second quarter. Monthly statistics on foreign trade in goods show that a large share of the fall was in April, when exports of goods declined by just over 15 per cent, and a recovery took place from May to the end of July. The signals regarding manufacturing companies' export orders are not clear, however, as the purchasing managers' index signals a much stronger recovery than the Economic Tendency Survey. One explanation for the measure differing could be that the purchasing managers' index is based on a number of large companies, while the Economic Tendency Survey is a more comprehensive survey and includes smaller companies, which are still having problems.

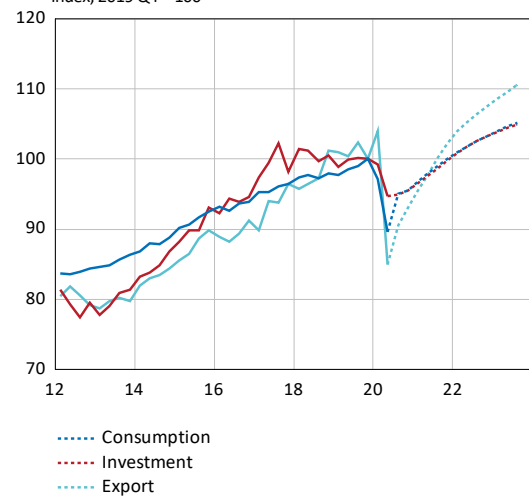
As the global economy recovers, demand for Swedish goods and services is expected to increase (see Figure 3:18). However, exports will not reach their pre-crisis level until the second half of 2021 (see Figure 3:17).

#### High demand for housing despite poor economic prospects

Investment developed relatively weakly back in 2019, when business sector investments excluding housing were largely unchanged in relation to the previous year. Housing investment fell at the same time by around 8 per cent in the wake of the earlier decline in housing prices. The lack of indicators makes it difficult to estimate how the pandemic has affected companies' willingness to invest, but many investments have probably been postponed, a picture supported by the Riksbank's Business Surveys. The fall in output and demand is expected to lead to a drop in business sector investment excluding housing of about 7 per cent this year.

Compared with developments in the Swedish economy in general, the housing market has been surprisingly strong during the crisis. The largest price rise has been on single-family dwellings, which can be largely explained by the fact that few of them have been put on the market for sale. Unemployment has risen significantly in recent months, and households' disposable income is assessed to be lower this year, both as a result of lower earned income and also lower income from capital. This should indicate a slower development in the housing market. The fact that prices have nevertheless risen could be due to the measures package implemented by the Riksdag and authorities to curb the financial consequences for households. It is also possible that

**Figure 3:17. Consumption, investments and exports**  
Index, 2019 Q4 = 100



Sources: Statistics Sweden and the Riksbank

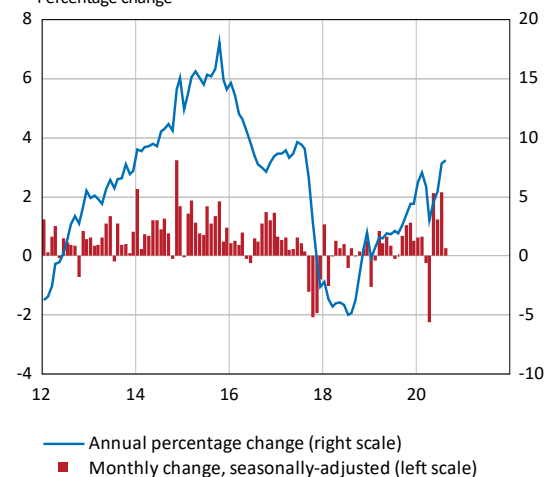
**Figure 3:18. Exports and the Swedish export market**  
Annual percentage change, seasonally-adjusted data



Note. The Swedish export market index measures import demand in the countries to which Sweden exports. This is calculated by aggregating imports in the countries included in KIX and covers around 85 per cent of the total Swedish export market.

Sources: Statistics Sweden and the Riksbank

**Figure 3:19. House prices according to HOX Sweden**  
Percentage change



Sources: Valueguard and the Riksbank

preferences regarding consumption of housing services have changed.

Households' interest expectations remain low, according to the Economic Tendency Survey, which could also explain the rising prices. Although housing prices according to the HOX fell in March and April, since then they have increased and are now higher than prior to the corona crisis (see Figure 3:19). Moreover, turnover during the summer was higher than the corresponding period in 2019, and the number of housing starts increased relatively quickly during the second quarter.

All in all, the continued good activity and price rises imply a relatively small negative effect on housing investment during the second half of this year. Developments on the housing market are expected to be more subdued going forward, and growth in housing investment to be moderate.

### Large deficit in public finances

This year, the Riksdag (the Swedish Parliament) has decided on fiscal policy measures of historic proportions. The earlier calculated general government cost appears to be much lower than expected, however (see the box "Cost of the government's crisis package lower than estimated"). The Swedish economy has been hit hard, and many people have been made unemployed. Although demand has begun to recover, continued measures are needed to get the Swedish economy going. In the budget bill, the government presented measures that weaken the financial balance by SEK 105 billion. The measures taken this year and next year are expected to support demand and alleviate the consequences of the crisis for both companies and households.

The government's measures together with economic developments are assumed to reduce general government net lending from 0.4 per cent of GDP in 2019 to -4.5 per cent of GDP in 2020. The consolidated gross debt of the public sector, the so called Maastricht debt, is consequently expected to increase from 35 per cent of GDP in 2019 to 40 per cent of GDP in 2020. Although the debt is expected to rise, it is still low, both from a historical and an international perspective. By 2022 general government net lending is expected to gradually rise to almost -1 per cent of GDP, and since GDP grows quickly the gross debt will fall somewhat as a percentage of GDP.

### Weak labour market in the spring

It has been a turbulent time on the labour market, and the effects of the sudden economic slowdown are clear. Since March, the Swedish Agency for Economic and Regional Growth has granted short-term work allowance for more than half a million employees. The number of bankruptcies increased in the initial stages of the crisis, and almost 100,000 people were given notice of redundancy, of whom around 70,000 were given notice in March and April (see Figure 3:20). According to the Swedish Employment Service, more than half of those given notice in March and April have been laid off, which is a larger share than during the financial crisis. In addition, the Swedish Employment

### Cost of the government's crisis package lower than estimated

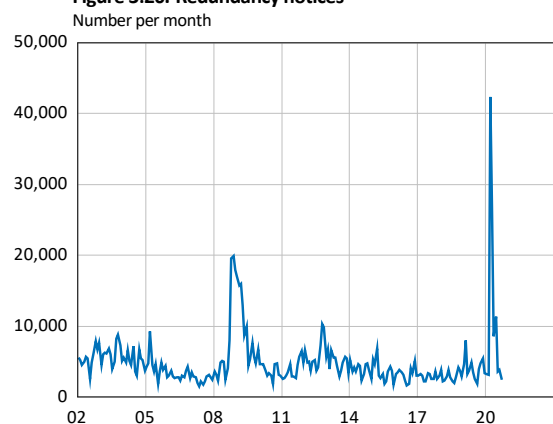
During the spring, the Riksdag has decided on measures of historic proportions to alleviate the economic consequences of the pandemic. Moreover, the government has notified that it plans to introduce unfinanced measures for SEK 105 billion in 2021 to support the recovery.

