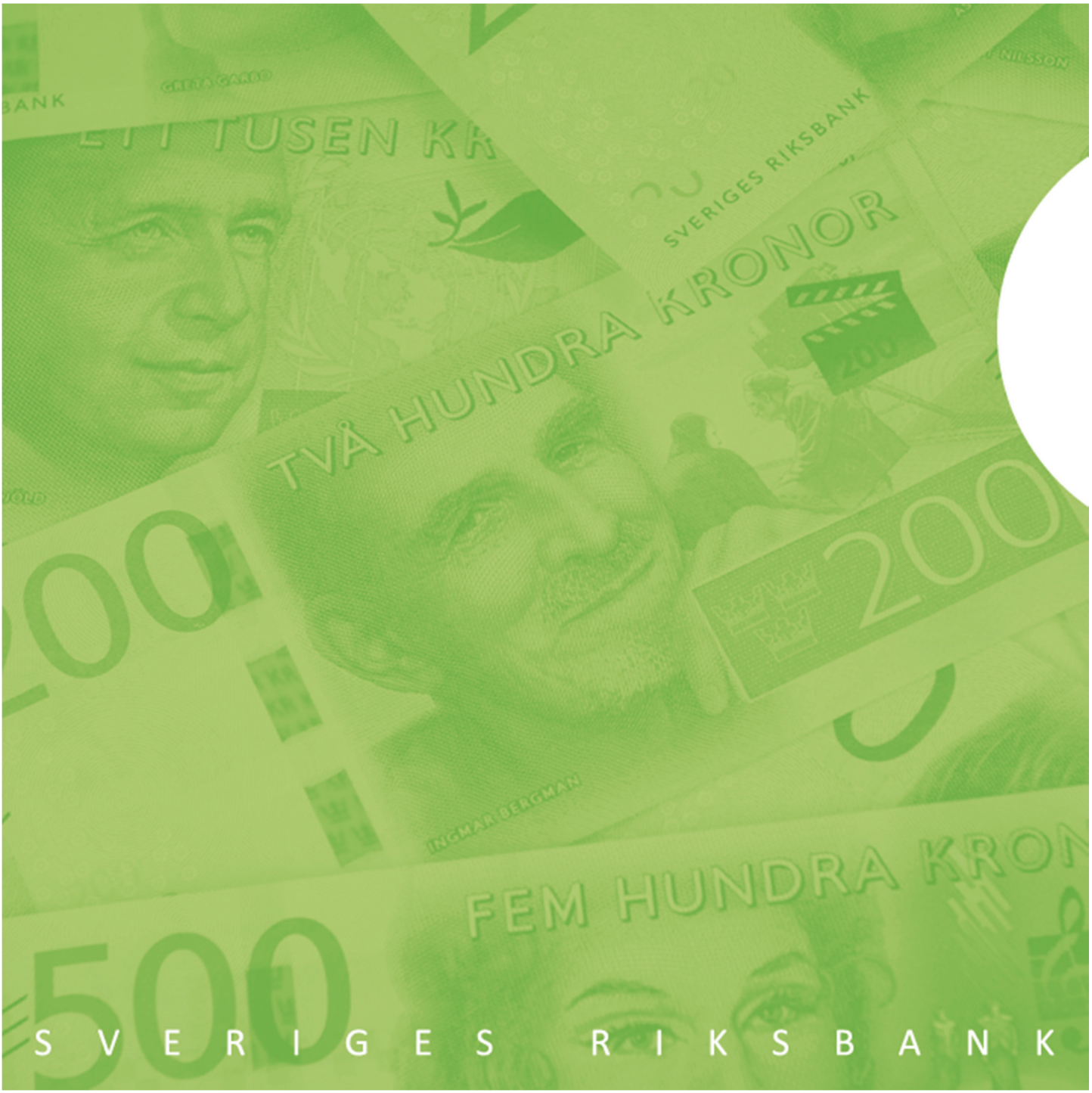
Monetary Policy Report

April 2020



Correction 28 April 2020

Inaccurate header corrected in Figure 1:8 and 3:13.

Monetary Policy Report

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

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

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

The Executive Board made a decision on the Monetary Policy Report on 27 April 2020. The report may be downloaded in PDF format from the Riksbank's website www.riksbank.se, where more information about the Riksbank can also be found.

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

Monetary policy in Sweden

MONETARY POLICY STRATEGY

- According to the Sveriges Riksbank Act, the objective for monetary policy is to maintain price stability. The Riksbank has defined this as a 2 per cent annual increase in the consumer price index with a fixed interest rate (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.

Contents

CHAPTER 1 – Monetary policy in a coronavirus pandemic

The coronavirus pandemic has caused great human suffering. Since mid-March, very extensive measures to restrain the spread of infection have severely slowed down activity in the global economy. This dramatic development has completely changed the economic prospects for both Sweden and the rest of the world. It is evident that companies are being badly impacted and that many people have lost or will lose their jobs. Uncertainty over how the economy will cope with the crisis has been reflected in heavy fluctuations on the financial markets.

Over the past seven weeks, the Executive Board has taken a number of monetary policy decisions on a large number of measures. The measures have been aimed at facilitating the supply of credit in the economy and counteracting a rise in the interest rate faced by households and companies as the uncertainty in the economy increases. Monetary policy has thus supported the Swedish economy and inflation. At today's monetary policy meeting, the Executive Board has decided to continue the purchases of covered bonds and government bonds until the end of September, and to hold the repo rate unchanged at zero per cent. The Riksbank is prepared to continue to use the tools at its disposal to support the economy and inflation. The combination of measures deemed appropriate is constantly evaluated and will be adjusted to economic developments.

Global economic crisis

The virus has spread rapidly around the world

The epidemic caused by the coronavirus that started in China around the start of the year has spread very rapidly around the world. On 11 March, the WHO declared it a pandemic. The pandemic has caused great human suffering. Almost three million people have been declared infected and virtually all countries of the world have been affected.[2]

The coronavirus has substantially burdened medical services, with a large number of critically ill people in a short space of time. To slow down the spread of infection and thereby increase health services' chances of coping with the increased burden, countries around the world have introduced comprehensive control measures, which have severely slowed down activity in the global economy. The measures include travel bans, curfews, bans on public gatherings, and the closure of factories, shops and schools. Concern about the pandemic has also led to self-imposed restrictions among households and companies. By the start of April, a large proportion of the world's population was subject to various types of control measures and restrictions.

The measures against the pandemic are causing a global economic crisis

The measures adopted to limit the spread of the virus have had consequences for the economy. It is now clear that these consequences will be severe. However, as nobody can predict

[2] See the World Health Organisation, www.who.int.

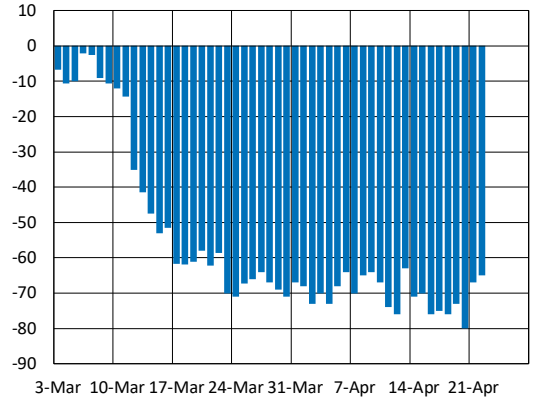
with any certainty the course of the pandemic, it is presently impossible to say how deep and prolonged the economic downturn will be.

This is not the first time the world has been affected by a pandemic, but measures to restrict the spread of one have never been as comprehensive. The world thus finds itself in a synchronised economic crisis with completely different impact factors to those previously experienced by the global economy.

The restrictions on the life of the community has resulted in many companies, not least in the services sector, being affected by a large fall in demand. Consumption of travel, hotel and restaurant services and various cultural events has almost entirely ceased during the spring. In Sweden, for instance, the turnover in the restaurant industry has declined by around 70 per cent (see Figure 1:1). The uncertain situation has also had negative effects on other consumption, on corporate investment and on export demand. At the same time, shortages of input goods and shocks to the transport system, as well as increased sickness absence, have affected production at a large number of companies. Many companies have laid off or given notices of redundancy to staff (see Figure 1:2). The number of newly-registered job-seekers at the Swedish Public Employment Service has also increased rapidly in recent weeks. The simultaneous impact in large parts of the world means that demand losses and production shocks reinforce each other and the negative effects become very serious.

The changed economic conditions have been reflected in substantial movements on financial markets. Equity prices have fallen rapidly and volatility has increased. Measures of risk premiums, such as yield differentials between risky and safe assets, have risen strongly on several markets (see Figure 1:3). At the same time, liquidity and the functioning of the markets have deteriorated. In Sweden, yields have risen markedly for corporate bonds and also, to some extent, for mortgage and municipal bonds. Despite the extensive monetary policy measures, the financial conditions are overall considerably tighter now than they were at the end of February, particularly for companies.

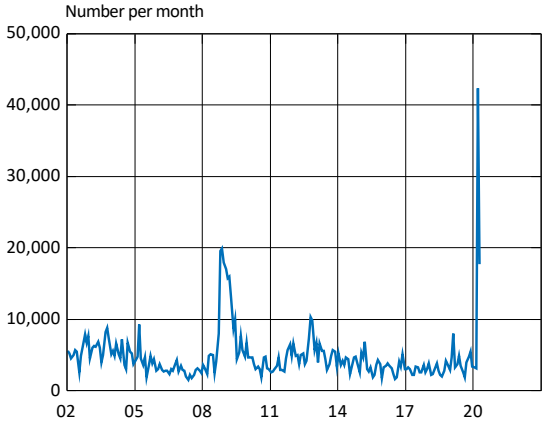
Figure 1:1. Turnover in the restaurant industry
Annual percentage change



Note. Daily turnover for about 600 restaurants with a total annual turnover of about SEK 11 billion.

Source: Caspeco.se

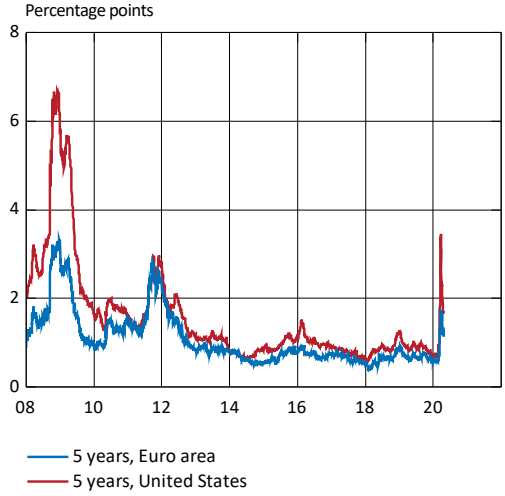
Figure 1:2. Redundancy notices
Number per month



Note. Redundancies for April refer to the period 1–17 April.

Source: The Swedish Public Employment Service

Figure 1:3. Difference between yields on corporate bonds and government bonds in the United States and the euro area
Percentage points



Note. Yield differentials refer to 5-year benchmark bonds issued by companies with good credit ratings and the government, respectively.

Source: Macrobond

Steep decline in Swedish GDP with major negative consequences for the labour market

Since the monetary policy meeting in February, the dramatic developments have completely changed the economic outlook and inflation prospects, both in Sweden and abroad. According to the IMF's assessment in mid-April, the downturn in global GDP this year will be significantly greater than it was in the financial crisis 2008–2009 (see Figure 1:4).

The great uncertainty over the course of the pandemic means that the Riksbank, in this report, has chosen to discuss developments on the basis of two different scenarios, rather than a single specific forecast. In these scenarios, GDP in Sweden this year will be 7 or 10 per cent lower than in 2019, respectively, at the same time as unemployment will rise to close to 10 or 11 per cent, respectively (see Figures 1:5 and 1:6). Abroad, the economic

situation will worsen in a similar way. However, developments may be either better or worse than described in these scenarios.

Very extensive economic policy measures are now being taken to limit the negative economic effects. With several parts of the economy either partly or wholly shut down to limit the spread of infection, it is difficult for stabilisation policy to avoid a substantial downturn in GDP. During the initial phase of the crisis, economic policy has been focused specifically on making it easier for companies that have been impacted particularly hard, while simultaneously limiting the direct loss of income for individuals losing their jobs. All of the economic policy measures are aimed at making the economic downturn short-lived and helping the recovery of the Swedish economy take place as quickly as possible. The Riksbank's measures have so far mainly been aimed at avoiding problems in the credit supply aggravating the situation further. This is a question of both measures to ensure that the banks do not need to tighten their lending due to a liquidity shortage and measures to safeguard the impact of monetary policy on interest rates in the economy in general, and to prevent an unwarranted rise in interest rates on individual markets.

Difficult to look forward in a turbulent time – several scenarios possible in the wake of the pandemic

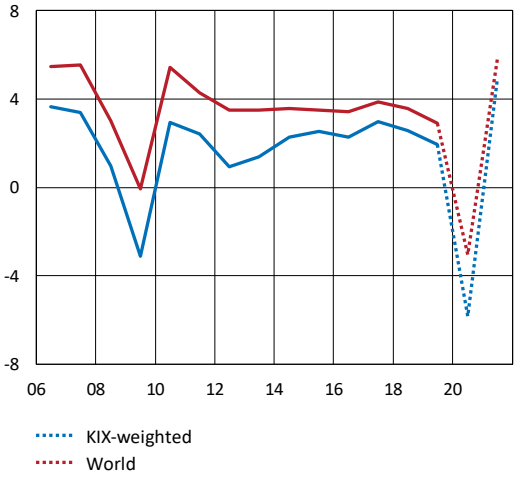
Pandemics eventually end, but, at present, it is not possible to say with any great precision when the trend will turn. When the spread of infection slows down, the control measures will gradually be withdrawn. An economic recovery may then start in Sweden and abroad. In this phase, general economic policy stimulation will gradually become more relevant to support a rapid recovery.

Unlike countries that presently have high levels of public debt, Sweden is in a good position to meet and overcome the problems entailed by the economic crisis with vigour. Given that most central banks now have policy rates close to zero, the monetary policy scope to act does not differ very much between countries.

In normal times, there are adjustment mechanisms in the economy that allow it to approach a normal situation in a few years' time. However, the extent and special character of the present crisis make it difficult to judge how quickly a recovery may happen. The shut-down of the economy, a slow return to normal movement among the population and the major strains on companies in certain sectors all mean that it will take time for production and employment to pick up again. Crises can also have profound effects on the structure and functionality of the economy, causing the normal situation itself to change. The risks of permanent effects on employment increase with the length of the crisis, as some employees will then find themselves increasingly removed from the labour market. This in turn increases the risk of a very prolonged fall in production.

Several factors determine both the size of the economic downturn and the speed of the recovery. For example, there is

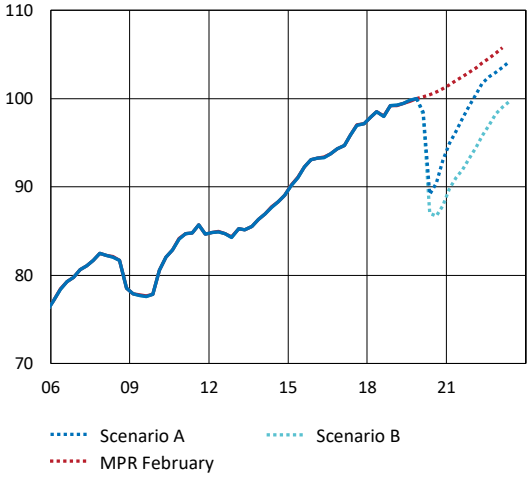
Figure 1:4. The IMF's forecast for GDP abroad
Annual percentage change



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

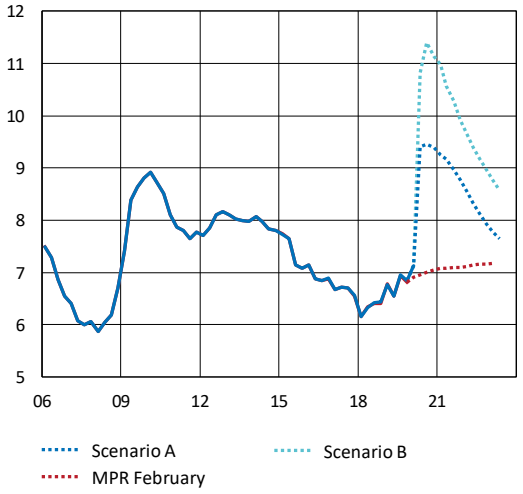
Sources: The IMF World Economic Outlook April 2020 and the Riksbank

Figure 1:5. GDP in Sweden
Index, 2019Q4 = 100



Sources: Statistics Sweden and the Riksbank

Figure 1:6. Unemployment
Per cent of the labour force



Sources: Statistics Sweden and the Riksbank

uncertainty over the future course of events abroad, which will be decisive for both the Swedish export industry and for the date on which tourism and travel can get started again. If the course of the crisis were to become very protracted, the negative consequences would be substantial for many domestic sectors, and the downturn would become more apparent on the markets for housing and commercial property, there is a risk that the economic downturn will be very deep and also have more permanent effects on the Swedish economy. Neither can it be ruled out that the deep downturn in the global economy will trigger a regular financial crisis or a debt crisis when many countries find themselves in a situation with large budget deficits and high debts. In such a scenario, the Swedish economy would also be very heavily impacted.

