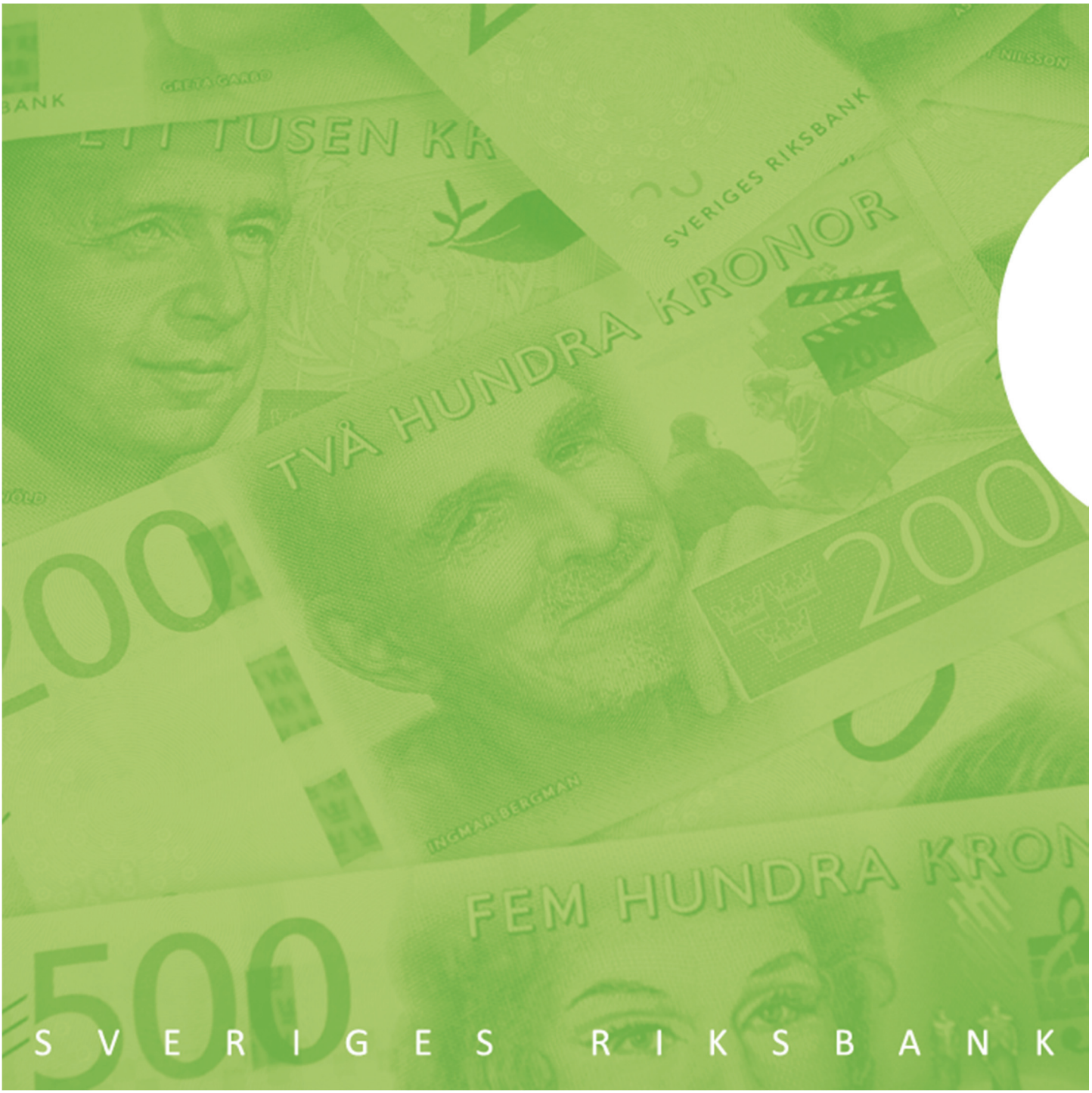
Monetary Policy Report

July 2019



Monetary Policy Report

The Riksbank's Monetary Policy Report is published six 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 2 July 2019. 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 six monetary policy meetings per year at which it decides on monetary policy. A Monetary Policy Report is published in connection with these meetings. Approximately two weeks after each monetary policy meeting, the Riksbank publishes minutes from the meeting, in which it is possible to follow the discussion that led to the current decision and to see the arguments put forward by the different Executive Board members.

PRESENTATION OF THE MONETARY POLICY DECISION

The monetary policy decision is presented in a press release at 9:30 a.m. on the day following the monetary policy meeting. The press release also states how the individual Executive Board members voted and provides the main motivation for any reservations entered. A press conference is held on the day following the monetary policy meeting.

Contents

CHAPTER 1 – Monetary policy considerations

Developments both abroad and in Sweden are largely in line with the Riksbank's forecasts. An increasing concern over potential further deterioration in trade relations and a faster decline in global economic activity have certainly affected pricing on financial markets, where interest rates on the whole have continued to fall. But growth abroad remains relatively good and confidence in both the household and corporate sectors indicates normal growth in the coming period. New information since the April Monetary Policy Report has not led to any greater revisions to the outlook for either the Swedish or international economy.

Economic activity in Sweden is strong and resource utilisation is expected to remain high, although it will normalise over the coming years. In line with the Riksbank's forecast, CPIF inflation amounted to 2.1 per cent in May and the conditions for inflation to remain close to the target are assessed to be good going forward. The Executive Board has decided to hold the repo rate unchanged at –0.25 per cent. The forecast for the repo rate is also unchanged and indicates that the next increase will occur towards the end of the year or at the beginning of next year. In accordance with the decision in April, the Riksbank will purchase government bonds for a nominal amount totalling SEK 45 billion, with effect from July 2019 to December 2020.

The risks surrounding developments abroad can have a bearing on the economic outlook and inflation prospects for Sweden, too, which emphasises the importance of exercising caution in monetary policy. The expansionary monetary policy emphasises the Riksbank's aim to safeguard the role of the inflation target as nominal anchor for price-setting and wage formation.

Continued good global economic activity but increasing concern over future developments

More normal growth abroad

International GDP has grown rapidly in recent years, but entered a phase with a lower growth rate. Over the coming years, international growth (weighted using the weights in the krona index, KIX) is expected to be close to the historical average of just over 2 per cent. Although international growth is expected to be more moderate in the period ahead, it is still assessed to be high enough for unemployment to fall or remain low in many countries. Resource utilisation has risen in recent years and is expected to be close to a normal level going forward. The oil price has on the whole risen somewhat since the start of the year. The higher oil price contributes to the forecast for average inflation abroad being just below 2 per cent this year, despite core inflation remaining subdued. Underlying inflation will rise gradually over the coming years and KIX-weighted inflation is expected to remain around 2 per cent a year, even when the contribution from energy prices to inflation is smaller.

Table 1:1.

Important factors for monetary policy
Roughly normal resource utilisation abroad in the coming years. Expectations of more expansionary monetary policy from several central banks
Strong Swedish economic activity despite lower growth going forward.
Good conditions for inflation close to 2 per cent during the forecast period. Inflation expectations are around 2 per cent.
Conclusion: Repo rate held unchanged at –0.25 per cent As in April, the forecast indicates that the next repo rate increase will take place towards the end of the year or at the beginning of next year. The Riksbank will continue purchasing government bonds, for a nominal amount totalling SEK 45 billion, with effect from July 2019 to December 2020. This will maintain the Riksbank's holdings of government bonds.

Table 1:2.

Important forecast revisions since April MPR
Somewhat lower growth both in Sweden and abroad in the coming years. The forecast for policy rates abroad has also been revised down.
Somewhat weaker krona and lower energy prices during entire forecast period.
Minor revisions to the inflation forecast overall. Somewhat lower CPIF inflation in the coming year. However, adjusted for energy prices inflation is expected to be a little higher in 2020.

The ongoing trade conflict between the United States and China has escalated and the political manoeuvring has also covered trade relations between the United States and other countries. This creates concern over further limitations to world trade. A severe escalation of the trade conflicts could have a clearly negative effect on economic developments. However, it is very difficult to quantify such a scenario in a forecast and it is therefore largely outside of the forecast described in this report.

However, uncertainty over global economic developments makes a clear impact on pricing in the financial markets. Government bond yields have declined and volatility on the financial markets has increased. Market expectations of monetary policy going forward have been adjusted down to even more expansionary levels for the coming years. Several central banks have also communicated that monetary policy may be made more expansionary.

Swedish export markets grew by almost 3.5 per cent last year. The growth rate is expected to remain around 3.5 per cent this year and in the coming years, which is lower than normal. This means that growth in Swedish exports will be a little weaker.

Strong Swedish economy even with lower growth rates going forward

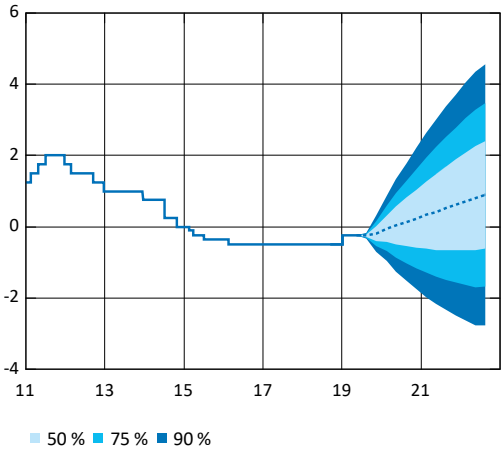
Over the coming years, the Swedish economy is expected to grow slightly more slowly than in recent years (see Figure 1:2). A number of factors contribute to this. In addition to lower export demand, growth in domestic demand is also expected to be lower, partly due to a more sluggish housing market. The downturn in housing investment will hold back GDP growth this year in particular, although the number of new housing starts is still high in a historical perspective. As growth is below the economy's growth potential, the strong Swedish economic activity will slow down somewhat.

Following a long period of favourable development, the situation on the labour market is strong. The decline in unemployment has slowed down over the past year, however, and since last autumn the labour force participation rate and employment rate have been at an unchanged, high level. Despite good demand for labour, there are groups who experience difficulty getting work. Matching problems, combined with subdued GDP growth in the coming years mean that the labour market is expected to enter a calmer phase with unemployment rising slightly going forward. However, resource utilisation is expected to remain higher than normal during the forecast period.

Inflation close to 2 per cent

The strong economic activity in Sweden, together with the weaker krona and rising energy prices, has contributed to inflation being close to the target of 2 per cent since the beginning of 2017 (see Figure 1:3). However, the measured rate of inflation is affected by both temporary and more lasting price variation. To estimate the level of the more permanent

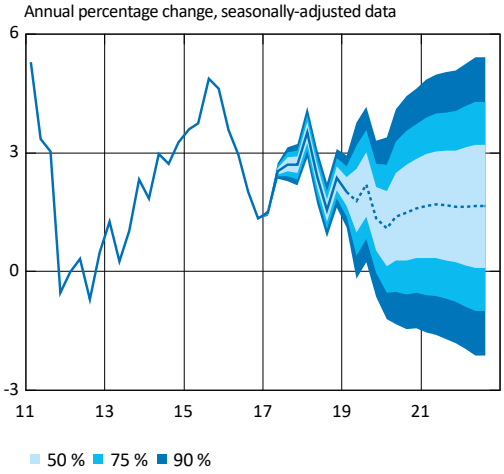
Figure 1:1. Repo rate with uncertainty bands
Per cent



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

Source: The Riksbank

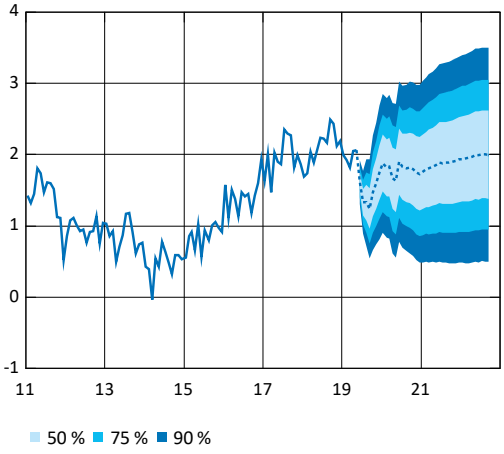
Figure 1:2. GDP with uncertainty bands
Annual percentage change, seasonally-adjusted data



Note. The uncertainty bands are based on the Riksbank's historical forecasting errors. The reported outcomes for GDP are also uncertain, as the National Accounts figures are revised several years after the first publication.

Sources: Statistics Sweden and the Riksbank

Figure 1:3. CPIF with uncertainty bands
Annual percentage change



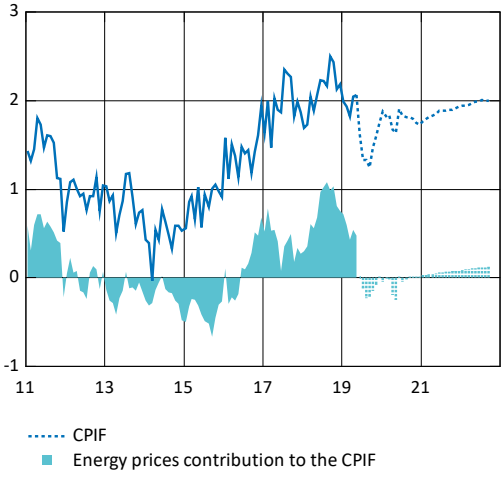
Note. The uncertainty bands are based on the Riksbank's historical forecasting errors.

Sources: Statistics Sweden and the Riksbank

component of the inflation rate, different measures of core inflation can be studied. The Riksbank's different measures of core inflation indicate that the permanent part of the inflation rate is also close to 2 per cent.

The conditions are good for inflation to be close to the inflation target in the period ahead. Economic activity is strong and resource utilisation is expected to continue to be high in the coming years. Unit labour costs have increased relatively rapidly in recent years, and are predicted to provide a positive contribution to inflation, despite the rate of increase slowing down somewhat. Earlier krona depreciations, rising food prices and higher rent increases than in recent years are other factors maintaining the level of inflation over the coming year. During the forecast period energy prices are expected to increase more slowly than in recent years, and the contribution from these prices to the rate of price increase will therefore become much less (see Figure 1:4). All in all, this means that CPIF inflation will gradually fall back in the coming months, to then rise and be close to 2 per cent for most of the forecast period.

Figure 1:4. CPIF and contribution from energy prices
Annual percentage change and percentage points, respectively



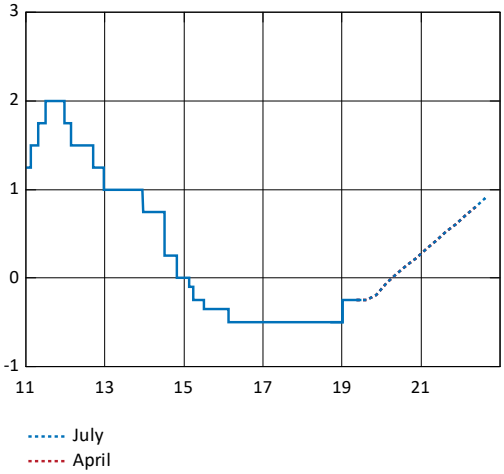
Note. The contribution of energy prices to the CPIF in the forecast is calculated as the annual percentage change in energy prices multiplied by their current weight in the CPIF.

Sources: Statistics Sweden and the Riksbank

Current monetary policy

A long period with a repo rate of −0.50 per cent and extensive purchases of government bonds has contributed to resource utilisation in the Swedish economy being high in recent years and inflation being close to the target, at the same time as inflation expectations have become established close to 2 per cent. Given this, the Riksbank raised the repo rate to −0.25 per cent in December 2018 (see Figure 1:5). The net purchases of government bonds were concluded in December 2017 and since then the Riksbank has upheld the level of its government bond holdings. At the start of 2019, inflation prospects looked gradually weaker. The forecast for the repo rate was therefore revised down in April and indicated that repo rate increases would be implemented at a somewhat slower pace.

Figure 1:5. Repo rate
Per cent



Note. Outcomes are daily data and the forecasts refer to quarterly averages.

Source: The Riksbank

Continued good economic outlook and inflation prospects

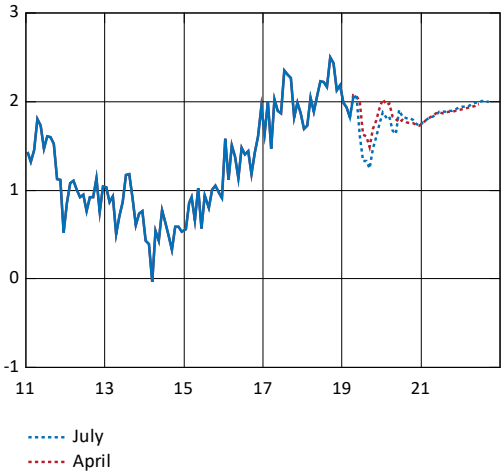
Developments abroad are largely in line with the Riksbank's forecast in April. GDP growth was higher than expected in the first quarter among several of Sweden's most important trading partners. But at the same time, many indicators point to international economic activity having entered a phase with lower growth rates. As a result of increased risks of a more extensive global trade conflict, among other things, international growth is expected to be somewhat lower than was previously forecast. The financial markets have been impacted by the increased concern over global economic activity and market expectations of future policy rates have been adjusted downwards. The Riksbank's forecast for international policy rates has also been revised down to some extent.

Activity in the Swedish economy has been at a high level since the April Monetary Policy Report was published, clearly illustrated by GDP growth being unexpectedly strong in the first

quarter. However, developments in domestic demand are at the same time showing signs of weakness. The indicators on the whole point to GDP growth slowing down in the coming quarters, and the forecast has been revised down somewhat. Resource utilisation will remain higher than normal, but fall gradually during the forecast period. The assessment of resource utilisation is largely the same as in April.

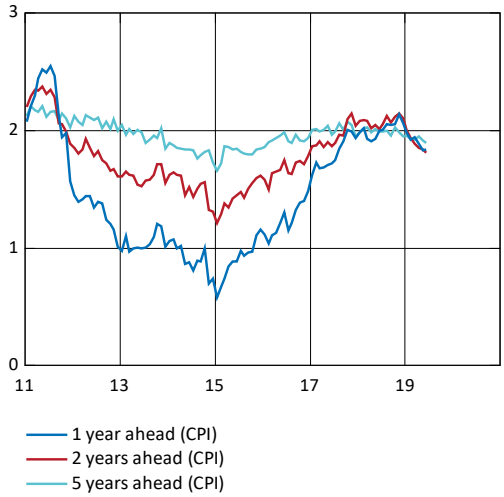
Inflation has been close to 2 per cent since the beginning of 2017. In line with the Riksbank's forecast, CPIF inflation amounted to 2.1 per cent in May, and when adjusted for energy prices to 1.7 per cent. The krona is somewhat weaker than was forecast in April and is expected to remain weaker throughout the forecast period. The high level of resource utilisation, combined with the weak krona, contributes to CPIF inflation excluding energy prices rising to around 2 per cent at the beginning of next year. The forecast for CPIF inflation excluding energy has been revised up marginally for 2020, which is mainly linked to the weaker krona. Lower energy prices than expected are counteracting the effects of the weaker krona and the forecast for CPIF inflation has been revised down slightly for the coming year (see Figure 1:6). Overall, however, the forecast revisions for inflation both including and excluding energy are minor.

Figure 1:6. CPIF
Annual percentage change



Sources: Statistics Sweden and the Riksbank

Figure 1:7. Inflation expectations among money market participants
Per cent, mean value



Source: Kantar Sifo Prospera

Inflation on target with continued expansionary monetary policy

Increasing concern over further deterioration in trade relations, weaker growth prospects and lower inflation expectations has led to market agents expecting lower policy rates in both the euro area and the United States. The European Central Bank (ECB) and the Federal Reserve have also communicated that their monetary policy may be made more expansionary. Lower policy rates abroad and concern over weaker global developments could indicate that more caution should also be exercised with regard to the repo rate increases in Sweden. But although the increasing concern has affected pricing on financial markets, where interest rates on the whole have continued to fall, growth abroad is still good and confidence in the household and corporate sectors indicates normal growth in the coming period. With the information now available, the Riksbank assesses that there is no reason to make any major adjustments to the forecasts for international inflation and growth.

The picture of resource utilisation in the Swedish economy is that it is still higher than normal. The outcomes for GDP in the most recent quarters have if anything been surprisingly strong. Moreover, the krona has been somewhat weaker than expected, which normally leads to higher inflation and demand.

In recent years, target attainment has been good, with inflation close to the inflation target and inflation expectations close to 2 per cent (see Figure 1:7). The economic outlook and inflation prospects remain good and the new information has not on the whole changed the assessment of the conditions for inflation to remain close to 2 per cent. The Executive Board has

therefore decided to hold the repo rate unchanged at –0.25 per cent. The forecast for the repo rate is also unchanged and indicates that the next increase will occur towards the end of the year or at the beginning of next year (see Figure 1:5). This means that inflation needs continuing support from monetary policy to remain close to 2 per cent. The real repo rate is expected to be negative over the entire forecast period (see Figure 1:8).

But the risks concerning international developments may have a bearing on the economic outlook and inflation prospects for Sweden, too. The downswing in international bond yields could indicate that global interest rates will be low for a longer period to come. Low interest rates abroad and uncertainty over global developments underline the importance of proceeding cautiously with monetary policy. If the conditions for inflation change, monetary policy will be adjusted.