Outcomes imply that some of this year's support have been used to a lesser extent than the government had estimated prior to the summer. The fact that the support was used less than expected, at the same time as there are clear signs that the economy has begun a recovery, can be a sign that the need is not as great as the government had assessed. But it can also be the case that the way the measures have been designed has meant that they have not reached all of the companies that need them.

One of the measures introduced by the government was to give companies the opportunity to short-term work schemes. The government estimated that this measure would cost SEK 95 billion. It appears that this measure was in demand, and many employees are on short-time work schemes, but not as many as expected. According to the Swedish Agency for Economic and Regional Growth, companies have so far applied for short-time work allowance in an amount of SEK 30 billion and the Riksbank has now revised down its assessment of the cost for the full year to about SEK 40 billion.

Another measure that has been revised down substantially is the reorientation support. When this allowance was introduced, the government calculated it would cost SEK 39 billion this year. The allowance means that companies can request support for decreased turnover. Initially, companies could apply for support for March and April. It was possible to apply for this support during the period 22 June to 31 August and according to the Swedish Tax Agency, which administers the support, it had paid out support of around SEK 1.3 billion as of 2 September. The government has now proposed that this support be extended to also include the months May–July. The support for all of the months, has been calculated by the Riksbank as costing around SEK 7 billion this year.

Figure 3:20. Redundancy notices



Note. Redundancies for September refer to the period 1–11 September.  
Source: Swedish Public Employment Service

Service reports that the number of persons who have been without work for twelve months or more has shown a clear increase. According to the Labour Force Survey (AKU), employment fell significantly in the second quarter. The service sector has been hit very hard and many temporarily employed people have lost their jobs, including many young people.

**The situation on the labour market appears to have stabilised**

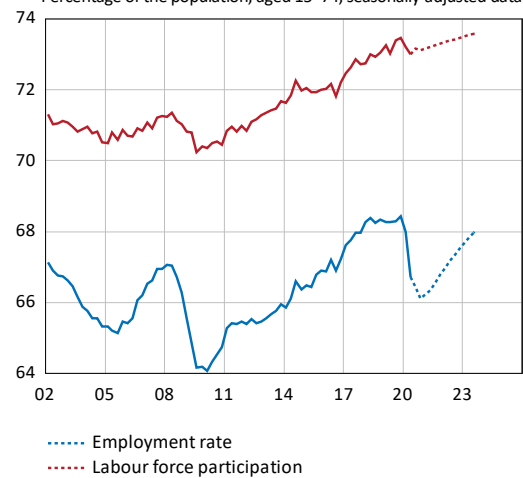
Following a dramatic development in the spring, the situation on the labour market now appears to have stabilised somewhat in recent months. Unemployment rose rapidly up to June and has since then remained largely unchanged. In August, unemployment was 9.1 per cent according to both the Labour Force Survey and the Swedish Public Employment Service. In recent months, the number of new applications for short-term work allowances has declined, as has the number of redundancy notices. Companies' recruitment plans according to the Economic Tendency Survey have also recovered somewhat, but are still negative and indicate that the personnel cutbacks are continuing. Outcomes and indicators thus point to the situation having stabilised, but there is a long way to go for the labour market to recover from the deterioration that has taken place so far this year and the indicators do not show any immediate improvement.

Many are expected to continue on short-term layoffs during the autumn which means that the number of hours worked will still be dampened. This year, particularly generous regulations apply to short term work schemes. The short-term work schemes has meant that many employees have been able to keep their jobs even in companies that have suffered production stoppages or large falls in demand. But even if demand in the economy has begun to rise again, it is still expected to remain weak in the coming quarters. Some companies are expected to no longer want to retain all staff on short-term work schemes as demand remains weak and the regulations for short-term become less generous at the turn of the year. This autumn, it is expected to contribute to the number of redundancies rising and many permanent employees losing their jobs.

Employment is thus expected to continue falling during the third and four quarters, but not at as fast a pace as during the spring. According to the Swedish Council for Higher Education, a record number of people have applied to study this autumn, and this is probably partly due to the weak labour market. Many are therefore expected to leave the work force, which will dampen the upturn in unemployment.

Unemployment will nevertheless continue rising and is expected to reach around 9.5 per cent at the end of the year. All in all, the number of employed is expected to decline by almost 200,000 people in 2020. Compared with the most recent decrease in employment, in connection with the financial crisis in 2008, the decline has been faster but is not expected to be as great (see Figure 3:21).

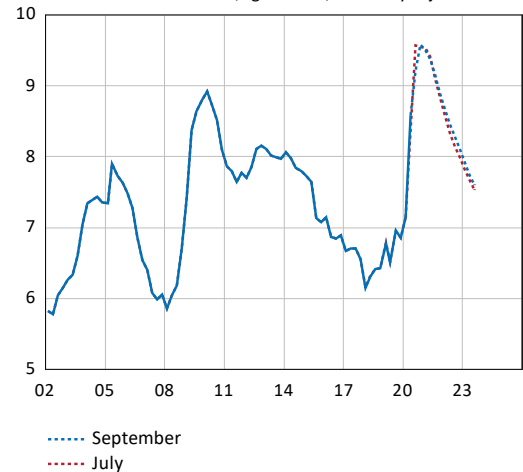
**Figure 3:21. Employment rate and labour force participation**  
Percentage of the population, aged 15–74, seasonally-adjusted data



Sources: Statistics Sweden and the Riksbank

**Figure 3:22. Unemployment**

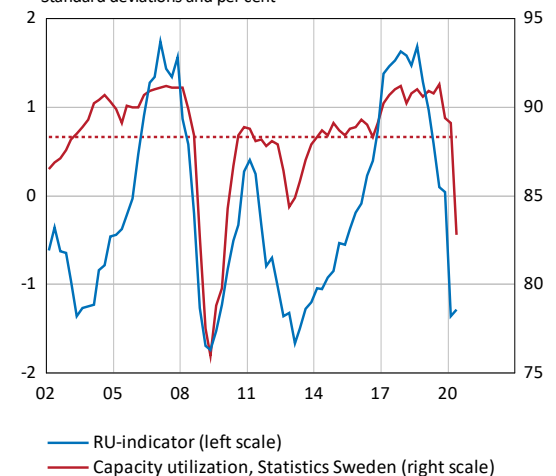
Per cent of the labour force, aged 15–74, seasonally-adjusted data



Sources: Statistics Sweden and the Riksbank

**Figure 3:23. Resource utilisation indicator and Capacity utilisation in the manufacturing industry**

Standard deviations and per cent



Note. The RU-indicator is a statistical measure of resource utilisation. It is normalised so that the mean value is 0 and the standard deviation is 1. The broken line represents the mean value of the Capacity utilisation since 1996. Capacity utilisation refers to seasonally-adjusted data.