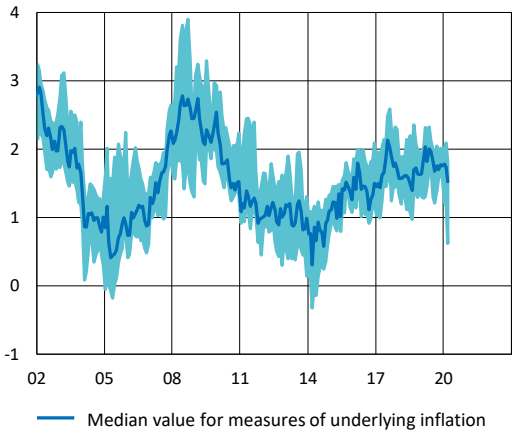
Probably limited effects on inflation in the slightly longer term

Various measures indicate that underlying inflation has shown stable development recently (see Figure 1:7). This year, however, the unease on the financial markets has led commodity prices, not least the price of oil, to fall sharply, which has caused CPIF inflation to fall (see Figure 1:8). Although we as yet only have access to inflation outcomes up to the end of March, the stability of the measure of underlying inflation indicates that the fall in inflation is only temporary so far.

It is important to emphasise that the crisis not only entails effects that slow down price developments. There are also factors that can push inflation upwards. One such factor is limitations in supply, which arise from a major shortage of input goods and from production shut-downs. Another factor is that many companies are now being knocked out in certain sectors, which can reduce competition and contribute to a higher rate of price increase going forward. A number of sectors are also experiencing increased demand as other operations are closed down. This is true of the non-durable goods segment, for example. In addition, the exchange rate has weakened, which supports price developments.

However, domestic demand has fallen heavily, which is expected to lead to inflation on the whole becoming lower (see Figure 1:9). The negative effects on inflation could be more long-term if they spill over onto inflation expectations. There was already a tendency towards falling inflation expectations before the outbreak of the corona pandemic, and market-based measures of inflation expectations have fallen substantially in recent weeks (see Figure 1:10). However, these measures are difficult to interpret in a situation with substantial uncertainty on the financial markets. It is reasonable to assume that long-term inflation expectations will not deviate too far from the inflation target, as the conditions for an economic recovery after the pandemic are good in Sweden, and much of the downturn in inflation is linked to temporarily lower energy prices.

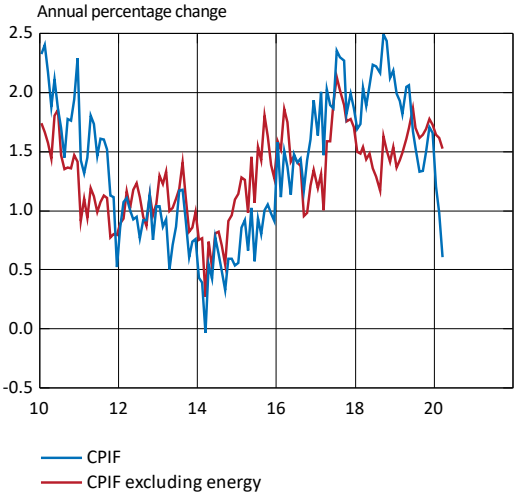
Figure 1:7. Different measures of underlying inflation
Annual percentage change



Note. The field shows the highest and lowest outcomes among different measures of underlying inflation. The measures included are the CPIF excluding energy, UND24, Trim85, CPIF excluding energy and perishables, persistence-weighed inflation (CPIFPV), factors from principal component analysis (CPIFPC) and weighted median inflation (Trim1).

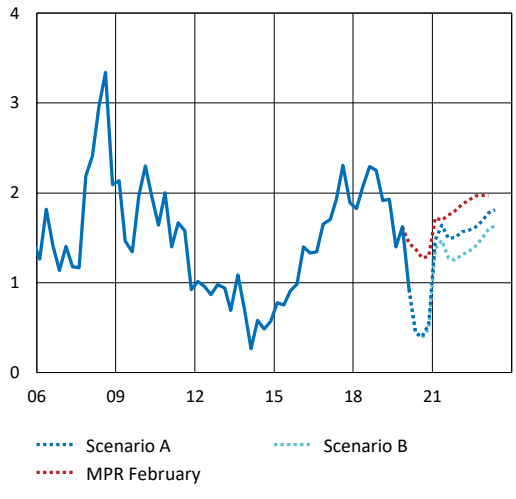
Sources: Statistics Sweden and the Riksbank

Figure 1:8. CPIF and CPIF excluding energy
Annual percentage change



Source: Statistics Sweden

Figure 1:9. CPIF
Annual percentage change



Sources: Statistics Sweden and the Riksbank

Comprehensive measures to take us through the crisis

The situation in the Swedish economy has changed drastically in a short time. To gain a continual understanding of how the situation is changing, the Riksbank is following other, more high-frequency indicators than usual and is interviewing more businesses than normal (see the box "This will take time to sort out"). It is evident that companies are being badly impacted and that many people risk losing their jobs.

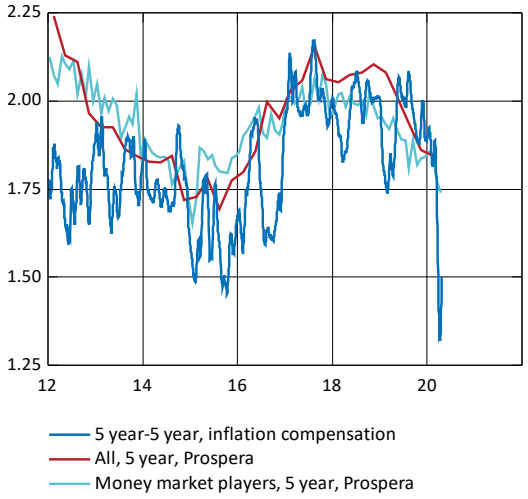
When demand stops abruptly, companies are affected by large falls in income and find it difficult to pay wages, rent and interest. This normally leads to redundancies and bankruptcies. In this situation, banks and investors become uncertain of whether companies will be able to repay their loans. Interest rates for corporate borrowing rise, credit granting becomes tighter and the functionality of the market for corporate securities deteriorates. The fact that credit conditions are tightened and interest rates on lending to households and companies are increasing in relation to interest rates on safe assets is of course natural when credit is assessed as more uncertain. But at the same time, tighter credit conditions and higher interest rates mean that the economic downturn will be deeper and more prolonged. The Riksbank's monetary policy aims to ensure that increased uncertainty and reduced risk appetite do not become a self-fulfilling prophesy. This helps avoid the downturn worsening and being prolonged unnecessarily.

Activity on the financial markets has been highly volatile since the end of February and trade has, at times, been limited. This is making it more difficult for companies that issue bonds or commercial papers to fund their operations. The interviews conducted by the Riksbank with companies around Sweden indicate that many are now having problems obtaining funding via the financial markets.

To support the credit supply in the economy and counteract various market rates rising, the Riksbank has taken various measures to supply liquidity to the financial system. The objective has been to keep borrowing costs down and prevent credit shortages so as to mitigate the negative effects on companies and jobs. In this way, the Riksbank's measures make it easier for robust companies to fund their operations, either by bank loans or via the financial markets, and to get through the current period without being forced to cut back their operations more than necessary or, in the worst case, wind them up. Many of the Riksbank's measures basically function as a kind of insurance, so that banks and companies can be sure that there is solid funding at a reasonable cost.

Consumption, investment and exports around the world are falling, due to closures and people falling ill or being worried about falling ill. Traditional policies for stimulating demand will probably not function in this environment. The Riksbank's

Figure 1:10. 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

"This will take time to sort out"

In March and April, the Riksbank contacted companies on several occasions to follow up on their situation following the outbreak and spread of the coronavirus. The discussions have confirmed that there has been a dramatic development, especially in some industries.

It becomes clear in the most recent discussions that the economic effects of the corona crisis are continuing to worsen.[3] There are still disruptions to production and deliveries, but the dominant factor now is the increasingly negative effects on demand. More companies are reporting a decline in orders and the demand for labour is continuing to fall.

Two out of three companies believe it will take nine months or longer before the demand situation is once again similar to that prior to the crisis. However, there is a considerable amount of uncertainty. The manufacturing industry and the hardest hit areas of the retail and services industries, for instance, the clothing trade, travel companies, hotels and restaurants, are the most pessimistic about the future. Increased unemployment, cautious households and changes in consumption patterns are some of the explanations given for the delay before demand returns to the same levels as before. Some changes in behaviour, such as reduced business travel, fewer conferences and increased e-commerce may also lead to more permanent effects in some industries. This entails new challenges, but can hasten the structural transformation of the industries as well as productivity growth.

The financing situation deteriorated in March. Large export companies state that it has become better in recent weeks. But activity in the commercial paper and bond markets is still considered to be much lower than prior to the crisis. Companies have therefore turned to the banking sector to take out new loans to strengthen liquidity.

[3] Available only in Swedish. Riksbankens Företagsundersökning Telefonintervjuer 14–17 april.

strategy during the initial phase of the crisis has therefore instead focused on ensuring that the supply of credit still functions. This, combined with targeted support measures by the Government and other public authorities, aims to alleviate the effects of the crisis and to create the conditions for a faster recovery when the economy begins to open up again. In the long-term, this means that the scope for attaining the inflation target will also improve.

The Riksbank has adopted a large number of measures in a short time

Over the past seven weeks, the Riksbank has implemented a number of measures, summarised in Table 1 below. These measures mean that the Riksbank's balance sheet is growing rapidly as a result of large asset purchases and extensive lending (see the article "The Riksbank's balance sheet is growing").

On 12 March, the Executive Board decided to offer the banks loans totalling SEK 500 billion on particularly favourable terms if the banks increase lending to non-financial companies. So far, the banks have borrowed a total of SEK 145.5 billion (as per 24 April) via this facility. The Riksbank will regularly follow up how the banks' credit granting to companies develops.

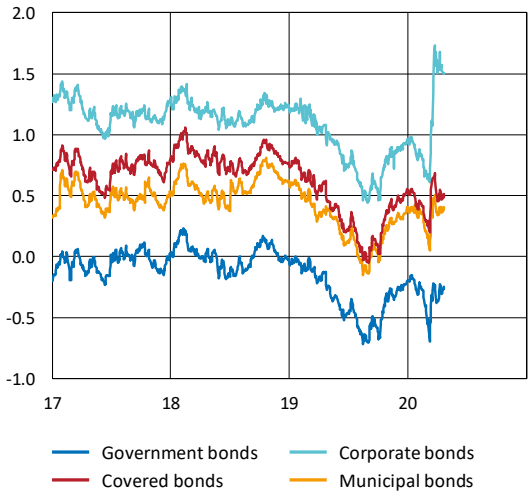
The Executive Board has also decided to ease the rules for collateral when banks borrow from the Riksbank. For example, the banks can now use covered bonds as collateral for their loans from the Riksbank to a greater extent than before. This makes it possible for the banks to increase their loans with the Riksbank and thereby their own lending onward into the economy. In addition, the Riksbank has made it possible for more credit institutions to become monetary policy counterparties temporarily, meaning that more credit institutions can receive these favourable loans. Both of these measures are helping the monetary policy measures to become spread more effectively via the banks to households and companies.

On 16 March, the Executive Board decided that the Riksbank is to purchase bonds in an amount of up to SEK 300 billion over the course of the year. Initially, the programme included purchases of government bonds (in addition to the purchases already made in earlier programmes) and municipal and mortgage bonds. On 19 March, it was also decided to include commercial paper and bonds issued by companies. By 24 April, the Riksbank had purchased assets under this programme in a nominal amount of SEK almost 66 billion (see Table 1). At today's monetary policy meeting, the Executive Board has decided to continue the purchases of covered bonds and government bonds until the end of September.

These purchases are aimed at easing the credit supply for both Swedish banks and non-financial companies. In addition, helping to increase demand for covered bonds and corporate securities improves the functioning of the markets, making it easier for banks and companies to obtain funding. In recent weeks, yields on both types of asset have fallen slightly and the functioning of the markets has improved (see Figure 1:11).

Figure 1:11. Bond yields

5-year bonds, per cent



Note. Covered bonds and corporate bonds are zero coupon rates calculated using the Nelson-Siegel method. Corporate bonds for companies with credit ratings of BBB or higher. Municipal bonds are benchmark bonds, issued by Kommuninvest i Sverige AB.

Sources: Macrobond and the Riksbank

The major uncertainty on the financial markets has increased the demand for liquid assets and especially US dollars. Interest rates on interbank loans in US dollars have risen markedly in relation to risk-free interest rates (see Figure 2:7). This has made borrowing in US dollars more expensive. To improve the banks' ability to find funding, the Riksbank is therefore also offering loans to the banks of a total of USD 60 billion, partly financed through a loan agreement (a so-called swap agreement) with the US central bank, the Federal Reserve.[4] In addition, the Riksbank has introduced weekly extraordinary market operations for unlimited amounts, to further strengthen the banks' access to liquidity.

To ensure that the transmission of monetary policy functions well, the lending rate in the operational framework for monetary policy has also been cut by 0.55 percentage points to 0.20 percentage points above the repo rate. This will reduce the costs for the banks to borrow money from the Riksbank, and the Riksbank is ensuring that the overnight rate on the financial markets stays close to the repo rate.

Important that different policy areas cooperate

Mitigating the effects of the economic downturn that will inevitably affect the economy and ensuring that as many people as possible still have a job to return to when the spread of infection has slowed down and the control measures gradually lifted will require several policy areas to cooperate. In Sweden, as abroad, comprehensive economic policy measures have been adopted (see the box "The Swedish Government's crisis measures" here in Chapter 1 and "Fiscal policy support measures abroad" in Chapter 3).

The Government and the Riksdag have adopted a long series of historically extensive measures. The Riksbank's measures function as a complement to many of these, by supporting the objectives of the general economic policy. For example, the Government has extended borrowing possibilities for companies via Almi and has launched government loan guarantees and measures to lower companies' costs, for example in the form of temporarily lowered social security contributions, forbearance with tax payments and the possibility of short-term layoffs of staff. The Government's decision to provide loan guarantees for corporate loans should give the banks further incentive to utilise the Riksbank's lending programme to extend loans to Swedish companies. At the same time, Finansinspektionen has lowered the countercyclical capital buffer to zero, further increasing the banks' ability to extend loans to companies. The cooperation of different policy areas gives the collected measures a more effective impact on the economy.

Monetary policy is thus contributing by facilitating the supply of credit to companies and holding borrowing costs down. Fiscal

The Swedish Government's crisis measures

As a result of the pandemic, the Government has taken a number of different measures to limit both the spread of infection and the economic consequences. The costs of the measures decided and announced so far, and which are aimed at municipalities, regions, authorities, companies and individuals, amount to more than SEK 100 billion.

Among other things, the state is compensating for the extraordinary costs incurred by the health and medical services as a result of the coronavirus. In addition, municipalities and regions are receiving a further SEK 15 billion in increased general state subsidies. Furthermore, the Public Health Agency of Sweden, the National Board of Health and Welfare and the Medical Products Agency have been given additional funds to finance increased personnel costs, education and training initiatives and medicine supply.

To make it easier for people to stay at home when they have symptoms, the Government has abolished the initial qualifying day for sick pay. To begin with, this applies up until 31 May, but it may be extended if necessary. To limit employers' costs for increased sick leave, the state is taking over all the costs for all sick pay for two months. In addition, the disease carrier's allowance is being raised.

Many companies are being hit hard by the crisis. To ease the pressure on companies and increase liquidity, the possibility to defer taxes is being introduced. This allows companies to defer the payment of three months of employers' social security contributions, preliminary tax and value-added tax for a year. Many companies are also in need of loans and to safeguard credit supply, the Government has decided on state credit guarantees that reduce the risks to banks when they lend to companies. Furthermore, the Government has introduced temporarily reduced employers' social security contributions for the period March-June and rent support in hard-hit industries.

An option for short-term work schemes with state support was introduced on 16 March. This means that employees can reduce their working hours and retain over 90 per cent of their wages, while employers can save up to half their labour costs. The Government has announced a proposal for the support to cover up to 80 per cent of working hours during the period May-July instead of the currently applicable 60 per cent. The measures are aimed at avoiding redundancies and at increasing the chances of a rapid recovery when demand rises again.

Many will nevertheless lose their jobs in the wake of the crisis. The Government has therefore decided temporarily to shorten the membership period requirement in order to receive compensation from the unemployment insurance scheme and to increase compensation levels. In addition, increased funds are being given to the Swedish Public Employment Service and labour market programmes. The number of places at universities and other higher education institutions is also being raised.

[4] The agreement with the Federal Reserve aims to curb the tendencies towards dollar shortages that have existed for some time and means that the Riksbank has increased its capacity to offer lending in USD in Sweden.

policy is contributing with more direct support measures that are decisive for the private sector to survive the crisis. Once the recovery has started, it will also have to be boosted by general demand stimulation, in which both fiscal policy and monetary policy have a role to play.

The Riksbank is prepared to continue providing support to the economy and inflation

Over the past seven weeks, the Executive Board has taken a number of decisions to counteract the downturn in the Swedish economy. Many central banks have cut their policy rates to close to zero. Like the central banks that already had a policy rate close to zero, the Riksbank has chosen to leave its repo rate unchanged so far (see Figure 1:12).[5]

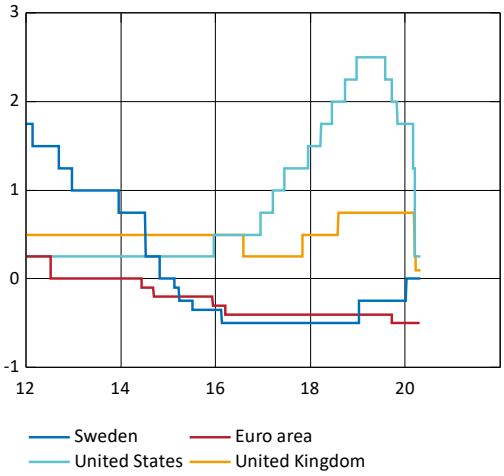
As the sharp downturn in consumption, investment and exports is due to the shut-down of the economy and people's concerns over the spread of the disease, it is not assessed as justifiable to try to increase demand by cutting the repo rate at the present time. The Executive Board has therefore decided to hold the repo rate unchanged at zero per cent (see Figure 1:13). In the Swedish economy's current situation, the important thing is to get through the downturn and the period of great uncertainty, among other things by ensuring that credit granting functions.