Purchases of government bonds continuing

The repo rate is the primary tool for monetary policy. But as a complementary monetary policy measure the Riksbank has also purchased a large volume of nominal and real Swedish government bonds since 2015. At the end of June, the holdings were SEK 319 billion as a nominal amount. To retain an appropriate level of bond holdings and the Riksbank's presence on the market, the Executive Board decided in April that from July 2019 to December 2020 the Riksbank will purchase government bonds for a nominal amount totalling SEK 45 billion (see Figure 1:9). The decision means that the Riksbank maintains holdings close to the average level since the beginning of 2018, when the net purchases were concluded (see Figure 1:10). That the Riksbank is continuing to purchase government bonds to maintain the level of its holdings is in line with the strategy for gradually normalising monetary policy that was communicated earlier.[2]

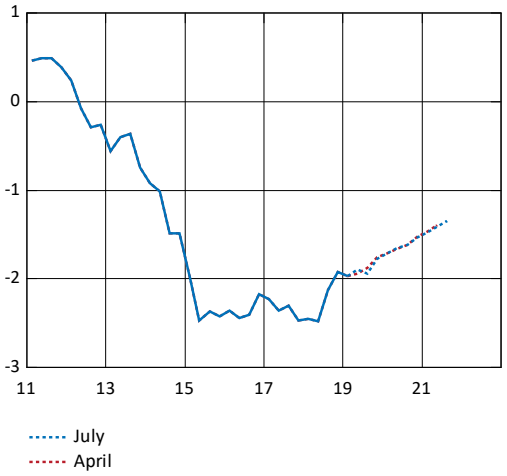
The Executive Board will determine in good time whether or not it is appropriate to continue purchasing government bonds after December 2020. In the long run, the holdings are expected to be smaller than they are today, but their exact size will depend on several factors that it is currently difficult to assess. The Riksbank intends to adapt the details regarding the normalisation of monetary policy with consideration to how the economy develops.

Uncertainty and risks

Forecasts of future economic developments are always uncertain, as illustrated by the uncertainty bands in Figures 1:1–1:3. In the Riksbank's forecasts, the risks of both stronger and weaker development shall, in principle, be balanced. It is difficult, however, to assess the likelihood of future events and the consequences they might have should they occur. Neither is it obvious how monetary policy should relate to uncertainty and

[2] See the article "The Riksbank's strategy for a gradual normalisation of monetary policy" in Monetary Policy Report, December 2017.

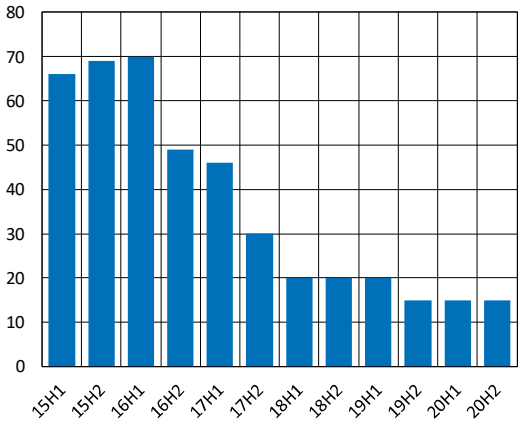
Figure 1:8. Real repo rate
Per cent, quarterly averages



Note. The real repo rate is the Riksbank's expected real interest rate, calculated as a mean value of the Riksbank's repo rate forecast for the year ahead minus the inflation forecast (CPIF) for the corresponding period. Outcomes are based on the latest forecasts at that time.

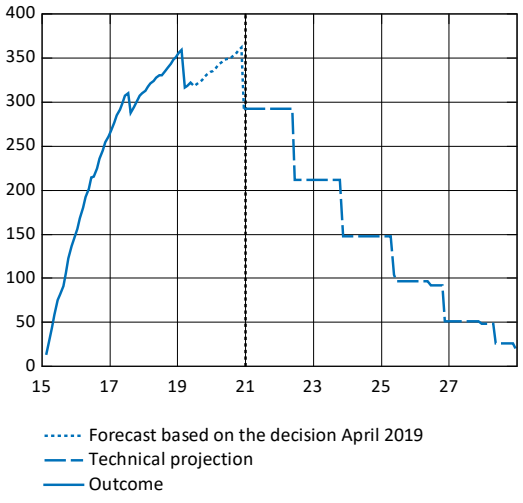
Source: The Riksbank

Figure 1:9. The Riksbank's purchases of government bonds
Nominal amounts, SEK billion.



Source: The Riksbank

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



Note. Forecast up until December 2020, after that a technical projection with the assumption that no further purchases are made. The vertical line marks the shift between the forecast and technical projection.

Source: The Riksbank

risks. There are occasions on which monetary policy deliberations may wish to pay particular attention to certain risks, the consequences of which may have a severe impact on economic development. But, on other occasions, it may be necessary to await more information before adjusting monetary policy.

Uncertainty over economic outlook and inflation prospects abroad

As Sweden is a small open economy dependent on trade, developments abroad have substantial significance.

There is still considerable uncertainty over the development of global economic activity. Market-based measures of inflation and policy rate expectations in the euro area and the United States have shifted downwards more significantly, which reflects subdued expectations of economic activity and inflation. Several central banks, including the ECB and the Federal Reserve, have signalled a somewhat more expansionary monetary policy, but not to the same degree indicated by market pricing.

Despite growth being higher than expected in several of Sweden's most important trading partners during the first quarter, confidence indicators in both the euro area and the United States have fallen since the beginning of the year (see Figure 3:11). There is a risk that the downswing reflects a more lasting weakness, and that global economic activity will be lower than the Riksbank has forecast. A sharper economic slowdown could also mean that international inflation becomes lower.

Concern over increased trade conflicts and lower global growth has increased. In May, the US government raised tariffs on Chinese goods and in response, China increased its tariffs on US goods. This has then been followed by threats of more extensive trade barriers and tariffs in both countries, see the box “Escalated trade conflict between the US and China” in Chapter 4. There is a risk that the negative effects of new trade barriers will be more tangible going forward than the Riksbank has forecast. A continued escalation in trade conflicts could cover more countries, create more uncertainty and thereby have greater repercussions on international growth.

The forms for the United Kingdom's withdrawal from the EU are continuing to create uncertainty over economic developments in the United Kingdom, and to some extent the rest of Europe. Theresa May has announced that she is leaving the post of Prime Minister and as yet it is unclear who will be her successor. This increases the uncertainty over the direction for the future work on the United Kingdom’s withdrawal from the EU.

Developments in Italy also comprise a risk to economic activity in Europe. Considerable challenges remain regarding

The repo rate in the long run

The repo rate has for a long time been at levels that are very low from a historical perspective. The same applies to policy rates in many other countries. The low interest rates are due to both structural and cyclical factors. During the years prior to the global financial crisis, savings increased in many countries at the same time as the will to invest declined. This contributed to a trend fall in global real interest rates.[3] In addition, the financial crisis and sovereign debt crisis in the euro area have led to low interest rates in many countries. Inflation has risen and economic activity strengthened in recent years, and interest rates have therefore begun to rise in many countries. However, structural factors will probably lead to interest rates being lower in the longer run than they have been historically.

Over the coming three years the repo rate is expected to rise from the current level of −0.25 per cent to 0.9 per cent, which is still a low level. The Riksbank's assessment at the beginning of 2017 was that the repo rate would in the longer run, in a situation that is cyclically normal, be between 2.5 and 4 per cent.[4] But there is considerable uncertainty regarding this assessment. In recent years, several central banks have revised down their assessment of the long-term level of the policy rate, and these assessments are now in the lower part of the Riksbank's interval.[5] This could indicate that the long-term level in Sweden is also in the lower part of the interval.

Inflation in Sweden is currently close to the target of 2 per cent, and resource utilisation is higher than normal. If inflation is to remain close to 2 per cent and resource utilisation is to be close to its normal level in the coming years, the Riksbank assesses that the repo rate needs to remain at its current level for a further period and then rise gradually. The repo rate will therefore probably be lower than its long-term level for a fairly long period to come.

[3] See, for instance, Rachel, L. and Smith, T. (2017), “Are low real interest rates here to stay?”, International Journal of Central Banking Vol. 13, No. 3, September 2017.
[4] See “The repo rate in the long run”, article in Monetary Policy Report, February 2017.
[5] See, for instance, the Bank of Canada, Monetary Policy Report April 2019, and the Board of Governors of the Federal Reserve System, “FOMC projection materials”, 19 June 2019.

public finances, the banking sector and the extensive structural problems in the Italian economy. At the same time, there are discussions on whether Italy is in breach of the EU's Stability and Growth Pact, which is increasing tension between the EU and Italy.

Geopolitical tensions, primarily between the United States and Iran, also contribute to increased uncertainty over economic developments going forward, for instance through the effects on the oil price.

Housing market posing risks to growth in Sweden

In Sweden, developments on the housing market still comprise a substantial risk. After falling sharply in the autumn of 2017, housing prices have recovered somewhat over the past year (see Figure 1:11). According to the Riksbank's forecast, prices will continue to rise weakly, and the fall in housing investment is expected to come to a halt in the coming years. However, the future development of housing prices is very uncertain. One cannot rule out the possibility that prices on the housing market will be weaker than the Riksbank has forecast. This could mean that not only housing investments, but also household consumption are weaker than expected.

Uncertainty over the inflation forecast in Sweden

The risks that are affecting Swedish growth prospects could also lead to a different outcome for inflation than in the Riksbank's forecast.

Another source of uncertainty regarding inflation is the development of the krona exchange rate. The krona could be either stronger or weaker than forecast by the Riksbank. The difficulties in estimating the impact of the exchange rate on inflation are also important in this context. The way that the krona affects consumer prices is determined by a number of factors, which makes the relationship between the exchange rate and inflation more complicated.[6]

Another uncertainty factor concerns the development of domestic cost pressures. Despite strong development in economic activity in recent years, wage increases in Sweden have

[6] See the article "The significance of the krona for inflation" in Account of Monetary Policy 2018.

Side-effects of monetary policy

The Riksbank continuously analyses the effects on the economy of the negative repo rate and the government bond purchases.

Low interest rates can create incentives for substantial risk-taking in the economy. Assets may become overvalued, risk may be incorrectly priced and the indebtedness of various agents may increase in an unsustainable manner. The increase in Swedish household indebtedness has long been a cause for concern. Among other factors, the increase is due to structural problems on the housing market and the falling trend for real interest rates in Sweden and abroad, while the expansionary monetary policy has also contributed. Several years of rapidly rising housing prices and heavily increased indebtedness have made households sensitive to both price falls on the housing market and rising interest costs. It is therefore important to increase households' resilience in different ways and to limit the risks of their high indebtedness.

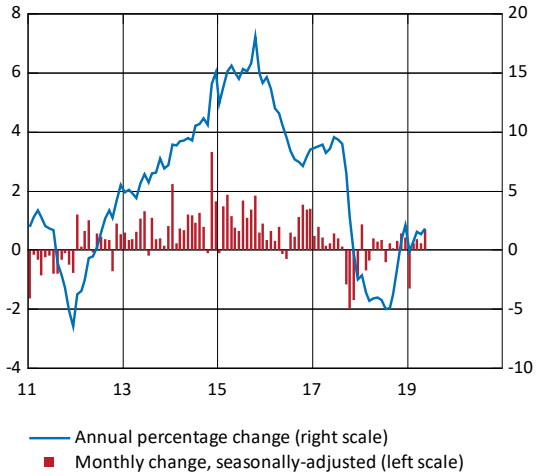
The functioning of the financial markets may be affected by a negative repo rate and government bond purchases. So far, the markets have been able to manage negative interest rates relatively smoothly. The Riksbank's purchases of government bonds have meant that a large proportion of the stock is not available for trade on the market. According to the Financial markets survey published by the Riksbank in June, slightly more than half of the respondents thought that liquidity on the government bond market was poor or very poor. However, they considered that other markets where the participants can manage interest rate risk were functioning well. According to the survey published by the Swedish National Debt Office in February, respondents thought that liquidity in the market for nominal government bonds had improved somewhat over the past year.

The negative interest rates have not led to a greater demand for cash. The value of outstanding banknotes and coins is much lower now than when the repo rate first became negative. It is still only a small portion of borrowing that takes place at negative interest rates and then only from certain larger companies and parts of the public sector. The Swedish banks' profits have been high and stable in recent years and although there are differences between the banks, profitability is on the whole good. The banks' results and lending capacity have not been tangibly affected by low and negative interest rates.

The Riksbank's overall assessment is that the side-effects of a negative policy rate and government bond purchases have so far been manageable.

Figure 1:11. House prices according to HOX Sweden

Per cent



Sources: Valueguard and the Riksbank

remained low.[7] This stems partly from the weak development in productivity, which has caused unit labour costs to rise at quite a rapid pace historically speaking over the past few years.[8] However, productivity varies substantially and is difficult to forecast. The uncertainty surrounding both wages and productivity contributes to making it difficult to assess future domestic cost pressures.

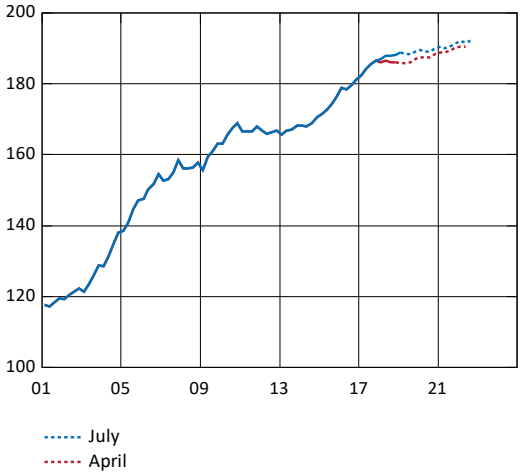
All in all, there are thus a number of factors that could lead to either lower or higher inflation than is now being assumed. The Riksbank is prepared to adapt its monetary policy if the inflation prospects were to change.

Risks linked to household indebtedness must be managed

Household debt as a percentage of disposable income is expected to continue increasing somewhat in the coming years (see Figure 1:12). The most highly indebted households are sensitive to several types of changed economic conditions, such as rising interest rates, falling housing prices and higher unemployment. Finansinspektionen's amortisation requirements, which aim to limit the number of households with high debt in relation to the value of their home and to their incomes, are an example of measures to reduce the risks linked to household indebtedness. An evaluation carried out by Finansinspektionen makes the assessment that the requirements have largely had the intended effect.[9]

The fact that household debt has for a long time been increasing at a much faster pace than household disposable income is partly due to the Swedish housing market having a number of serious structural problems. Addressing these problems requires, above all, measures within housing and tax policy. Examples of feasible measures include reviewing the regulations regarding the new production of housing, as well as the rent-setting system, the taxation of capital gains from housing property sales and also property tax and tax relief on interest expenditure.

Figure 1:12. Household debt ratio
Per cent of yearly disposable income



Note. Households' total debts as a share of their disposable income totalled over the past four quarters.

Sources: Statistics Sweden and the Riksbank

[7] See the article "The Phillips curve and monetary policy" in Monetary Policy Report, July 2018.
[8] See also the article "Development of Swedish labour costs in an international perspective" in Monetary Policy Report, February 2019.
[9] See Finansinspektionen, "Finansinspektionens arbete med makrotillsyn" (Finansinspektionen's work on macroprudential policy), 2019.

ARTICLE – The Riksbank's operational framework needs to be adjusted to new conditions

The Riksbank's policy rate decisions are put into practice via the Riksbank's operational framework for the implementation of monetary policy. With the aid of the operational framework, the Riksbank ensures that the shortest market rates are stabilised close to the policy rate. Developments in the world around the Riksbank mean that the operational framework needs to be adapted. The most important drivers of change are the increased number of monetary policy counterparties, new categories of actors wishing to become counterparties to the Riksbank, and developments in the payment field that will make it possible to make transactions 24/7. The Riksbank is therefore considering changing the operational framework so that it can continue to affect market rates effectively. The operational framework needs to become simpler and more automated to remain robust. The main changes the Riksbank is considering making are to abandon the daily fine-tuning transactions and to reduce the difference in interest rates for the standing lending and deposit facilities. In this way, the Riksbank can ensure that the overnight rate remains close to the policy rate, even without daily operations. The weekly market operations at the policy rate will remain. The proposed adjustments to the Riksbank's operational framework for monetary policy are of a technical nature and are not intended to have any monetary policy effects. The Riksbank will decide on the design of the new operational framework following a consultation procedure during the period 3 July to 30 September to gather the views of interested parties. After that, the changes to the operational framework can begin in October 2019.

The Riksbank steers the overnight rate

The Riksbank influences interest rates in the economy in order to fulfil the inflation target. The Riksbank's main tool for conducting monetary policy is the policy rate. The Executive Board takes decisions on the Riksbank's policy rate – the repo rate – at the monetary policy meetings. In practice, these decisions are realised with the use of the Riksbank's operational framework, which specifies which actors have the opportunity of lending or depositing money at the Riksbank and at which interest rate.

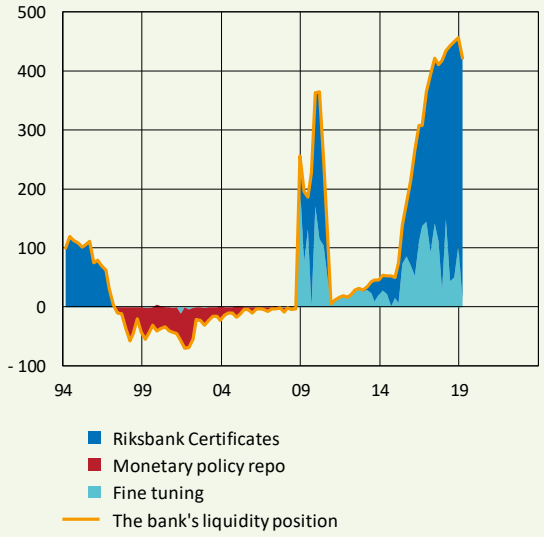
The repo rate is an important benchmark for the interest rates applied to the banks' deposits to and loans from the Riksbank. Any deficit or surplus the banks have on their accounts in the Riksbank's payment system, RIX, at the end of the day are automatically managed as loans or deposits overnight at the repo rate plus/minus 0.75 percentage points. As one alternative to lending and deposits at the Riksbank is for the banks to borrow money from one another, the Riksbank's lending and deposit rates will be set to give the banks strong incentives to agree on an interest rate that is within the Riksbank's corridor of plus/minus 0.75 percentage points around the repo rate for overnight loans between one another. Ultimately, this also affects the interest rates that the banks' customers, that is to say companies and households, will face.

Daily market operations at present

To stabilise the overnight rate around the Riksbank's repo rate, the Riksbank offers to accept deposits of the banking system's daily investment needs after the banks have evened out their deficits and surpluses between themselves. This is performed at the repo rate minus 0.10 percentage points and is known as the fine-tuning rate for deposits. If the banking system has a borrowing requirement at the end of the day, the Riksbank can, instead, lend the corresponding amount at the repo rate plus 0.10 percentage points (the fine-tuning rate for lending). This fine-tuning contributes to the overnight rate mostly being close to the Riksbank's repo rate.

The banking system's daily deposit or borrowing requirement after the banks have evened out their daily deficits and surpluses with each other form the banking system's liquidity position in relation to the Riksbank. Over time, the banking system has had both significant surpluses and deficits in relation to the Riksbank (see Figure 1:13). Nevertheless, the Riksbank's operational framework has succeeded in stabilising the overnight rate well. This is a quality that a new operational framework must also possess.

Figure 1:13. The banks' liquidity position in relation to the Riksbank
SEK billion, quarterly data



Source: The Riksbank

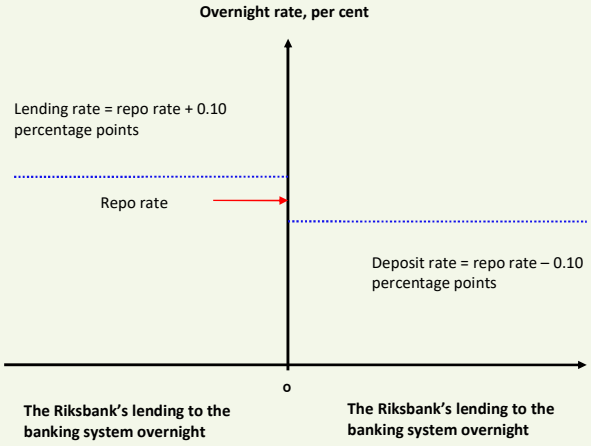
Changed conditions

In the near future, it is primarily changes in the area of payments that justify the need for adjusting the operational framework. Rapid changes have been taking place in the payment area for a number of years. There is a trend towards it being possible to make payments around the clock, seven days a week. In 2021, the Riksbank intends to supply a new service that gives the banks the possibility to make payments in central bank money in the Riksbank's system every day of the year.[10] To facilitate the development of instant payments 24 hours a day in central bank money, the Riksbank intends to abandon the daily market operations in the form of fine tuning transactions.

Another imminent change is that, as of 14 October 2019, RIX will shut one hour later than at present. This will mean that the fine-tuning transactions need to be made an hour later than they are today. As the fine-tuning involves several manual elements, it would mean that both the Riksbank and the banks would need to increase the resources required to manage the fine tuning. The number of monetary policy counterparties has increased and is expected to continue to increase. This means that more counterparties can be involved in the manual administration that fine-tuning entails. The consequences of this would be an increase in operational risks.

