

Monetary Policy Report

September 2018



Correction 7 September 2018

Clarification is provided in Table 1:2.

Corrections 13 and 20 September 2018

Wrong translations in the introduction on page 23 and on page 8.

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 to conduct.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 produce 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 current Monetary Policy Report is submitted as an account of monetary policy.

The Executive Board made a decision on the Monetary Policy Report on 5 September 2018. 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 have a negative effect on confidence in the inflation target. The Riksbank's ambition has generally 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 imbalance in 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 5

Favourable economic activity, Swedish inflation on target 5

Current monetary policy 7

Uncertainty and risks 9

CHAPTER 2 – Financial conditions 13

International developments 13

Financial conditions in Sweden 16

CHAPTER 3 – The current economic situation 18

Inflation in Sweden 18

Global and Swedish economic activity 19

ARTICLE – Small effects on production and inflation of the summer's drought and forest fires 23

CHAPTER 4 – The economic outlook and inflation prospects 24

International developments 24

Sweden 26

Tables 31

CHAPTER 1 – Monetary policy considerations

The overall economic outlook remains largely unchanged since the Monetary Policy Report in July, and points to economic activity remaining favourable abroad and in Sweden. However, there is still considerable uncertainty in the world economy. Rapidly rising energy prices have helped to push up CPIF inflation. The high resource utilisation in the Swedish economy means that the conditions for underlying inflation to rise also remain good. CPIF inflation is therefore expected to stay close to the target of 2 per cent even when the rate of increase in energy prices slows down. As it is important for economic activity to continue to be strong and have an impact on price growth, monetary policy needs to remain expansionary. The Executive Board has therefore decided to hold the repo rate unchanged at –0.50 per cent. If the economy develops as expected, there will soon be scope to slowly reduce the support from monetary policy. The forecast for the repo rate indicates that the repo rate will also be held unchanged at the monetary policy in October and then raised by 0.25 percentage points either in December or February. Reinvestments of principal payments and coupon payments in the government bond portfolio will continue until further notice, in accordance with previous decisions. The expansionary monetary policy underlines the Riksbank's aim to safeguard the role of the inflation target as nominal anchor for price-setting and wage formation.

Favourable economic activity, Swedish inflation on target

Favourable international economic activity but continued uncertainty

Global economic activity remains favourable, even though last year's high growth rates have been followed by more subdued developments during the first half of this year. Several factors indicate that the good global growth will continue. For example, confidence among companies and households is high and the situation on the labour market is continuing to improve in most countries. The financial conditions are also in general beneficial to growth, with low interest rates and good credit terms for both households and companies.

Rising oil prices over the last 12 months have contributed to higher inflation abroad. In the period ahead, the oil price is expected to decrease slightly, causing inflation to also fall back somewhat. But as resource utilisation becomes increasingly strained and wage growth rises, inflationary pressures are expected to increase so that international inflation is just below 2 per cent towards the end of the forecast period. In some countries, where economic development has been strong and inflation is slightly above central bank inflation targets, normalisation of monetary policy is already under way in the form of policy rate rises and reduced asset holdings. However, the European Central Bank (ECB) is still increasing its asset holdings and has communicated that it will not start increasing its policy rate until after next summer.

Table 1:1.

Important factors for monetary policy
Global economic activity is continuing to strengthen but there is still uncertainty. Slow normalisation of monetary policy abroad against the backdrop of moderate inflationary pressures.
The exchange rate to gradually strengthen in the coming years.
Resource utilisation in the Swedish economy still high in the period ahead.
Inflation expectations and CPIF inflation close to 2 per cent. But temporarily high energy prices have helped to push up CPIF inflation. Underlying inflation is more subdued but expected to rise going forward.
Conclusion: Monetary policy needs to remain expansionary for inflation to stay close to target. The repo rate is held unchanged at –0.50 per cent and slow increases are expected to begin in December or February, on condition that the economy develops as expected. Reinvestments of principal payments and coupon payments in the Riksbank's bond portfolio will continue.

Table 1:2.

Important forecast revisions since the Monetary Policy Report in July
Upwardly revised forecast for Swedish GDP growth in 2018 due to a surprisingly high outcome for the second quarter. Higher resource utilisation during the forecast period.
Weaker krona throughout the forecast period.
More rapid rate of increase in energy prices in the year ahead.
Adjusted for energy prices, inflation has been revised downwards slightly, as a result of lower-than-expected outcomes and a lower forecast for wage growth.
Overall, the forecast for CPIF inflation has been revised upwards slightly for 2018 and revised downwards slightly for the second half of 2019. In the longer term, it is unchanged.