Keeping the repo rate at zero now does not rule out the possibility that it may be cut later on to stimulate demand in the recovery phase, or to avoid inflation and inflation expectations becoming too low. But there are several factors that are currently difficult to assess, which will determine whether it is appropriate to cut the repo rate below zero once 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 if, for instance, the banks' capitalisation and profitability have weakened.

Although future economic developments are extremely uncertain, everything nevertheless indicates that monetary policy stimulus in the form of low interest rates and a large liquidity surplus will be needed for the foreseeable future. The combination of measures deemed appropriate is constantly evaluated and will be adjusted to economic developments. The Riksbank is prepared to continue to use the tools at its disposal to support the economy and inflation. The Riksbank can supply further liquidity, so that there is no shortage of credit to prevent an economic recovery. Both lending to companies via the banks and purchases of bonds may be extended further. The repo rate can also be cut, if this is assessed to be an effective measure.

Figure 1:12. Policy rates

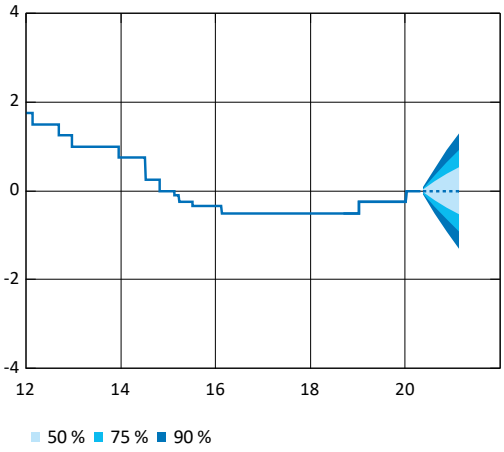
Per cent



Sources: The national central banks, Reuters and the Riksbank

Figure 1:13. Repo rate with uncertainty bands

Per cent



Note. Since the situation is so uncertain, a scenario for the repo rate is shown only one year ahead. 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

[5] Denmark is an exception. There, the Nationalbanken has raised its policy rate from –0.75 to –0.6 per cent.

Table 1:1. The Riksbank's measures

Date of decision	Measure	Scope	Purpose of measure	Details
12 March	Programme for corporate loans via monetary policy counterparties	Up to SEK 500 billion (Lending so far SEK 145.5 billion)	Support the credit supply to non-financial companies.	Initiated 20 March. Extended to also cover sole proprietors on 6 April.
16 March	Purchases of bonds: government, municipal and covered	Up to SEK 300 billion (Purchases so far SEK 61 billion)	Maintain the expansiveness of monetary policy, provide support to the economy and support the credit supply broadly in the Swedish economy.	Purchases of government bonds were initiated on 18 March, purchases of covered bonds were initiated on 25 March, purchases of municipal bonds will be initiated on 28 April.
16 March	Interest rate in standing loan facility cut	Cut from 0.75 to 0.20 percentage points above the repo rate	Ensure that the overnight rate on the market for Swedish kronor is close to the repo rate.	
16 March	Weekly extraordinary market operations	Unlimited (SEK 22.7 billion utilised so far)	Strengthen the banks' access to liquidity in Swedish krona to facilitate their funding and thereby their role as suppliers of credit to Swedish companies.	Loans against collateral for three months at interest rate 0.20 percentage points above the repo rate.
16 March	Amended regulations on limitations for covered bonds as collateral	—	Further the impact of the lending programme to non-financial companies and contribute to better functioning of the market for covered bonds	Further changes were decided on 19 March.
19 March	Loans in US dollars	Up to USD 60 billion (so far USD 2 billion)	Strengthen access to liquidity in USD in the Swedish financial system to enable banks and other agents to satisfy their need for USD.	
19 March	Purchases of corporate bonds and commercial paper	Not specified (within bond purchases of up to SEK 300 billion) (so far, SEK 4.9 billion)	Give further support to credit supply for Swedish companies.	Purchases of commercial paper were initiated on 2 April.
26 March	Temporary extension of the Riksbank's counterparty circle	—	Further the impact of the lending programme to non-financial companies.	

Note. Municipal bonds refers to municipalities, regions and Kommuninvest i Sverige AB. The figures in brackets in the table refer to use up to and including 24 April.

ARTICLE – The Riksbank's balance sheet is growing

The monetary policy measures taken in recent weeks mean that the Riksbank's balance sheet is growing fast in light of the major asset purchases and extensive lending. If all of the measures are used in full, the balance sheet total may increase by more than SEK 1400 billion. This is considerably more than during the financial crisis 2008–2009 and is a gauge of the size of the measures taken by the Riksbank to support the economy.

The Riksbank's balance sheet reflects the measures taken by the Riksbank to stimulate the economy and create the conditions for inflation to gradually return to the target. Even before the coronavirus pandemic, the balance sheet total was larger than during the financial crisis 2008–2009 (see Figure 1:14). The balance sheet is now growing further.

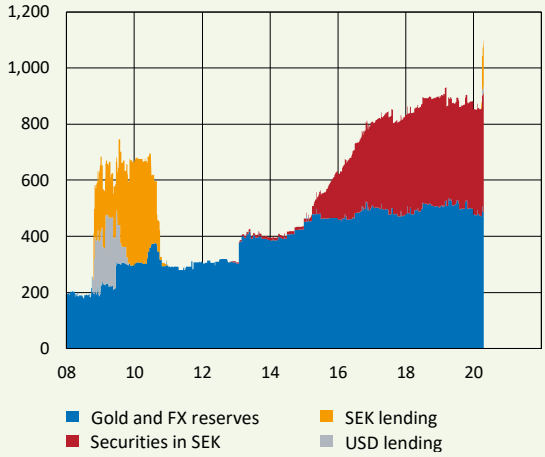
Figure 1:15 shows how the assets and liabilities on the Riksbank's balance sheet may be affected as a result of the measures taken since the middle of March. Exactly how the balance sheet is affected will depend on what measure is taken and how much liquidity the banks and other agents request. When the Riksbank buys assets (such as bond and commercial paper), the holdings of securities on the asset side increase. The Riksbank pays for its purchases by "creating central bank money", that is, increasing the banking system's liquidity surplus towards the Riksbank, so that deposits from the banking system increase on the liabilities side. When the Riksbank instead lends money in Swedish krona, a claim arises on the balance sheet's asset side, while the deposit increases the liabilities side. All of these measures thus mean that the balance sheet total grows.

The balance sheet total also grows when the Riksbank lends US dollars, assuming that the lending is financed by using the swap agreement with the Federal Reserve, as the Riksbank's lending is then financed through an increased debt to the Federal Reserve. However, the balance sheet total is unchanged if the lending is financed through the Riksbank's foreign currency reserve. In both cases, the banking system's liquidity surplus remains unchanged.

Before the crisis broke out in earnest in Sweden, at the end of February 2020, the banking system's liquidity surplus towards the Riksbank (the banks' deposits with the Riksbank) amounted to around SEK 480 billion, while the Riksbank's total assets amounted to around SEK 900 billion. If all of the measures the Riksbank has implemented up to now are used in full, the holdings of securities may increase by SEK 300 billion (corresponding to the Riksbank's new decisions on purchases of bonds and commercial paper), lending in Swedish krona to the corporate sector may amount to SEK 500 billion and lending in US dollars may amount to around SEK 600 billion. The balance sheet total could then increase by a total of SEK 1400 billion. Most of this corresponds to an increase in the banking system's liquidity surplus, which then rises by SEK 800 billion. Moreover, the Riksbank is offering three-month loans in Swedish krona to the banks, which if they are used will increase the balance sheet total and the banking system's liquidity surplus even further.

The fact that the balance sheet is growing in this way means that the Riksbank is taking on some of the risk that agents on private markets are unable or unwilling to bear under the circumstances currently prevailing in the Swedish economy. It is part of the Riksbank's task to contribute to alleviating negative consequences for the economy and enable it to gradually return to a normal situation. The amounts may change according to needs and depending on economic developments.

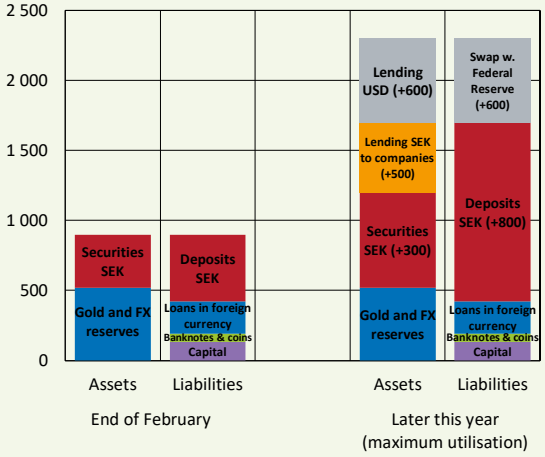
Figure 1:14. Assets on the Riksbank's balance sheet
SEK billion



Source: The Riksbank

Figure 1:15. Potential consequences of the Riksbank's measures for the Riksbank's balance sheet

SEK billion



Source: The Riksbank

CHAPTER 2 – The crisis has led to tighter financial conditions

The economic consequences of the coronavirus pandemic have dominated developments in the financial markets since the end of February. There is considerable uncertainty over how companies, households and financial agents will manage the crisis, which has led to severe fluctuations on the financial markets, both in Sweden and abroad. Share prices have fallen and volatility has increased substantially. Companies' borrowing costs have risen and interest rate differentials between risky and safe assets have increased. It has become more expensive for banks to borrow US dollars on the international financial markets. All in all, liquidity and market functioning have deteriorated, and despite extensive easing from many central banks, financial conditions are significantly tighter now than at the end of February, especially for companies.

Severe fluctuations on the financial markets

Developments on the financial markets have recently been steered by the consequences of the coronavirus pandemic for the global economy. As an increasing number of countries have closed their borders and introduced restrictions to limit the spread of the virus, economic activity has fallen rapidly. This has led to reduced income for many companies, with the result that they have problems paying their costs. The uncertainty over profitability has meant that it has become more expensive and more difficult for companies to borrow. There is a substantial risk that many companies will be forced into bankruptcy as a result of a temporary shortage of liquid funds. The Riksbank's measures aim to provide the Swedish financial system with liquidity to enable the credit supply to companies and households to continue to function.

The rapid deterioration in economic prospects has been reflected in severe fluctuations on the financial markets. Several central banks have taken various measures to support the supply of credit and cut their policy rates, which has contributed to yields on government bonds falling. Investors have to a large extent turned away from risky assets to safer and more liquid assets. Share prices in Sweden and abroad have fallen and volatility has increased. Yields on risky assets, especially corporate bonds, have risen markedly.

The krona has weakened against the US dollar and against other currencies that normally appreciate in times of increased

Table 2:1.

Developments on the financial markets since the Monetary Policy Report in February
Stock prices have fallen and volatility has increased.
Yields on high-risk bonds have increased significantly and interest rate differentials between high-risk and safe assets have risen.
Yields on government bonds have fallen in several economies, including the United States and the United Kingdom.
The krona is weaker.

The transmission mechanism - from the repo rate to interest rates for households and companies

The repo rate has a direct effect on short-term interbank rates and government bond yields via the overnight rate. Expectations regarding the future repo rate and government bond purchases affect the development of longer-term government bond yields, which are also influenced by foreign yields. Government bond yields act as an anchor for other types of bond yields, which in turn affect banks' funding costs. This ultimately affects the lending rates for households and companies.

uncertainty. The increased demand for US dollars is probably one of the reasons why it has become more expensive for Swedish banks to obtain financing on the global money markets.

There are thus clear risks that developments in the financial sector may aggravate the economic consequences of the coronavirus pandemic. To alleviate these risks, several central banks, including the Riksbank, have quickly implemented extensive measures. But on the whole, financial conditions have nevertheless tightened significantly since the end of February (see Figure 2:11). The strongest contributory factors are that prices of risky assets such as shares and corporate bonds have fallen, that volatility has increased, and that it has become more difficult for companies to finance themselves on the financial markets.

Large fall on stock markets

At the end of February, it was very unclear how extensive the spread of the coronavirus would be. The risk of a severe decline in profitability made global stock price indices fall (see Figure 2:1). At the beginning of March, it became increasingly clear that the coronavirus would spread globally and the fall in share prices was then substantially reinforced.

Although stock prices fell on a broad front, the sectors that were hit hardest were those most exposed to the drop in consumption as a result of restrictions to prevent the spread of the virus.

For instance, there was a severe fall on share prices for airlines and companies in the hotel and restaurant industries. However, the largest fall was for oil companies, which in addition to weak demand for oil resulting from the decline in economic activity, were also affected by the escalated conflict between Saudi Arabia and Russia regarding production levels for oil.

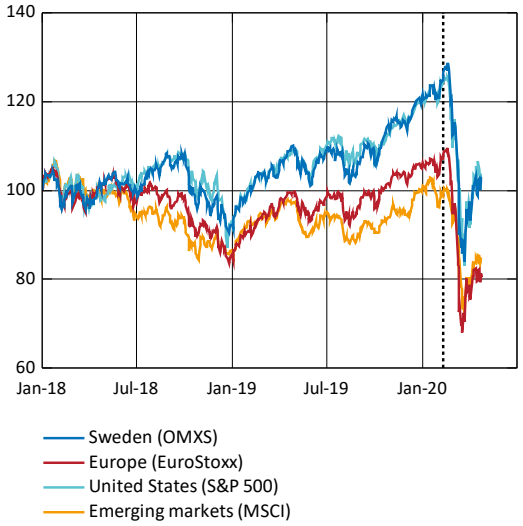
Uncertainty over the economic consequences of the coronavirus pandemic has contributed to major fluctuations on the stock markets. This uncertainty is reflected in market-based measures of volatility on the stock markets, which has reached the same level as during the financial crisis (see Figure 2:2).

Yields on risky bonds have risen

In that the prospects for company profitability have deteriorated, yields on corporate bonds have increased significantly. The difference between corporate bonds yields and government bond yields reflects the risk premiums in credit markets. These premiums have risen significantly, even for companies with good credit ratings and in the United States, for instance, they are at the highest levels since the financial crisis (see Figure 2:3). One interpretation of this is that investors envisage an economic downturn ahead, and that this will have a major impact even on the companies with the highest credit ratings.

The Swedish bond markets have seen a similar development. Risk premiums have risen clearly, especially for corporate bonds. Upturns can also be noted for covered bonds and municipal bonds, but these are smaller (see Figure 2:4). Households'

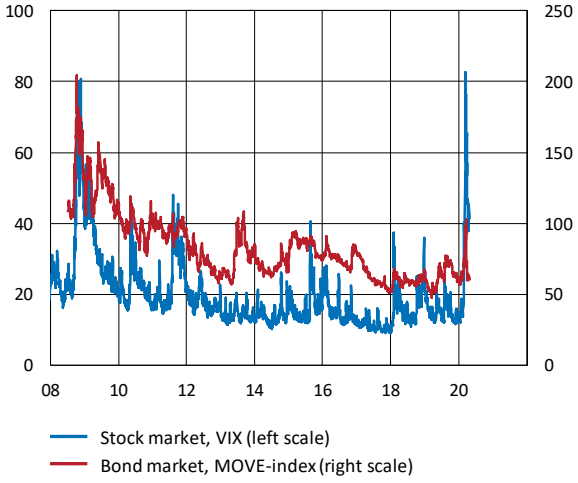
Figure 2:1. Stock market movements in domestic currency
Index, 2 January 2018 = 100



Note. The vertical line indicates the Monetary Policy Meeting in February.

Source: Macrobond

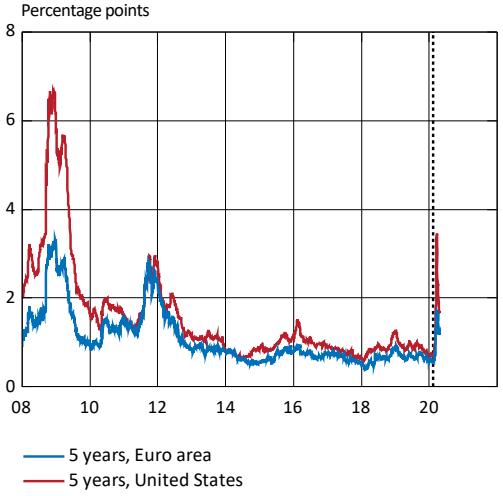
Figure 2:2. Volatility index for US equity and bond markets
Per cent and index, respectively



Note. Volatility Index (VIX) shows the expected volatility on the US stock market based on options prices. The Merrill Lynch Option Volatility Estimate (MOVE) Index is a measure of the expected volatility of US government bonds on the bases of options prices.

Sources: Chicago Board Operations Exchange and Merrill Lynch

Figure 2:3. Difference between yields on corporate bonds and government bonds in the United States and euro area
Percentage points



Note. Yield differentials refer to 5-year benchmark bonds issued by companies with good credit ratings and the government, respectively. The vertical line indicates the Monetary Policy Meeting in February.

Source: Macrobond

mortgages are financed to around 50 per cent by the covered bonds issued by the banks. The fact that yields on covered bonds have risen somewhat thus means that the banks' financing costs are increasing, which can ultimately lead to lending rates to households and companies also rising. The difference between yields on these bonds and government bonds has declined, however, since the Executive Board's decision to purchase covered bonds and municipal bonds, and later also securities issued by companies (see Figure 2:4).