The operational framework for monetary policy needs to be adjusted

The Riksbank has concluded that the operational framework for monetary policy needs to be adjusted so that manual routines such as fine-tuning transactions can be replaced, to a greater degree, by automated procedures. This would make the system more robust with respect to changes. The Riksbank is therefore considering dropping the daily fine-tuning transactions as a way of adapting to the changed conditions in the payment area. At the same time, this would mean that the lending and deposit rates were changed from the current repo rate plus/minus 0.75 percentage points to the repo rate plus/minus 0.10 percentage points (see Figure below).



The difference between the Riksbank's lending or deposit rates will thus be significantly less than it is today. This means that the overnight rate will be less sensitive to how the liquidity in the banking system is divided between the banks at the end of the day. If an imbalance arises and one bank deposits while another borrows in the standing facilities, they will deposit/borrow at interest rates close to the policy rate. A narrow corridor is also expected to promote activity on the interbank market. A bank should become more willing to lend money from one day to the next if, in the event of a deficit at the end of the day, it knows it can borrow from the Riksbank at an interest rate of 0.10 percentage points over the policy rate. In this way the Riksbank can ensure that the overnight rate remains close to the repo rate.

With this system, lending and depositing at the end of the day will be automatic, without the elements of manual processing currently linked to fine-tuning. The banks will no longer need to call the Riksbank and deposit or lend money in fine-tuning transactions. The balances that may remain on the banks' RIX accounts after they have borrowed or lent to one another will automatically enter the Riksbank's lending or deposit facilities. As manual processing will cease, the operational risks for both the Riksbank and the monetary policy counterparties will decrease and monetary policy can be implemented more efficiently.

[10] See "Riksbank planning for instant payments", news item on www.riksbank.se published on 11 June 2019.

The proposed adjustments to the Riksbank's operational framework are not intended to have any monetary policy effects. In practice, the operational framework will be adjusted to what the Riksbank is already doing. As a consequence of the Riksbank's comprehensive purchases of Swedish government securities, the banking system has had and will have a large liquidity surplus for the foreseeable future. The monetary policy counterparties invest this liquidity surplus either in Riksbank Certificates with a maturity of one week at the Riksbank's repo rate or deposit it overnight at an interest rate 0.10 percentage points below the Riksbank's repo rate.

Transaction-based overnight rates allow the possibility of evaluation and follow-up

The Riksbank needs to have access to transaction-based overnight rates to be able to evaluate how efficiently monetary policy is being implemented – which is to say that the Riksbank is stabilising the overnight rate close to the policy rate. The Riksbank has therefore introduced into the new Terms and Conditions for RIX and Monetary Policy Instruments that started to apply as of 1 April of this year incorporated reporting requirements for the monetary policy counterparties. This reporting will mean that the Riksbank can calculate transaction-based overnight rates for the shortest maturities in Swedish krona on a daily basis.

Consultation on the Riksbank's new operational framework for monetary policy

The Riksbank will decide on the final form for the adjusted operational framework for monetary policy and the road ahead after a consultation procedure to inform of the proposed changes and gather views from RIX participants, monetary policy counterparties and other interested parties. The consultation procedure will take place during the period 3 July to 30 September 2019 and take up several questions, including how interest rate setting and the banks' liquidity management will be affected. Questions concerning which securities may be used as collateral for credit and the role of Riksbank Certificates will also be addressed.

The changes to the operational framework will be made in two stages. In stage one, which is proposed to be implemented at the beginning of October, the Riksbank is considering:

- ceasing its daily manual fine-tuning transactions
- setting the deposit rate on the standing deposit facility at the policy rate minus 0.10 percentage points
- allowing the lending rate to remain at, or close to, the policy rate plus 0.75 percentage points

If the daily manual administration is abandoned, the operational framework will become automatic. The interest rate corridor will be narrower than it is today, which means that the overnight rate should continue to be close to the policy rate.

In the second stage, the lending rate on the standing lending facility will be set at the policy rate plus 0.10 percentage points, at the same time as some changes are being considered with regard to collateral requirements. This is proposed to be done within two years of the operational framework becoming automated.

In September, the Riksbank will also conduct a further consultation procedure focusing on the Riksbank's possible administration responsibility for a reference rate for the very shortest maturities in Swedish krona. The Riksbank's work on producing transaction-based overnight rates provides many of the conditions required to administer and publish a reference rate.

CHAPTER 2 – Financial conditions

Since the monetary policy meeting in April, the trade conflict between the United States and China has escalated, which has contributed to greater unease regarding the prospects for global macroeconomic developments. This has impacted the financial markets, where investors have in general become less willing to hold risky assets. As a result, equity prices have fallen in a number of countries, government bond yields have fallen, and the difference between yields on risky and safe assets has increased somewhat. Given the increased concern and that both inflation and inflation expectations have been weaker than expected, several central banks have communicated that they may conduct a more expansionary monetary policy going forward. Compared with April, market expectations of future policy rates have fallen substantially, especially in the United States.

The Riksbank's monetary policy decision in April was perceived as more expansionary than expected on the financial markets. The krona weakened during the following days, but has since then strengthened. Although equity prices have fallen somewhat in line with developments abroad, the financial conditions in Sweden are assessed as remaining expansionary and providing support to economic developments.

International developments

Global uncertainty is continuing to impact the financial markets

The uncertainty over global macroeconomic developments is continuing to impact the financial markets. At the start of the year, several central banks revised down their growth and inflation forecasts and communicated a more expansionary monetary policy. This contributed during the first four months of the year to rising equity prices, falling yields on government bonds and shrinking differences between yields on risky and safe assets. Since then the trade conflict between the United States and China has escalated and further political manoeuvring has concerned trade relations between the United States and Mexico. The consequence was lower equity prices and larger differences in yield between risky and safe assets. At the same time, this led to continued falls in government bond yields and to the market adjusting its expectations of future policy rates down further (see Figure 2:1).

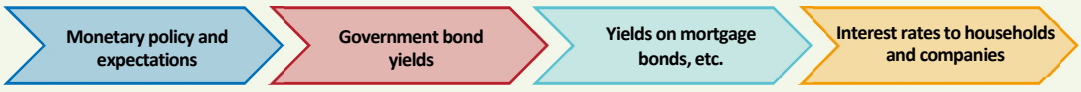
The increased unease regarding the macro economy and the weaker development of inflation and inflation expectations has caused several central banks to communicate that they may conduct a more expansionary monetary policy going forward

Table 2:1.

Developments on the financial markets since the Monetary Policy Report was published in April
Expectations of market participants regarding the level of future policy rates have fallen both in Sweden and abroad.
Government bond yields have fallen both in Sweden and abroad.
The krona is slightly weaker than was forecast in April.
Share indices have risen somewhat in the United States, but fallen in several other countries, including Sweden.
Lending rates for households and companies are unchanged.
Growth in bank lending to households has dampened somewhat, while lending to non-financial corporations is continuing to grow at approximately the same rate as in recent years.

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.



(see Figure 2:2). This has contributed to some recovery in equity prices and further reinforced the decline in government bond yields.

Central banks signalling more expansionary monetary policy

At its monetary policy meeting in June, the European Central Bank (ECB) held its policy rates unchanged and announced that they would remain at the current levels at least until the middle of 2020. Previously, the ECB had signalled that the policy rates would remain at their current levels at least until the end of 2019. The ECB also presented further details regarding the new long-term loans to banks, the so-called Targeted longer-term refinancing operations (TLTRO-III). The conditions for these loans were somewhat less favourable than market participants had expected. The forecasts for growth and inflation were held largely unchanged, but the ECB emphasised that there are risks on the downside that could, if realised, entail an even more expansionary monetary policy in the future. After the monetary policy meeting, ECB Chairman Mario Draghi indicated that monetary policy could become even more expansionary unless the developments in inflation and inflation expectations improved. Pricing indicates that market participants' expectations of policy rates have been revised down since April. According to market pricing, the most probable outcome is now that the ECB's next policy rate adjustment will be a cut (see Figure 2:1).

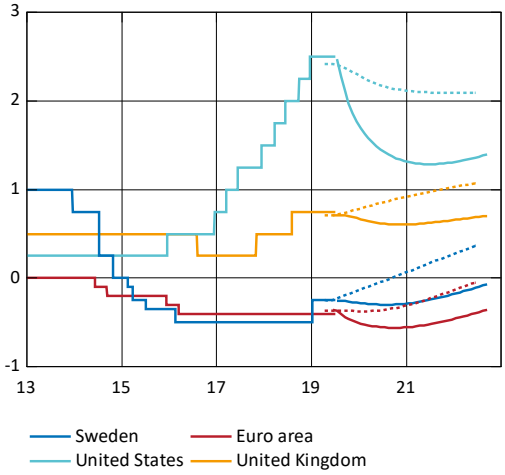
The US Federal Reserve held its policy rate unchanged at the monetary policy meeting in the middle of June. Inflation is still slightly below the target of 2 per cent and the forecast for inflation was adjusted down slightly. At the same time, market-based measures of inflation expectations have fallen. The forecast for growth was left largely unchanged, but it was stated that the forecasts were more uncertain that those published at the earlier meeting in March. As a result of the greater uncertainty and the somewhat subdued inflationary pressures, the central bank signalled that more expansionary monetary policy might be required later this year. The median forecast for the policy rate among members of the Monetary Policy Committee indicates a continuing unchanged policy rate during 2019, although several members made the assessment that a policy rate cut would probably be appropriate. Pricing indicates that market participants expect at least two cuts in the policy rate this year (see Figure 2:1).

In the United Kingdom, the central bank stated at its monetary policy meeting in June that the direction for its monetary policy would be affected to a great extent by the withdrawal from the EU and the consequences this had for the UK economy. Expectations of the policy rate have fallen since the April Monetary Policy Report and now indicate that it is most likely that the policy rate will be held unchanged for the coming two years (see Figure 2:1).

The Norwegian central bank, Norges Bank, raised its policy rate from 1 per cent to 1.25 per cent at its monetary policy

Figure 2:1. Policy rates and rate expectations according to forward rates

Per cent

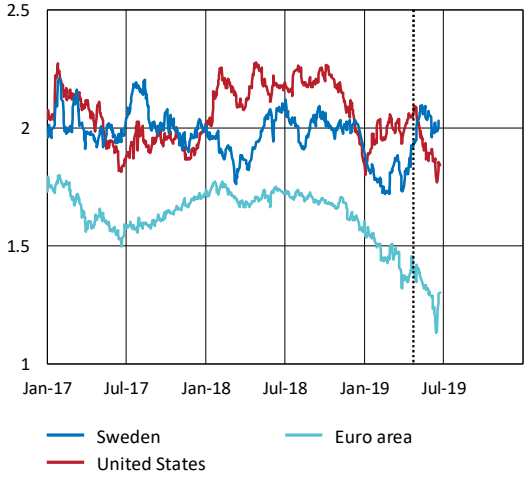


Note. Forward rates describe the expected overnight rate. Unbroken lines refer to 28 June 2019, broken lines refer to 18 April 2019.

Sources: The national central banks, Macrobond and the Riksbank

Figure 2:2. Market-based measures of long-term inflation expectations

Per cent

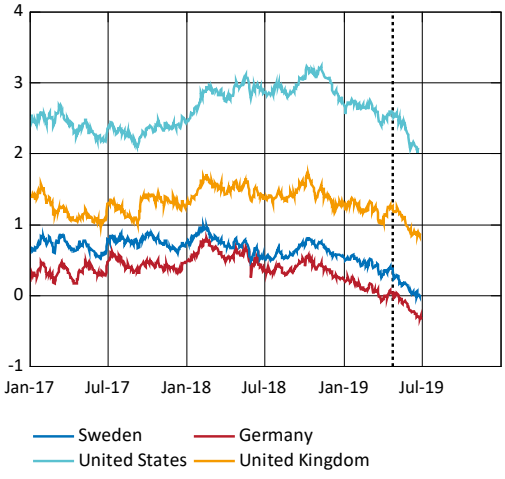


Note. Inflation expectations refer to a 5-year period starting in 5 years' time. The measures for the United States and Sweden are calculated on the basis of bond prices, while the measure for the euro area is calculated on the basis of swap prices. The vertical line indicates the Monetary Policy Meeting in April.

Sources: Bloomberg, Macrobond and the Riksbank

Figure 2:3. 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 April.

Sources: The national central banks and the Riksbank

meeting in June. This decision was made in the light of continued strong economic growth and a core inflation slightly above the target of 2 per cent.

Lower government bond yields reflect concern over economic slowdown

Government bond yields abroad have fallen almost continuously since last autumn (see Figure 2:3). The downturn, which has been reinforced recently, reflects concern over economic developments and expectations of a more expansionary monetary policy going forward.

Developments in Italy also comprise a risk to economic activity in Europe. Considerable challenges remain for both public finances and the banking sector, at the same time as the Italian economy is suffering from extensive structural problems. There are also discussions under way on whether Italy is in breach of the EU's Stability and Growth Pact, which is increasing tension between the EU and Italy.

Political uncertainty has increased in Italy, and the yield differentials in relation to German bonds are still much larger than at the beginning of last year (see Figure 2:4). As the Italian banks have large holdings of domestic government bonds, higher yields on these bonds mean that the banks' capital ratios decline. This contributes to the risks of a poorer macroeconomic outcome.

Somewhat lower asset prices since April

The decline in investors' willingness to hold risky assets has meant that equity prices are lower on most stock exchanges than at the time of the monetary policy meeting in April (see Figure 2:5). The escalated trade conflict has also contributed to the expected volatility on the US equity and bond markets rising and to differentials in yield between bonds with credit risk and government bonds increasing in the United States (see Figures 2:6 and 2:7). Developments in the euro area have been similar.

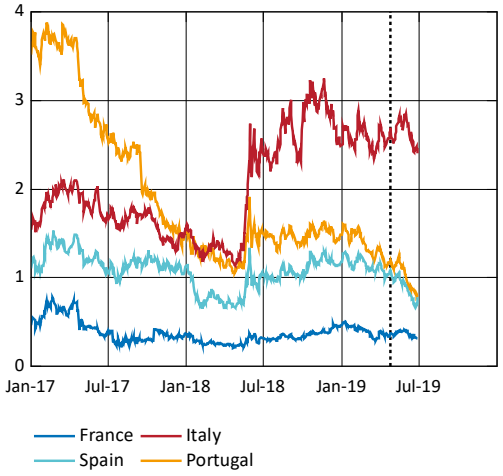
Financial conditions in Sweden

Continued expansionary financial conditions in Sweden

There are factors driving financial conditions in Sweden in different directions. Interest rates are still low, access to credit is good and the weaker exchange rate since the start of the year is contributing to more expansionary financial conditions. On the other hand, equity prices have fallen and volatility on the financial markets has risen, which has had a contractionary effect. All in all, however, financial conditions in Sweden are still assessed as expansionary and as providing support to economic development.

At its monetary policy meeting in April, the Executive Board of the Riksbank decided to hold the repo rate unchanged. The difference from February was that the Executive Board assessed that weaker inflation prospects meant that the next increase in

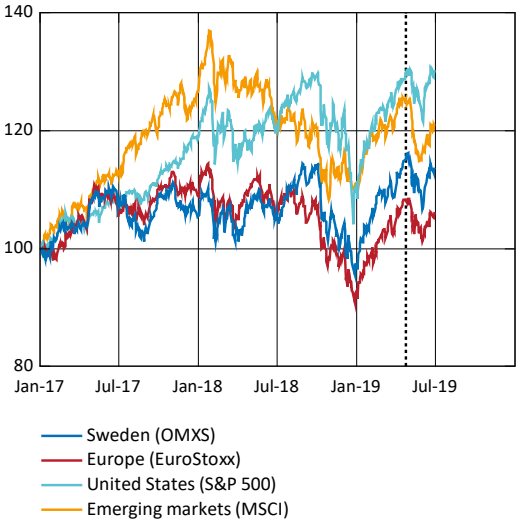
Figure 2:4. Yield differential in relation to Germany, 10-year
Percentage points



Note. Yield differentials refer to 10-year benchmark bonds. The vertical line indicates the Monetary Policy Meeting in April.

Source: Macrobond

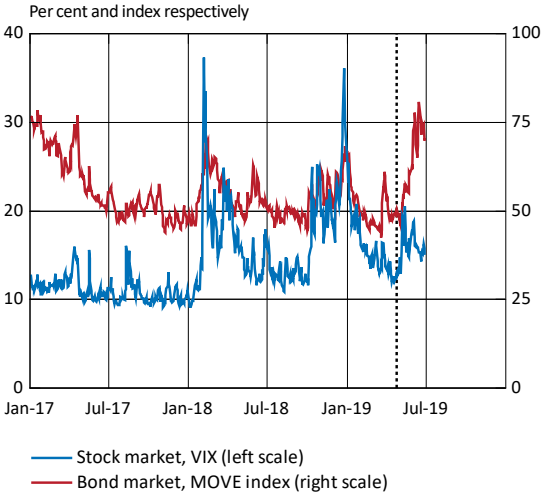
Figure 2:5. Stock market movements in domestic currency
Index, 3 January 2017 = 100



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

Source: Macrobond

Figure 2:6. 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. Merrill Lynch Option Volatility Estimate (MOVE) Index is a measure of the expected volatility of US government bonds based on options prices. The vertical line indicates the Monetary Policy Meeting in April.

Sources: Chicago Board Operations Exchange and Merrill Lynch

the repo rate should be made a little later and that the increases after that should be at a somewhat slower pace. The Executive Board also decided to purchase government bonds for a nominal amount totalling SEK 45 billion, with effect from July 2019 to December 2020.

The monetary policy decision in April was perceived as more expansionary than expected on the financial markets. According to market pricing, expectations of the repo rate in the coming years fell in connection with the announcement. The expectations now are that the repo rate will be negative until the end of 2022. According to the Prospera survey published in June, expectations of the repo rate lie in between the market pricing and the Riksbank's repo rate path and indicate that the next increase in the repo rate will be made in the middle of 2020 (see Figure 2:8).

Prospera's survey also showed that inflation expectations have fallen somewhat at one, two and five years ahead (see Figure 1:7). Expectations five years ahead are still close to 2 per cent. The market-based measures of long-term inflation expectations fell prior to the end of last year, in Sweden as well as the United States and the euro area (see Figure 2:2). The Swedish measures have recovered significantly in recent months and are now once again close to the target of 2 per cent. On the other hand, market-based measure of inflation expectations abroad are still at low levels, particularly in the euro area.

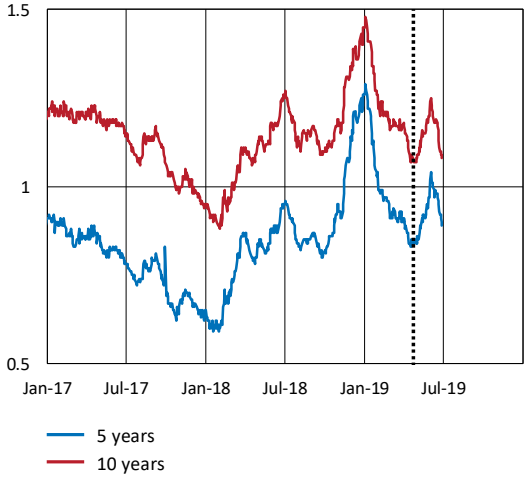
Yields on two-year government bonds increased during the second half of 2018, but have since fallen back (see Figure 2:9). Longer-term government bond yields have fallen in line with international developments (see Figure 2:3). This is partly because of expectations of lower policy rates going forward, but also because demand for the bonds has increased, as investors are seeking safer assets. Equity indices in Sweden have developed in line with those in other developed economies.

The interest rates that banks say they apply for loans between themselves without collateral, STIBOR, have increased slightly more than the repo rate since December last year (see Figure 2:9). One likely reason for this is that the banks have reduced their presence on the interbank market and instead increased their holdings of highly liquid assets, such as Riksbank Certificates, to prepare for the regulations that Finansinspektionen is expected to present later this year. The new regulations, which concern so-called Leverage Coverage Ratios (LCR), are aimed at strengthening the banks' liquidity.

The Riksbank carefully monitors the functioning of the bond market

The markets for Swedish government bonds, covered bonds and interest derivatives are important for the transmission of monetary policy to the rest of the economy. The Riksbank therefore carefully monitors how the government bond market and adjacent markets are functioning, by performing surveys, analysing data and having regular contact with market participants.