Sources: Statistics Sweden and the Riksbank

### Next year employment will gradually rise and unemployment will fall

Economic activity appears to have begun to recover. In the sectors where demand has begun to rise, the staff on short-term layoffs will be able to return to normal working hours before there is any new recruitment. It will therefore take time before employment growth rises. During 2021, employment will increase as demand rises. But it will take time for the labour market to recover. The high level of unemployment and the prolonged recovery mean that groups with a weak attachment to the labour market risk finding it even more difficult to compete for jobs. The economic crisis caused by the pandemic will have long-term negative effects on unemployment.<sup>26</sup>

At the end of 2023, the employment rate is expected to be somewhat lower than the pre-crisis level, while labour force participation is expected to have recovered lost ground then and attained the same level. The fact that the employment rate does not fully recover means that unemployment is higher at the end of 2023 than prior to the crisis (see Figures 3:21 and 3:22).

### Resource utilisation lower than normal during the entire forecast period

The amount of spare capacity in the economy affects the development of wages and prices. Data indicates that this occurs with quite a considerable time lag. However, resource utilisation cannot be measured exactly and the Riksbank therefore makes an assessment based on a number of different indicators.

Several indicators point to resource utilisation having fallen rapidly and that there is now considerable spare capacity in the economy. Capacity utilisation in the manufacturing industry fell heavily during the second quarter, according to Statistics Sweden (see Figure 3:23). The Riksbank's resource utilisation indicator fell markedly in the first quarter, and remained largely unchanged in the second quarter. Other measures of resource utilisation are the GDP, hours and employment gaps. Using these measures, resource utilisation looks to be very low in 2020 and 2021. As GDP, the number of hours worked and the number of persons employed recover, resource utilisation will normalise (see Figure 3:25).

However, it is worth bearing in mind that the pandemic has led to factors of production being temporarily more or less eliminated. The assessment of GDP, employment and hours gaps is partly based on an estimate of the trend development for these variables. When the crisis affects the supply side so directly, several of the traditional indicators used to assess resource utilisation are even more difficult to interpret.

### Low rate of wage increase this year

During the spring, there should have been extensive wage bargaining rounds, but they were postponed until the autumn because of the pandemic. The agreements that applied have

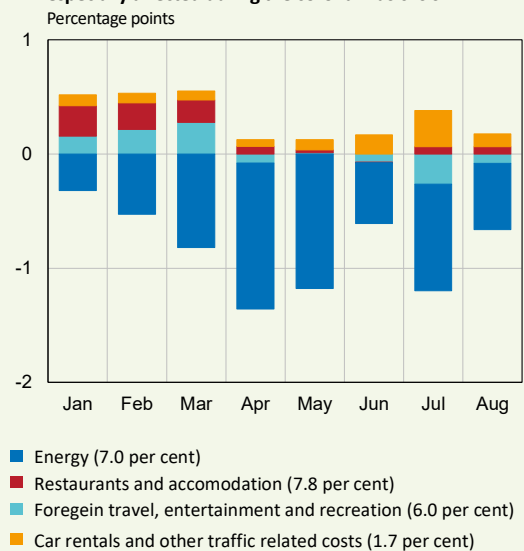
### Temporary effects holding inflation down in 2020

The effect of the annual update in weights in the consumer price index is unusually large in 2020, and is expected to hold CPI inflation down by just over 0.2 percentage points during the year. The weight adjustments are expected to become more normal in January next year, which, in turn, will lead to inflation then rising by approximately as much.

The price measurements used as a basis for calculating the CPI have been affected by the measures to prevent the spread of infection. With regard to some service prices, Statistics Sweden has had to use so-called imputation methods, which mean replacing the missing values with new artificial values that are assumed to be close to the real values. Some examples are prices of charter travel and tickets to various entertainment and sporting events.

Figure 3:24 shows the contribution to CPI inflation from prices that have been more or less directly affected by the corona crisis. The negative contribution from energy prices was largest in April and May. Both petrol and electricity prices have risen somewhat recently, which indicates that energy prices will make a positive contribution to CPI inflation with effect from spring 2021. With regard to the product groups foreign travel and entertainment and recreation, where some prices had to be imputed, the contribution to inflation has been negative since April. The contribution from restaurants and accommodation has also been clearly lower since April. During the summer months, higher prices for rental cars have had a counterbalancing effect and contributed positively to CPI inflation. This effect was subdued in August. The assessment is that the level of inflation will rise when price measurements function fully again in the aviation industry and entertainment and events sector. It may also be the case that some sectors that have been affected particularly strongly by the crisis will attempt to compensate for this by raising prices a little more than usual.

**Figure 3:24. Contribution to CPI inflation from prices especially affected during the coronavirus crisis**



Sources: Statistics Sweden and the Riksbank

<sup>26</sup> A high level of unemployment over a long period of time can have long-term negative effects, see the article "The long-term effects of the pandemic on output and employment" in the Monetary Policy Report in July 2020.

been extended and the manufacturing industry, which is first in line, has extended its central wage agreements until 31 October. Negotiations within the manufacturing sector will begin on 1 October, according to the social partners, with the aim of concluding them by 31 October. In the prevailing uncertain economic situation, other parties in the labour market have also chosen to postpone negotiations and the aim is that all of the agreements will be signed by the end of December. This has meant that wages have increased slowly in recent months, according to preliminary statistics.<sup>27</sup>

This year, the rate of wage increase is expected to be low, but is expected to rise in 2021 apace with the recovery in economic activity following this year's rapid downturn (see Figure 3:26). At the same time, it is possible that there will be upward pressure on wages within occupations where there is a shortage of labour, such as the healthcare sector.

However, this year there will be an increase in hourly wages in the National Accounts, another source of statistics, as different support measures, such as the short-term work schemes and reduced sick-pay responsibility for companies, will lead to the measured payroll expenses decreasing less than the number of hours worked.<sup>28</sup>

This year's restrictions have led to parts of production being temporarily closed down. This means that productivity this year is expected to be low, despite many people being on short-term work schemes and the number of hours worked therefore being lower than normal. As the restrictions are eased, and production returns to normal the number of hours worked will rise. Initially, however, production is expected to increase faster, which means that productivity will rise.