Despite the essentially favourable economic outlook, there is still considerable uncertainty over international developments. The trade conflict between the United States and China has worsened over the summer, and although the effects on the global economy are expected to be limited, the consequences may become more serious if the conflict escalates or spreads to other countries. There are also risks linked to the sustainability of public finances, for instance in Italy, and several emerging market economies are showing problems in terms of high inflation, large current account deficits and political instability, for instance. Risks such as these can, if they occur, have a major impact on economic developments, but they are very difficult to quantify in a forecast. Such scenarios therefore lie mainly outside of the forecast reported here.

Continued high resource utilisation in the Swedish economy

Activity in the Swedish economy remains high. GDP growth in the second quarter was surprisingly rapid and together with strong indicators, this suggests that economic activity is still not slowing down. The increasingly strong economic activity in recent years is largely based on global economic improvements and low interest rates that have driven domestic demand. Growth in foreign demand is predicted to slow slightly in the years ahead while the slowdown in the housing market is expected to lead to a decline in housing investment. This will dampen the growth rate in the Swedish economy going forward (see Figure 1:2).

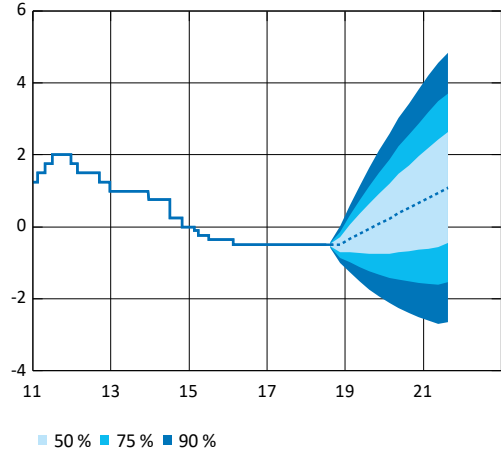
The situation on the labour market has improved continuously since the start of 2013, with a rising employment rate and falling unemployment. Demand for labour is still considerable and the number of employed persons is expected to continue to rise for a further period of time. At the same time, however, there are signs that it is difficult to match job-seekers to vacant jobs. Many industries are reporting labour shortages and recruitment times are long. Matching problems on the labour market and a slower increase in labour will contribute to more subdued employment growth and a slight rise in unemployment.

Resource utilisation is expected to be higher than normal and continue to be so despite a gradual slowdown in GDP growth. Wage growth has been unexpectedly weak in recent months and the forecast has therefore been revised down somewhat. The strong economic activity, higher wage growth abroad and a certain upturn in productivity growth are fuelling the expectation that wages will rise faster going forward. However, wage growth will remain moderate in relation to resource utilisation.

Inflation close to target

Since early 2017, CPIF inflation has been close to 2 per cent (see Figure 1:3). Rapidly rising energy prices have contributed to this and different measures of underlying inflation, which provide an indication of where inflation is heading in the slightly longer term, are still lower than CPIF inflation. The median of a number of different measures of underlying inflation currently stands at 1.5 per cent and has been relatively unchanged during 2018 (see

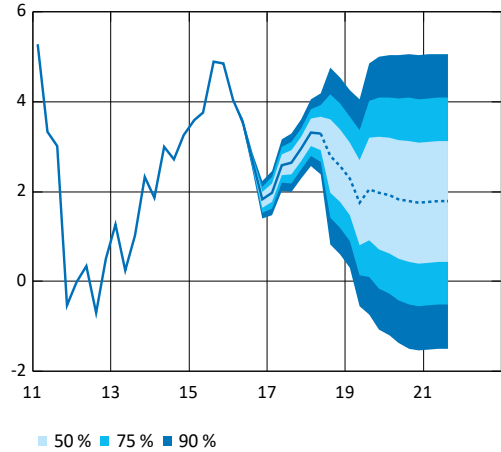
Figure 1:1. Repo rate with uncertainty bands
Per cent



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

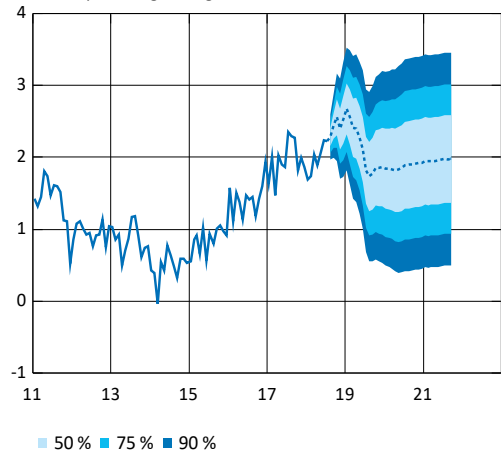
Figure 1:2. GDP with uncertainty bands
Annual percentage change, seasonally-adjusted data