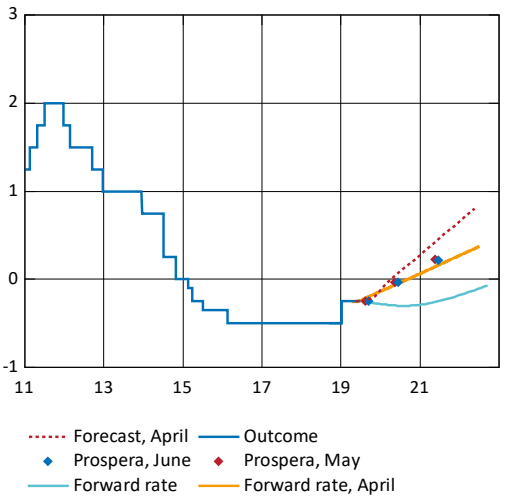
Figure 2:7. Yield differential between corporate bonds with a good credit rating and government bonds for the US
Percentage points



Note. Yield differentials refer to 5-year and 10-year benchmark bonds. The vertical line indicates the Monetary policy Meeting in April

Source: Macrobond

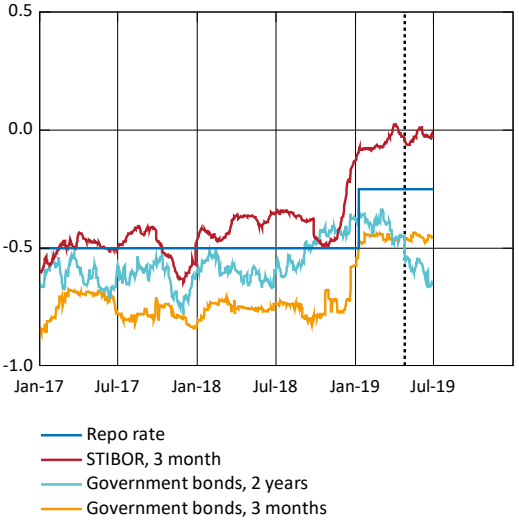
Figure 2:8. Repo rate and market repo rate expectations
Per cent



Note. The forward rate refers to 28 July 2019 and is a measure of the expected repo rate. The Prospera survey responses show the average for money market participants 4 April 2019 (Prospera May) respectively 29 May 2019 (Prospera June).

Sources: Macrobond, Kantar Sifo Prospera and the Riksbank

Figure 2:9. The repo rate, interbank rates and market rates
Per cent



Note. Zero coupon yields are calculated on government bonds. The vertical line indicates the Monetary Policy Meeting in April.

Sources: Macrobond and the Riksbank

In recent years, turnover on the Swedish government bond market has fallen, something which has also occurred in other countries. This is due in part to financial regulations but also to a reduction in the amount of bonds that market participants can actively trade as a result of the Riksbank's bond purchases.

According to the Financial markets survey published by the Riksbank in June, slightly more than half of the respondents think that liquidity on the government bond market is poor or very poor. However, they consider that other markets where the participants can manage interest rate risk are functioning well.

According to the survey published by the Swedish National Debt Office in February, both the Office's own dealers and foreign investors moreover think that market liquidity in nominal government bonds has improved somewhat over the past year. [11] However, several market participants say that market liquidity is still low.

Krona weaker since the turn of the year

In KIX-weighted terms, the krona has depreciated by around 4 per cent since the start of the year and it is somewhat weaker than was forecast in the April Monetary Policy Report (see Figure 2:10). The depreciation has in 2019 been against both larger currencies such as the euro and US dollar and currencies in other small open economies.

The krona depreciated during the first two months of the year, in particular after domestic macro statistics showed weaker figures than the market had expected. For example, the krona depreciated by 1.3 per cent in total in conjunction with the inflation outcomes for January and February. During a period that extends from March until mid-April, the krona recovered somewhat, which was partly due to the macro statistics published being more in line with market expectations.

A new period of depreciation followed the monetary policy decision by the Riksbank in April. In three weeks, the krona depreciated by almost 3 per cent in trade-weighted terms. One important reason for this was that the monetary policy decision was perceived as more expansionary than the market had expected. In recent weeks the depreciation has been recovered to some extent, but the krona is still somewhat weaker than was forecast in April.

Slightly higher lending rates in Sweden

The conditions for households and companies to obtain credit remain good. However, the growth rate in lending to households has gradually fallen over the last three years (see Figure 2:11). This is probably linked to the fact that households are expecting higher loan costs and that prices in the housing market have slowed down. However, the debt-to-income ratio of households continues to rise as debts are still increasing faster than incomes (see Figure 1:12).

[11] See the report "Förtroendet för Riksgälden 2018" (Confidence in the Swedish National Debt Office 2018) issued by Kantar Sifo Prospera.

Figure 2:10. Competition-weighted nominal exchange rate, KIX

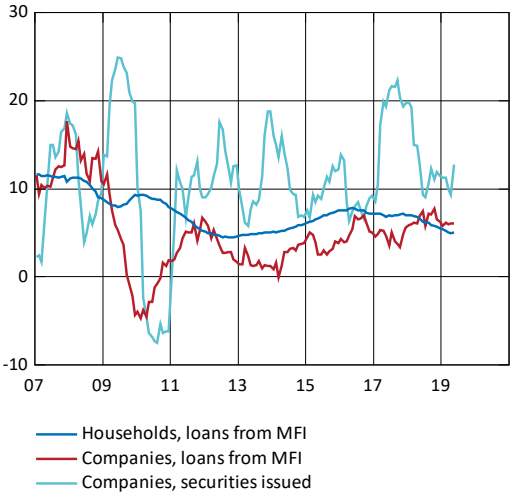
Index, 18 November 1992 = 100

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

Sources: National sources and the Riksbank

Figure 2:11. Bank lending to households and companies

Annual percentage change

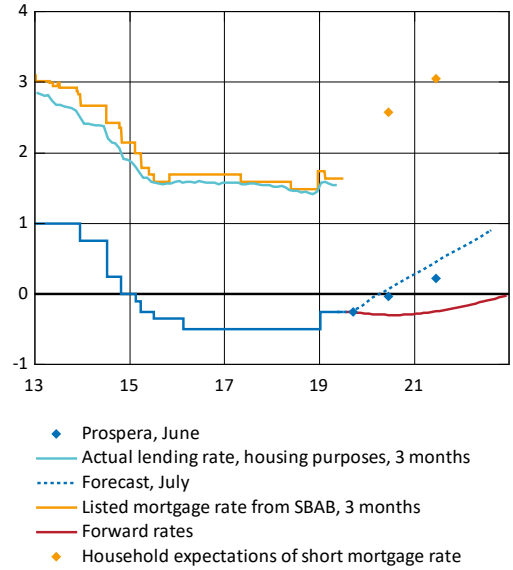


Note. Lending by Monetary financial institutions (MFI) to households and non-financial corporations adjusted for reclassifications and bought and sold loans, according to financial market statistics. Securities issued by non-financial corporations have been adjusted for currency impact.

Source: Statistics Sweden

Figure 2:12. Repo rate and lending rate to households

Per cent



Note. Forward rates are estimated on 28 June 2019 and are a measure of the expected repo rate. Survey responses show the mean value for money market participants on 29 May 2019. Household expectations of the short mortgage rate are according to the Economic Tendency Survey in June.

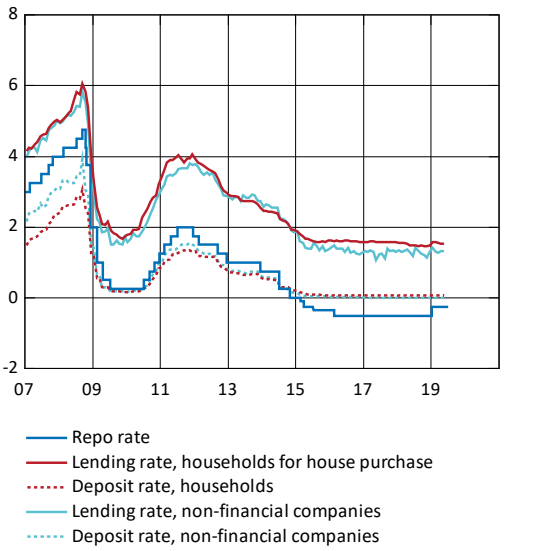
Sources: Macrobond, Kantar Sifo Prospera, Statistics Sweden, National Institute of Economic Research and the Riksbank

The traditional form for corporate financing, bank loans, has on average increased by 5 per cent a year since 2015. Borrowing via the capital markets by means of corporate bond issuing has been increasing rapidly for a number of years and now constitutes more than a third of total corporate debt. The commercial property companies are responsible for a large share of this increase.[12] A number of factors, such as good demand and favourable funding conditions both in Sweden and abroad, have contributed to an increasing number of companies preferring this form of borrowing (see Figure 2:11). Since the turn of the year, yields on corporate bonds have fallen in the same way as abroad.

The average actual lending rate for housing purposes, with a three month maturity, has not risen as much as the repo rate since December (see Figure 2:12). This development was expected and can be explained by several factors. For instance, the increased competition on the mortgage market has meant that mortgage rates for new contracts fell last year, and this development has probably continued into this year. Another cause may be that banks' funding costs may not be fully affected by changes in the repo rate as long as the repo rate is low. For example, the average deposit rates offered to households and companies have not risen at all since December (see Figure 2:13). In addition, mortgages will also be financed through issuing of mortgage bonds, and the yields on these bonds are held down in the same way as abroad.

According to the Economic Tendency Survey, households are expecting the variable mortgage rate to rise going forward (see Figure 2:12). This is probably the main reason why an increasing number of households choose fixed-rate mortgages. The percentage of new loans taken out at a variable rate has decreased since September last year, although this has turned around since February (see Figure 2:14).

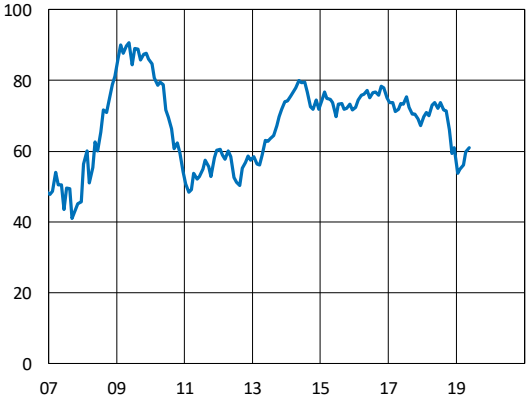
Figure 2:13. Repo rate together with the average deposit and lending rate to households and companies, new contracts
Per cent



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

Sources: Statistics Sweden and the Riksbank

Figure 2:14. Percentage of households' new loans at variable rates
Per cent



Note. Refers to new household loans from mortgage institutions. Percentage of loans in each category is calculated based on the value of the loans. Variable rate refers to interest-rate fixation periods up to and including three months.

Source: Statistics Sweden

[12] See Financial Stability Report 2019:1, Sveriges Riksbank.

CHAPTER 3 – The current economic situation

Inflation was 2.1 per cent in May, which was in line with the Riksbank's forecast. High resource utilisation, depreciation of the krona and rising energy prices have helped inflation remain close to the target of 2 per cent since the start of 2017. However, CPIF inflation is expected to be temporarily lower in the months ahead as energy prices have fallen. Several indicators point to a slowdown in economic activity abroad, even though growth among many of Sweden's trading partners was unexpectedly high in the first quarter of this year. Growth in Sweden was also unexpectedly high in the first quarter, thanks primarily to strong exports. The development in domestic demand was weaker, however. Lower confidence among households and companies indicates that GDP growth will be slightly lower than normal in the quarters ahead. The labour market is still strong but employment growth will now be lower as GDP increases more slowly.

Inflation in Sweden

Inflation just above target in May

In May, CPIF inflation was 2.1 per cent (see Figure 3:1), which was in line with the forecast in the Riksbank's Monetary Policy Report from April. Excluding energy prices, CPIF inflation was lower and amounted to 1.7 per cent, which was also in line with the Riksbank's forecast. The depreciation of the krona in recent years has caused the prices of serveral goods including food to increase more rapidly than normal. At the same time, the prices of other CPI components that are usually sensitive to the exchange rate have increased unusually slowly. This is true in particular of clothes, shoes and foreign travel.

The measured rate of inflation is affected by both temporary and more persistent price variation. To estimate the level of the more persistent component of the inflation rate, the Riksbank studies different measures of core inflation. These measures exclude or reduce the significance of prices that have previously been shown to vary considerably.[13]

The Riksbank's different measures of core inflation indicate that the more permanent part of the inflation rate is also close to 2 per cent (see Figure 3:2). The median of all measures amounted to 2.0 per cent in May. The measures that use statistical methods to reduce the significance of volatile components indicate slightly higher inflation than, for example, the CPIF excluding energy. Two of the measures that appear the most useful in an evaluation are UND24 and CPIFPC. UND24, which gives greater weight to less volatile components in the CPIF, amounted to 2.0 per cent in May. The CPIFPC, which is based on common trends in the components, was 1.9 per cent in May.

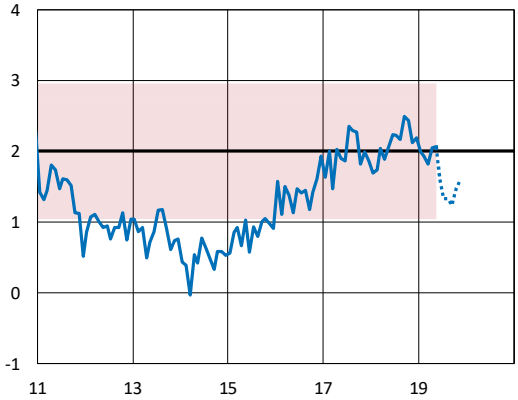
Table 3:1.

Expected development in April MPR	Actual development
CPIF inflation 2.1 per cent, CPIF inflation excluding energy 1.7 per cent in May.	CPIF inflation was 2.1 per cent and CPIF excluding energy was 1.7 per cent.
GDP growth 0.9 per cent in first quarter.	GDP growth was 2.4 per cent.
Unemployment 6.4 per cent in second quarter.	Monthly outcomes for April and May indicate a somewhat lower unemployment.

Note. MPR refers to the Monetary Policy Report. Inflation refers to the annual percentage change. GDP growth refer to the seasonally-adjusted quarterly changes in per cent, calculated at an annual rate. Unemployment refers to percentage of the labour force.

Figure 3:1. CPIF and variation band

Annual percentage change



Note. The pink area shows the Riksbank's variation band and covers about three-quarters of the outcomes since January 1995. The variation band is a way of showing whether the deviation from the inflation target is unusually large. The broken line represents the forecast for the upcoming 6 months.

Sources: Statistics Sweden and the Riksbank

[13] See the article "Why measures of core inflation?" in Monetary Policy Report, October 2018.

Temporarily lower inflation in the months ahead

The strong economic situation has contributed towards rising inflation in recent years. A weaker krona and rising energy and food prices have also helped inflation to rise.

The strong economic activity is expected to continue to contribute positively to inflation in the period ahead. In addition, substantial rent increases, effects of the krona depreciation and continued rising food prices are expected to contribute to a higher rate of increase in the CPIF excluding energy over the next few months (see Figure 3:3). At the same time, the rate of increase in energy prices is expected to decline, which will cause CPIF inflation to temporarily fall in the short term (see Figure 3:1). The declining rate of increase is partly due to last year's rising energy prices gradually disappearing from twelve-month comparisons. Furthermore, both electricity and fuel prices have fallen recently (see Figure 3:4).

The Riksbank's model forecast, which summarises the information in a large number of indicators, suggests that the rate of increase in the CPIF excluding energy will rise slightly in the coming months (see Figure 3:3). The upturn is explained in part by price developments in channels prior to the consumer channel and in survey responses from companies. In the producer channel, prices are increasing more rapidly than normal, both of imported goods and of goods produced and sold in Sweden (See Figure 3:5).

According to the Economic Tendency Survey, more companies than normal in the retail sector are planning to increase prices in the months ahead. Plans in the entire business sector, however, are now more normal (see Figure 3:7). In the Riksbank's Business Survey as well, more companies than has been the norm over the past five years state that they are planning to increase their prices.[14] According to the companies surveyed, higher costs and continued healthy demand are expected to drive up prices in the coming year. According to survey data in the Economic Tendency Survey, companies' sales prices have continued to rise mainly as a result of increasing import prices (see the box "Higher import prices explain price increases" in this chapter).

The Riksbank's forecast is slightly below the model forecasts, particularly from July and the months thereafter. Among other things, this is due to Statistics Sweden this year introducing a new method of measuring dental care charges that is considered to provide a seasonal pattern with lower measured price increases during the summer months.[15] The models do not capture this new pattern.

Inflation forecast unchanged in the short term

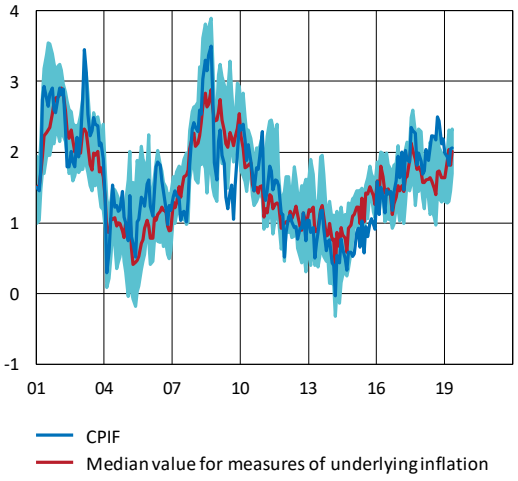
The forecast for the rate of increase in the CPIF excluding energy is unchanged in the coming months. Further depreciation of the krona since the previous Monetary Policy Report will affect

[14] See the Riksbank's Business Survey, May 2019.

[15] A brief description of the method can be found in Monetary Policy Report, February 2019.

Figure 3:2. CPIF and different measures of underlying inflation

Annual percentage change

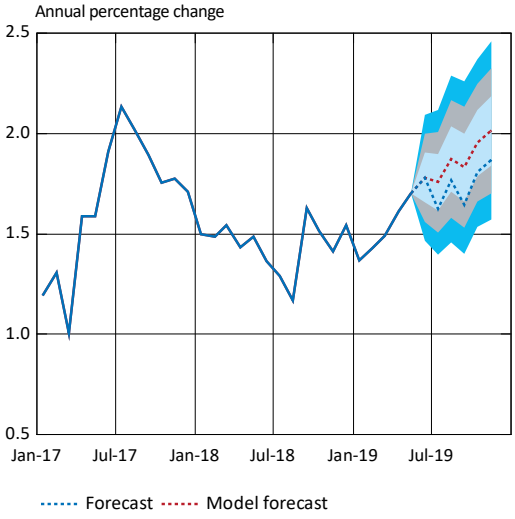


Note. The field shows the highest and lowest outcomes among different measures of underlying inflation. The measures included are CPIF excluding energy, UND24, Trim85, CPIF excluding energy and unprocessed food, persistence-weighed inflation (CPIFPV), factors from principal component analysis (CPIFPC)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

Sources: Statistics Sweden and the Riksbank

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

Annual percentage change

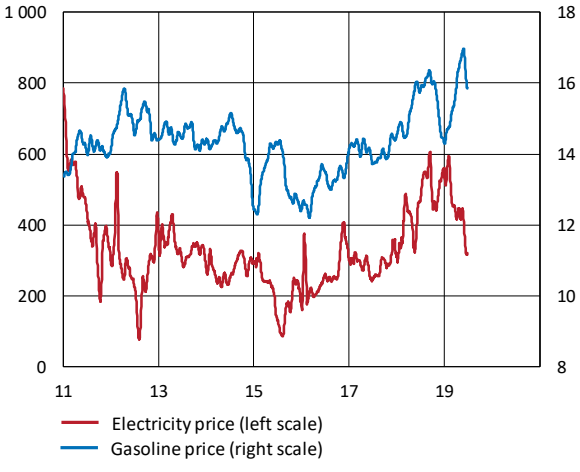


Note. The uncertainty bands 50, 75 and 90 per cent are based on the models' historical forecast errors.

Sources: Statistics Sweden and the Riksbank

Figure 3:4. Energy prices

SEK per MWh and SEK per litre respectively, 15-day average



Note. Prices refer to a 15-day average of the system price per MWh electricity and 95-octane gasoline.

Sources: Macrobond and Nordpool

inflation excluding energy mainly next year, but will also contribute marginally to a higher rate of increase in the prices of certain goods over the next few months.

Energy prices have recently fallen. Both oil and electricity prices have fallen on the global market. This has led to the forecast for CPIF inflation being revised down for the months ahead in relation to the forecast in April (see Figure 1:6).

Global and Swedish economic activity

Slowdown in global growth going forward

GDP growth was higher than expected in the first quarter among several of Sweden's most important trading partners. At the same time, however, many economic indicators point to a global slowdown in the period ahead. Higher growth, in for example the euro area, the United Kingdom and the United States is therefore not giving rise to a more positive view of global economic activity compared with the Monetary Policy Report in April. Instead, growth is expected to be slightly lower over the coming quarters. Global trade has decreased since the autumn of last year and the forecast now takes the perceived increased risk of more extensive global trade wars into account (see Figure 3:8).

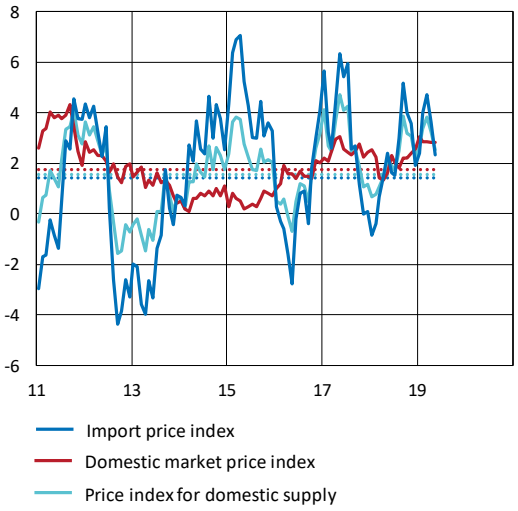
GDP in the euro area increased by 1.6 per cent in the first quarter of 2019, compared with the fourth quarter of 2018 in annualised terms (see Figure 3:9). Growth was primarily driven by domestic demand with strong investment growth. However, forward-looking economic indicators provide slightly mixed signals about the state of the euro area economy.