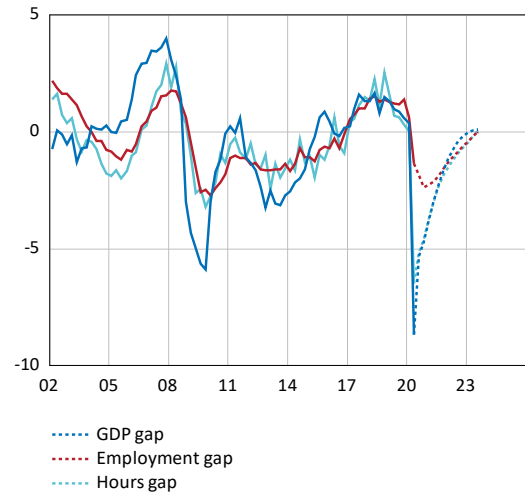
**Inflation somewhat higher than expected in recent months**

Strong economic activity, a weaker krona and rising energy prices contributed to CPIF inflation being close to the target from 2017 to the first half of 2019. Inflation then fell back during the second half of 2019, and was low at the beginning of 2020 (see Figure 3:27). The sharp downturn in the rate of inflation was due to several factors. One was that the mild winter caused electricity prices to fall gradually from autumn 2019 to summer 2020. In spring 2020, the oil price also began to fall heavily, which contributed to reducing fuel prices. The falling electricity and fuel prices pushed down CPIF inflation considerably during the first six

<sup>27</sup> Definitive outcomes for wage statistics are published at a delay of just over one year. The final figure for June will thus be preliminary until the June figure for next year is published. The National Mediation Office normally makes calculations, with the aid of a model, on what the final outcome will be. However, as a result of the uncertain situation, no such calculation has been made for the months of April-June this year. The most recent outcomes will probably be revised up somewhat.

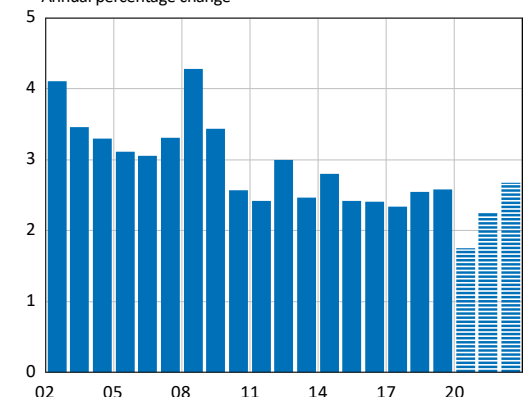
<sup>28</sup> Hourly wages according to the National Accounts can be calculated as payroll expenses divided by the number of hours worked. Short-term work scheme means that companies can reduce the number of hours at the same time as the payroll expenses do not decline as far. This also means that the rate of increase in unit labour costs rises. However, companies' costs increase more slowly than the statistics show, since state subsidizes short-term work schemes. The wage and labour cost statistics from the National Accounts in this situation reflect payroll expenses more from a wage-earner perspective than companies' wage costs.

**Figure 3:25. GDP gap, employment gap and hours gap**  
Per cent



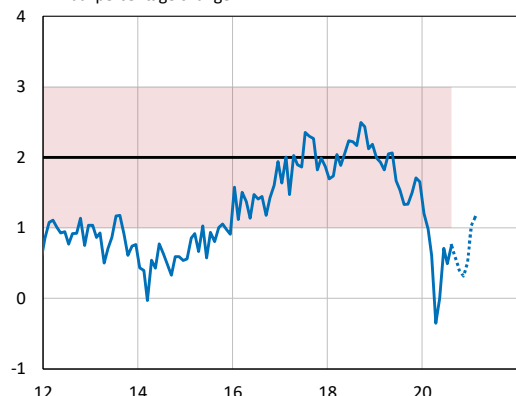
Note. The gaps refer to the deviation of GDP, the number of employed and number of hours worked from the Riksbank's assessed trends.  
Sources: Statistics Sweden and the Riksbank

**Figure 3:26. Wages according to short-term wage statistics in the economy as a whole**  
Annual percentage change



Sources: Swedish National Mediation Office and the Riksbank

**Figure 3:27. 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. The broken line represents the forecast for the next 6 months.

Sources: Statistics Sweden and the Riksbank

months of the year. In April, energy prices helped to reduce CPIF inflation by a good 1.2 percentage points.

The corona crisis has had a clear impact on inflation figures, which have become more volatile and service prices have been particularly impacted. The CPIF outcomes for April and May were low. Some of the price movements were due to actual price falls, while others were the result of temporarily amended measurement methods. There are several elements of temporary effects in inflation at the moment, at the same time as some measurement problems remain (see the box “Temporary effects holding down inflation in 2020”). In June, July and August, CPIF inflation was higher than expected. The increased volatility means that individual monthly outcomes should continue to be interpreted with caution.

Like other central banks, the Riksbank calculates and publishes various different measures of underlying, or core, inflation. These measures, which exclude or reduce the significance of prices that have previously varied substantially, indicate that more persistent inflation has risen in recent months (see Figure 3:28).

#### Moderate inflation rate in near term

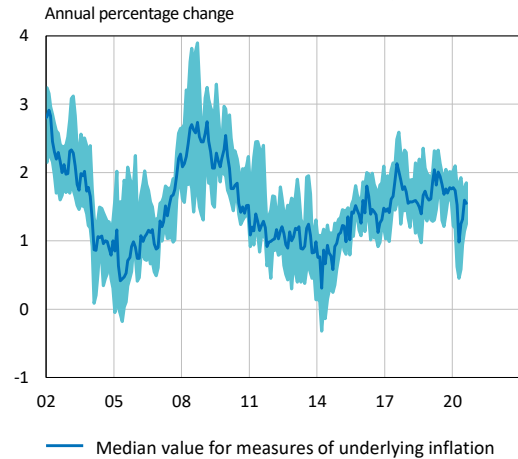
According to the Economic Tendency Survey, business sector expectations of sales prices fell substantially and were at historically low levels during the first quarter. They have risen somewhat during the second quarter, but from very low levels. The rate of increase in most prices in the producer channel, and especially import prices, has fallen significantly in recent months, which is largely linked to the krona appreciation. Prices of consumer goods produced and sold in Sweden are thus still rising faster than normal in the producer channel (see Figure 3:29).

Inflation is expected to be very low in 2020, but somewhat higher than was forecast in the July Monetary Policy Report. Around the turn of the year, the temporary effects are expected to wane and inflation is expected to rise. The Riksbank's model forecast, which summarises the information from a large number of indicators, such as price plans, producer prices and exchange rates, points to inflation being low this year (see Figure 3:30). During the remainder of 2020, the assessment is somewhat higher than the model forecast. This is because the model is not thought to capture new dynamics entailed in, for instance, changes in measurement methods and temporary deviations. The assessment also includes the expectation that some sectors particularly badly affected by the crisis will compensate for this by increasing prices slightly more in the autumn.