Company financing more expensive

The bond market has become an increasingly important source of financing to companies in recent years. The total securities debt for Swedish non-financial companies has more than doubled since 2013, and now amounts to around SEK 1,400 billion.

The uncertainty over future profitability and repayment capacity has increased the credit risk for financing companies. This applies in particular to companies in the worst-hit sectors, such as the travel, hotel and restaurant industries. When credit risks increase, investors want greater compensation to buy bonds from these companies, and even the banks become less willing to lend money. This means that yields on both bonds and bank loans increase and consequently it becomes more expensive for companies to finance themselves.

Financial markets functioning less well

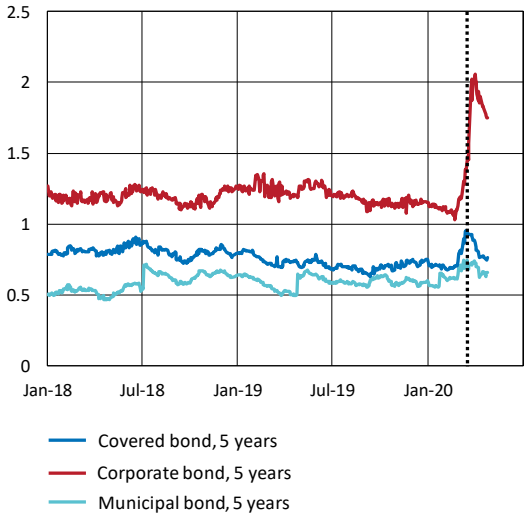
When there is considerable uncertainty on the financial markets, many agents want to sell risky assets. Problems can then arise for buyers and sellers to agree on prices, and the liquidity of the markets can deteriorate rapidly. This can mean, for instance, that the volume of transactions declines, that the cost of trading increases, and that it takes longer to execute transactions. This happened in mid-March when investors' willingness to hold risky assets suddenly declined and the functioning of the bond markets, for instance, deteriorated.

A common measure of liquidity on a market is the average difference between the bid and ask prices traders offer on the marketplace. On the Swedish market for corporate bonds this measure is usually stable at around 0.10 percentage points, but in mid-March it suddenly increased to historically high levels of more than 0.50 percentage points (see Figure 2:5).

Investors are usually compensated through higher yields when market liquidity deteriorates. A company that seeks financing through the bond market in this environment thus needs to pay a rate that reflects the company's poorer credit rating and the deterioration in market functioning. In this way, the companies' market financing becomes both more expensive and more difficult to obtain. In a worst case scenario, companies might have difficulty obtaining financing at all.

Figure 2:4. Yield difference between bonds and government bonds in Sweden

Per cent

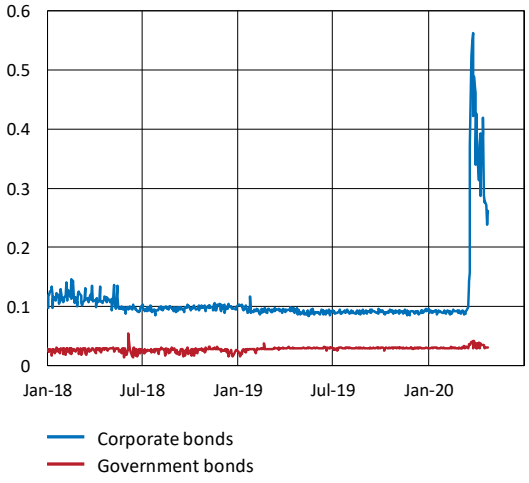


Note. Covered bonds and corporate bonds are zero coupon rates calculated using the Nelson-Siegel method. Corporate bonds for companies with credit ratings of BBB or higher. Municipal bonds are benchmark bonds, issued by Kommuninvest i Sverige AB. Vertical line marks 16 March 2020, when the Executive Board decided to extend the asset purchases to cover municipal bonds and covered bonds.

Sources: Bloomberg, Macrobond, Refinitiv and the Riksbank

Figure 2:5. Difference between bid and ask prices on bonds in Sweden

Per cent



Note. Average listed prices, based on all available nominal government bonds, and just over 50 corporate bonds with varying maturities and with credit ratings equivalent to BBB or higher.

Sources: Refinitiv and the Riksbank

Government bond yields have been affected by the crisis

In connection with the large increase in economic uncertainty at the beginning of March, government bond yields fell in several countries (see Figure 2:6). This became particularly tangible in the United States, where the Federal Reserve cut its policy rate on two occasions, by a total of 1.5 percentage points, and announced large-scale asset purchases, including government bonds. At the same time, government bond yields rose in a number of other countries, such as Italy, Portugal and Spain. This probably reflects market agents' concerns over the high public debt levels and the states' future ability to pay in these countries.

The low yields on government bonds in Sweden, and for instance in the United Kingdom, Germany and the United States, indicate that market participants are expecting policy rates to remain low for a long period to come. Central banks' asset purchases are also contributing to keeping yields low.

Increased stress on the money markets

At the beginning of March, yields on the global money market rose, especially when financial agents' demand for US dollars rose. For instance, the interest rates on interbank loans in US dollars without collateral, Libor, rose (see Figure 2:7). One reason for the upturn in Libor was that the banks needed to replace borrowing via commercial paper with short-term interbank loans.[6] Borrowing via commercial paper declined as investors sought the most liquid and safest assets.

As the Swedish banks largely finance themselves via the global money markets, their financing costs have also increased. This is clearly visible in Stibor, which has increased, although not to the same extent as Libor (see Figures 2:7 and 2:8). If the banks' financing costs continue to be elevated, this may lead to a gradual increase in lending rates to households and companies.

Weaker krona and lower inflation expectations

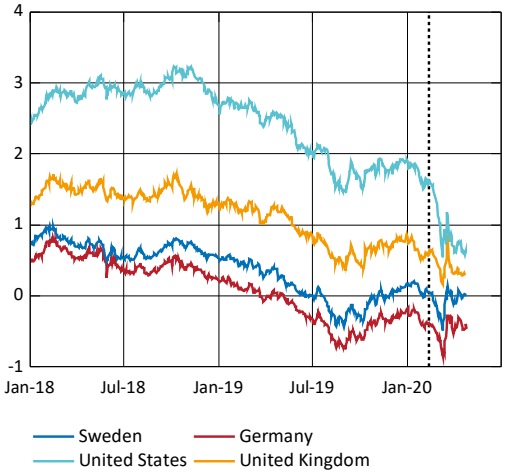
On the foreign exchange market the US dollar has strengthened against most currencies, including the euro. The largest movements on the foreign exchange markets took place in the middle of March. Since then, the krona and many other currencies have been relatively stable. During periods when market participants prefer safer assets, the krona exchange rate usually weakens, especially against the currencies that investors regard as safe harbours. Since the monetary policy meeting at the end of February, the krona, measured in terms of the trade-weighted krona index, KIX, has weakened by around 1 per cent (see Figure 2:9).

Market-based measures of inflation expectations have fallen tangibly in most countries since the beginning of March (see Figure 2:10) and largely reflect severely deteriorated prospects for global economic activity and inflation. However, these measures can be difficult to interpret in a situation with

[6] For a more detailed argument, see S. Avdjiev, E. Eren and P. McGuire "Dollar funding costs during the Covid-19 crisis through the lens of the FX swap market" *BIS Bulletin*, No. 1 April 2020, Bank for International Settlements.

Figure 2:6. Government bond yields with 10 years to maturity

Per cent

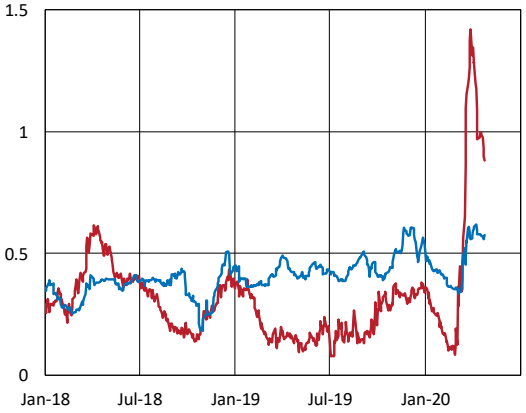


Note. Implied zero-coupon yields from government bonds for Sweden, Germany and United Kingdom. 10-year benchmark bonds for the United States. The vertical line indicates the Monetary Policy Meeting in February.

Sources: The national central banks, US Treasury and the Riksbank

Figure 2:7. Difference between interbank rates and rates on treasury bills, 3 months

Per cent

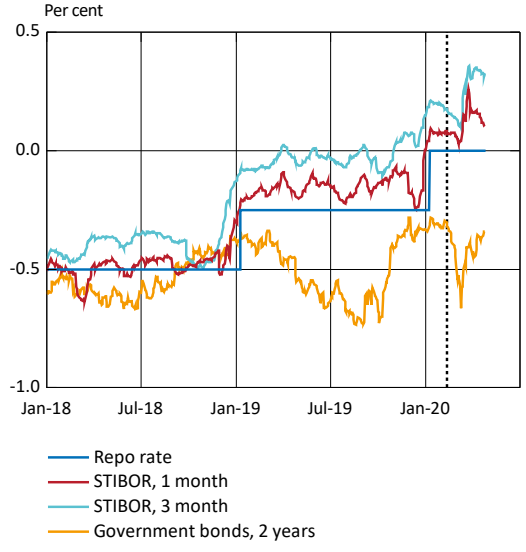


Note. For LIBOR, the difference is taken in relation to a US benchmark treasury bill, and for STIBOR in relation to a Swedish treasury bill with a zero coupon rate calculated using the Nelson-Siegel method.

Sources: Macrobond and the Riksbank

Figure 2:8. The repo rate and market rates

Per cent



Note. Zero coupon rate with 2-year maturity calculated from government bonds. The vertical line indicates the Monetary Policy Meeting in February.

Sources: Macrobond and the Riksbank

substantial uncertainty on the financial markets. This is because the market for nominal government bonds is much larger and more liquid than the one for real government bonds. In times when investors prefer safer assets, demand for nominal government bonds is therefore higher than that for real government bonds. This can reinforce the fall in the market-based measures of inflation expectations, which should therefore be interpreted with some caution.

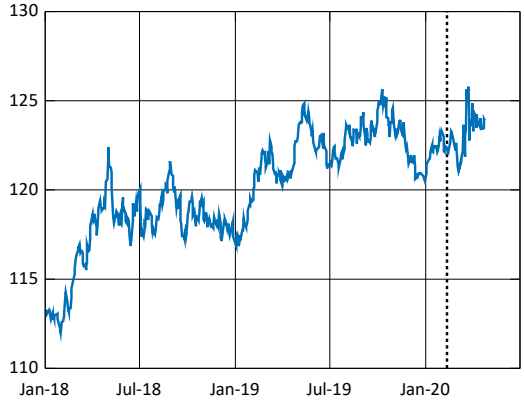
In the euro area, the market-based measures of inflation expectations are now at very low levels, in historical terms. In the United States and Sweden, too, these measures are at low levels and clearly below the inflation targets. Survey-based measures have also fallen somewhat, but in Sweden, for instance, the long-term inflation expectations according to Prospera's survey are still close to 2 per cent.

Considerably tighter financial conditions

Despite extensive easing from many central banks (see the box "The central banks' measures"), financial conditions in Sweden and abroad have become much tighter since the end of February. There are several reasons for this. Share prices have fallen and volatility has increased. At the same time, yields on risky assets, such as corporate bonds and mortgage bonds, have risen in relation to government bonds. Some of the yields on the money markets have also increased. In addition, liquidity on some markets has deteriorated. In Sweden, the exchange rate has weakened and thus contributed to counteracting the tightening a little.

A summarising index for financial conditions in Sweden is reported in Figure 2:11.[7] This index shows clearly tighter financial conditions, and in March it was negative for the first time since 2014. This is despite the fact that the index at present contains neither yields for corporate bonds not any measures of market liquidity.

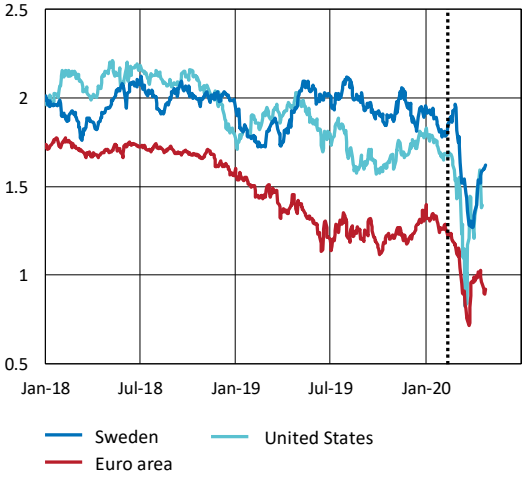
Figure 2:9. Nominal exchange rate, KIX
Index, 18 November 1992 = 100



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 vertical line indicates the Monetary Policy Meeting in February.

Sources: National sources and the Riksbank

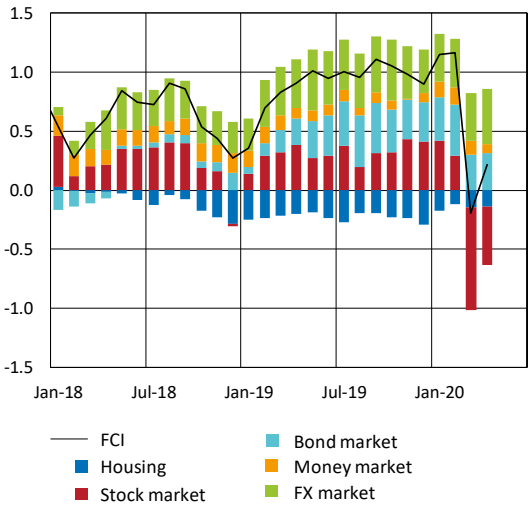
Figure 2:10. Market measure of long-term inflation expectations
Per cent



Note. The measures refer to a 5-year period starting in 5 years' time. For the United States and Sweden, they 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 vertical line indicates the monetary policy meeting in February.

Sources: Bloomberg, Macrobond and the Riksbank

Figure 2:11. Financial conditions index, FCI
Standard deviations



Note. A higher value indicates more expansionary financial conditions.

Source: The Riksbank

[7] 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.

ARTICLE – The central banks' measures

Like other central banks, the Riksbank has taken extensive measures to alleviate the economic effects of the coronavirus pandemic. These measures concern helping companies to survive the shut-down to counteract loss of production and avoid too many jobs being lost. Many central banks are therefore focusing on stimulating the credit supply to companies, on providing the financial system with liquidity and on keeping borrowing costs down. Following the policy rate cuts by some central banks, policy rates are now close to zero in all developed economies, which contributes to making monetary policy more expansionary.

Acute stress on the financial markets

At the end of February and the first weeks in March, the realisation of the scope of the pandemic hit the financial markets in Europe and North America with full force. Companies' borrowing costs then rose rapidly and it became more expensive for banks and other financial agents to borrow in particular US dollars on the international financial markets. In several countries it also became more expensive for municipalities and regions to get loans. The interest rates charged to companies, banks and authorities rose, despite several central banks cutting their policy rates at a rapid pace, or alternatively holding them close to zero. The situation worsened further in mid-March, when the corporate bond markets in several countries showed signs of acute stress. Many investors then wanted to sell their debt instruments and it became difficult or impossible to find buyers at prices the sellers could accept. During a few days, yields on government bonds with long maturities also rose, even in countries such as the United States and Germany, which are normally regarded as having very good credit ratings.

Central banks are focusing on crisis management

To prevent the economic shut-down ultimately leading to a financial crisis, the Riksbank and other central banks have taken extensive measures over a short period of time (see Table 2:2).[8] In many cases, these concern decisions and promises of measures that are unprecedented in modern times. For instance, in the United States the Federal Reserve has cut its policy rate by 1.5 percentage points to almost zero in a short space of time and has opened ten or so different programmes and facilities to help credit granting. In addition, they announced on 23 March, that they intended to purchase US government securities and covered bonds in the amounts needed to support the smooth functioning of markets. The European Central bank, ECB, and the United Kingdom's central bank, the Bank of England, has also decided to carry out extensive purchases of financial assets.

To counteract the increased demand for liquid fund, and especially US dollars, many central banks have offered loans both in their country's own currency and in US dollars.

The Riksbank has for instance decided to lend up to SEK 500 billion to the banks for onward lending to companies, has extended its purchases of government bonds, cut its lending rate to monetary policy counterparties and begun to purchase covered bonds and debt instruments issued by individual companies. The Riksbank has also announced that purchases of bonds issued by municipalities and regions in Sweden will be initiated on 28 April.

Large-scale purchases of financial assets

Large increases in purchases of government bonds have been made by many central banks. One purpose of these purchases is to keep interest rates down. Government bonds play an important role in the financial system, as in most developed economies they are associated with a low level of risk. They are therefore used regularly as collateral when banks and other financial institutions are to borrow money and the yield on government bonds often forms a benchmark when determining other interest rates. Smoothly-functioning markets for, and low yields on, government bonds in this way create the conditions for banks and non-financial companies to be able to finance themselves at low borrowing costs via the financial markets.