Confidence in the service sector and among households is still relatively high. This is likely due to the fact that wages have risen more rapidly than previously (see Figure 3:10). In addition, interest rates are still low. However, confidence in the manufacturing industry is low and industrial production has stagnated in the past year. The situation in the manufacturing industry is not clear-cut, however. Corporate investment plans suggest that investment growth will continue to be healthy this year. Investment is benefiting from the continued easing of credit terms.

Overall, confidence in the entire business sector is approximately normal (see Figure 3:11). However, the weak development in the manufacturing industry is expected to contribute to temporarily weaker GDP growth in the second quarter, which will then grow by around 1.5 per cent, calculated at an annual rate, in the third quarter of 2019.

In the United States, GDP increased by 3.1 per cent in the first quarter compared with the fourth quarter calculated in annualised terms (see Figure 3:9). The outcome was higher than the fourth quarter. The largest positive contributions to the growth in demand came from inventories and net exports. Similar to the end of 2018, domestic demand was still subdued, mainly due to the weakness in private consumption. Statistics on

Figure 3:5. Producer prices for consumer goods
Annual percentage change



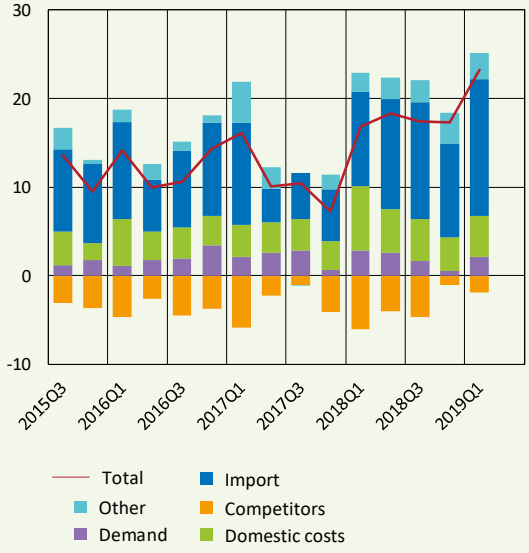
Note. Import price index measures what Swedish importers pay for their goods at the border. Domestic market prices measure what Swedish producers are paid when sale takes place in Sweden. The price index for domestic supply is an aggregate of the import- and home market price index. Broken lines refer to average rate of increase since the year 2000.

Sources: Statistics Sweden and the Riksbank

Higher import prices explains price increases

The figure below is based on survey data and shows how companies in the trade and service sectors report that various factors have affected their prices. In the service sectors, it is increased demand and higher domestic costs that are pushing up prices. Within the trade sector, it is instead rising costs for imports, to some extent due to the weaker krona, that have dominated the price changes. Statistics for the first quarter shows that sales prices are continuing to increase mainly as a result of rising import prices.

Figure 3:6. The driving forces behind price changes by companies in the trade and services sectors
Net figures



Note. The figure shows how different factors have affected the unweighted net figure for the question of what has happened with prices in the last three months in both the trade and services sectors.

Sources: National Institute of Economic Research and the Riksbank

retail sales in April and May indicate overall a certain recovery during the second quarter.

The US labour market is still strong despite weaker signals in May. Unemployment is low and amounted to 3.6 per cent in May despite the slowdown in employment growth. However, wage growth has softened since the beginning of the year and confidence among companies and households has declined. Overall, growth is predicted to slow in the second quarter as the contribution from inventories is expected to be less and exports are expected to grow more slowly.

Continued low inflation in the euro area

Inflation in the euro area is still low. The inflation rate was 1.2 per cent in June (see Figure 4:5). The rate of increase in energy prices fell at the same time as service prices rose. The higher rate of increase in services prices meant that underlying inflation, measured as the HICP excluding energy and foods, rose to 1.1 per cent.

In the United States, CPI inflation in May fell to 1.8 per cent. Excluding energy and food, CPI inflation amounted to 2.0 per cent. In contrast to the euro area, core inflation in the United States is therefore higher than total inflation, which is due in part to energy prices in the euro area increasing more rapidly than in the United States as a result of a weaker development of the euro. The deflator for private consumption has increased more slowly and the rate of increase amounted to 1.5 per cent in April.

Despite the price fall in the past month, the oil price has still risen during the year. The upturn at the beginning of the year was due to a combination of sanctions in several parts of the world, an agreement to cut oil production between OPEC and Russia, and high demand. The recent escalation of the trade conflict between China and the United States has created uncertainty about growth in the global economy, which has probably contributed to the fall in the oil price.

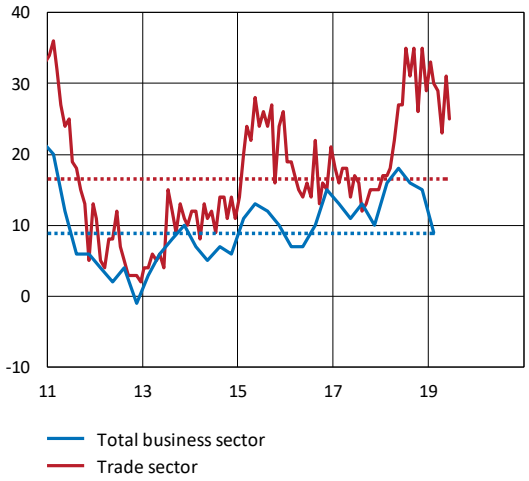
Moderate Swedish growth in the second and third quarters

GDP increased by 2.4 per cent in the first quarter, compared with the immediately preceding quarter, calculated as an annual rate (see Figure 3:9). The upturn was greater than expected and was primarily driven by strong growth in service exports while domestic demand developed more weakly. The rapid upturn in service exports is considered to be down to temporary factors to a certain extent. One explanation for the development was strong growth in foreign consumption in Sweden, which in turn may be connected to the depreciation of the krona. On the other hand, both investment and in particular household consumption increased unexpectedly slowly.

Temporary factors have contributed to a variation in Swedish GDP growth over the past year. On the whole, however, growth has been somewhat lower compared with the years 2014 to 2017, due in part to weaker development in domestic demand.

Overall, indicators suggest that growth will be slightly lower than normally in the second and third quarters. According to the

Figure 3:7. Pricing plans in the business and trade sectors
Net figures, seasonally-adjusted data



Note. The net figure is the difference between the proportion of companies stating that they expect higher sales prices and those expecting lower sales prices over the next three months. Broken lines represent the averages since May 2003.

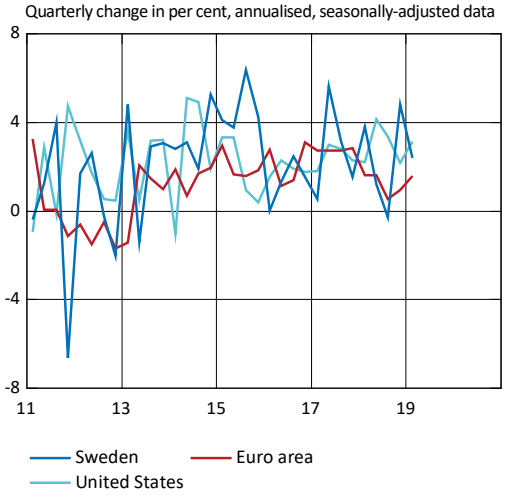
Source: National Institute of Economic Research

Figure 3:8. World trade volume
Index, 2011 = 100

Note. Refers to trade in goods.

Source: CPB Netherlands Bureau for Economic Policy Analysis

Figure 3:9. GDP in Sweden and abroad
Quarterly change in per cent, annualised, seasonally-adjusted data



Sources: Bureau of Economic Analysis, Eurostat and Statistics Sweden

Economic Tendency Survey, the economic situation in Sweden weakened in June to a level roughly compatible with normal growth. The downturn was explained by lower confidence among companies. Confidence in the business sector as a whole is roughly normal (see Figure 3:11). Confidence is unusually low among households, however. The monthly statistics for demand and production indicate a growth rate close to normal.

According to the Riksbank's latest Business Survey published in June, economic activity is still very good for the major Swedish companies, although the picture is slightly less bright compared with the previous survey in February. As previously, companies think economic activity will be weaker in the period ahead. They also perceive the risks to be greater and the deepest unease concerns the consequences for global economic activity of the ongoing trade conflicts. The situation is reported to be better in the construction and retail sectors than in industry.

Housing investment is expected to decrease further in 2019, which will weigh on GDP growth. This is in stark contrast to the years 2014–2017 when housing investment grew rapidly and gave a significantly positive contribution to growth.

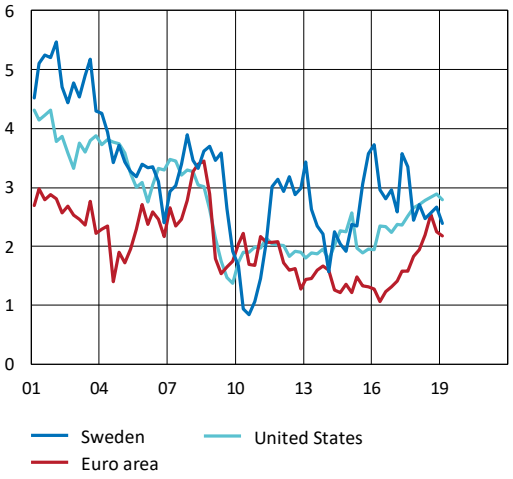
A model forecast is a way of summarising information in indicators, demand and output in the Swedish economy. The model forecast indicates that GDP will grow by 2.0 per cent in the second quarter compared with the immediately preceding quarter, calculated in annualised terms (see Figure 3:12). The Riksbank's forecast for the second quarter is lower than the model forecast. This is because the models do not fully capture either the downturn in housing investment or the temporary effects that are considered to have lifted the GDP level in the first quarter of this year. GDP growth is expected to be 0.3 per cent in annualised terms in the second quarter, and 1.3 per cent in the third quarter of 2019.

Continued strong labour market

Both labour supply and labour demand have increased significantly in recent years. This has led to historically high labour force participation and employment rates (see Figure 4:7). In recent months, the rate of increase in both employment and the labour force has slowed.

Indicators suggest a continued high demand for labour. For example, the number of newly registered job openings at the Swedish Public Employment Service is on a very high level, even though it fell slightly in May as redundancy notices rose. Recruitment plans according to the Economic Tendency Survey have softened but are still higher than normal and indicate that employment will continue to increase (see Figure 3:13). In the quarters ahead, the number of persons employed and the number in the labour force are expected to rise, albeit at a slower pace than in recent years. The decline is primarily due to the slowdown in GDP growth. Unemployment is expected to be 6.3 per cent in the second quarter and then increase somewhat thereafter (see Figure 4:15).

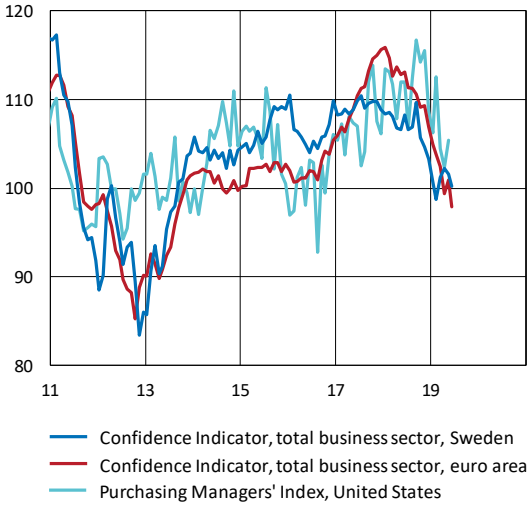
Figure 3:10. Labour costs in Sweden and abroad
Annual percentage change



Note. The Swedish series refers to hourly labour cost and is a four-quarter moving average. For the United States and the euro area, the figures refer to labour costs per employee.

Sources: The Bureau of Labor Statistics, the ECB and Statistics Sweden

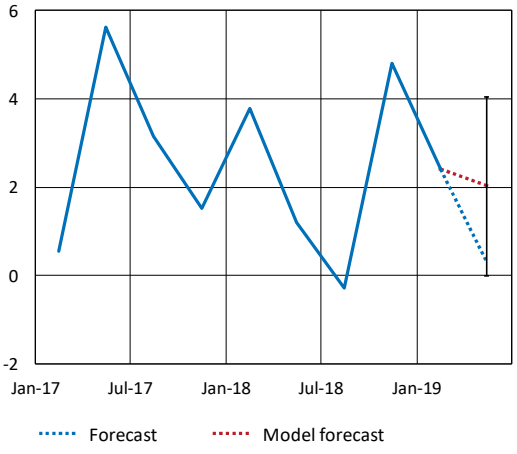
Figure 3:11. Confidence indicators in Sweden and abroad
Index, average = 100, standard deviation = 10



Note. The purchasing managers' index from the United States and the confidence indicator from the euro area are normalised from January 1998. Purchasing managers' index, United States refers to the Riksbank's combined weighting of the manufacturing and service sectors.

Sources: European Commission, Institute for Supply Management (ISM), National Institute of Economic Research and the Riksbank

Figure 3:12. GDP, model forecast with uncertainty bands
Quarterly change in per cent, annualised, seasonally-adjusted data



Note. The model forecast is an average of forecasts from different statistical models. The vertical line refers to a 50 per cent uncertainty band based on the models' historical forecast errors.

Sources: Statistics Sweden and the Riksbank

High resource utilisation in the economy

The amount of spare capacity in the economy affects the development of wages and prices with a certain time lag. Resource utilisation in the economy cannot be measured exactly, however. The Riksbank therefore follows a number of different indicators to be able to make an assessment.

Several of these indicators suggest that resource utilisation is still higher than normal, although it appears to be slightly lower than previously (see Figure 3:14). According to the Economic Tendency Survey, many companies still report a shortage of labour, although slightly fewer experienced a shortage in the first quarter of 2019 compared with the preceding quarter. Another sign that there is still little spare capacity on the labour market are the high vacancy rate, which measures the number of unfilled jobs that need to be filled immediately. In addition the average time for recruitment in the business sector is still long.

Overall, the Riksbank has not changed its assessment that resource utilisation in the Swedish economy is currently higher than normal and the cyclical conditions for inflation going forward are therefore largely unchanged compared with in the Monetary Policy Report in April.

Minor changes in wage growth

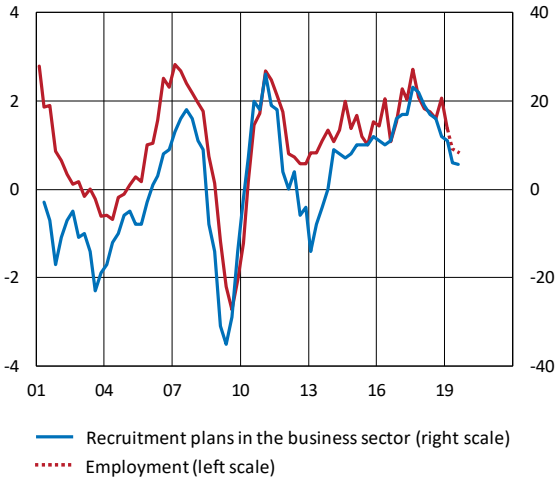
Average wage growth for the whole of 2018 was 2.5 per cent. During the period January–April this year, wages in the economy as a whole have risen by an average of 2.5 per cent compared with the same period last year, according to preliminary short-term wage statistics (see Figure 3:15). The rate of wage increase in the business sector was lower, however, amounting to 2.3 per cent during the period January–April.

Wage growth is expected to rise in the quarters ahead as the strong labour market situation has an impact on wage formation. The increase will nevertheless be moderate as wage agreements struck in the last wage bargaining round still apply.

Cost pressures, measured in terms of the rate of increase in unit labour costs, do not just depend on wage development but also on productivity. As productivity has developed weakly for several years, unit labour costs have risen more rapidly than normal. According to the outcome for the National Accounts for the first quarter, however, productivity increased unexpectedly rapidly, and the rate of increase in unit labour costs fell to 2.2 per cent. This was lower than during last year when the average rate of increase amounted to 2.9 per cent. Outcomes for both labour costs and productivity according to the National Accounts are volatile, however, and developments in individual quarters should be interpreted with caution.

Figure 3:13. Employment and recruitment plans

Annual percentage change and net figures, seasonally-adjusted data

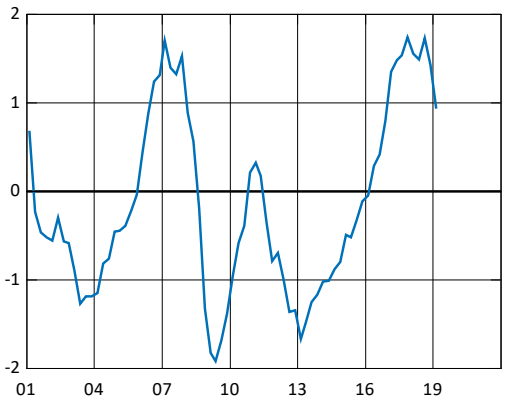


Note. Recruitment plans refer to expectations of the number of employed in the business sector three months ahead, moved forward one quarter. Recruitment plans for 2018 Q2 refer to an average of the outcomes in April to June 2019.

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

Figure 3:14. Resource utilisation indicator

Standard deviations

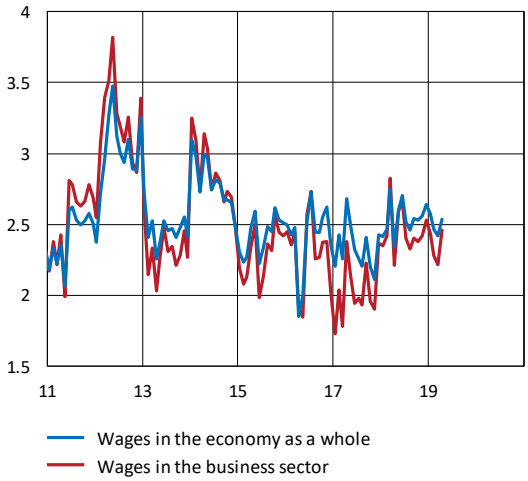


Note. The RU indicator is a statistical measure of resource utilisation. It is normalised so that the mean value is 0 and the standard deviation is 1.

Source: The Riksbank

Figure 3:15. Wages in the business sector and economy as a whole

Annual percentage change



Note. The National Mediation Office's forecast of final outcome May 2018–April 2019.

Source: National Mediation Office

CHAPTER 4 – The economic outlook and inflation prospects

After several years of solid growth abroad and low interest rates, Swedish economic activity is strong and resource utilisation is high. International growth is expected to be slightly lower in the period ahead, but still high enough for unemployment to fall or remain low in many countries. The Swedish economy is also expected to grow more slowly over the next few years compared with recent years. This is mainly due to a slowdown in domestic demand as a result of developments on the housing market. Inflation has been around the inflation target of 2 per cent since the start of 2017 but is expected to fall back temporarily in the new few months as the contribution from energy prices declines. However, continued strong economic activity in Sweden will help to keep inflation close to the target going forward. Compared with the assessment in April, the forecast for CPIF inflation is basically unchanged. The Swedish krona has developed more weakly than expected and compared with the previous forecast, is anticipated to be weaker in the coming years. This is expected to contribute to slightly higher inflation next year, but will be counteracted by somewhat lower energy prices.

International developments

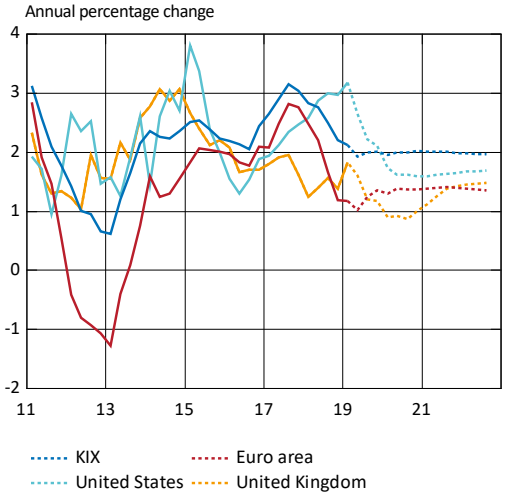
Growth abroad will be lower in the coming years

Trade-weighted (KIX-weighted) GDP has grown rapidly in recent years. In the years ahead, the growth rate is expected to normalise close to its historical average of just over 2 per cent (see Figure 4:1). Resource utilisation among our most important trading partners has risen in recent years and is expected to be close to a normal level in the coming years. Demand for Swedish exports is expected to grow by around 3.5 per cent this year and in the coming years (see Figure 4:2). This entails a lower growth rate than the average of 4.6 per cent per year since the year 2000.

The trade conflict between the US and China has escalated. The US administration has raised tariffs on already tariffed imports from China and in response, China has increased the extent of tariffs on imports from the United States, see the box “Escalated trade conflict between the US and China” in this chapter.