#### Inflation to rise gradually in the coming years

Inflation will rise at the beginning of 2021. This is partly due to the unexpectedly large adjustment in weights in the consumption basket 2020 no longer affecting inflation. Other temporary factors, more directly linked to the corona pandemic, are also expected to decline gradually, contributing to the rise in inflation. Energy prices are expected to continue rising from the current

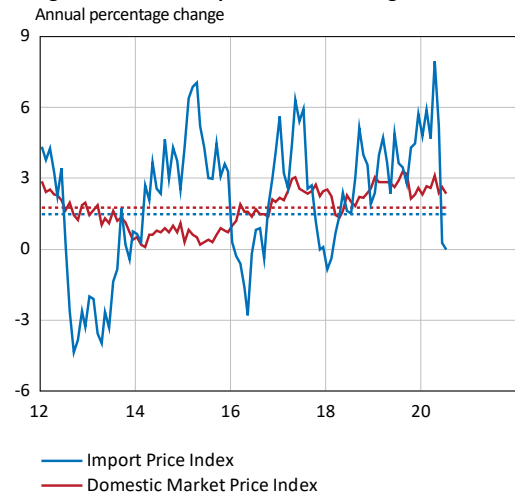
**Figure 3:28. Different measures of underlying inflation**



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

**Figure 3:29. Producer prices for consumer goods**



Note. The import price index measures how much Swedish importers pay for their goods at the border. Domestic market prices measure how much Swedish producers are paid when sales take place in Sweden. Broken lines represent the averages since 2000.

Source: Statistics Sweden



levels, which will also provide a positive contribution to CPIF inflation. But at the same time, the krona has appreciated and cost pressures are low, which contributes to inflation being subdued next year, before beginning to rise again.

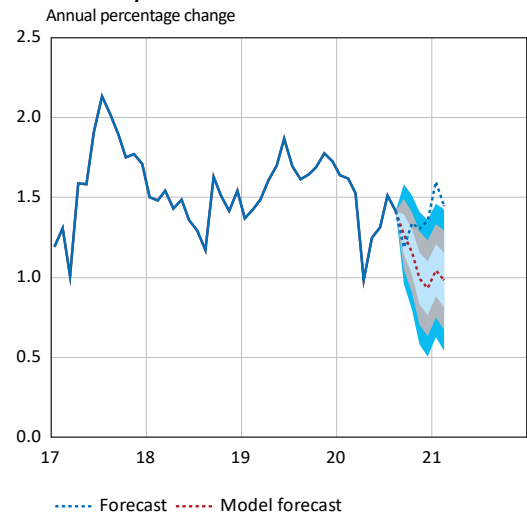
It is still difficult to know how the current crisis will affect inflation in the longer run. Some factors indicate that it could contribute to higher inflation, while others point to lower price increases in the long run.

Disruptions to the supply side of the economy can lead to inflation rising. An increasing number of bankruptcies risks hampering competition and thereby leading to higher price increases. The crisis could also lead to reduced trade in goods and services with other countries, which can also contribute to higher inflation.<sup>29</sup>

There are also factors indicating that inflation will remain below the target in the coming years. The krona will gradually appreciate and resource utilisation in the economy is expected to be significantly lower than normal throughout the forecast period. At the same time, companies' costs are expected to increase more slowly than normal. If the crisis becomes prolonged, there is a risk that inflation expectations will become entrenched at low levels.

The Riksbank's overall assessment is that inflation in Sweden will rise gradually as demand strengthens, wages increase faster and inflation abroad rises. The relatively weak demand and the continued low resource utilisation in Sweden and abroad will slow down the rate of increase in inflation, however. At the same time, there are factors that are assessed to lead to a higher rate of price increase during the latter part of the forecast period (see Figure 3:31).

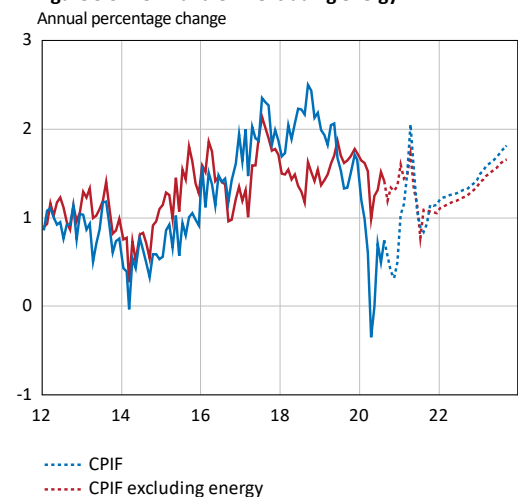
**Figure 3:30. CPIF excluding energy, model forecast with uncertainty bands**



Note. The uncertainty bands 50, 75 and 90 per cent are based on the models' historical forecast errors.

Sources: Statistics Sweden and the Riksbank

**Figure 3:31. CPIF and CPIF excluding energy**



Sources: Statistics Sweden and the Riksbank

<sup>29</sup> For a discussion of these factors, see the article "Inflation outlook during the corona crisis" in the Monetary Policy Report in July 2020.

## ARTICLE – Two alternative scenarios for the development of the economy

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To illustrate the great uncertainty surrounding the main scenario, this article presents economic development in two different scenarios. In one scenario, a new, greater wave of infection arrives later this year, leading to restrictive measures in society becoming more severe than at present. This leads to a new decline in economic activity in Sweden and abroad. The scenario also assumes that the downturn weakens the Swedish housing market and that output in the longer term is affected by increasing numbers of bankruptcies, a slower decrease in unemployment and further restraints on investment. Compared with the main scenario, it therefore takes significantly longer for the economy to return to its pre-crisis level.

In contrast, the other scenario involves recovery taking place more rapidly than in the main scenario. The assumption here is that infection falls to very low levels in the autumn and that social life largely returns to normal at the same time as sentiment among households and companies improves rapidly. Together with continued large economic policy stimulation, this may help recover the fall in production in the second quarter sooner than in the main scenario.

A technical assumption in both scenarios is that monetary policy is the same as in the main scenario, but the Riksbank is always prepared to act if economic and inflation prospects should change. However, a more rapid upturn in the economy would not automatically give reason to make monetary policy less expansionary in different ways.

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### **The corona pandemic continues to dominate the risk outlook**

The corona pandemic continues to hold social life in its grip and, as in the spring and summer, the pandemic is dominating the risk outlook and making forecasts for economic development highly uncertain. There is a clear risk of the spread of infection increasing again, as illustrated by developments in several European countries recently. Restrictions and voluntary limitations on social life to reduce physical contacts could then hold back economic development to an even greater extent than they are doing at present. On the other hand, the number of people in intensive care and numbers of coronavirus-related fatalities have fallen in several of the countries that were badly affected in the spring. The recovery going forward will therefore largely be determined by what happens with the spread of infection, whether any increase in the infection rate leads once again to more intensive care admissions and deaths, and how much social life is affected.

### **Developments have been roughly in line with the Riksbank's main scenario in July**

Economic developments abroad over the summer have overall been in line with the picture that the Riksbank

presented in the main scenario in July, even if the restrictions on social life have not been lifted to the extent that the main scenario assumed. GDP abroad and in Sweden fell sharply during the first six months of the year, but output has started to recover and indicators of short-term growth indicate that the upturn is continuing.