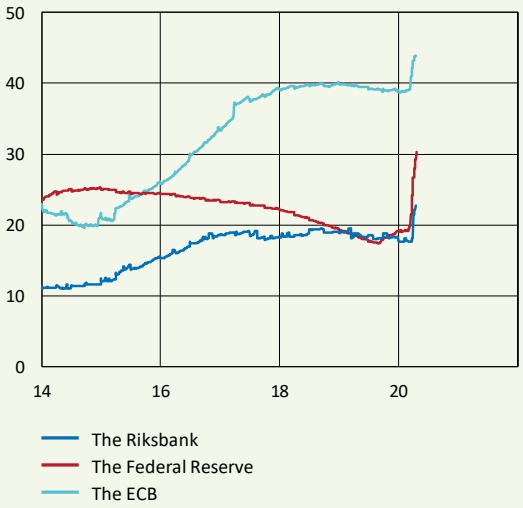
The pandemic and its economic consequences have already caused several states to substantially increase their expenditure. As tax revenue is falling at the same time, sovereign debt will rise and the supply of government bonds will increase rapidly. Within the euro area, expectations of poorer public finances have led to larger differences in yields on government bonds issued by different states in the

[8] In addition, governments and financial supervisory authorities have taken extensive measures. For a discussion of the fiscal policy measures, see the boxes "The Swedish Government's crisis measures" in Chapter 1 and "Fiscal policy support measures abroad" in Chapter 3.

monetary union. The difference in government borrowing rates between on the one hand Germany and on the other hand Greece, Italy, Portugal and Spain, rose substantially during the first weeks in March. On 18 March, the ECB announced a new and extensive programme of measures including purchases of government bonds and securities issued by the private sector. Within the framework for the *Pandemic Emergency Purchase Program* the ECB is intending to buy assets for EUR 750 billion this year, which corresponds to more than 6 per cent of the monetary union's total GDP. Following the announcement, government borrowing rates in the euro area fell and the downturns were particularly large for the most heavily indebted countries. But yields on bonds issued by Greece, Italy, Portugal and Spain are still relatively high. This has led to an intensive discussion in the euro area on potential jointly-financed economic policy measures to supplement the ECB's purchases.[9]

The central banks' decisions on extensive asset purchases have already had a clear impact on their balance sheets, which are now expanding at a rapid pace (see Figure 2:12).

Figure 2:12. Central banks' balance sheet totals
Per cent of GDP



Note. Observations after 31 December 2019 are expressed as a percentage of GDP per 2019 Q4.

Sources: Macrobond and the Riksbank

Easing for credit supply to companies

One of the most acute economic problems caused by the coronavirus pandemic is that robust companies risk being knocked out when they no longer receive income they can use for their payments. This risk increases the longer the virus and the restrictions to prevent the spread of the virus are preventing households from consuming and companies from conducting their normal operations. There is thus a growing need to borrow money in the corporate sector to weather the turbulent period.

For small and medium-sized enterprises it is mostly a case of applying for loans from private banks. The unease on the financial markets and the uncertainty over companies' future prospects could, however, lead to the banks tightening their credit granting. This is why the Riksbank and other central banks have chosen to stimulate the banks' lending to non-financial companies in various ways.

Many large companies and banks also issue their own debt instruments to cover parts of their borrowing requirements. To make it easier for companies to obtain access to financing, several central banks have decided to extend their purchases of financial assets to also include debt instruments issued by non-financial companies and banks and by other financial institutions. The Riksbank, for instance, has begun to buy short-term debt instruments issued by non-financial companies and covered bonds, which comprise an important funding source for mortgages. One important purpose of this measure has been to ensure that the markets for these securities continue to function, despite the uncertainty. The central banks' purchases will keep down borrowing costs for companies and on the housing market and reduce the risk of companies experiencing difficulty in financing the debt instruments that fall due. This will encourage other investors to continue purchasing companies' debt instruments.

Debt instruments issued by companies and banks are linked to credit risks and purchases of these instruments are not usually included in most central banks' areas of activity. The governments in the United Kingdom and the United States have therefore decided on special measures to compensate for the possible credit losses that may arise. In the euro area and in Sweden, the central banks have decided on asset purchases without this type of loss guarantee. The differences between the countries partly reflect the differences in the framework regulating the central banks' operations and independence.

In recent weeks, the yields on corporate bonds have fallen somewhat and the markets have begun to function better (see Figures 2:3, 2:4 and 2:5). The difference between yields on covered bonds and government bonds has also fallen substantially, both in Sweden and abroad. This indicates that the measures that the Riksbank and other central banks have taken have had some effect. The situation on the global money markets has also improved since the Federal Reserve extended its swap agreements with other central banks and thus made US dollars more easily available on these markets. This has means that the cost for the banks to finance themselves in dollars has declined slightly.

[9] The ECB announced as early as 12 March that they had decided on extended purchases of net assets during 2020, to a value of EUR 120 billion. The total of the new asset purchases decided on 12 and 18 March thus amounts to EUR 870 billion, or just over 7 per cent of the euro area's GDP.

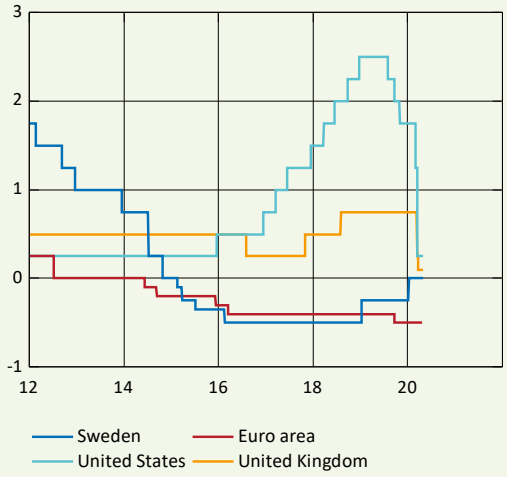
Policy rates abroad close to zero

As already mentioned, the Federal Reserve has reduced the interval for its policy rate by 1.50 percentage points to 0.00 – 0.25 per cent. The central banks in Canada, Norway and the United Kingdom have also cut their policy rates close to zero. Examples of other countries where the rates have been cut are Australia, Mexico, New Zealand, Poland and the Czech Republic.

The Riksbank and other central banks that already had policy rates close to zero have so far let them remain there. The ECB's deposit rate, for instance, has remained unchanged, at −0.50 per cent. All in all, policy rates in all of the developed economies are now close to zero and this will contribute to making monetary policy expansionary (see Figure 2:13).

Figure 2:13. Policy rates

Per cent



Sources: The national central banks, Reuters and the Riksbank

Table 2:2. The central banks' measures

Measures	Bank of England	The ECB	Federal Reserve	The Riksbank
Policy rate cut	Yes	No	Yes	No
Programme for corporate lending via banks	Yes	Yes	Yes	Yes
Purchases of bonds issued by public authorities, such as central or local governments	Yes	Yes	Yes	Yes
Purchases of bonds with mortgages as collateral	No	Yes	Yes	Yes
Purchases of commercial paper	Yes	Yes	Yes	Yes
Purchases of corporate bonds	Yes	Yes	Yes	Yes
Changed collateral requirements in steering system	No	Yes	No	Yes
Loans in US dollars via swap agreement with Fed	Yes	Yes	—	Yes

Note. The measures in the table do not necessarily cover all of the measures taken by central banks. Purchases of corporate bonds are included in the Riksbank's framework decision but no such purchases have yet been made.

Sources: Bank of England, ECB, Federal Reserve and the Riksbank

CHAPTER 3 – Exceptional situation in both the Swedish and the global economy

Economic developments are completely dominated by the corona pandemic and the measures implemented to limit the speed at which the infection is spreading. Economic activity has slowed abruptly and governments and central banks the world over have taken substantial action to mitigate the consequences for the economy. Despite this, millions of people around the globe will be affected by companies going bankrupt and jobs disappearing. Developments in the period ahead will depend on a number of factors that are categorically uncertain and it is more worthwhile to describe developments in terms of a number of scenarios rather than a single forecast. In Scenario A, the measures introduced in Sweden and in other countries to mitigate the spread of the infection are assumed to be in place until the beginning of the summer and the general global recovery will start in the third quarter. The closing-down of the Swedish economy during the second quarter causes GDP to fall by about 7 per cent and unemployment to rise to about 10 per cent in 2020. Recovery of the economy starts in the summer and will be relatively prolonged. If more serious imbalances arise in the real or financial economy, for example due to the pandemic lasting for longer, recovery may be considerably slower. Such a development is described in Scenario B, where GDP falls by about 10 per cent and unemployment rises to just over 11 per cent this year.

The pandemic is hitting the global economy hard

Developments in the global economy have been dramatic in recent months and have been completely dominated by the effects of the corona pandemic. Since the outbreak in China at the turn of the year, the virus has spread rapidly over the world.

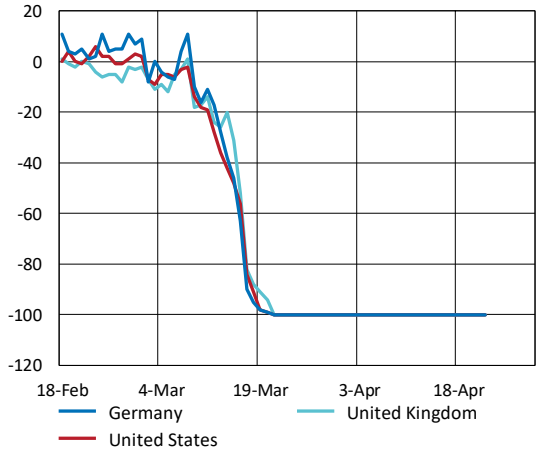
Extensive measures has been introduced to limit the spread of infection, but it is still difficult to judge how long it will take before it slows down. The economic consequences of the pandemic are very considerable. It is clear that there will be a sharp decline in global economic activity, but it is very difficult to say exactly how deep and how prolonged it will be.

Different measures have been taken in different countries, but their aim is generally to reduce human physical contact in order to curtail the spread of infection. People have been instructed to stay at home and gatherings of people have been restricted. In some countries, activities in several sectors have been completely closed down. Several countries have closed their borders to passenger transport and virtually all advise against foreign travel. Over 100 countries have introduced some form of restrictions, affecting billions of people.

Economic activity has been directly and substantially reduced by the measures introduced to slow the spread of infection. Production capacity is also being affected by increased sickness absence among employees and bottlenecks in different parts of the global production process. The fact that large parts of the

Figure 3:1. Restaurant visits abroad

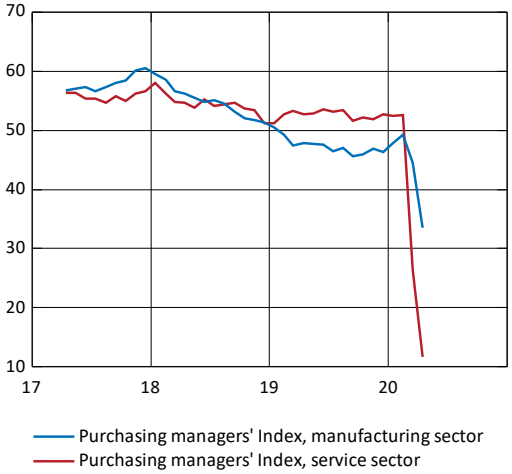
Annual percentage change



Source: Open Table

Figure 3:2. Confidence indicators in the euro area

Index



Note. Purchasing Managers' Index for the manufacturing industry and service sector published on 23 April 2020.

Source: Markit Economics

world are being affected simultaneously means that the fall in demand and production problems are combining and reinforcing the negative effects.

Clear signs of falling GDP in several countries

GDP is expected to fall by between 8 and 13 per cent during the second quarter of this year in both the euro area and the United States. It is above all private consumption and investment that will be lower as parts of the economy have closed down and people have been instructed to stay at home. Companies have laid off staff and unemployment is expected to rise sharply in the near term. The fall in GDP is expected to be somewhat sharper in the euro area and in the United States compared with in Sweden. This is partly due to the introduction of tougher restrictions in these societies and because those sectors hardest-hit by the crisis, such as restaurants and hotels, are responsible for a greater share of GDP in both the United States and several larger EU Member States.

Indicators that can be followed in real time, such as restaurant bookings and cinema visits, suggest almost a 100-percent reduction in the euro area compared with the previous year (see Figure 3:1). Other examples of data that can be studied in real time include electricity consumption, which has decreased by over 20 per cent in Italy since the restrictions were introduced. The airports in Frankfurt, Paris and Madrid report an 80-percent decrease in the number of flight departures. Traditional confidence indicators, such as Purchasing Managers' Indices for the service sector, show that countries that have introduced the most extensive restrictions are also those that have reported the largest declines in confidence in March and April (see Figure 3:2).

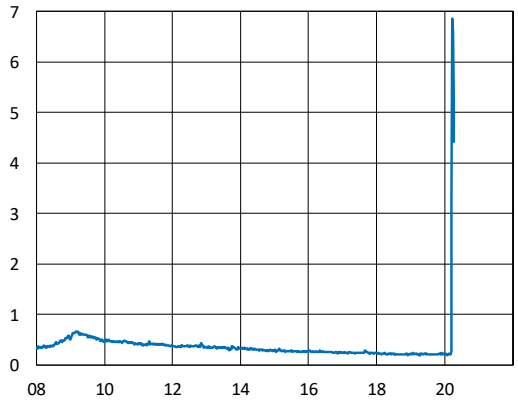
In the United States, the infection began spreading among the general public a few weeks later than in Europe, but seems to be following a similar course. The majority of US states are instructing their inhabitants to stay at home. Here, there are also signs of a sharp decline in the economy. For example, the number of people applying for unemployment support has recently risen to around 6 million per week (see Figure 3:3).

In China, the spread of the infection has slowed according to official statistics. Many employees have returned to their workplaces and production has begun to pick up again. Purchasing Managers' Indices rose again in March and data that is more quickly available than the official statistics, known as high-frequency data, suggests that the economy will recover during the second quarter. Two examples of such data are coal consumption at power plants and passenger transport, which have begun to increase again. A third example is that the number of containers waiting to be unloaded at Chinese ports is now decreasing and beginning to approach normal levels again.

The most recent forecast from the IMF suggests that GDP in 2020 will fall by 3 per cent globally and by 6 per cent in countries that are important for Swedish foreign trade (see Figure 3:4). These are more substantial declines than during the financial

Figure 3:3. New applications for unemployment support in the USA

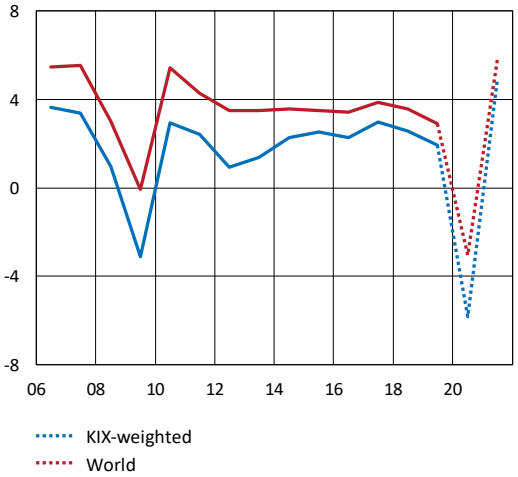
Millions per week



Source: U.S. Department of Labor

Figure 3:4. The IMF's forecast for GDP abroad

Annual percentage change

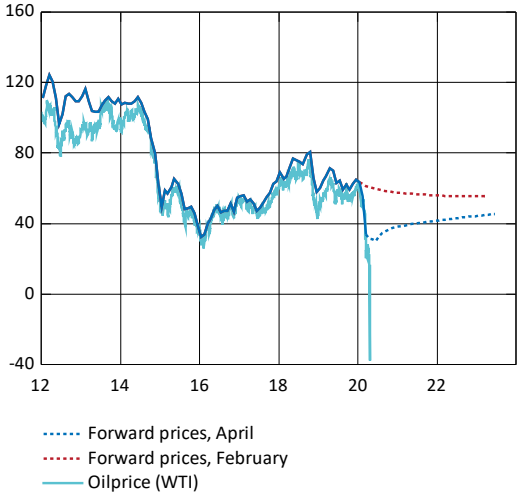


Note. The KIX is an aggregate of countries that are important for Sweden's international trade.

Sources: The IMF World Economic Outlook April 2020 and the Riksbank

Figure 3:5. Crude oil price

USD per barrel



Note. Brent oil, forward prices are calculated as a 15-day average. The outcome refers to daily outcomes for WTI and monthly spot price averages for Brent.

Sources: Macrobond and the Riksbank

crisis despite the comprehensive support measures taken (see the box "Fiscal policy support measures abroad").

Dramatic fall in the oil price

The oil price, measured in terms of Brent, has fallen from just over USD 55 a barrel to nearly USD 20 since the monetary policy meeting in February. The decline can be explained by both reduced demand and an expected increased production of oil. In mid-April, OPEC and Russia agreed to reduce production by almost 10 million barrels a day. This record-high production restriction applies in May and June and will thereafter gradually decrease up until the end of April 2022. However, this has not led to rising prices as the falling demand, due to the pandemic, is having a counterbalancing effect. According to forward pricing, the Brent price is expected to rise slowly towards USD 40 a barrel at the end of 2020 (see Figure 3:5).

On 20 April, the price of US WTI oil fell from around USD 20 a barrel to almost USD –40 a barrel, the first time the price was negative. The reason for the price fall was almost full oil stores and forward agreements that were about to expire. Investors therefore paid to dispose of oil which they would otherwise have had delivered in May. Forward prices with delivery further ahead in time also fell, but to a much lesser extent. The price fall has had relatively limited spillover effects on Brent oil, which fell around USD 10 a barrel during the same period.

The low oil price affects oil-producing countries such as the United States, Russia, Brazil and Norway negatively while net importers such as the euro area and Sweden benefit. High-cost producers risk being knocked out of the market as a result of the low oil price. US shale oil is particularly vulnerable as production costs are high, making it more sensitive to price falls. The falling oil price has led to turbulence on the financial markets with an increased risk of credit losses in the banking sector.