Although the parties agreed at the G20 meeting in Osaka to resume trade talks, concern has increased that there will be further barriers to global trade. This has led to greater unease on the financial markets, which among other things is reflected in falling stock prices in some countries. The increased risk has weakened corporate sector confidence and the Riksbank has revised down the forecast for GDP growth and policy rates abroad slightly compared with the forecast in April. A further escalation of the trade conflict to include other countries risks having a more negative impact on global growth. The United States has announced that it does not intend to introduce tariffs on vehicle imports from the EU this year, but were this to happen later on, it may have negative effects on growth in countries like

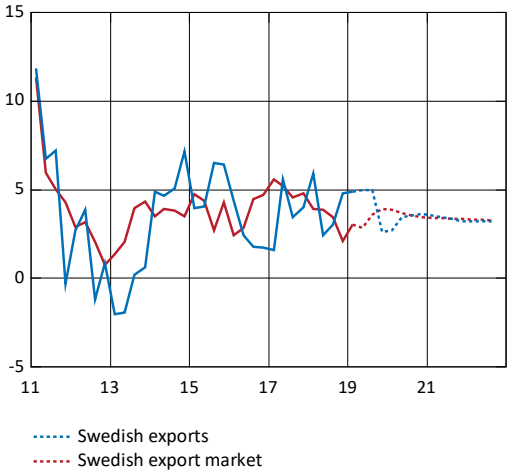
Figure 4:1. GDP in various countries and regions
Annual percentage change



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

Sources: Bureau of Economic Analysis, Eurostat, national sources, Office for National Statistics and the Riksbank

Figure 4:2. Exports and the Swedish export market
Annual percentage change, calendar-adjusted data



Note. Swedish export market index aims to measure import demand in the countries to which Sweden exports. It is calculated by aggregating 32 countries and covers around 85 per cent of total Swedish export market.

Sources: Statistics Sweden and the Riksbank

Germany. Risks associated with a severe escalation of the trade conflicts could have a clearly negative effect on economic developments. However, it is very difficult to quantify such a scenario in a forecast and it is therefore largely outside of the forecast described in this report.

After leading the Brexit negotiations for three years, Theresa May has announced that she will step down as UK prime minister. Who her successor will be is currently unclear, which increases uncertainty regarding the future direction of the UK's withdrawal from the EU. A lack of clarity as regards the forms of the withdrawal is also creating uncertainty with regard to the growth prospects for the UK in particular, but also for the rest of Europe to a certain extent.

Modest growth in the euro area

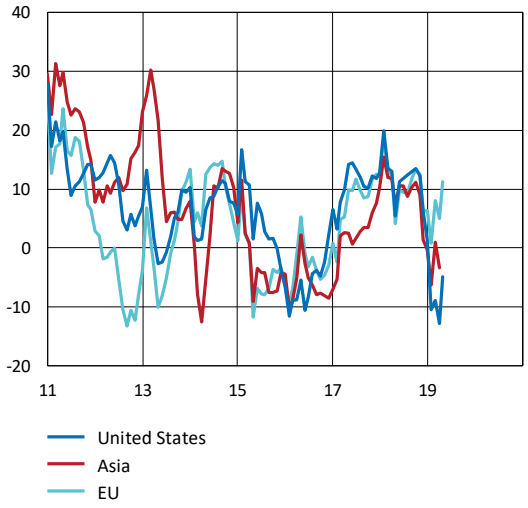
The slowdown in the euro area during the second half of 2018 looks to have been at least partially due to temporary factors and GDP growth increased at a faster rate during the first quarter. Several factors indicate relatively healthy growth in the period ahead. Monetary policy is and is expected to continue to be very expansionary during the forecast period and credit terms for companies have eased. A slightly expansionary fiscal policy is also expected to contribute to growth over the next few years. Consumer confidence is relatively high and the labour market is strong with reduced unemployment and high employment growth. Demand for labour is expected to be high enough for unemployment to continue to fall slightly in the years ahead, albeit at a slower rate. This will help to hold up wage growth. The risk of an escalated trade conflict abroad is having a negative impact on the euro area and is expected to subdue GDP growth marginally in the coming years. As global demand is set to be slightly lower, investment growth is also expected to be dampened slightly over the next few years. The same is true of household consumption when employment growth slows. GDP is nevertheless expected to grow at an approximately normal rate, just below 1.5 per cent per year in 2019–2021 (see Figure 4:1).

Strong economic activity but gradually lower growth in the United States

Economic activity in the United States remains strong and GDP growth is good. Confidence among households is also very high. Confidence in the manufacturing industry has declined, however, and is slightly lower than normal, while it remains high in the service sector.

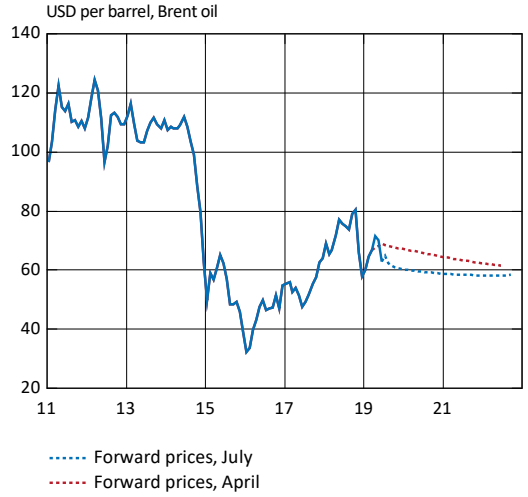
The labour market in the United States is strong and is expected to remain so in the coming years. Unemployment is expected to increase moderately to just above 4 per cent at the end of the forecast period. The high resource utilisation is expected to help wage growth continue to rise in the period ahead, after which wage growth will decline gradually. The strong labour market has strengthened the contribution from private consumption to GDP growth and this contribution is expected to remain strong. Overall, GDP is expected to grow by 2.5 per cent

Figure 4:3. Chinese exports
Annual percentage change, current prices, three-month moving average



Source: China General Administration of Customs (GAC)

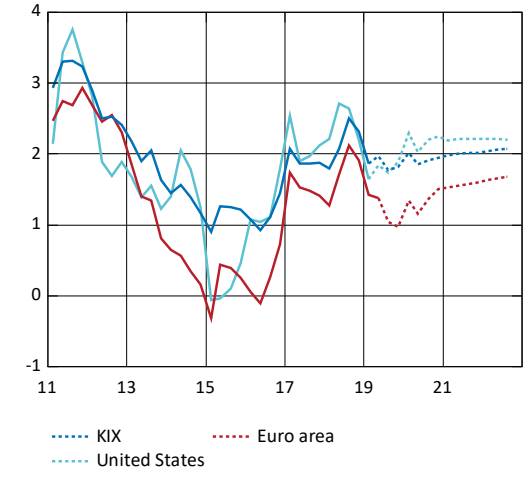
Figure 4:4. Price of crude oil
USD per barrel, Brent oil



Note. Forward prices are calculated as a 15-day average. The outcomes refer to monthly averages of spot prices.

Sources: Macrobond and the Riksbank

Figure 4:5. Consumer prices in various countries and regions
Annual percentage change



Note. KIX is an aggregate of the countries that are important to Sweden's international transactions. Euro area refers to HICP.

Sources: The Bureau of Labor Statistics, Eurostat, national sources and the Riksbank

this year and then gradually decline to 1.6 per cent in 2021, due in part to less expansionary fiscal policy and risks associated with the trade conflict with China (Figure 4:1).

The escalated trade conflict between the United States and China risks subduing Chinese growth

GDP growth in China will continue to fall gradually in the years ahead. The slowdown depends in part on the rebalancing of the Chinese economy from investment-driven growth to growth that is driven more by private consumption and where the service sector will have a greater role. A more long-term focus on sustainable, stable growth and measures to reduce lending will result in lower growth figures going forward.

In recent weeks, the downside risks to developments in the Chinese economy have increased as the trade conflict with the United States has escalated. Previously, the Chinese authorities have compensated for the risks of negative growth by conducting a more expansionary fiscal policy with tax cuts and increased investment in infrastructure, so as to stimulate domestic demand. Monetary policy has also been redirected in a more expansionary direction and since the start of 2018, reserve requirements for banks have been gradually lowered.

Even though the increased risk of an extended trade conflict between the United States and China has been considered in the forecast, it cannot be ruled out that the economic effects can be greater than expected. The direct effects are in that case expected to primarily affect Chinese exports as China is more dependent on trade with the United States than the other way around. China's exports to the United States have developed negatively in recent months, while China's exports to the EU have increased (See Figure 4:3). Even though it is too early to judge the scale, it can be noted that tariffs already introduced have had a certain negative impact on trade between the United States and China. However, it is difficult to assess the total effect on trade, as trade patterns may change.

Despite increased downside risks, the assessment is that economic policy stimuli will help to hold up Chinese growth so that it is around the official target of 6–6.5 per cent in 2019 and just below 6 per cent in 2020 and 2021.

Lower price on crude oil

During the first four months of this year, the global market price of Brent crude rose by more than 30 per cent to around USD 70 a barrel. However, since the beginning of May, when the trade conflict escalated, lower demand has subdued the oil price. According to forward pricing, the oil price is expected to be around USD 60 a barrel during the forecast period (see Figure 4:4). Uncertainty surrounding the oil price is considerable, however, partly as a result of increased geopolitical tension in the Middle East.

Escalated trade conflict between the US and China

Last year, the United States introduced tariffs on half of all imports from China. Twenty-five percent duty was imposed on goods valued at USD 50 billion while goods for a further USD 200 billion were subject to a 10-percent tariff. On 10 May, the United States increased the tariffs from 10 to 25 per cent on Chinese goods valued at USD 200 billion. The United States has also threatened to impose tariffs on all imports from China, i.e. imports for approximately a further USD 300 billion.

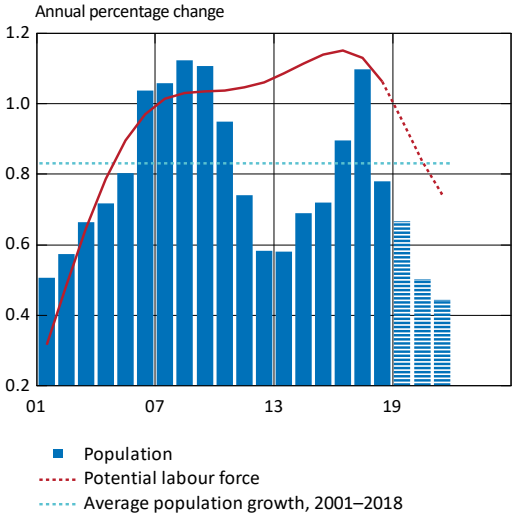
In response, on 1 June China raised the existing tariffs on US goods. These tariffs vary between 5 and 25 per cent for goods corresponding to a value of USD 60 billion. Since last year, China has in total introduced tariffs on US goods to a value of USD 110 billion.

China is unable to fully match the amounts imposed by the US on Chinese goods as total Chinese imports from the United States are worth much less than the corresponding US imports from China. This increases the risk of other, "non-tariff" trade barriers being introduced, such as longer lead times on imports from the United States and complicated customs procedures, as well as perhaps making it more difficult for US companies to conduct business operations in China.

The parties agreed at the G20 meeting in Osaka to resume trade talks. However, the risk of disruptions to global trade remain, as the outcome of the negotiations between the United States and China is uncertain, at the same time as the United States has threatened further tariffs against other countries, too.

Figure 4:6. Population and potential labour force, 15–74 years

Annual percentage change



Note. Potential labour force refers to the long-term sustainable level according to the Riksbank's assessment.

Sources: Statistics Sweden and the Riksbank

Slowly rising cost pressures

The recovery of the oil prices in the first half of 2019 has contributed to the expectation that KIX-weighted inflation abroad will stabilise at just below 2 per cent this year and then remain at around 2 per cent in the following years (see Figure 4:5).

In the euro area, inflation measured in terms of the HICP is predicted to remain around 1.5 per cent in the coming years. Core inflation, HICP adjusted for energy and food prices, has been around 1 per cent in recent years, and has not increased as expected. However, the increasingly strong labour market has contributed, and is expected to continue to contribute, to increased cost pressures. This is expected to to gradually bring up core inflation in the period ahead from just above 1 per cent this year to 1.7 per cent at the end of the forecast period.

In the United States, CPI inflation is expected to rise this year, in part due to higher food prices. The strong US labour market is contributing to a slightly more rapid increase in wage growth and thereby in corporate labour costs, which will contribute towards slightly higher core inflation this year and next year. Elevated tariffs will contribute initially to higher inflation due to the higher price of imported goods. Uncertainty associated with the escalated trade conflict will, however, subdue demand somewhat, which will lead to slightly lower inflationary pressures after 2020 compared with the forecast in April. Overall, CPI inflation is expected to be just above 2 per cent in the coming years (see Figure 4:5).

Sweden

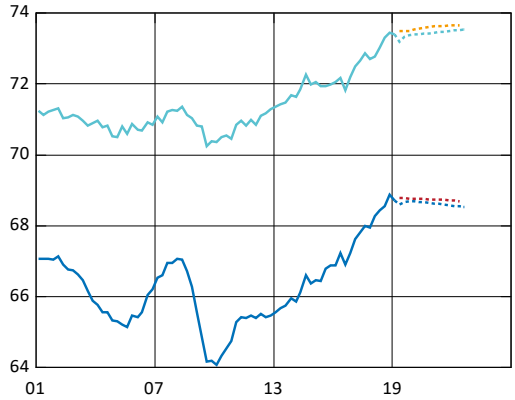
Slower growth in labour supply

The economy's growth potential is affected by trend developments in labour supply and productivity. In recent years, the working-age population has grown relatively rapidly (see Figure 4:6). This has contributed to a sharp increase in labour supply.

The labour force participation rate has also shown a rising trend since 2009 and, in 2018, over 73 per cent of the population aged 15-74 participated in the labour force (see Figure 4:7). The upturn has occurred among both Swedish-born and foreign-born persons. Among Swedish-born persons, the increase is primarily due to older people choosing to remain in the labour force for longer. The long period of strong economic activity is probably one reason for why those born outside Europe are now also becoming established on the labour market somewhat faster than previously.

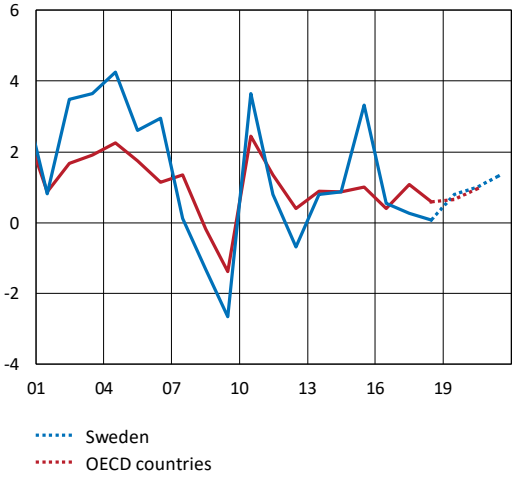
In the years ahead, growth in the working age population will fall as a larger share of the Swedish-born population reach an age at which labour force participation normally declines due to retirement. Migration to Sweden is assumed to fall at the same time. However, since labour force participation among foreign-born and older people is expected to increase, growth in

Figure 4:7. Employment rate and labour force participation
Percentage of the population, aged 15–74, seasonally-adjusted data



Sources: Statistics Sweden and the Riksbank

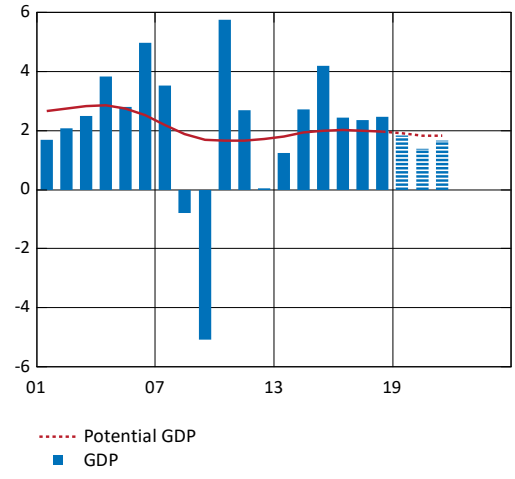
Figure 4:8. Productivity
Annual percentage change, calendar-adjusted data



Note. The forecast for the OECD is taken from Economic Outlook, May 2019. Productivity for the OECD refers to GDP per employee. For Sweden, it refers to GDP per hour worked.

Sources: OECD, Statistics Sweden and the Riksbank

Figure 4:9. GDP
Annual percentage change, calendar-adjusted data



Note. Potential GDP refers to the long-term sustainable level according to the Riksbank's assessment.

Sources: Statistics Sweden and the Riksbank

potential labour supply is not expected to decline as rapidly as the growth in population (see Figure 4:6).

Similarly to much of the world, productivity growth in Sweden, with the exception of isolated years, has been low since the financial crisis (see Figure 4:8). There is no individual factor that explains the weak productivity growth, but several factors have probably interacted.[16] Productivity growth is expected to increase in the period ahead but will remain lower than it was prior to the financial crisis.

Overall, the increase in labour supply and productivity will lead to a GDP growth potential of just under 2 per cent a year in 2019–2021 (see Figure 4:9).

Swedish economic is strong, but growth is slowing

In the years immediately ahead, the Swedish economy is expected to grow slightly more slowly than in recent years (see Figure 4:9). As growth will be lower than the economy's growth potential, a gradual normalisation of the strong Swedish economic situation will occur (see Figure 4:10). Some of this development is due to lower growth in domestic demand, partly as a result of developments on the housing market. Sweden's growth is also very dependent on development abroad, which, after a period of high growth, will now grow at a more normal rate in the years ahead. A gradual appreciation of the Swedish krona and reduced growth on Swedish export markets are expected to lead to a slight slowdown in Swedish exports in the coming years.

Strong growth in domestic demand in recent years has reduced net exports and the surplus in the current account (see Figure 4:11). The slowdown in domestic demand in combination with the upturn in exports at the start of 2019 means that net exports have picked up and are expected to continue to rise somewhat in the coming years. Higher net exports are also linked to a weaker krona.

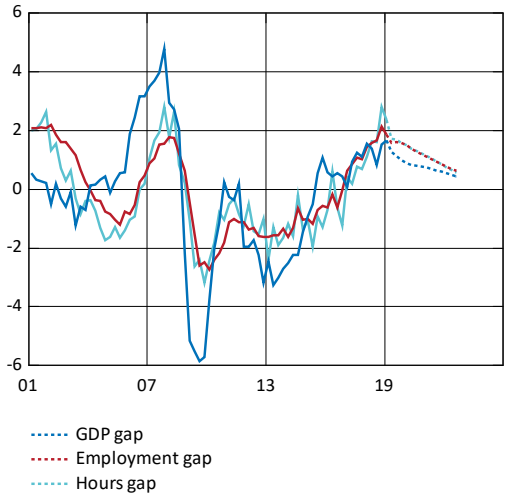
Fiscal policy was somewhat expansionary last year and financial saving in the public sector fell from 1.4 to 0.9 per cent of GDP. In light of overall macroeconomic developments, adopted fiscal policy measures for this year are expected to lead to a slight additional fall in financial saving, to 0.3 per cent of GDP.

Housing investment weighing down developments

The housing shortage and high housing prices were two reasons why housing construction increased and became an important driver of the economic upturn in 2014–2017, when the contribution to GDP growth was just over 0.5 percentage points per year on average. In the autumn of 2017, housing prices began to fall when the demand for newly built homes decreased. The price fall and uncertainty that characterised the market have led to a decrease in new housing starts. This development will weigh down housing investment and GDP growth, particularly this year,

[16] For an international comparison and review of various explanatory factors, see the chapter "Produktiviteten i Sverige" ["Productivity in Sweden"] in "Lönebildningsrapporten 2017" (in Swedish only, summarised as Wage Formation in Sweden 2017), National Institute of Economic Research.

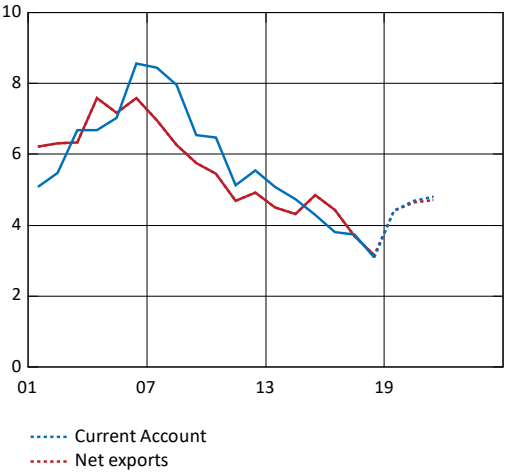
Figure 4:10. GDP gap, employment gap and hours gap
Per cent



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

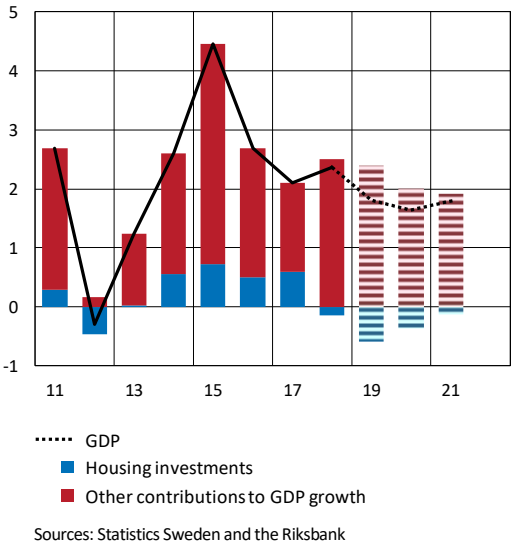
Sources: Statistics Sweden and the Riksbank

Figure 4:11. Sweden's current account and net exports
Per cent of GDP



Sources: Statistics Sweden and the Riksbank

Figure 4:12. Contributions to GDP growth
Percentage points



Sources: Statistics Sweden and the Riksbank

and then have a more or less neutral effect on GDP growth in the coming years (see Figure 4:12). Although the decline in housing construction is substantial in the short-term perspective, the number of housing starts remains historically high.