### **Two scenarios for the development of the economy**

To illustrate the substantial uncertainty surrounding the main scenario in Chapter 3, two alternative scenarios for future developments are presented here. The alternative scenarios resemble those in the July report in the sense that they are based on more optimistic and more pessimistic assumptions than the main scenario as regards the spread of infection and the effects of the measures implemented to restrict it. They also illustrate how the recovery may look if the crisis has long-term effects on the economy.

The first scenario assumes a new wave of infection later this year in both Sweden and other countries. Restrictions and voluntary limitations on social life therefore increase again, causing a new economic downturn. The second scenario instead illustrates a more favourable development both in Sweden and abroad, where the spread of infection and restrictions fall to very low levels in the autumn, forming

the basis for a faster economic upswing than in the main scenario. The main conditions for the scenarios are summarised in Table 3:1. Diagrams illustrating the development of the economy in scenarios can be found at the end of the article, as can tables showing annual mean values (see Tables 3:2 and 3:3).

**Table 3:1. Summary of the assumptions in the scenarios**

Scenario with a second wave of infection
<ul style="list-style-type: none"> <li>• The degree of immunity is low and infection rises at the end of 2020.</li> <li>• New restrictions and voluntary limitations on physical contact affect social life both in Sweden and abroad.</li> <li>• 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.</li> <li>• 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.</li> <li>• Higher unemployment and more pessimistic sentiment affect the Swedish housing market, where prices fall and new construction declines.</li> </ul>
Scenario with faster economic upswing
<ul style="list-style-type: none"> <li>• The spread of infection falls to very low levels over the autumn and has basically stopped by next year.</li> <li>• Social life returns to normal to a large extent and sentiment rapidly improves among households and companies.</li> <li>• 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.</li> <li>• The downturn in economic activity over the spring of 2020 has minor or no effects on long-term production capacity.</li> <li>• House prices continue to rise.</li> </ul>

Note. Both scenarios have been made under the technical assumption that monetary policy in Sweden will be the same as in the main scenario in Chapter 3.

### **A second wave of infection causes economic activity abroad to fall significantly again this year**

The alternative scenario with a second wave is based on the assumption that infection rates increase noticeably later this year. Even if the outbreak is not as large as in the spring, it is assumed to be comprehensive enough for restrictions on social life to increase again, rather than staying more or less unchanged over the rest of the year as the main scenario assumes.

Compared with developments in the spring, a new wave of infection would probably not have as large negative effects on GDP growth in the United States and euro area. Measures to limit the spread of infection will probably be less comprehensive and preparedness for the coronavirus is also higher. However, it will disrupt output and affect households negatively. Economic activity abroad therefore decreases significantly again towards the end of the year. Inflation will also be substantially lower than in the main scenario due to resource utilisation becoming weaker.

### **The second wave of infection holds the Swedish economy back and a downturn on the housing market burdens growth further**

The significant decrease in economic activity abroad towards the end of the year affects Swedish exports negatively. In addition, greater restrictions on social life entail decreased demand, and sentiment among households and companies deteriorates again. Overall, this leads to a new fall in GDP in Sweden in the fourth quarter of the year (see Figure 3:32). However, as restrictions abroad are assumed to be less comprehensive than in the spring, the fall is not as great as in the second quarter. In this scenario, GDP decreases by 4.9 per cent in 2020.

The scenario assumes that infection rates decline in 2021 and that restrictions on social life are thus eased next year. However, the long period of very low activity in the economy in this scenario puts companies under further pressure. Bankruptcies therefore increase and unemployment continues to rise to about 12 per cent (see Figure 3:33).

Reduced economic activity and more redundancy notices probably contribute towards the housing market being affected more negatively than in the spring. Housing prices and housing construction are therefore expected to develop more weakly in 2021 in this scenario, compared with the main scenario. Output in the long-term is also affected more, as bankruptcies become more and investments fewer. Even three years ahead, the level of GDP in this scenario is lower than in the main scenario (see Figure 3:32). The number of unemployed people losing their connection to the labour market probably also increases, meaning it takes longer for unemployment to fall (see Figure 3:33).

The new downturn in economic activity restrains price increases. In the scenario with a second wave, inflation becomes significantly lower than in the main scenario, above all in the year ahead (see Figure 3:34).

The scenario has been formed under the assumption that both fiscal and monetary policy are the same as in the main scenario. If a second wave of infection were to arrive and economic activity fall again, it would seem reasonable to expect economic policy measures to be expanded to provide further support for the economy. In a new downturn, the fall would therefore probably be smaller than the scenario indicates.

Demand in the economy can be effectively supported with fiscal policy, as public finances in Sweden are strong and interest rates are low. Monetary policy has plenty of scope to manage problems that might arise on the financial markets, such as poorer credit supply or rising risk premiums that push up interest rates charged to households and companies. The repo rate could also be cut if it is judged effective, especially if confidence in the inflation target was under threat. To give the economy the best support, the interplay of monetary policy and fiscal policy is important.

### Low infection rates and decreasing restrictions in the autumn allow faster economic upswing

A more optimistic scenario than in the forecast described in the main scenario is that the spread of the coronavirus slows down to very low levels in the autumn and largely disappears next year. This could involve social life relatively rapidly returning to normal to a large extent and sentiment among households and companies improving, both in Sweden and abroad. Shocks to companies' output then become ever smaller at the same time as demand steadily increases and companies resume investment. An expansionary monetary policy and the major fiscal policy stimulation measures launched contribute to increasing demand.

In this scenario, activity in the economy could rise rapidly and output increase substantially in the second half of this year, both abroad and in Sweden. For Sweden, this could involve GDP returning to the same level as before the crisis as soon as the end of the year (see Figure 3:32). In 2020, GDP decreases by an average of 3.3 per cent but growth then increases markedly in 2021. Even though the sharp economic downturn in the spring leads to bankruptcies and rising unemployment, the relative rapid upturn means that the effects on output in the long term will be relatively moderate. In this scenario, unemployment falls steadily and approaches the pre-crisis level significantly more rapidly than in the main scenario (see Figure 3:33).

### A faster economic upswing will also cause inflation to rise at a faster pace

Larger price increases abroad, combined with ever higher domestic demand, improvements of the situation on the labour market and growing cost pressures in companies, will contribute to inflation in Sweden rising faster towards the target of 2 per cent (see Figure 3:34).

In the scenario, inflation is very close to the inflation target towards the end of 2022 and the rate of increase will probably not slow down after that. However, apart from a temporary peak next year, inflation will be below 2 per cent until then. Furthermore, it takes time for unemployment to come down to more normal levels. Even if developments could thus be stronger than in the main scenario, it would not be a reason to make monetary policy less expansionary in different ways.