Note. The uncertainty bands are based on the Riksbank's historical forecasting errors. There is also uncertainty for the outcomes for GDP, as the figures in the National Accounts are revised several years after the preliminary 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

Figure 3:3). Service prices have increased at a slower pace, after rising at an increasingly rapid trend rate in recent years. Inflationary pressures thus appear to be moderate at present. The surprisingly high energy prices will contribute to slightly higher CPIF inflation in the year ahead, compared with the previous forecast. But during 2019, the rate of increase in energy prices will instead slow down and inflation will fall back to just below 2 per cent (see Figure 1:4).

The cyclical conditions for the development of inflation are deemed to have remained largely unchanged since the previous Monetary Policy Report, and underlying inflation is expected to rise in the coming years. The inflation forecast for the longer term is therefore unchanged. The high resource utilisation in the Swedish economy will continue to be a key driver of inflation going forward, as will rising inflationary pressures abroad. The Swedish krona has been weaker than expected and in light of this, the exchange rate is expected to be weaker in the years ahead compared with the forecast in July (see Figure 1:5). However, the gradual appreciation that is nevertheless expected to occur will subdue inflation from mid-2019 onwards. Overall, it is the Riksbank's assessment that inflation will be close to 2 per cent in the years ahead.

Current monetary policy

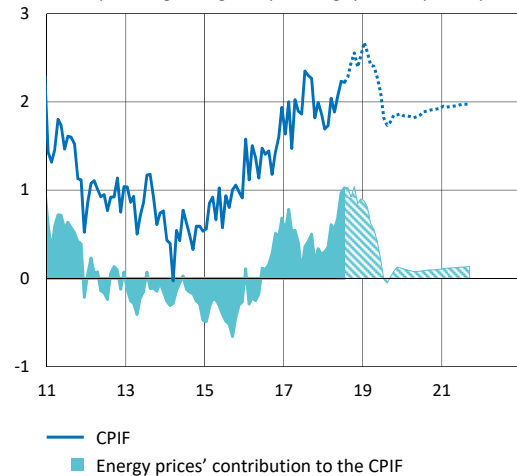
The Riksbank's monetary policy with a negative policy rate and extensive purchases of government bonds has had a clear impact on short-term and long-term market rates and on the krona exchange rate in recent years. Monetary policy has contributed to inflation and inflation expectations being close to 2 per cent, to economic activity being strong and to unemployment falling back.

If the economy develops as expected, there will soon be scope to slowly reduce the support from monetary policy.

For some time, the Swedish economy has developed strongly and inflation has been close to the target of 2 per cent since the beginning of 2017. Both long-term and short-term inflation expectations are also close to the inflation target (see Figure 3:6). However, measures of underlying inflation, which provide an indication of where inflation is heading in the slightly longer term, clearly indicate that inflationary pressures are still moderate. But resource utilisation in the Swedish economy is higher than normal and even though it is rapidly rising energy prices that have been the main driver of CPIF inflation this year, the cyclical conditions remain good for underlying inflation to also rise. Inflation is therefore expected to stay close to the target of 2 per cent even when energy prices no longer contribute so much to inflation. The overall picture of the economic outlook and inflation prospects remains largely unchanged since the July Monetary Policy Report.

As inflationary pressures are still moderate, it is important that economic activity continues to be strong and has an impact

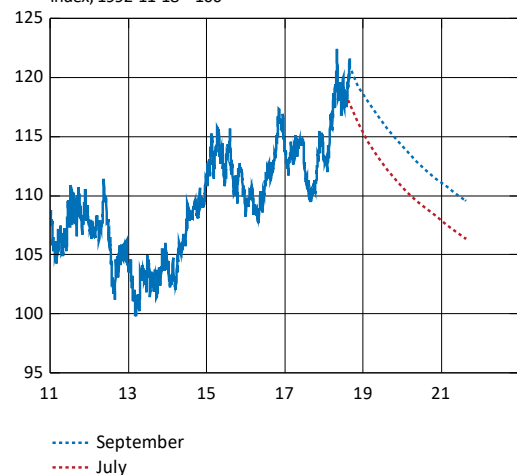
Figure 1:4. CPIF and contribution from energy prices
Annual percentage change and percentage points respectively



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.