Expectations of a certain normalisation of the economy going forward are contributing to a slightly slower increase in business sector investment, excluding housing investment, than in recent years. Total gross investment will remain more or less unchanged this year and then increase at a moderate rate thereafter.

Subdued consumption growth as a result of moderate development in housing prices

Disposable household income will grow increasingly slowly in the years ahead when employment is expected to increase at a slower pace and mortgage rates rise in tandem with the repo rate. According to the National Institute of Economic Research's Consumer Tendency Survey, households' interest rate expectations over the next few years seem well in line with the Riksbank's forecast for the repo rate (see Figure 2:12). This suggests that households are making allowances for forthcoming rate rises in their financial calculations and reflects to a certain extent the fact that households are saving a historically high share of their income to begin with.

In light of the continued strong situation on the labour market and a stabilisation of the housing market, households can therefore expect to consume a larger share of their income, thereby smoothing their consumption over time. Consumption will thus develop at a relatively even pace in the years ahead, slightly below the historically average growth rate (see Figure 4:13).

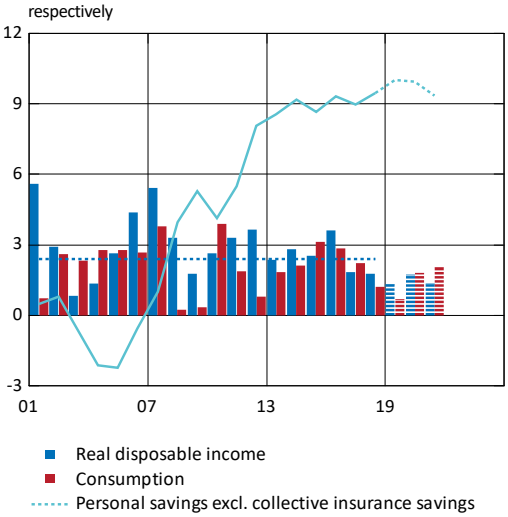
Stabilisation on the housing market and slower growth in household debt

Household debt has increased at an ever-slower rate in the wake of the price fall in housing. Housing prices have been stable over the past year and the fall, measured in terms of the HOX price index, has stopped at just under 5 per cent compared with the price peak in the summer of 2017 (see Figure 1:11). The downturn is hence moderate compared with previous price increases and today's home-buyers are in general still paying a significantly higher price for their home than the sellers once did. As housing purchases are mostly funded via mortgages, this continues to constitute a key driver of household debt growth.

In the years ahead, construction is expected to stabilise at a lower level, while amortisation requirements will affect an increasing number of households and mortgage rates will gradually rise. This is expected to contribute to moderate housing price increases. Statistics Sweden has adjusted disposable household income downwards for 2018, which means that the debt-to-income ratio, the amount of debt a household has in relation to its income, is higher to start with compared with the assessment in April. Debt is expected to continue to increase

Figure 4:13. Households' real disposable income, consumption and savings ratio

Annual percentage change and per cent of disposable income, respectively

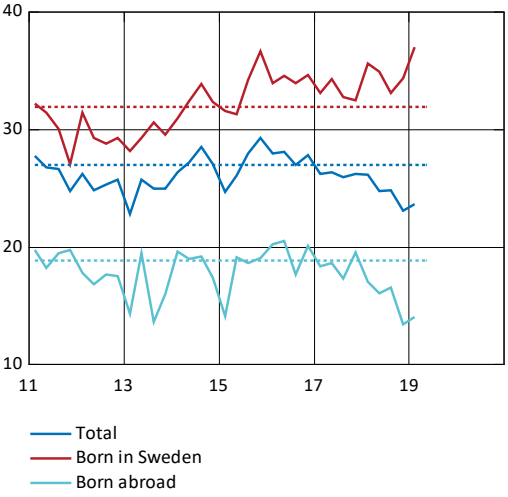


Note. Disposable income has been deflated using the household consumption deflator. Broken line is the average of consumption growth 1994–2018. Collective insurance savings consist of savings that households do not control themselves, such as premium pensions and group insurance policies.

Sources: Statistics Sweden and the Riksbank

Figure 4:14. Job finding rate

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

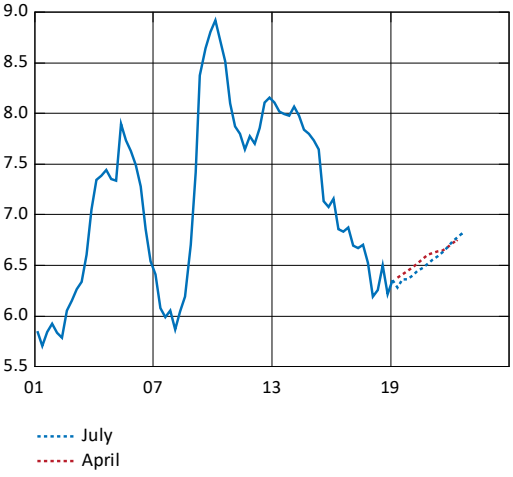


Note. The job-finding rate refers to the percentage of unemployed who become employed each quarter. The broken lines represent the mean value since Q3 2005.

Source: Statistics Sweden

Figure 4:15. Unemployment

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



Sources: Statistics Sweden and the Riksbank

slightly more rapidly than income and the debt-to-income ratio will rise to just over 190 per cent in 2022 (see Figure 1:12).

Strong labour market

Developments on the labour market have been strong for several years and both the labour force participation rate and the employment rate have risen to very high levels (see Figure 4:7). The favourable economic situation means that demand for labour remains high and employment is expected to increase by almost 1 per cent this year.

At the same time as developments on the labour market have been favourable, it has become more difficult to match job-seekers with vacant jobs. The job-finding rate, i.e. the flow from unemployment into employment, is still relatively low despite healthy economic activity (see Figure 4:14). An explanation for this is probably the large in-flow into the labour force that is mostly made up of refugees and their family members, a group that have historically had a weaker connection to the labour market. This development has led to changes in the composition of the unemployed group, as the proportion of unemployed persons registered with Arbetsförmedlingen (the Swedish public employment service) belonging to 'vulnerable' groups has increased and now constitutes over 75 per cent.[17] The inflow of labour in the period ahead is also expected to consist primarily of persons who, on average, find it relatively difficult to obtain work. At the same time, demand for labour is growing more slowly and unemployment is therefore expected to rise slightly during the forecast period (see Figure 4:15).

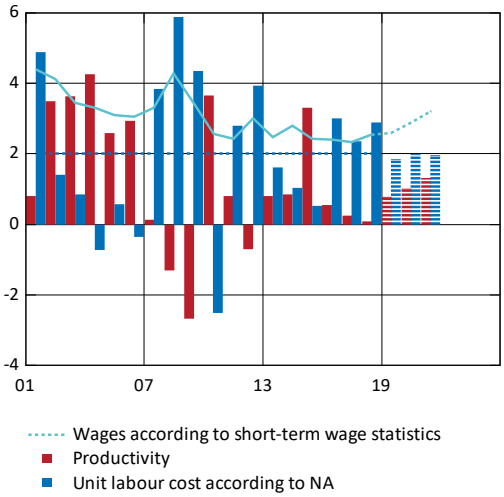
GDP growth, employment and hours worked are expected to be lower than their respective growth trends, and resource utilisation will therefore fall slightly. All in all, resource utilisation on the labour market, and in the economy as a whole, is still expected to be higher than normal and to remain so over the coming years (see Figure 4:10).

Gradually higher wage growth

In recent years, wages have increased moderately, in relation to both the economic situation and their historical average. The same is true of wage growth abroad. Productivity growth, which affects the scope for wage increases at companies, has also been weak. Developments in resource utilisation abroad and weak productivity growth are key factors behind the subdued wage growth of recent years. At the same time, weak productivity growth during the period has led to a relatively rapid increase in unit labour costs (see Figure 4:16).

Wage growth according to the short-term wage statistics is expected to be 2.6 per cent on average in 2019 and is thereafter expected to rise further in the coming years. Both resource utilisation and wage growth abroad have risen (see Figure 3:10). During 2020, new wage negotiations will take place in a situation

Figure 4:16. Wages and labour costs in the whole economy
Annual percentage change



Note. Broken line is the average of unit labour cost according to NA 1994–2018.

Sources: National Mediation Office, Statistics Sweden and the Riksbank

[17] Vulnerable groups are defined by Arbetsförmedlingen as employed persons who lack upper-secondary school education, and/or are born outside Europe and/or have a disability and/or are 55–64 years old.

where inflation expectations of recent years have been close to 2 per cent, the labour market has been very strong and inflation has been close to the inflation target. In addition, productivity is expected to rise slightly more rapidly in the period ahead, approximately in line with other countries (see Figure 4:8). Overall, this suggests rising wage growth. During the forecast period, unit labour costs are expected to rise more or less in line with their historical average of 2 per cent per year (see Figure 4:16).

Swedish krona to appreciate in the period ahead

The Swedish krona has weakened since publication of the Monetary Policy Report in April (see Figure 2:10). Some of this depreciation occurred in connection with the monetary policy decision, but other economic news has also contributed to the krona's development.

Seen in a slightly longer-term perspective, the krona has repeatedly been lower than in the Riksbank's forecasts. It is difficult to forecast changes in the exchange rate, not least in the shorter term. In the longer term, there is evidence that exchange rates are driven by fundamental factors such as relative productivity and terms of trade, and that movements away from long-term equilibrium levels should be temporary. Estimates of long-term equilibrium levels may differ depending on, for example, which measure of the real exchange rate is used. But the collective assessment of the krona's development in a longer-term perspective indicates that the krona is currently weaker than its long-term equilibrium level (see the article "The trend development of the Swedish krona" in this chapter). As in the Riksbank's earlier assessment, the krona is therefore expected to slowly strengthen in the longer term. In the current forecast, the krona will remain close to its current level during the forthcoming quarters, before it gradually appreciates towards its long-term equilibrium level (see Figure 4:17).

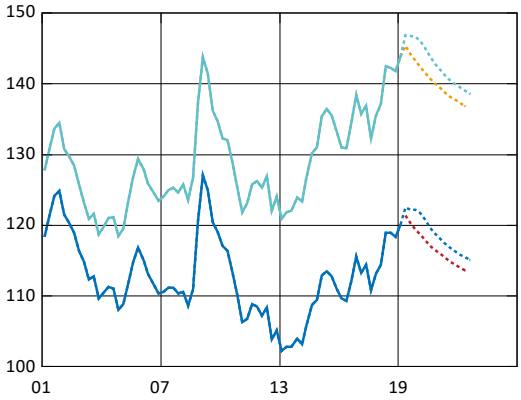
Inflation close to 2 per cent in the coming years

Inflation has now been close to the Riksbank's inflation target of 2 per cent since the start of 2017 (see Figure 4:18). Several factors have contributed to this. Among others, the economic situation in Sweden has strengthened and the krona has depreciated, contributing to higher price growth in imported goods and food. In recent years, rising energy prices have also contributed to higher inflation.

Inflation has developed in line with the Riksbank's forecast since the monetary policy meeting in April. In May, CPIF inflation amounted to 2.1 per cent. Excluding energy prices, CPIF inflation was lower and amounted to 1.7 per cent. The median of different measures of underlying inflation regularly analysed by the Riksbank lies at 2 per cent.

Economic activity is strong and resource utilisation is expected to continue to be high in the coming years. Unit labour costs are expected to increase at a relatively normal rate going forward. The weak krona, rising food prices and higher rent

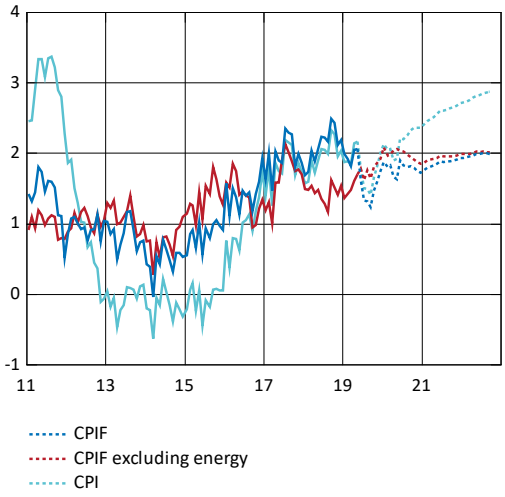
Figure 4:17. Real and nominal exchange rate, KIX
Index, 18 November 1992 = 100



Note. The real exchange rate is calculated using the CPIF for Sweden and the CPI for the rest of the world. The KIX (krona index) is a weighted average of the krona exchange rate against currencies in 32 countries that are important for Sweden's international transactions. A higher value indicates a weaker exchange rate.

Sources: National sources, Statistics Sweden and the Riksbank

Figure 4:18. CPIF, CPIF excluding energy and CPI
Annual percentage change



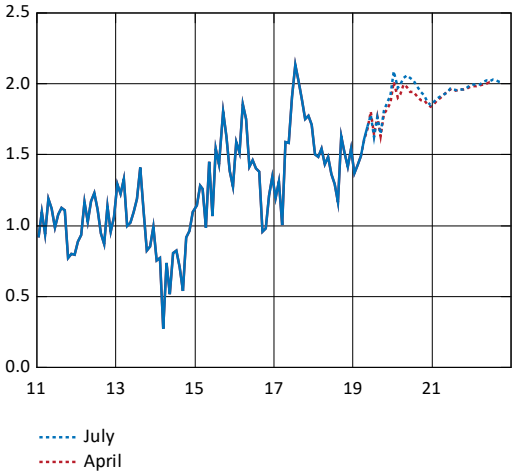
Sources: Statistics Sweden and the Riksbank

increases than in recent years are other factors making a positive contribution to inflation over the next few years. Overall, this means that inflation measured in terms of the CPIF excluding energy will gradually rise and CPIF inflation will be close to 2 per cent for most of the forecast period (see Figure 4:18).

There are factors that seem to be dampening inflation. In the years ahead, the krona is expected to appreciate somewhat at the same time as energy prices are expected to increase more slowly than in recent years. The lower rate of increase in energy prices will contribute towards a temporary drop in CPIF inflation, which will be just below 1.5 per cent in the months ahead before rising again.

The prospects for inflation are largely the same as in the Monetary Policy Report from April. The krona is weaker than the previous forecast and is expected to remain weaker for the entire forecast period which has led to a slight upward revision of CPIF inflation excluding energy in 2020 (see Figure 4:19). Lower energy prices than expected are counteracting the effects of the weaker krona and the forecast for CPIF inflation has been revised down slightly for the year ahead (see Figure 1:6). Overall, however, the forecast revisions for inflation both including and excluding energy are minor.

Figure 4:19. CPIF excluding energy
Annual percentage change



Sources: Statistics Sweden and the Riksbank

ARTICLE – Trend development of the Swedish krona

The krona's nominal exchange rate in competitiveness-weighted terms (measured using the krona index KIX) is on approximately the same level today as it was in 1993, the first year with a variable exchange rate. Against some specific currencies, the krona is weaker than in 1993, but against other currencies it is on a level close to or stronger than it was 25 years ago. However, the krona exchange rate has weakened considerably against many currencies in recent years, and, if the development of prices and costs in national currencies is simultaneously taken into account, the krona is currently weak according to most measures. The real krona exchange rate showed a weakening trend for several decades, approximately until the global financial crisis. This development can be explained by weaker productivity in Sweden than in other countries during a period and periodic deterioration in Sweden's terms of trade. During the 2010s, different measures of the real exchange rate provide a divided picture of the krona's development. But the overall view is nevertheless that the krona is weak at present and can be expected to become stronger in the period ahead as interest rates rise more in Sweden than abroad and uncertainty over global trade policy abates. However, there is significant uncertainty over how large, how rapid and how soon an appreciation of the krona could be. The Riksbank is therefore continuing with its analytical work to shed light on and better understand the development of the krona.

Is the krona weak?

The recent depreciation of the Swedish krona has provoked an intensive debate. However, the recent depreciation of the krona exchange rate need not necessarily mean that it is fundamentally weak. The depreciation could also mean that the krona is returning to a more normal level after a temporary period of being unusually strong. For example, the Swedish krona has depreciated by 11 per cent against the Norwegian krone since the first quarter of 2016 but, over the year before that, it had appreciated to the same extent. At present, the exchange rate against the Norwegian krone is at the same level as in 1993, the first year with a variable exchange rate. At the same time, the krona has weakened by about 15 per cent against the euro and by around 45 per cent against the Swiss franc.

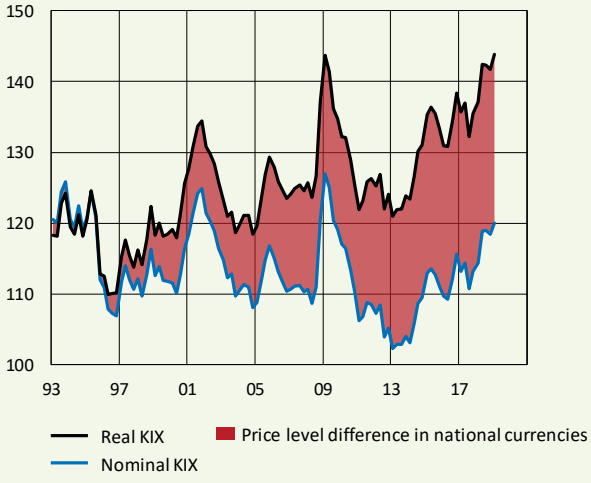
Making a more universal statement over the development of the krona exchange rate thus means balancing a number of different currencies. This is done in KIX (the krona index), which weighs a number of bilateral exchange rates on the basis of how significant they are for Sweden's foreign trade. According to KIX, the krona is currently on about the same level as in 1993, when the krona had just depreciated by 20 per cent in conjunction with the introduction of variable exchange rates. However, KIX includes a number or emerging market economies that have been given increasing weights due to their growing significance for world trade. On average, the emerging market economies have had comparatively high inflation and thus weak exchange rate development, as exchange rates tend to adjust themselves so that prices for goods and services that are traded internationally do not differ too much from country to country. Against the currencies of more similar countries, the krona has depreciated in nominal terms since 1993 and much of this depreciation has taken place in recent years.

The real exchange rate – a comparison of price levels in common currency

It has been pointed out in the debate that, because of the development of the exchange rate, a Swedish krona buys fewer and fewer goods and services abroad compared with in

Figure 4:20. Real KIX divided into nominal KIX and price level difference

Index 18 November 1992=100



Source: The Riksbank

Sweden. For many reasons, this is also the most relevant kind of comparison to make – between price levels in common currency. This comparison is generally referred to as the real exchange rate and is defined as the product of the nominal exchange rate and the ratio between a foreign and domestic price index.[18]

By comparing the CPIF for Sweden and similar price indices for the countries included in KIX, the measure usually representing the krona's real exchange rate, the real KIX, can be obtained. Figure 4:20 shows how this index has developed since 1993, divided into development in nominal KIX and the difference in price levels. It clearly indicates that the nominal KIX is on the same level as in 1993 but that a growing price level difference has made the krona weaker in real terms, as inflation in Sweden has been lower than abroad.

Different measures of the real exchange rate

This picture of how the difference in price levels has developed is based on the consumer price index. However, it is not necessarily the most appropriate way of measuring the real exchange rate, partly because index structures and measurement methods differ among countries. Another consumer-price-based alternative is to construct a real exchange rate based on the purchasing power parity (PPP) statistics compiled by the OECD and Eurostat in order to compare real income levels in different countries. The advantage of these PPP data is that they are based on comparisons of prices of identical products, although the data set is narrower than common consumer price indices and is updated significantly less frequently and with a greater delay.[19]

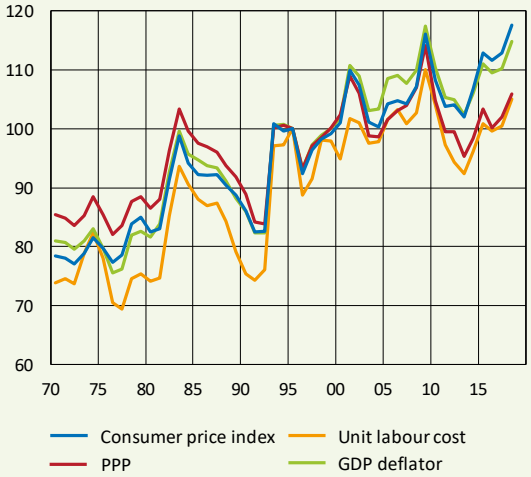
Another possibility is to use the GDPdeflator which is intended to capture the price level of the total output in each country. It is also possible to use costs instead of prices, and calculate the real exchange rate based on the unit labour cost in different countries. Use of this method avoids variations due to changes in companies' price mark-ups and alleviates the difficulties with comparability that can be caused by the way in which consumer price indices are constructed. At the same time, the unit labour cost captures the labour cost and not the total cost of a produced unit, which can affect the picture of the relative price level if the profit share were to develop differently in Sweden and abroad. In contrast to consumer prices, the GDP deflator also includes prices of goods and services that do not go to private consumption (for example exports and investments), and excludes prices of imported goods and services.