**Table 3:2. Scenario with a second wave of infection**

Annual percentage change, annual average, calendar-adjusted data

	2020	2021	2022
CPIF	0.4	0.7	1.1
GDP	-4.9	1.2	5.4
Unemployment, 15–74 years*	9.2	10.9	9.3
No. of employed, 15–74 years	-2.4	-1.5	2.3

\*Per cent of the labour force

Sources: Statistics Sweden and the Riksbank

**Table 3:3. Scenario with faster economic upswing**

Annual percentage change, annual average, calendar-adjusted data

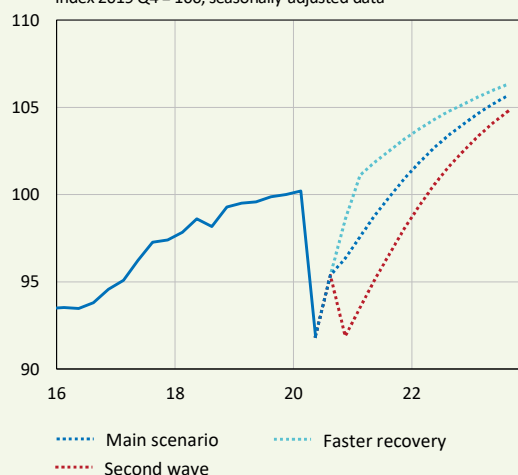
	2020	2021	2,022
CPIF	0.6	1.7	1.5
GDP	-3.3	6.0	2.3
Unemployment, 15–74 years*	8.5	8.2	7.6
No. of employed, 15–74 years	-1.6	1.0	1.5

\*Per cent of the labour force

Sources: Statistics Sweden and the Riksbank

**Figure 3:32. GDP**

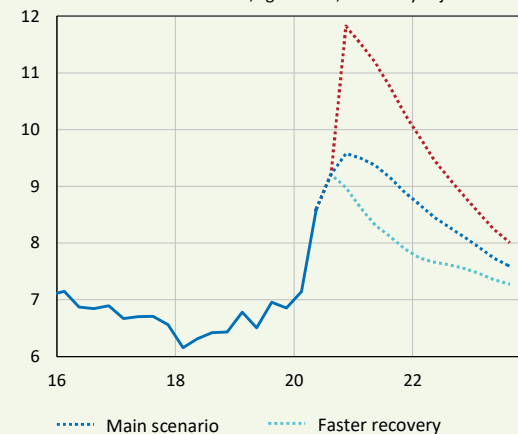
Index 2019 Q4 = 100, seasonally-adjusted data



Sources: Statistics Sweden and the Riksbank

**Figure 3:33. Unemployment**

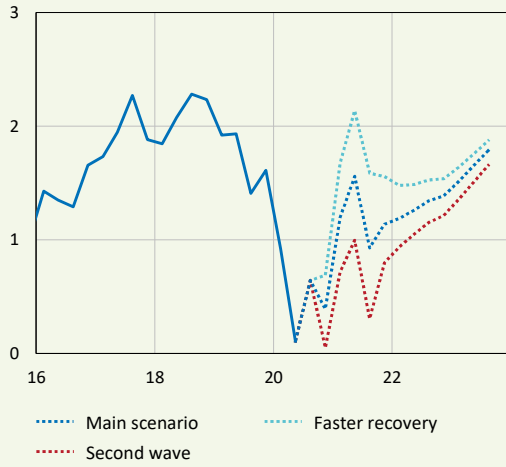
Per cent of the labour force, aged 15–74, seasonally-adjusted data



Sources: Statistics Sweden and the Riksbank

**Figure 3:34. CPIF**

Annual percentage change, seasonally-adjusted data



Sources: Statistics Sweden and the Riksbank

## Tables

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

**Table 1. Repo rate forecast**

Per cent, quarterly averages

	Q2 2020	Q3 2020	Q4 2020	Q3 2021	Q3 2022	Q3 2023
Repo rate	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)

Source: The Riksbank

**Table 2. Inflation**

Annual percentage change, annual average

	2018	2019	2020	2021	2022
CPI	2.1 (2.1)	1.7 (1.7)	0.5 (0.4)	1.2 (1.4)	1.3 (1.4)
CPI excl. energy	1.4 (1.4)	1.6 (1.6)	1.4 (1.3)	1.2 (1.4)	1.2 (1.3)
CPI	2.0 (2.0)	1.8 (1.8)	0.6 (0.5)	1.1 (1.4)	1.3 (1.4)
HICP	2.0 (2.0)	1.7 (1.7)	0.7 (0.5)	1.2 (1.4)	1.2 (1.4)

Note. HICP is an EU harmonised index of consumer prices.

Sources: Statistics Sweden and the Riksbank

**Table 3. Summary of financial forecasts**

Per cent, unless otherwise stated, annual average

	2018	2019	2020	2021	2022
Repo rate	-0.5 (-0.5)	-0.3 (-0.3)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)
10-year rate	0.7 (0.7)	0.1 (0.1)	0.0 (0.1)	0.4 (0.5)	0.7 (0.8)
Exchange rate, KIX, 18 November 1992 = 100	117.6 (117.6)	122.1 (122.1)	118.7 (120.6)	115.4 (118.5)	114.0 (116.0)
General government net lending*	0.8 (0.8)	0.4 (0.3)	-4.5 (-6.6)	-2.6 (-2.7)	-0.6 (-0.7)

\*Per cent of GDP

Sources: Statistics Sweden and the Riksbank

**Table 4. International conditions**

Annual percentage change, unless otherwise stated

GDP	PPP-weights	KIX-weights	2018	2019	2020	2021	2022
Euro area	0.11	0.49	1.8 (1.9)	1.3 (1.2)	-8.5 (-8.1)	5.6 (6.3)	3.8 (3.7)
USA	0.15	0.08	3.0 (2.9)	2.2 (2.3)	-4.3 (-5.8)	4.4 (5.1)	3.4 (4.9)
Japan	0.04	0.02	0.3 (0.3)	0.7 (0.7)	-5.5 (-5.0)	2.5 (2.9)	1.4 (1.5)
China	0.19	0.09	6.6 (6.6)	6.1 (6.1)	2.0 (0.6)	9.4 (10.2)	5.7 (5.8)
KIX-weighted	0.75	1.00	2.6 (2.6)	2.0 (2.0)	-6.2 (-6.3)	5.6 (5.9)	4.3 (4.4)
World (PPP-weighted)	1.00	—	3.6 (3.6)	2.9 (2.9)	-3.0 (-3.2)	5.8 (6.3)	3.6 (4.4)

Note. Calendar-adjusted growth rates. The PPP-weights refer to the global purchasing-power adjusted GDP weights for 2019, according to the IMF. KIX-weights refer to weights in the Riksbank's krona index (KIX) for 2020. The forecast for GDP in the world is based on the IMF's forecasts for PPP-weights. The forecast for KIX-weighted GDP is based on an assumption that the KIX-weights will develop in line with the trend during the previous five years.