Consumers are benefiting from lower fuel prices, especially in the United States, where the fuel tax is relatively low. Consumer prices are directly affected via lower prices of fuel and other oil-related products, which are included in inflation calculations. Consumer prices can also be affected indirectly via lower business costs.

The pandemic is also hitting the Swedish economy hard

Due to the rapid course of events, normal sources of economic statistics do not provide rapid enough information on the economic consequences. As a result, the Riksbank has collected and analysed daily and weekly statistics to a larger extent than usual. Since the beginning of March, the Riksbank has also carried out recurrent telephone interviews with around 50 companies (see the box in Chapter 1 "This will take

Fiscal policy support measures abroad

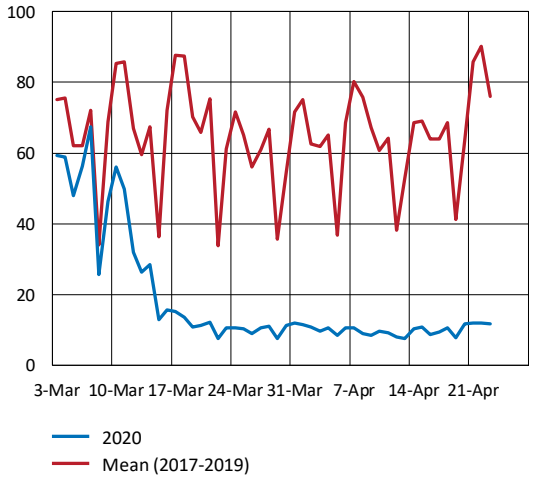
Comprehensive fiscal policy measures have been taken in more or less all countries to mitigate the economic consequences of the corona pandemic. At the end of March and the end of April, the US Congress approved an aid package equivalent in total to about 12 per cent of GDP, in which just about 7 per cent is made up of fiscal policy measures and the rest of loans and guarantees. The package contained cash transfers to households and increased unemployment benefits. Smaller companies are being offered compensation for two weeks of sick leave and loans to manage cashflow. These loans can later be waived if they, for example, are used to retain employees or pay off other loans. Traditional loans with repayment are being offered to larger companies and hard-hit industries. In addition, the package includes measures to strengthen health and medical care services and food programmes for vulnerable groups.

The fiscal policy measures taken within the EU vary between Member States, but the European Commission has activated an opt-out clause in the growth and stability pact aimed at creating scope for Member States to support their economies. On the national level, measures have been implemented up until mid-April equivalent to an average of 3 per cent of GDP. The measures include different support programmes for companies, increased funding to health and medical care services and support for the unemployed and self-employed. Stimulus measures in Germany correspond to around 5 per cent of GDP and also include a programme in which the state can directly support larger companies by buying their shares. EU Member States are also offering liquidity support in the form of loan guarantees and tax deferment, which in total amounts to around 16 per cent of GDP. As a complement to national measures, EU finance ministers have drafted a proposal for common safety-nets for individuals, companies and Member States. The proposal was approved by the European Council and includes measures from the European Investment Bank (EIB), the European Stability Mechanism (ESM), and a new temporary facility under the European Commission (SURE) and amounts in total to around EUR 500 billion (3 per cent of the EU's GDP). At the end of April, the European Council agreed to work to set up a recovery fund to act to support the sectors and geographical areas in the union hit hardest by the corona pandemic.

In both the United States and the EU, these large stimulus packages are causing a sharp increase in public indebtedness. This can be problematic in highly indebted countries in which public finances were already weak prior to the crisis.

Figure 3:6. Hotel bookings in Stockholm

Occupancy rate in per cent



Source: Benchmarking Alliance

time to sort out"). The responses show that the situation changed dramatically in mid-March. Daily and weekly data on, among others, travel and hotel bookings, restaurant visits and air traffic confirm this development and that economic activity is currently significantly lower than normal (see Figures 3:6 and 3:7). The Economic Tendency Survey for April confirmed the sharp slowdown in the Swedish economy (see Figure 3:8).

The view of Swedish industrial companies on production and employment in March was more pessimistic than it has been for a long time. In parallel, Purchasing Managers' Indices for the service sector indicate a very rapid slowdown. In the automotive industry, for example, several large factories in Sweden have been closed for parts of March and April due to a lack of input goods. This in turn affects production and employment among sub-contractors.

Consumer-related industries and their sub-contractors are being affected by people staying at home. In addition, increased general uncertainty about economic developments is causing households and companies to delay consumption and investment.

Overall, all this is creating a negative spiral of falling production, employment, income and demand that is hitting most industries in the economy. The magnitude of the effects on Swedish GDP is very uncertain and depends on several different factors.

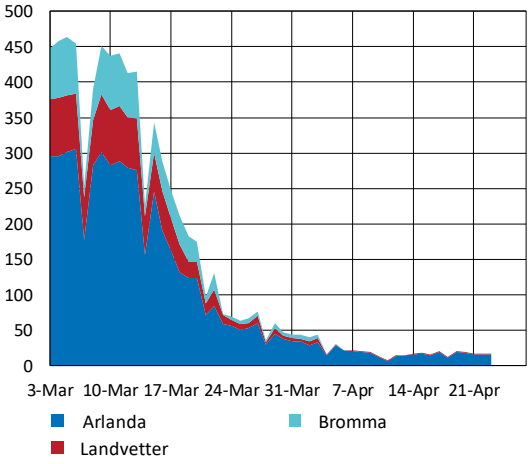
Rapidly deteriorated labour market in Sweden

The sudden slowdown in demand in the economy is hitting the Swedish labour market hard. The instruction to people to stay at home and to limit their physical contact is having a particularly adverse effect on the service sector in which many do not have permanent employment. For a company to have the right to lay off its staff in the short term, which is one of the Government's support measures (see the box "The Swedish Government's crisis measures" in Chapter 1), companies must have taken measures to cut their labour costs. This means that many fixed-term employees and consultants will be laid off unless they play a critical role in the company. Many with more uncertain employment terms are therefore expected to lose their jobs.

The possibility of short-term work schemes means that many permanent employees that would otherwise have become unemployed will retain their jobs (see the article "Are those on short-term work schemes unemployed?"). The Government has also introduced other measures that reduce companies' staff costs and aim to reduce the risk of bankruptcies so as to ultimately increase the possibilities for companies to retain their employees.

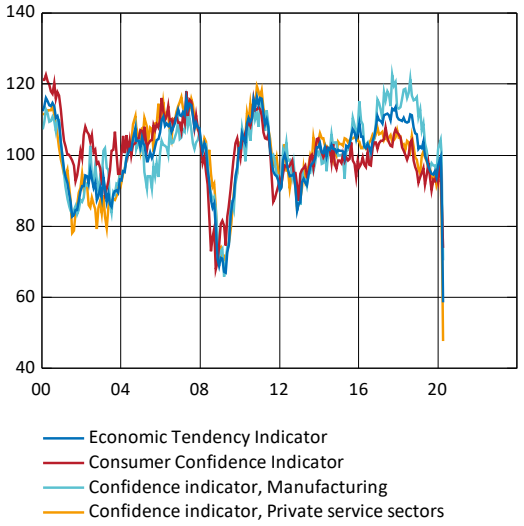
Despite the measures, many companies will not be able to cope with the exceptional crisis we are currently experiencing and unemployment will rise. The Government

Figure 3:7. Air traffic in Sweden
Total number of flights at Arlanda Airport, Landvetter Airport and Bromma Airport



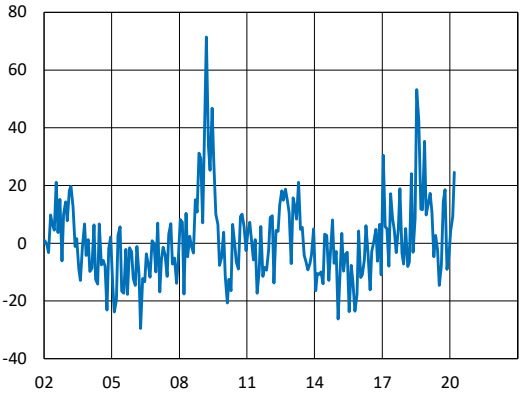
Source: Flightradar24

Figure 3:8. Confidence indicators in Sweden
Index, average = 100, standard deviation = 10, seasonally-adjusted data



Source: National Institute of Economic Research

Figure 3:9. Bankruptcies in Sweden
Annual percentage change



Source: Statistics Sweden

has temporarily increased unemployment insurance fund compensation levels to mitigate the consequences for those affected and to bolster general demand in the economy.

The number of bankruptcies increased in March by 24.5 per cent compared with the same month in 2019 (see Figure 3:9) and according to statistics from UC, bankruptcies seem to have continued to increase in April.[10] The number of redundancy notices rose in March to just over 40,000, which is more than double as many as in any single month during the financial crisis of 2008–09 (see Figure 3:10).

Overall, the statistics indicate a very serious situation on the Swedish labour market, where an unusually sharp increase in unemployment is to be expected.

Temporarily lower wage growth and inflation this year

The deteriorating and uncertain situation on the labour market has affected the ongoing wage bargaining rounds. On 20 March, the Swedish Trade Union Confederation and the Confederation of Swedish Enterprise agreed to delay this spring's wage negotiations until the autumn of 2020. This is expected to lead to wages overall remaining on approximately the same level from the beginning of the first quarter to the end of the third quarter in 2020, which in turn means that annual wage growth will fall significantly this year compared with the assessment in the Monetary Policy Report in February.

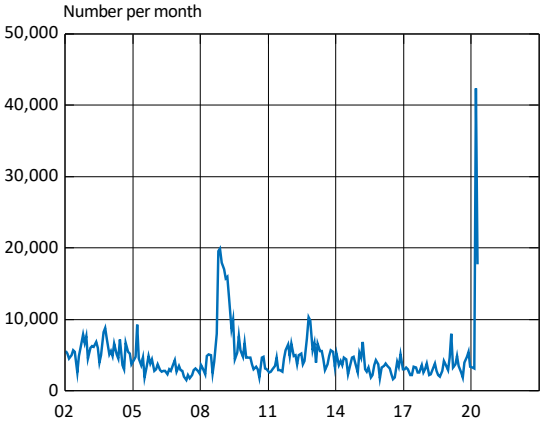
The measures introduced to limit the spread of infection and the economic consequences will also affect inflation this year. A special aspect is the currently impaired scope for calculating reliable measures of changes in prices for certain goods and services, which makes the published inflation statistics particularly uncertain and difficult to interpret (see the article "More difficult to calculate inflation"). The reduced economic activity is expected to subdue inflationary pressures in the near term, but there are some indications that the measures introduced to combat the spread of infection, including closed borders, may lead to higher prices of some goods. An example is food and in particular prices of fruit and vegetables (see Figure 3:11).

Inflation for 2020 is also being affected by the unusually large effect of updated weights in the CPI calculation this year. The weight adjustments explained about two thirds of the forecast error for CPIF inflation in January and, in the Riksbank's view, this effect will push down the rate of inflation by just over 0.2 percentage points more than expected over the whole year. The assessment is that the inflation level will rise again in January 2021, when the annual weight update is assumed to be more normal.

In the Monetary Policy Report in February, falling energy prices were already expected to dampen inflation substantially in 2020. The oil price had been lower and the unusually mild winter had dampened demand for electricity, which was assumed to

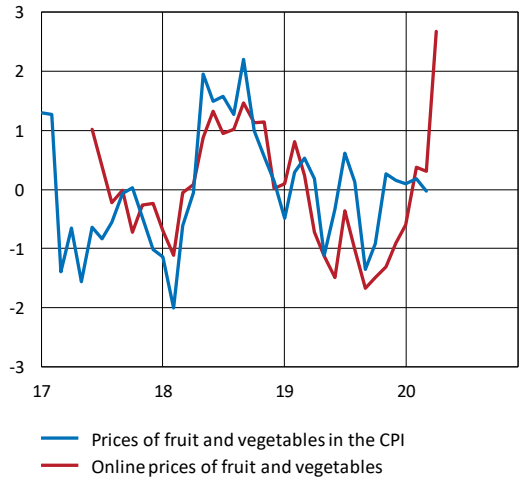
[10] UC is a business and credit information company.

Figure 3:10. Redundancy notices
Number per month



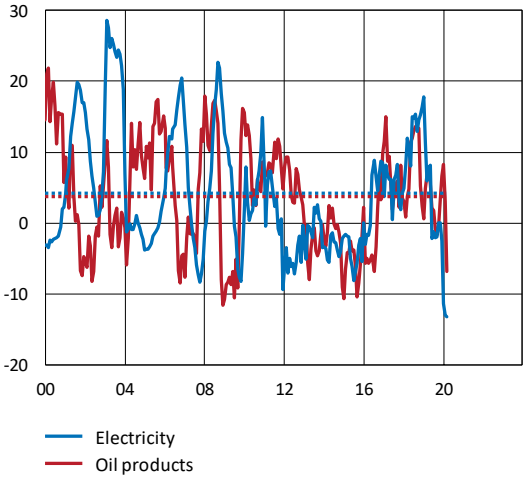
Note. Redundancies for April refer to the period 1–17 April.
Source: The Swedish Public Employment Service

Figure 3:12. Prices of fruit and vegetables
Annual percentage change



Note. Online data refers to prices of fruit and vegetables that can be bought online. Average of daily price observations up until 21 April.
Sources: Statistics Sweden and the Riksbank

Figure 3:11. Electricity prices and fuel prices in the CPI
Annual percentage change



Note. Broken lines show mean values from 2000.
Sources: Statistics Sweden and the Riksbank

contribute to continuously low electricity prices during the spring. Since then, electricity prices have fallen even lower (see Figure 3:12), due to lower demand, at the same time as the oil price has dropped sharply and contributed to lower fuel prices.

There are therefore clear elements of temporary effects in CPIF inflation at present. Inflation is expected to be significantly higher again when the basket effect falls out of the twelve-month change in January 2021, at the same time as energy price stabilise or increase slightly.

This year, CPIF inflation excluding energy is expected to amount to 1.5 per cent, while CPIF inflation will be significantly lower and amount to 0.6 per cent on average (see Figure 3:13).

Future developments

Several phases to pass through on the road back to a normal situation

Roughly speaking, the Riksbank can identify three phases that have to be passed through before society and the economy are back to normal again. Sweden and many other countries are currently still in a phase in which the spread of the coronavirus is dominating life in society. To ensure health services are not overstretched, comprehensive measures are being taken to slow the spread of infection. These measures are necessary but simultaneously have major negative consequences for the economy, and economic policy needs to concentrate entirely on giving as much support as possible to households and companies to help them get through the crisis.

In the next phase, which more countries than just China are entering, restrictions on society are gradually relaxed. It will still very much be a question of keeping the spread of the virus at a manageable level for the medical care services and there will be a risk of setbacks if the spread of infection increases again. In this phase, the economy starts to recover. In some industries, recovery may be rapid to begin with. In others, it can take a long time before demand returns. The economic policy measures to bridge over the crisis are gradually withdrawn, or change towards more general stimulation of demand, as society starts to open up. But vigilance is required to avoid setbacks.

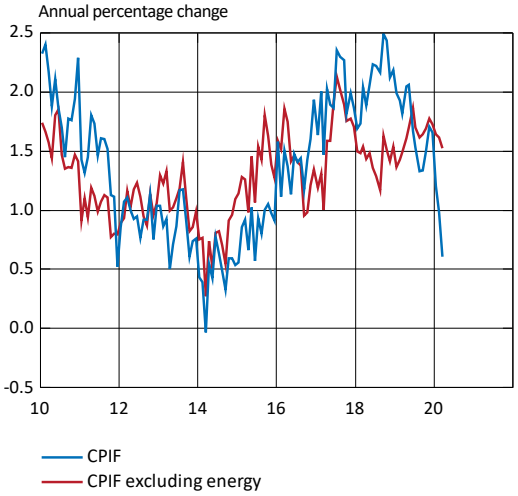
The last phase starts when the pandemic is over and the spread of infection no longer affects society at large, due either to enough people having been infected and becoming immune or to the availability of a vaccine. The negative consequences of the crisis will probably cast a shadow over economic developments for a long time, for example via significantly higher sovereign debt in most countries, highly indebted companies, high unemployment and substantial pressure on structural transformation in the economy.

Difficult to calculate GDP

Statisticians calculating official statistics are currently faced with specific difficulties. This is contributing to the general level of uncertainty surrounding the economic situation (See also the article “More difficult to calculate inflation”). Preliminary quarterly GDP outcomes will be more uncertain than usual and also difficult to interpret. For example, the calculation of GDP in fixed prices requires price data that currently can be difficult to compile.

Another problem is that when normal production falls sharply, other production arises in certain industries that is not perhaps fully captured by the indicators used in the quarterly calculations. Production in the public sector, which can be difficult to interpret even in normal times, becomes significantly more difficult to track. This applies especially to healthcare and education. It is unclear how the effect of closed schools and the reallocation of healthcare from planned surgery to intensive care, in part outside normal hospitals and with other principals, will affect the calculated share of value added in the public sector.

Figure 3:13. CPIF and CPIF excluding energy
Annual percentage change



Source: Statistics Sweden

Major uncertainty regarding how deep and prolonged the economic decline will be

The depth and length of the decline in the Swedish economy will therefore depend on how long society is restricted by the spread of the coronavirus and the measures implemented to counter it. How households and companies act afterwards will obviously play a major part in developments. Due to the considerable international dependence of the Swedish economy, developments will also be determined to a large extent by the recovery in countries that are most important for Swedish foreign trade. As the conditions for countries will be different once recovery starts, the strength of the upturn may also vary.