Trend depreciation of the real exchange rate up until the financial crisis

Figure 4:21 shows real effective – i.e. trade-weighted – exchange rates for Sweden up until the end of 2018 based on these various measures.[20] The real exchange rate calculated using the consumer price index and the GDP deflator gives the impression that the depreciation since 2012 is a continuation of a trend that has been ongoing since the 1970s. The other measures also indicate a trend depreciation of the krona's real exchange rate. However, the trend for these measures is less obvious after 1993.

Figure 4:21. Different measures of the Swedish real effective exchange rate

Index 1995=100, annual data up to and including 2018



Note. The names specify which price or cost measure has been used to deflate the real exchange rate. There are no data for certain measures for certain countries prior to 1995. The sample is limited to countries and years in which there are data available for the measures based on the consumer price index, PPP and GDP deflator. The real exchange rate based on unit labour costs is an inverted and reindexed version of the OECD's "Competitiveness Indicator, Relative Unit Labour Costs, Overall Economy".

Sources: OECD, World Bank and the Riksbank

The differences between the measure that uses the consumer price index and those based on unit labour costs and PPP data can partly be an expression of differences in the price measurement methods that form the basis for each country's consumer price index. The fact that the development differs between the consumer price index and unit labour costs can also in part reflect that domestic output has a different composition to domestic consumption.

[18] $Real\ exchange\ rate = Nominal\ exchange\ rate \times \frac{Foreign\ price\ index}{Domestic\ price\ index}$.

[19] PPP stands for Purchasing Power Parity. Significantly fewer products are used in the construction of PPP data than in the construction of consumer price indices and for each individual sub-index, prices are only collected every third year. The data used here are based on the aggregation of prices referred to as "purchasing power parities for private consumption". Bilateral real exchange rates in relation to the United States and the euro area calculated on the basis of these data were shown in the article "Development of the Swedish krona in the longer term" in Monetary Policy Report, October 2018.

[20] To make the presented measures of the real exchange rate as comparable as possible, some of the emerging market economies included in KIX have not been weighed in before 1995. Data are also missing for the euro area as a whole prior to 1995 and have been replaced by an aggregate of a smaller group of countries. Overall, this mean that the sample is limited to 18 KIX countries for the period prior to 1995, which corresponds to 84 per cent of KIX with 1994 weights. Prior to 1995, constant KIX weights from 1994 are used.

PPP data also make it possible to directly ascertain whether the krona is strong or weak as the comparison refers to the same basket of goods in Sweden and abroad. If the identical basket were more expensive in Sweden, the krona could be said to be strong, and vice versa if the basket is cheaper. During 2018, the Swedish price level measured in this way was about 20 per cent lower than in Norway but around 15 per cent higher than in the euro area and about 10 per cent higher than in the United States.

What can explain the trend in the krona's real exchange rate?

Overall, the various measures indicate a depreciating trend in the krona's real exchange rate since the 1970s, but one which seems to be less obvious since 1993, depending somewhat on which measure is given the greatest weight. What can explain this trend?

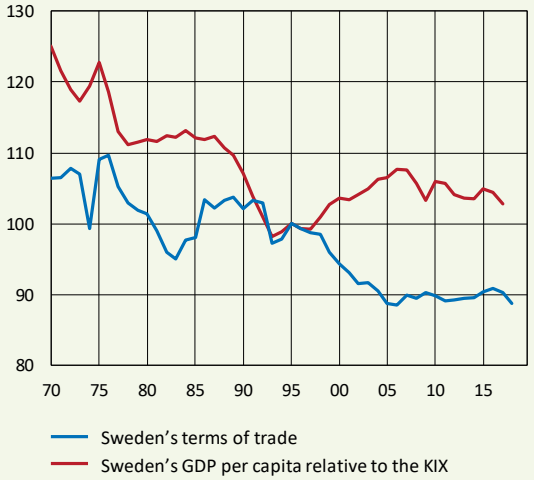
In traditional economic theory, a trend depreciation of a country's real exchange rate is normally explained by slower productivity growth at home than abroad or by a trend deterioration in the country's terms of trade.[21]

Relative productivity growth is normally reflected in the development in GDP per capita relative to other countries. Between 1970 and 1993, GDP per capita grew more slowly on average in Sweden than in the KIX-weighted countries (see Figure 4:22). This may be an important cause of the depreciation in the real krona exchange rate during this period. After that followed a ten-year period of relatively rapid growth in Swedish GDP per capita. Between 2006 and 2009, Swedish GDP per capita fell back slightly relatively to other countries and has since then been largely unchanged compared with the KIX countries as a whole.

The period of relatively high Swedish productivity growth between 1998 and 2006 coincided in the main with a clear deterioration in the Swedish terms of trade (see Figure 4:22). The terms of trade for a small, open economy like Sweden's are mainly dictated by global market prices. They can in turn be determined by supply factors such as technological development or raw material deposits. The most obvious examples of countries whose exchange rates covary considerably with the country's terms of trade are those whose production and exports are strongly orientated towards individual raw materials. But even with other production patterns, trends in a country's export prices and import prices, that are important for the exchange rate, can arise. The deterioration in the terms of trade that occurred between 1998 and 2006 affected both Sweden and a few other countries, including Finland and South Korea, that export high-tech products with fast technological development and hence rapidly falling costs and prices.[22]

Figure 4:22. Sweden's terms of trade and GDP per capita relative to other countries

Index 1995=100, annual data up to and including 2018 (for GDP per capita in 2017)



Note. The aggregate weighting of the KIX countries' GDP per capita has been done using the same sample of countries and years as those described in the note to Figure 4:21 and in footnote 20.

Sources: IMF and World Bank

In summary, the trend depreciation of the real exchange rate in 1970–1993 is compatible with the trend development of traditional explanatory variables during the same period. The continued krona depreciation between 1998 and 2006 coincided with an increase in GDP per capita relative to other countries of 5 per cent but a simultaneous deterioration in the terms of trade of about 10 per cent. The reason for a continued depreciation of the real exchange rate up until 2009 could be that GDP per capita fell back relative to other countries between 2006 and 2009, but after that, it is difficult to find support in traditional explanatory variables for a weakening trend – or equilibrium level – in the real krona exchange rate. [23]

The development of Sweden's foreign trade (and other international transactions) should also be linked to the exchange rate. Starting at the beginning of the 1990s, the

[21] When productivity development is faster than abroad, wage growth and ultimately the prices of such goods and services that are not traded internationally should be higher. This is a crucial link in the reasoning behind the "Balassa-Samuelson Hypothesis", which posits that the real exchange rates of economies with relatively rapid productivity growth can be expected to appreciate. Terms of trade are defined as the ratio between the export price index and the import price index. See further M. Berka, M. B. Devereux, and C. Engel (2018), "Real Exchange Rates and Sectoral Productivity in the Eurozone", *American Economic Review* 108(6): 1543–1581.

[22] The Export Inquiry (SOU 2008:90) ascertained in 2008 that "an important explanation for the decline in the terms of trade is that Sweden's economy is specialised in high-tech industries, the rapid technological development of which is leading to cost reductions and product price falls. In addition, many Swedish companies operate in specialist market segments in which an increase in supply from Sweden quickly leads to reduced prices."

[23] The literature identifies a number of additional factors that can affect real exchange rates at least temporarily, including the level of public consumption, trade barriers and demographic factors. A review of such variables and estimates of the real effective exchange rates of 48 countries can be found in L. A. Ricci, G.M. Milesi-Ferretti, and J. Lee (2008), " Real Exchange Rates and Fundamentals: A Cross-Country Perspective", IMF Working Paper 08/13. However, a preliminary review in relation to the euro area indicates that the changes in these variables over the last few decades have been so minor that they can only have had a marginal impact on the real exchange rate in relation to the euro.

Swedish current account first increased from a deficit of 1 per cent of GDP in 1993 to a surplus of 8 per cent in 2006. Since then, the surplus has gradually fallen (See Figure 4:11). There is no simple correlation between the current account and the exchange rate but one hypothesis that forms the basis of parts of the IMF's recurring analysis of the degree of under- and overvaluation of various currencies posits that the more in balance foreign trade is, the closer the real exchange rate is to its long-term equilibrium level.[24]

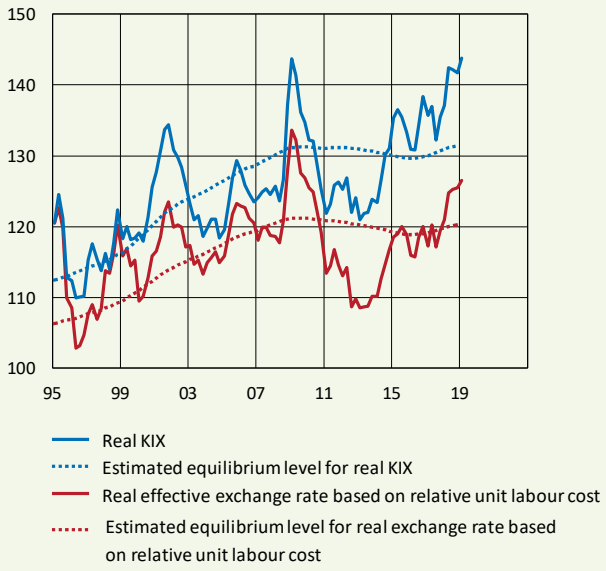
The development of the real exchange rate in an empirical model

It is clear from the reasoning above that there are periods when the development in traditional explanatory variables drags the real exchange rate in different directions. This is an argument in favour of using an empirical model to weigh together the impact of various factors on the real exchange rate. The Riksbank regularly uses a time series model with time-varying equilibrium levels in order to simultaneously explain the equilibrium level of the real exchange rate and its deviations from this equilibrium level. A combination of the estimated trend in relative GDP per capita and the estimated trend in the terms of trade is assumed to explain the equilibrium level. At the same time, the current account balance and differences in relation to other countries in short-term and long-term interest rates are assumed to be behind the deviations of the exchange rate from the equilibrium level. The model is estimated using data from 1995 onwards, both on real KIX and on the krona's real exchange rate based on relative unit labour cost. Real KIX and the krona's real exchange rate based on relative unit labour cost, as well as the estimated equilibrium levels are reproduced in Figure 4:23.

According to these estimates, using both real KIX and relative unit labour cost, the clear trend deterioration in the terms of trade between 1998 and 2006 affects the krona exchange rate more than the relatively limited increase in relative GDP per capita that took place during the same period. This explain the depreciation of the krona's estimated equilibrium level during this period (see Figure 4:23). As both the terms of trade and relative GDP per capita have been largely unchanged since then, no major changes in the estimate equilibrium level have occurred either.

With the estimate of how the equilibrium level has developed also follows a picture of when the krona was stronger or weaker than its real equilibrium level. If we focus on the period since the global financial crisis, we see that the krona was weak according to both measures during the most intensive phase of the financial crisis in 2009. This was a period when the financial markets and the global economy were characterised by very considerable uncertainty – not least with regard to the economies of the Baltic countries, to which Swedish banks were significantly exposed.

Figure 4:23. Estimated equilibrium level for real exchange rate measured using two different measures
Index 18 November 1992=100



Source: The Riksbank

In the years after the financial crisis, the krona was strong. During this period, the economic situation stabilised in the Baltic economies and monetary policy moved in a less expansionary direction in Sweden than in many other countries. Since 2017–2018, the krona has once again been weak. At the same time, interest rates in Sweden have been low compared with those abroad and economic policy uncertainty has been unusually high, not least with regard to trade policy.

The krona today and in the future

In conclusion, we can note that there are important differences between different measures of the real exchange rate, but that there is a great deal to suggest that the krona is currently weaker than a long-term equilibrium level. The krona can therefore be expected to appreciate in the period ahead as interest rates in Sweden rise relative to other countries and the uncertainty surrounding global trade policy decreases. As the inflation rate in Sweden is expected to be approximately the same as in other countries, it is reasonable to predict that the adjustment will take place in the form of a strengthening of the nominal exchange rate.

Based on the current state of knowledge, however, it is very difficult to say just how large the krona appreciation can be expected to be, when it will start and how quickly it will happen. The Riksbank therefore intends to continue to contribute analyses that shed light on and increase understanding of the krona's development.

[24] See, for instance, IMF, *2018 External Sector Report: Tackling Global Imbalances amid Rising Trade Tensions*, which presents the assessment that 2017 current account surplus in Sweden exceeded the level that was compatible with fundamental factors and that this in turn indicated that the krona was undervalued.

Tables

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

Table 1. Repo rate forecast

Per cent, quarterly averages

	Q2 2019	Q3 2019	Q4 2019	Q3 2020	Q3 2021	Q3 2022
Repo rate	–0.25 (–0.25)	–0.25 (–0.25)	–0.19 (–0.19)	0.14 (0.14)	0.52 (0.52)	0.90

Source: The Riksbank

Table 2. Inflation

Annual percentage change, annual average

	2017	2018	2019	2020	2021
CPIF	2.0 (2.0)	2.1 (2.1)	1.7 (1.8)	1.8 (1.8)	1.9 (1.9)
CPIF excl. energy	1.7 (1.7)	1.4 (1.4)	1.7 (1.7)	2.0 (1.9)	1.9 (1.9)
CPI	1.8 (1.8)	2.0 (2.0)	1.8 (2.0)	2.2 (2.3)	2.6 (2.6)
HICP	1.9 (1.9)	2.0 (2.0)	1.7 (1.8)	1.8 (1.8)	1.8 (1.8)

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

Sources: Statistics Sweden and the Riksbank

Table 3. Summary of financial forecasts

Per cent, unless otherwise stated, annual average

	2017	2018	2019	2020	2021
Repo rate	–0.5 (–0.5)	–0.5 (–0.5)	–0.2 (–0.2)	0.1 (0.1)	0.5 (0.5)
10-year rate	0.7 (0.7)	0.7 (0.7)	0.3 (0.5)	0.6 (1.0)	1.1 (1.4)
Exchange rate, KIX, 18 November 1992 = 100	112.9 (112.9)	117.6 (117.6)	121.7 (120.3)	120.2 (117.5)	117.1 (115.2)
General government net lending*	1.4 (1.4)	0.9 (0.9)	0.3 (0.6)	0.3 (0.5)	0.3 (0.5)

* 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

Sources: Statistics Sweden and the Riksbank

Table 4. International conditions

Annual percentage change, unless otherwise stated

GDP	PPP-weights	KIX-weights	2017	2018	2019	2020	2021
Euro area	0.11	0.49	2.5 (2.5)	1.9 (1.8)	1.2 (1.2)	1.4 (1.4)	1.4 (1.5)
USA	0.15	0.08	2.2 (2.2)	2.9 (2.9)	2.5 (2.4)	1.6 (1.8)	1.6 (1.6)
Japan	0.04	0.02	1.9 (1.9)	0.8 (0.8)	0.8 (0.6)	0.5 (0.5)	0.9 (0.9)
China	0.19	0.08	6.7 (6.9)	6.7 (6.6)	6.0 (6.1)	5.9 (6.0)	5.9 (6.0)
KIX-weighted	0.75	1.00	2.9 (2.9)	2.6 (2.5)	2.0 (2.0)	2.0 (2.1)	2.0 (2.1)
World (PPP-weighted)	1.00	—	3.8 (3.7)	3.6 (3.7)	3.3 (3.4)	3.5 (3.6)	3.6 (3.6)

Note. Calendar-adjusted growth rates. The PPP weights refer to the global purchasing-power adjusted GDP weights for 2018, according to the IMF. KIX weights refer to weights in the Riksbank's krona index (KIX) for 2019. The forecast for GDP in the world is based on the IMF's forecasts for PPP weights. The forecast for KIX-weighted GDP is based on an assumption that the KIX weights will develop in line with the trend during the previous five years.

CPI	2017	2018	2019	2020	2021
Euro area (HICP)	1.5 (1.5)	1.8 (1.8)	1.2 (1.4)	1.3 (1.6)	1.6 (1.6)
USA	2.1 (2.1)	2.4 (2.4)	1.8 (1.9)	2.2 (2.3)	2.2 (2.2)
Japan	0.5 (0.5)	1.0 (1.0)	0.6 (0.7)	1.4 (1.5)	1.1 (1.2)
KIX-weighted	1.9 (1.9)	2.2 (2.2)	1.9 (1.9)	1.9 (2.0)	2.0 (2.0)

	2017	2018	2019	2020	2021
Policy rates in the rest of the world, per cent	–0.1 (–0.1)	0.1 (0.1)	0.2 (0.2)	0.2 (0.3)	0.3 (0.5)
Crude oil price, USD/barrel Brent	54.8 (54.8)	71.5 (71.5)	63.9 (67.0)	59.5 (65.9)	58.5 (63.4)
Swedish export market	5.0 (5.0)	3.3 (3.4)	3.4 (3.2)	3.6 (3.7)	3.4 (3.5)

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

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

Table 5. GDP by expenditure

Annual percentage change, unless otherwise stated

	2017	2018	2019	2020	2021
Private consumption	2.2 (2.2)	1.2 (1.2)	0.7 (1.8)	1.8 (2.1)	2.0 (2.0)
Public consumption	0.0 (0.0)	0.9 (0.9)	0.8 (0.9)	0.8 (0.8)	0.8 (0.8)
Gross fixed capital formation	6.0 (6.0)	4.0 (3.3)	0.4 (0.8)	1.5 (1.9)	1.8 (1.9)
Inventory investment*	0.1 (0.1)	0.4 (0.4)	0.0 (0.0)	−0.2 (−0.2)	0.0 (0.0)
Exports	3.2 (3.2)	3.9 (3.5)	4.3 (3.5)	3.8 (4.0)	3.6 (3.8)
Imports	4.8 (4.8)	3.8 (2.9)	1.9 (2.5)	3.1 (3.1)	3.4 (3.6)
GDP	2.1 (2.1)	2.4 (2.3)	1.8 (1.7)	1.6 (1.9)	1.8 (1.8)
GDP, calendar-adjusted	2.4 (2.4)	2.5 (2.4)	1.8 (1.7)	1.4 (1.7)	1.7 (1.7)
Final domestic demand*	2.4 (2.4)	1.8 (1.6)	0.6 (1.2)	1.4 (1.6)	1.6 (1.6)
Net exports*	−0.5 (−0.5)	0.2 (0.4)	1.2 (0.5)	0.5 (0.5)	0.3 (0.3)
Current account (NA), per cent of GDP	3.7 (3.7)	3.1 (3.4)	4.4 (3.7)	4.7 (4.0)	4.8 (4.1)

*Contribution to GDP growth, percentage points

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

Sources: Statistics Sweden and the Riksbank

Table 6. Production and employment

Annual percentage change, unless otherwise stated

	2017	2018	2019	2020	2021
Population, aged 15–74	1.1 (1.1)	0.8 (0.8)	0.7 (0.7)	0.5 (0.5)	0.4 (0.4)
Potential hours worked	1.1 (1.1)	1.1 (1.1)	1.0 (1.0)	0.9 (0.9)	0.7 (0.7)
Potential GDP	2.0 (2.0)	2.0 (2.0)	1.9 (1.9)	1.8 (1.8)	1.8 (1.8)
GDP, calendar-adjusted	2.4 (2.4)	2.5 (2.4)	1.8 (1.7)	1.4 (1.7)	1.7 (1.7)
Number of hours worked, calendar-adjusted	2.1 (2.1)	2.4 (2.4)	1.0 (1.1)	0.4 (0.4)	0.3 (0.4)
Employed, aged 15–74	2.3 (2.3)	1.8 (1.8)	0.9 (1.0)	0.5 (0.5)	0.4 (0.4)
Labour force, aged 15–74	2.0 (2.0)	1.4 (1.4)	0.9 (1.1)	0.6 (0.6)	0.5 (0.5)
Unemployment, aged 15–74 *	6.7 (6.7)	6.3 (6.3)	6.3 (6.4)	6.5 (6.5)	6.6 (6.6)
GDP gap**	0.8 (0.8)	1.3 (1.3)	1.3 (1.1)	0.8 (1.0)	0.7 (0.9)
Hours gap**	0.5 (0.5)	1.8 (1.8)	1.8 (2.0)	1.4 (1.5)	1.0 (1.2)

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

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

Sources: Statistics Sweden and the Riksbank

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

Annual percentage change, calendar-adjusted data unless otherwise stated

	2017	2018	2019	2020	2021
Hourly wage, NMO	2.3 (2.3)	2.5 (2.6)	2.6 (2.7)	2.9 (3.0)	3.2 (3.2)
Hourly wage, NA	2.5 (2.5)	2.2 (2.2)	2.6 (2.8)	2.9 (3.0)	3.2 (3.3)
Employers' contribution*	0.0 (0.0)	0.5 (0.5)	0.1 (0.1)	0.1 (0.1)	0.1 (0.1)
Hourly labour cost, NA	2.5 (2.5)	2.7 (2.6)	2.7 (2.9)	3.0 (3.1)	3.3 (3.4)
Productivity	0.2 (0.2)	0.1 (0.0)	0.8 (0.6)	1.0 (1.3)	1.3 (1.3)
Unit labour cost	2.4 (2.4)	2.9 (2.9)	1.8 (2.3)	2.0 (1.8)	2.0 (2.0)

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

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

Sources: National Mediation Office, Statistics Sweden and the Riksbank

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