CPI	2018	2019	2020	2021	2022
Euro area (HICP)	1.8 (1.8)	1.2 (1.2)	0.4 (0.6)	1.0 (1.3)	1.4 (1.4)
USA	2.4 (2.4)	1.8 (1.8)	1.2 (0.9)	1.9 (1.6)	2.0 (2.0)
Japan	1.0 (1.0)	0.5 (0.5)	-0.1 (-0.1)	0.1 (0.1)	0.4 (0.4)
KIX-weighted	2.2 (2.2)	1.8 (1.8)	1.2 (1.3)	1.5 (1.7)	1.9 (1.9)

	2018	2019	2020	2021	2022
Policy rates in the rest of the world, per cent	0.1 (0.1)	0.1 (0.1)	-0.3 (-0.3)	-0.3 (-0.4)	-0.3 (-0.4)
Crude oil price, USD/barrel Brent	71.5 (71.5)	64.1 (64.1)	43.4 (40.8)	46.8 (42.4)	48.8 (45.1)
Swedish export market	3.9 (3.8)	2.5 (2.4)	-10.2 (-11.0)	8.3 (6.5)	7.1 (7.2)

Note. International policy rate is an aggregate of policy rates in the US, the euro area (EONIA), Norway and the United Kingdom.

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

**Table 5. GDP by expenditure**

Annual percentage change, unless otherwise stated

	2018	2019	2020	2021	2022
Private consumption	1.8 (1.8)	1.3 (1.2)	-4.5 (-4.3)	4.5 (3.6)	3.7 (4.3)
Public consumption	0.8 (0.8)	0.1 (0.3)	0.2 (0.5)	2.9 (1.6)	2.1 (1.4)
Gross fixed capital formation	1.4 (1.4)	-1.0 (-1.3)	-3.5 (-7.7)	2.3 (4.3)	4.0 (5.6)
Inventory investment*	0.3 (0.3)	-0.1 (-0.1)	-0.7 (-0.8)	0.2 (0.5)	0.0 (0.0)
Exports	4.2 (4.2)	3.3 (3.2)	-7.3 (-11.3)	6.5 (5.5)	7.0 (7.9)
Imports	3.8 (3.8)	1.1 (1.1)	-7.8 (-12.3)	7.0 (6.0)	6.5 (7.6)
GDP	2.0 (2.0)	1.3 (1.2)	-3.6 (-4.5)	3.7 (3.6)	3.7 (4.1)
GDP, calendar-adjusted	2.1 (2.1)	1.3 (1.2)	-3.9 (-4.8)	3.5 (3.5)	3.7 (4.1)
Final domestic demand*	1.4 (1.4)	0.3 (0.3)	-2.8 (-3.7)	3.4 (3.1)	3.2 (3.7)
Net exports*	0.3 (0.3)	1.0 (1.0)	-0.1 (0.0)	0.1 (0.0)	0.5 (0.4)
Current account (NA), per cent of GDP	2.4 (2.4)	4.1 (4.1)	4.8 (4.5)	4.6 (4.2)	4.8 (4.3)

\*Contribution to GDP growth, percentage points

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

Sources: Statistics Sweden and the Riksbank

**Table 6. Production and employment**

Annual percentage change, unless otherwise stated

	2018	2019	2020	2021	2022
Population, aged 15–74	0.8 (0.8)	0.7 (0.7)	0.4 (0.5)	0.4 (0.4)	0.4 (0.4)
Potential hours worked	0.9 (0.9)	0.8 (0.8)	0.7 (0.7)	0.6 (0.6)	0.5 (0.6)
Potential GDP	1.8 (1.7)	1.7 (1.6)	1.6 (1.6)	1.6 (1.6)	1.6 (1.7)
GDP, calendar-adjusted	2.1 (2.1)	1.3 (1.2)	-3.9 (-4.8)	3.5 (3.5)	3.7 (4.1)
Number of hours worked, calendar-adjusted	1.8 (1.8)	-0.3 (-0.3)	-4.1 (-5.0)	1.9 (2.9)	2.2 (2.2)
Employed, aged 15–74	1.5 (1.5)	0.7 (0.7)	-1.8 (-2.1)	-0.1 (-0.1)	1.6 (1.9)
Labour force, aged 15–74	1.1 (1.1)	1.1 (1.1)	0.2 (-0.1)	0.6 (0.5)	0.6 (0.8)
Unemployment, aged 15–74 *	6.3 (6.3)	6.8 (6.8)	8.6 (8.7)	9.2 (9.2)	8.4 (8.3)
GDP gap**	1.3 (1.4)	0.9 (0.9)	-4.6 (-5.5)	-2.7 (-3.7)	-0.6 (-1.4)
Hours gap**	1.8 (1.8)	0.8 (0.8)	-4.0 (-5.1)	-2.7 (-2.7)	-1.1 (-1.1)

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

Note. Potential hours refer to the long-term sustainable level for the number of hours worked according to the Riksbank's assessment.

Sources: Statistics Sweden and the Riksbank

**Table 7. Wages and labour costs for the economy as a whole**

Annual percentage change, calendar-adjusted data unless otherwise stated

	2018	2019	2020	2021	2022
Hourly wage, NMO	2.6 (2.5)	2.6 (2.6)	1.7 (2.1)	2.3 (2.2)	2.7 (2.7)
Hourly wage, NA	2.7 (2.7)	3.9 (3.9)	4.3 (4.9)	0.4 (0.0)	2.5 (2.5)
Employers' contribution*	0.7 (0.7)	0.1 (-0.1)	-1.2 (-1.1)	0.9 (1.1)	0.0 (0.0)
Hourly labour cost, NA	3.4 (3.4)	4.0 (3.8)	3.2 (3.7)	1.4 (1.1)	2.5 (2.5)
Productivity	0.2 (0.2)	1.6 (1.5)	0.2 (0.3)	1.6 (0.5)	1.5 (1.8)
Unit labour cost	3.4 (3.4)	2.5 (2.4)	3.0 (3.5)	-0.3 (0.6)	1.0 (0.6)

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

Note. NMO is the National Mediation Office's short-term wage statistics and NA is the National Accounts. Labour cost per hour is defined as the sum of actual wages, social-security charges and wage taxes (labour cost sum) divided by the number of hours worked by employees. Unit labour cost is defined as labour cost sum divided by GDP in fixed prices. Hourly wages according to the National Accounts can be calculated as payroll expenses divided by the number of hours worked. Via the short-term work scheme, companies can reduce the number of hours while payroll expenses will not decrease as much. This entails a relatively rapid increase in hourly wages according to National Accounts this year. Next year, most employees are expected to work normal hours which, in turn, will lead to the rate of increase in hourly wages according to National Accounts being low compared with this year. This also means that the rate of increase in unit labour costs will rise this year. However, companies' costs are also expected to increase more slowly than the statistics will show. The wage and labour cost statistics from the National Accounts are thus adjusted to reflect payroll expenses from a wage-earner perspective to a higher degree than companies' wage costs.

Sources: National Mediation Office, Statistics Sweden and the Riksbank



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