Economic developments both in the near term and slightly further ahead will therefore depend on a number of factors, domestic and global, which are currently extremely uncertain and the economic effects of which are difficult to assess.

Scenarios focusing on developments in 2020–2021

Normally, the Riksbank's forecasts can be seen as a weighing together of scenarios for economic developments, in which the different weights denote the probabilities of the scenarios occurring. In the current circumstances, however, it is more worthwhile to focus on the scenarios themselves, especially the significance of different assumptions regarding how deep the decline may be and how long the economy may be affected by the corona pandemic. The descriptions of economic developments in the coming sections should therefore be interpreted as scenarios, rather than forecasts.

In normal times, it is reasonable to assume that the economy will approach a normal situation in a few years' time. It is not obvious, however, that the economy in the current crisis will follow historical patterns. Crises can also have profound effects on the structure and functionality of the economy, causing the normal situation itself to change. As it is very uncertain where the economy will be in a few years' time once the crisis has passed, the description focuses mainly on scenarios for developments in the period 2020–2021. To illustrate that the crisis, under certain circumstances, can cause economic developments to be weak for several years to come, the figures also show projections over the whole of the normal forecast horizon to the first half of 2023.

Two scenarios illustrate feasible routes the economy may take going forward

Below follows a description of economic developments in two scenarios with different assumptions regarding the depth of the decline this year and the recovery thereafter. The scenarios illustrate feasible two feasible routes the economy may take going forward. Neither of them should be interpreted as the Riksbank's assessment of the most probable development. Neither should they be interpreted as the most favourable and worst possible scenario respectively. In the Riksbank's view, developments can be both better and worse than those described in the scenarios.

In Scenario A, Sweden and other countries enter a phase in which the rate of infection is decreasing and some restrictions on society already start to be eased in the near term and more significantly during the summer. The return to a normal situation is still relatively prolonged, however. In Scenario B, the measures to limit the spread of infection need to be in place to a significant extent during the summer, which leads to an even more prolonged process. It is also assumed to further exacerbate the crisis and have greater negative effects in the longer term. The conditions for the scenarios are summarised in Table 3:1.

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

Scenario A
• Measures to subdue the spread of infection start to be eased before the summer • Recovery starts in the third quarter • Moderate effects on the Swedish housing market • More bankruptcies and unemployed persons have some impact on GDP in the long term
Scenario B
• Measures to subdue the spread of infection unchanged for most of the summer • Recovery is delayed and does not start until the fourth quarter • The crisis is exacerbated by a clear decline on the Swedish housing market. • More bankruptcies, higher unemployment and lower investment have a significant impact on GDP in the long term

Substantial fall in Swedish GDP in the near term, irrespective of scenario

As a starting point for both scenarios, the Riksbank has tried to estimate how much demand will be affected in the near term by the corona pandemic and to combine this into a GDP effect. Table 3:2 shows that GDP at the end of April is estimated to be 11 per cent lower than at the start of the year.[11]

The calculation assumes that tourism, restaurant and café visits and the consumption of various sporting and cultural events fall as much as 70 to 90 per cent from the beginning of the year up to the end of April. The consumption of clothes and car purchases are assumed to fall by 30 to 40 per cent. Some goods, such as furniture and white goods, are also affected, but not quite as much. Other goods and services, that make up just over half of consumption, are probably affected to a small extent, including food and housing costs. The fall in consumption is softened somewhat by parts of the consumption that normally occurs abroad now taking place in Sweden instead. This means that the item called “Other consumption” in the table, and which makes up about three-quarters of consumption, continues to grow. The overall reduction in consumption is assumed to

[11] Some of the assumptions are based on high-frequency statistics, such as turnover in the hotel, restaurant and travel industries, payment statistics and new vehicle registrations. Other information used includes the Riksbank’s telephone interviews with companies, redundancy statistics, temporary job applications and data on bankruptcies and reconstructions. Overall, the high-frequency statistics only give an indication of how deep the decline may be and only for certain parts of the economy.

contribute 2.5 percentage points to the fall in GDP from the turn of the year up until the end of April.

Travel restrictions mean that tourism is being seriously affected. As a result, consumption by foreign nationals in Sweden is also falling, which is counted as a reduction in Swedish exports in the National Accounts. The calculation is based on this component of exports decreasing by 90 per cent. Lower demand abroad and production problems mean that exports of motor vehicles are also being affected to a considerable extent. Together with reduced exports of other goods and services, exports in total are assumed to be responsible for about 7 percentage points of the fall in GDP.

Table 3:2. Assumed effects of the corona pandemic in different domestic sectors

Percentage change and contribution to change in GDP between January and April in percentage points

	Assumed effect	Import-adjusted contribution to GDP
Consumption	**−14.3**	**−2.5**
Swedish consumption abroad [1]	−90	0.0
Swedish recreational travellers [2]	−75	−1.3
Cinema, events, sport, etc. [3]	−90	−0.2
Restaurant, café [3]	−70	−0.9
Clothes & shoes	−30	−0.3
Consumption, vehicles	−40	−0.2
Other [4]	1	0.3
Exports	**−23.2**	**−7.3**
Foreign consumption	−90	−2.2
Export motor vehicles	−40	−1.3
Other exports	−15	−3.9
Investment	**−11.0**	**−1.4**
Investment, excluding housing	−15	−1.0
Housing	−10	−0.4
Public investment	0	0.0
Public consumption	**1.1**	**0.3**
Stockbuilding	—	**−0.5**
GDP	—	**−11.3**

Note. The column "Assumed effect" shows how much production and demand are assumed to fall in the near term before demand picks up again. The calculated contribution to GDP is adjusted for estimated import content. 1) Recorded as imports. Affects consumption but not GDP. 2) Refers to travel, transport, housing and restaurants in Sweden. 3) The weight has been adjusted to exclude Swedish recreational travellers. 4) Refers to several different sub-items. 4) Includes among others substitution of consumption that otherwise would have occurred abroad.

Sources: Statistics Sweden, the Swedish Agency for Economic and Regional Growth and the Riksbank

Business and housing investment are assumed to decrease in the order of 10–15 per cent in the near term as an effect of a reduced need for investment in companies and uncertainty over developments going forward. This contributes about 1.5 percentage points to the fall in GDP. Companies' need for stocks also decreases when demand falls, which reinforces the decline in GDP. Public consumption increases in the near term,

however, primarily as a result of major investment in medical care services.

With these assumptions, GDP would thus in total be about 11 per cent lower at the end of April compared to the start of the year. This is of course a rough estimate and the fall may be smaller, but also larger.

How much GDP will be affected in total during 2020 depends partly on how great the fall will be in the first half of the year, and partly on how quickly economic activity picks up again. Given the assumptions in Scenario A, GDP falls by about 7 per cent this year compared with 2019 and given the assumptions in Scenario B, the fall will be about 10 per cent.[12] In both scenarios, there will be a sharp fall in production in the near term, which is greater than during the financial crisis of 2008–09.

Scenario A: gradual return to a normal situation in the foreign economy starting in the summer

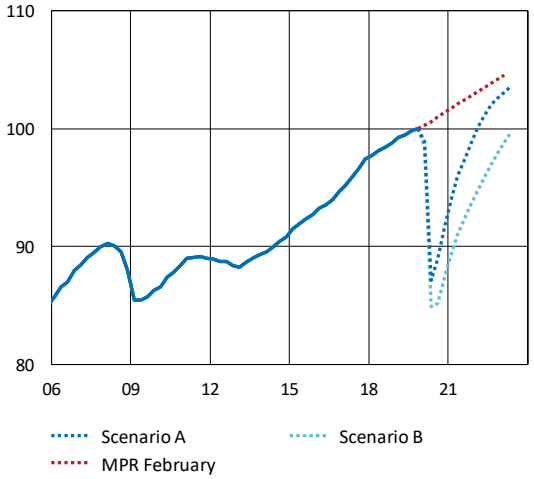
Assuming that the impact of the coronavirus on society in Europe reaches its peak April–May, the return to a normal situation could start in the summer. However, it is difficult to know how quickly measures can be withdrawn without the spread of infection picking up again. The return to normal will therefore be slow to start with. After the summer, the citizens of most countries will be able to move around more normally, but it will probably take time before travel and other activities reach the same levels as before the crisis, if indeed those levels are even reached.

People may therefore limit their physical contact for the whole of 2020, albeit to a lesser and lesser extent, which will dampen demand this year. In such a scenario, general economic recovery in the world would start during the third quarter and it will probably be possible to recuperate most of the fall in GDP in the second quarter in the years ahead (see Figure 3:14).

Scenario A: recovery for the Swedish economy starts in the third quarter

As in other countries, Sweden can gradually withdraw the measures to reduce the spread of the virus in this scenario, and movement among the population will slowly increase starting in the summer. Demand will gradually increase in the third and fourth quarter this year, but exports, household consumption and corporate investment will still be substantially lower than the corresponding quarter in 2019. The recovery will then continue throughout next year and not until the end of 2021 can GDP be more or less back on the same level as before the crisis (see Figure 3:15). However, this level is about 3 per cent lower than the Riksbank's estimate in February of where GDP would be at this point in time.

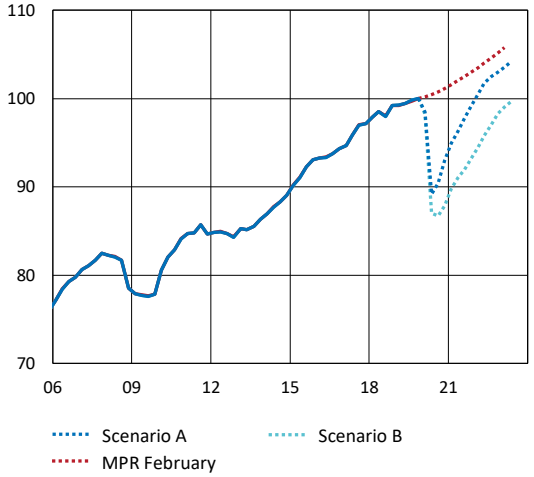
Figure 3:14. GDP abroad (KIX2)
Index, 2019Q4=100



Note. KIX2 is the euro area and the United States combined with their respective KIX-weights relative to the sum of the two weights (0.86 and 0.14 respectively).

Sources: Eurostat, Bureau of Economic Analysis and the Riksbank

Figure 3:15. GDP in Sweden
Index 20019Q4=100



Sources: Statistics Sweden and the Riksbank

[12] The scenarios are based on approximately the same calculation of the effect on GDP in the near term. The scenarios should therefore not be seen as marking an interval for the potential magnitude of the fall in GDP and the rise in unemployment in 2020. The difference in GDP and unemployment in 2020 between the scenarios is primarily explained by how long the negative effect persists.

The relatively prolonged process depends in part on the closing-down of the economy continuing to have repercussions for some considerable time. For example, many investment projects have been put on hold both in Sweden and abroad and exports are being affected. The measures taken by the Government, the Riksbank and other authorities are indeed helping to bridge over the crisis, but many companies will nevertheless find it difficult to survive and bankruptcies will increase. This affects the capacity to produce in the short term and will prolong the time it takes to bring up the level of activity.

Probably, production capacity will to a certain extent be negatively affected even in the longer term. In this scenario, however, it is assumed that the crisis only to a limited extent has after-effects that cause more sustained impairment of the economy, for example via a major decline in the housing market. Such after-effects could have serious consequences for the economy in the longer term.

Scenario A: substantial and rapid increase in unemployment

The closing-down of the economy will affect employment considerably in 2020, particularly in the hardest-hit service industries, where the number of persons employed decreases rapidly in the short term. The number of unemployed persons therefore increases rapidly as a consequence of the crisis. The majority of those who lose their jobs are probably those on fixed-term employment contracts.

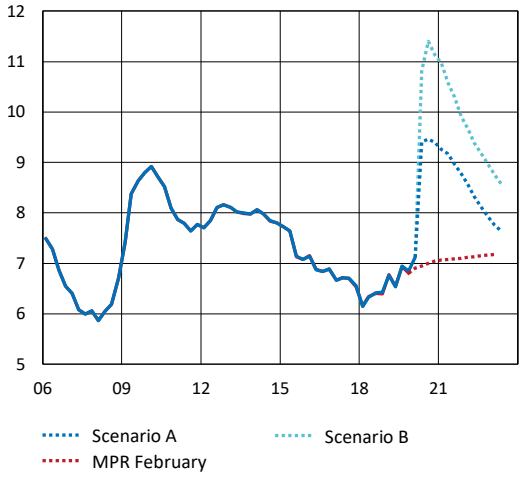
How unemployment as a share of the labour force develops is more uncertain, as the number of people in the labour force is also affected. But there will be a substantial increase in unemployment in 2020 whatever the circumstances. With the assumptions in Scenario A, unemployment increases by an estimated 10 per cent or so in the short term. However, it starts to fall as the recovery picks up during the second half of this year and continues to fall in 2021 (see Figure 3:16).

The situation on the labour market only improves slowly, however, in line with the normal pattern after major economic downturns. The closing-down of the economy, the gradual return to normal social life and the strain on companies in certain industries mean that it takes time before employment picks up again. The risks of permanent effects on unemployment also increase as the crisis lengthens, as some employees find themselves increasingly further from the labour market.

Scenario A: the fall in demand and the low oil price temporarily dampen inflation in 2020

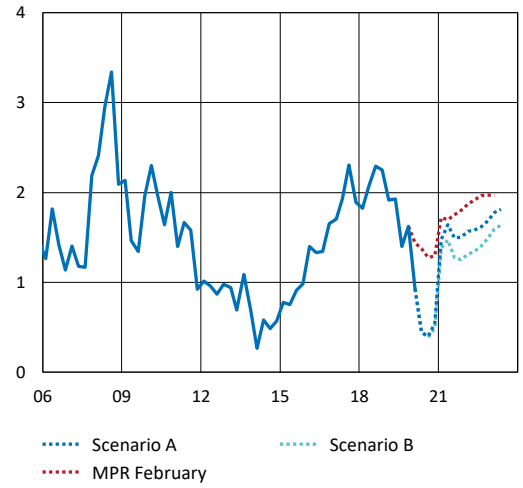
It is difficult to assess the effects of the crisis on inflation. Prices tend to fall as demand for goods and services diminishes. But disruptions to production, trade and transport lead to a reduction in the supply of certain products, which can cause prices to rise. The Riksbank's assessment is that the effect of lower demand is greater in the near term, which in turn suggests that inflation will be lower in the year ahead both internationally and in Sweden. The low oil price further contributes to slower price growth in

Figure 3:16. Unemployment
Per cent of the labour force



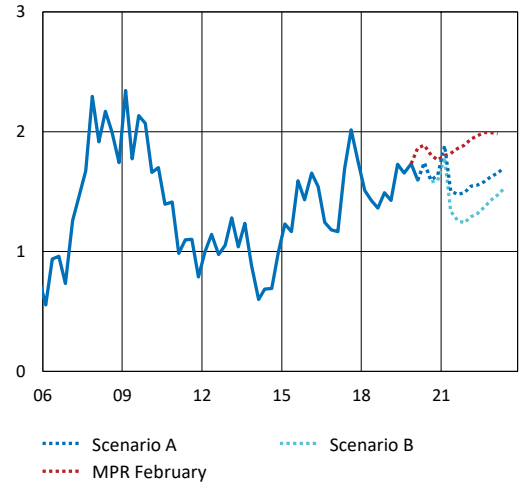
Sources: Statistics Sweden and the Riksbank

Figure 3:17. CPIF
Annual percentage change



Sources: Statistics Sweden and the Riksbank

Figure 3:18. CPIF excluding energy
Annual percentage change



Sources: Statistics Sweden and the Riksbank

2020. However, forward prices of oil indicate that the price will rise going forward, albeit at a slow rate. Inflation is therefore subdued in 2020, but as demand gradually strengthens after 2020, it is also likely that inflation will increase (see Figure 3:17).

As the economic recovery has clearly picked up at the end of 2020, and the effects on energy prices are basically temporary, long-term inflation expectations are not expected to be affected too significantly. This is an important reason for why there is a good chance that most of the decline in inflation in 2020 will be temporary. But the development of inflation is not just uncertain in the short term but also in the longer run, when various upside risks can also start to be significant. In the scenario, lower demand is assumed to contribute to slightly lower inflation in the coming years, but inflation could instead be higher as a result of supply restrictions and structural transformation. In addition, the trend of sharply increased globalisation in recent decades could slow down.

Scenario A: major economic policy initiatives in the near term
Given the macroeconomic developments in Scenario A and in light of the Government's actions and communication thus far during the crisis, further fiscal policy measures are likely to be taken in addition to those already presented. Overall, the measures and the macroeconomic developments are assumed to lead to the public sector's consolidated public gross debt, the so-called Maastricht debt, increasing to 45 per cent of GDP in 2020 before gradually decreasing. The scenario means that general government net lending will fall to about −7 per cent of GDP in 2020.

So far, the Riksbank has taken a large number of measures to make it easier for companies to access credit, keep borrowing costs down and support economic development (see Chapter 1 and the article "The Riksbank's balance sheet is growing"). The scenario does not contain exact assumptions about the size of various measures going forward or the level of the repo rate. The starting point is that monetary policy will be adapted to the circumstances where the entire toolbox can be used, which includes the potential scaling-up of various measures and cutting the repo rate. The measures are implemented when they are deemed to provide the greatest benefit.

Scenario B: prolonged closing-down of the economy will have after-effects that cause negative consequences in the longer term
The starting point in Scenario B is that the measures to reduce the spread of infection are in place for longer than in the previous scenario. Attempts to withdraw the measures aimed at reducing the spread of the virus are assumed to be unsuccessful and the spread does not slow to any significant degree until late summer. Restrictions on people's physical contact will therefore be in place for most of the summer, which means that economies around the world will be closed down for a prolonged period.

Regardless of the measures taken abroad and in Sweden to bridge over the crisis, demand will remain weak for the third quarter of this year. This will cause more bankruptcies and higher unemployment, which will delay the recovery. Weak demand and a lack of investment also affect long-term production capacity and it can be assumed that there will also be more long-term effects on unemployment as employees, especially in hard-hit industries, will find it increasingly difficult to re-enter the labour market.

In this scenario, the recovery can also be complicated by various spillover effects, which mean that it may take even longer before GDP is back at the same level as before the crisis (see Figure 3:14). For example, some euro-area countries that already have weak public finances will be put under further pressure by a long period of weak demand and the need for substantial efforts to help households and companies. Similar to after the financial crisis, this may lead to turbulence in the financial markets if doubt is cast on the long-term sustainability of public finances. This in turn can have repercussions for financial costs via higher risk premiums.

Scenario B: Deeper decline in the Swedish economy and spillover effects cause weaker recovery

Sweden has no problems with its public finances. However, the Swedish economy is vulnerable to spillover effects via the housing market and because of high household indebtedness. In a scenario in which the crisis is exacerbated by a substantial slump in the housing market, households will probably curb their consumption for a long time and housing investment will fall further in 2021. The commercial property market may also be affected, which in turn may lead to greater credit losses for the major banks that have significant lending to commercial property companies. All these would cause GDP, after quite a considerable fall this year, to develop significantly more weakly going forward than in the other scenario (see Figure 3:15).

In such a scenario, the effect on unemployment could also be more dramatic in the near term and an even slower recovery can be expected in the coming years (see Figure 3:16). The weak development may also mean that inflation in the period ahead will be lower than in Scenario A. But as in that scenario, it is reasonable to assume that inflation will nevertheless rise from its depressed level this year (see Figure 3:17).

Scenario B: even more substantial economic policy measures necessary

The slow recovery in the economy is assumed to lead to the Government taking more substantial fiscal policy measures than in the previous scenario. The measures already adopted, such as short-term work schemes, will also be utilised to a greater extent. This could cause the Maastricht debt to rise to about 50 per cent of GDP at the same time as general government net lending falls to almost −9 per cent of GDP in 2020. In this scenario, it is also reasonable to assume that monetary policy needs to become

more expansionary than in Scenario A. As in that case, this may lead the Riksbank to scale up measures that have already been implemented and/or to cut the repo rate.

ARTICLE – Are those on short-term work schemes unemployed?

There is considerable interest in comparing labour market developments between different countries, particularly in times of international crises. The purpose is often to learn which economic policy measures work well to counteract increased unemployment and reduced employment. But one should exercise caution when making such comparisons. There are differences between countries with regard to the measures implemented both to prevent the spread of the coronavirus and to alleviate the economic effects of the pandemic. But even if the strategies to combat the spread of the virus were to have been the same in all countries, the consequences for the labour market might nevertheless differ because developments are also affected by the special circumstances and institutions in each country. This article specifically takes up how the national systems for state support to short-term work schemes may have different effects on the unemployment statistics in different countries. If one wishes to draw conclusions with regard to Sweden on the basis of developments in unemployment in other countries, it is important to be aware that there are major differences in the definitions between different sources of statistics.

The Riksbank and the Swedish Government, together with other authorities, have implemented measures to alleviate the effects of the coronavirus pandemic on the Swedish economy.[13] Many measures are aimed at helping companies to survive and retain their employees so that the economy can pick up again when the corona crisis wanes and production can resume.

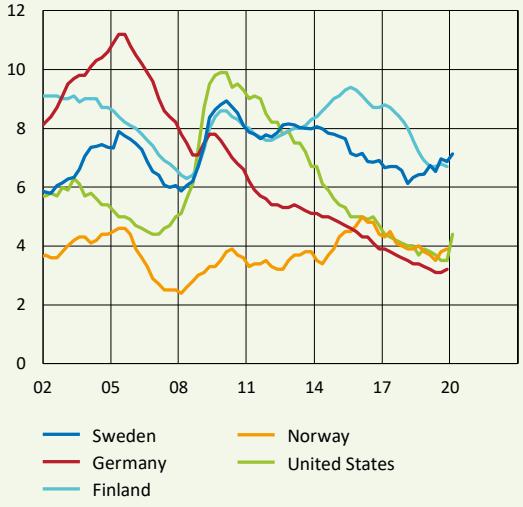
Other countries have also implemented extensive measures to alleviate the economic effects of the pandemic.[14] The way the measures have been designed depends largely on the labour market institutions in the respective country. The effects on, for instance, unemployment may differ in different countries, even if the measures taken are similar.

One example of how even similar measures can have entirely different effects on unemployment is government support to short-term work schemes, which has been provided in many countries. Employees on short-term schemes in Sweden receive salary and are counted as employed in the Labour Force Surveys (LFS), the official labour market statistics in Sweden. Those on short-term schemes are not to register with the Swedish Public Employment Service, as they still have their jobs. The short-term work schemes therefore mean that fewer people are registered as unemployed in Sweden, both with regard to the LFS and Swedish Public Employment Service statistics, than would be the case without this measure.[15]

In Sweden, state support for short-term work schemes has not been available in earlier crises, but there is a lot of interest in this support, and so far, up to 24 April, support has been granted for more than 250 000 employees.

The Swedish system for short-term work schemes is similar to the German system for short-time work, which contributed to keeping unemployment down in Germany during the financial crisis (see Figure 3:19). The German government has estimated that 2.35 million employees will take part in short-time work in Germany in 2020. This corresponds to almost 6 per cent of the employed in Germany and is around twice as many as during the financial crisis. In March, the number of people in short-term work in Germany was around one million.[16]

Figure 3:19. Unemployment in different countries
Per cent of the labour force, 15–74 years, seasonally-adjusted data

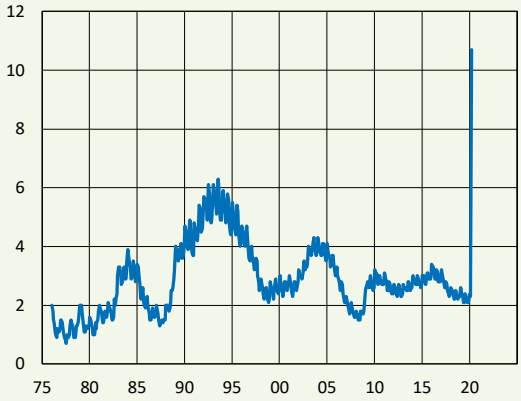


Sources: Bureau of Labor Statistics, Eurostat and Statistics Sweden

[13] See the article "The Riksbank's balance sheet is growing" and the box "The Swedish Government's crisis measures".
[14] See the box "Fiscal policy support measures abroad".
[15] According to Swedish Public Employment Service, unemployed are persons registered as openly unemployed and persons taking part in programmes with activity support. According to the LFS, unemployed are persons who are able and willing to work and have applied for jobs. For more details of the differences, see I. Häkkinen Skans (2019), "Developments on the labour market according to different statistical sources", Economic Commentaries no. 6, Sveriges Riksbank.
[16] According to statistics from Bundesagentur für Arbeit.

In Norway and Finland the short-term work scheme system is different. There, the employer does not pay any salary to the people who are on short-term work schemes; instead they receive compensation through the unemployment insurance. Employees who are on short-term work schemes full-time, are counted as unemployed in the register-based statistics.[17] This means that the figures for register-based unemployment in these countries have begun to rise substantially as more people are on short-term work schemes off. In Norway, unemployment has risen from just over 2 per cent in February to almost 11 per cent in March (see Figure 3:20). In Finland, almost 450,000 employees have been given notice of short-term work schemes in the space of a few weeks.

Figure 3:20. Registered unemployment in Norway
Per cent of the labour force



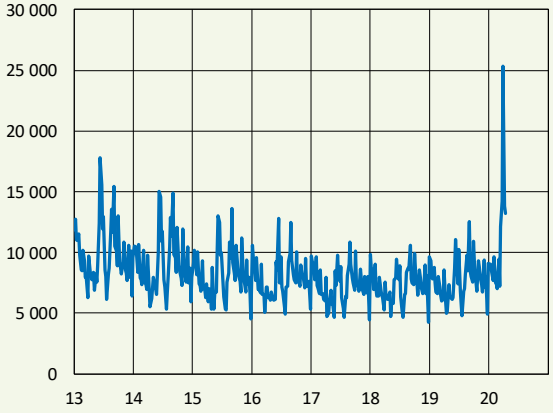
Source: NAV

It is unclear whether people who are on different types of short-term work schemes in these countries are to be classified as unemployed or outside of the labour force in the internationally comparable labour force surveys. But it is probable that the unemployment figures according to the labour force surveys will not be as high as according to the register-based statistics, at least in the short term. One important reason is that those on short-term work scheme will probably not seek new jobs during the period of time they are on short-term work schemes, and to be classified as unemployed in the labour force survey they would have to be actively seeking jobs. Register-based unemployment is also affected by how the regulations regarding unemployment insurance look, for instance, how large a percentage of those who have lost their jobs are entitled to unemployment benefit. This differs between countries and over time. The requirements made for job seekers in the unemployment insurance scheme also affect how active those who have lost their jobs will be in seeking new jobs and thus also affect registration as unemployed in the LFS.

In countries that lack generous systems for short-term work schemes one can see signs that unemployment will rise dramatically. In the United States, for instance, new applications for unemployment benefit (known as initial jobless claims) rose in a few weeks from around 200,000 applications a week to 6.6 million applications in a week. These are unprecedented levels in the United States.[18] The fact that the number of new applications is rising so quickly is a sign that the downturn in the economy is moving quickly, but also that employment security in the United States is weak.

In Sweden, most employees have the right to a certain period of notice, which means that unemployment is not rising as quickly as in the United States.[19] However, in Sweden too, the notices of redundancy have increased rapidly, which indicates that unemployment will increase going forward.[20] Moreover, many of the employed have fixed-term employment contracts or are employed by the hour, and these contracts are not being extended, which will increase unemployment. The number of newly-registered unemployed at the Swedish Public Employment Service has already begun to increase at a faster pace (see Figure 3:21).

Figure 3:21. Newly registered unemployed at the Swedish Public Employment Service
Number of people per week



Note. The reduction in new registrations in the weeks 15 and 16 (beginning 6 and 13 April) is probably due to the Easter holiday.

Source: The Swedish Public Employment Service

It is important to be aware that different sources of statistics can define labour market variables in very different ways. Comparisons between different countries should

[17] Register-based unemployment in Norway and Finland corresponds to the employment figures produced by the Swedish Public Employment Service in Sweden.
[18] Initial jobless claims are usually a good indicator of how the official unemployment measure in the United States is developing. However, there is a risk that many of those who are not entitled to unemployment benefit will leave the labour force, which would cause a less steep increase in the number of unemployed.
[19] In Sweden, the period of notice given is regulated by collective wage agreements and the time of notice for redundancy varies according to the length of employment. Employees who are not covered by any collective wage agreement have a period of notice pursuant to the Employment Protection Act. The period of notice is always at least one month for those with permanent employment. When an employer gives notice, an employee who has been employed for at least 10 years has a period of notice of 6 months, according to the Employment Protection Act.
[20] Not all notices of redundancy lead to redundancy and unemployment. The number of those given notice of redundancy who lose their jobs depends, among other factors, on how long the crisis lasts. During the financial crisis, around 60 per cent of those given notice of redundancy were actually made redundant and around 30 per cent became unemployed.

always be made with some caution, as developments are affected by the special circumstances and institutions in each country. If one wishes to compare unemployment in different countries, it is important to use data sources that measure unemployment in a comparable way. The labour force surveys are the statistic that is most internationally comparable and they should therefore be used when making comparisons with other countries. However, during the corona pandemic it may be difficult to carry out the surveys in the same way as usual, which can lead to the statistics being less comparable.[21]

[21] See the Eurostat website for further information https://ec.europa.eu/eurostat/data/metadata/covid-19-support-for-statisticians.

ARTICLE – More difficult to calculate inflation

The current situation will affect the possibilities to calculate reliable measures of inflation. The problem is primarily how to deal with prices of products that are no longer consumed, and also how to collect price data. Up until now, the scope for collecting statistics has been relatively good in Sweden, but there are already certain products that cannot be purchased.

The measures introduced to limit the spread of the coronavirus across the world have also affected the capacity to measure prices. The situation has already affected the collection of price data in Sweden, although the calculations of the outcome in March should not be affected to any great extent. It is already not possible to purchase certain products at all and the basic question is how to measure the price of these products in an index with fixed yearly weights. Compared with many other countries, the scope for compiling statistics in Sweden is relatively good, but this could rapidly be limited if shops and service points have to close down.[22]

Statistics Sweden's strategy

Statistics Sweden has drafted proposals for possible courses of action, in the current situation and if the situation deteriorates.[23] Statistics Sweden presents different methods that can be used to deal with product groups in which no transactions have taken place or in which it has not been possible to collect prices. For certain product groups, there is a risk that no prices at all can be collected in the months ahead. This applies primarily to different types of services such as package tours, foreign air travel, sporting events and theatre visits. The general method is then to allow price indices for products that have no or too few price observations to follow the same monthly or annual trend as similar products that can be measured. In other words, the price development for a missing product group is replaced by the development for the nearest higher aggregate in the index. If, for example, there are no theatre tickets to buy, the price development for these is assumed to be the same as for the entire "Recreational and cultural services" aggregate. If this is not a possible way forward, one will have to go up a further aggregate level.

Regarding products for which there are no relevant "higher aggregates" at all, such as package holidays, Statistics Sweden will use a method by which the price development for a missing product group is replaced by the annual percentage change in the total CPI.[24]

Table 3:3 shows the sub-indices that will be primarily affected. Together they have a weight corresponding to 3 per cent in the CPIF. Prices of package holidays and foreign air travel are components that vary a great deal from month to month and have a clear seasonal pattern. Using the proposed replacement model, most of this seasonal pattern will be maintained for this year as well despite it not being possible to collect any actual price observations.

The consumption pattern has already changes this year and it may change even more. This will lead to adjustments of the weights in the CPIF system going forward, which in turn may affect the price variation from month to month in the total CPIF. One example may be a temporary change in seasonal patterns in the CPIF as a result of a lower weight for foreign travel in the coming years.

To summarise, it should be pointed out that the measuring problems at present indicate that one should interpret future outcomes with particular caution.[25]

Table 3:3. Prices affected by measurement problems

Sub-index	Weight in the CPIF
Ticket, sporting events	0.42
Cinema ticket	0.18
Theatre ticket	0.19
Admission ticket, entertainment	0.28
Admission ticket, museum	0.07
Air package holidays	1.16
Boat journeys, domestic and foreign	0.09
Foreign air travel	0.62
Total	**3.01**

Note. Weight in per cent.
Source: Statistics Sweden

[22] In many European countries, much of the collection of prices has been stopped already due to various restrictions that prevent the measurement of prices in outlets or because outlets have closed

[23] The material was presented as an extraordinary meeting in the Consumer Price Index Board on 1 April. See the document "Hantering av effekter av Corona-pandemin i KPI och HIKP [Dealing with the effects of the corona pandemic in the CPI and the HICP] (in Swedish only) from the meeting on www.scb.se.

[24] Regarding services with a clear seasonal variation, a replacement method that uses monthly development would have very strange effects on the annual rate of inflation. Therefore, a method that imputes annual percentage changes is preferable according to Statistics Sweden.

[25] Similar to Statistics Sweden, Eurostat has published guidelines for price measurements during the corona pandemic. These Eurostat guidelines propose methods for the HICP that are similar to those proposed by Statistics Sweden for the CPI/CPIF. See https://ec.europa.eu/eurostat/data/metadata/covid-19-support-for-statisticians and the document "Guidance on the compilation of the HICP in the context of the Covid-19 crisis".

Tables

Table 1. Scenario A

Annual percentage change, annual average

	2019	2020	2021	2022
CPIF	1.7	0.6	1.5	1.6
GDP*	1.3	−6.9	4.6	5.0
Unemployment, aged 15–74**	6.8	8.8	9.0	8.2
Employed, aged 15–74	0.7	−2.2	0.1	1.7
General government net lending***	0.5	−6.9	−3.2	−1.2
GDP abroad (KIX2)*	1.4	−8.0	5.4	5.0
CPI (KIX2)	1.3	0.2	1.2	1.5

*Calendar-adjusted growth rate **Per cent of the labour force ***Per cent of GDP. Outcome and forecast for general government net lending are based on EDP statistics published at the end of March by Statistics Sweden.

Note. KIX2 is the euro area and the United States combined with their respective KIX-weights relative to the sum of the two weights (0.86 and 0.14 respectively).

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

Table 2. Scenario B

Annual percentage change, annual average

	2019	2020	2021	2022
CPIF	1.7	0.6	1.3	1.4
GDP*	1.3	−9.7	1.7	5.4
Unemployment, aged 15–74**	6.8	10.1	10.4	9.3
Employed, aged 15–74	0.7	−3.8	−0.7	1.6
General government net lending***	0.5	−9.3	−7.9	−4.0
GDP abroad (KIX2)*	1.4	−10.7	3.0	5.2
CPI (KIX2)	1.3	0.2	1.1	1.4

*Calendar-adjusted growth rate **Per cent of the labour force ***Per cent of GDP. Outcome and forecast for general government net lending are based on EDP statistics published at the end of March by Statistics Sweden.

Note. KIX2 is the euro area and the United States combined with their respective KIX-weights relative to the sum of the two weights (0.86 and 0.14 respectively).

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

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