Sources: Statistics Sweden and the Riksbank

Figure 1:5. Competition-weighted nominal exchange rate, KIX Index, 1992-11-18 = 100



Note. Outcomes are daily rates and forecasts refer to quarterly averages. KIX refers to an aggregate of countries that are important for Sweden's international transactions.

Sources: National sources and the Riksbank

on price increases. Monetary policy therefore needs to remain expansionary and the Executive Board has decided to hold the repo rate unchanged at -0.50 per cent, in line with the forecast in July. If the economy develops as expected, the Executive Board assesses that there will soon be scope to slowly reduce the support from monetary policy. The forecast for the repo rate indicates that the repo rate will also be held unchanged at the monetary policy in October and then raised by 0.25 percentage points either in December or February (see Figure 1:6).² Thereafter, the repo rate is expected to be raised gradually, with approximately two rate rises of 0.25 percentage points per year, according to the forecast. All in all, the forecast for the repo rate means that monetary policy will continue to be expansionary for a long period of time.

At the end of August, the Riksbank's government bond holdings amounted to just over SEK 330 billion, expressed as a nominal amount (see Figure 1:7).³ Net purchases of government bonds were concluded at the turn of the year, but principal payments and coupon payments will be reinvested in the government bond portfolio until further notice.⁴ In December 2017, the Executive Board decided to start reinvestments of the large principal payments due during the first half of 2019 ahead of time. The Riksbank already started reinvestments in January of this year and these will continue until the middle of 2019 (see Figure 1:8). This means that the Riksbank's holdings of government bonds will increase temporarily in 2018 and the beginning of 2019.

Just as in many other countries in the world, monetary policy is expansionary and will remain so in the coming years. For example, the real repo rate is expected to be negative throughout the forecast period (see Figure 1:9).

Monetary policy considerations

Since July, economic activity abroad has strengthened in line with expectations, and outcomes and indicators point to faster-than-expected growth in the Swedish economy. Compared with the previous forecast, resource utilisation is expected to be somewhat higher, and the exchange rate to be weaker, over the next few years. Inflation has been slightly higher than expected and the forecast has been revised up somewhat for the next 12 months (see Figure 1:10). During 2019, inflation is expected to fall back, but it will continue to be close to the target. This could suggest that now is the time to make monetary policy less expansionary.

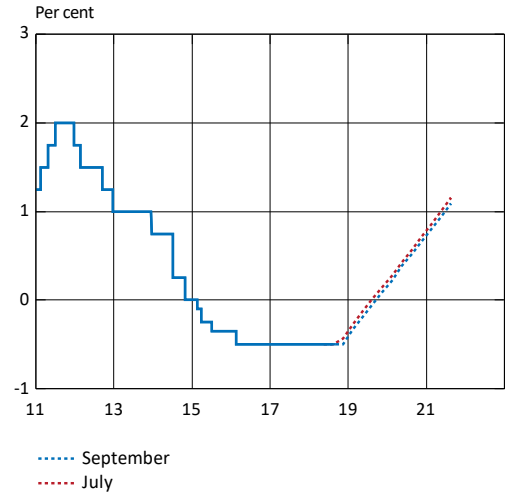
The target for monetary policy is that CPI inflation should be 2 per cent. But inflation is influenced by temporary factors and although CPI inflation is now slightly above 2 per cent,

² The decision on the level of the repo rate made at the Monetary Policy meeting on 20 December will apply from 9 January 2019.

³ In addition to purchases made since 2015, the holdings also include the portfolio built up during 2012 and reinvestments of principal payments and coupon payments.

⁴ The Riksbank's strategy for a gradual normalisation of monetary policy involves continuing to reinvest principal payments in the government bond portfolio for a while even after repo rate rises have begun. See the article "The Riksbank's strategy for a gradual normalisation of monetary policy" in the December 2017 Monetary Policy Report.

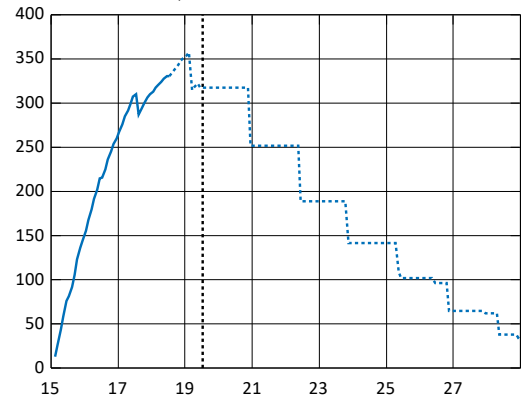
Figure 1:6. Repo rate



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

Source: The Riksbank

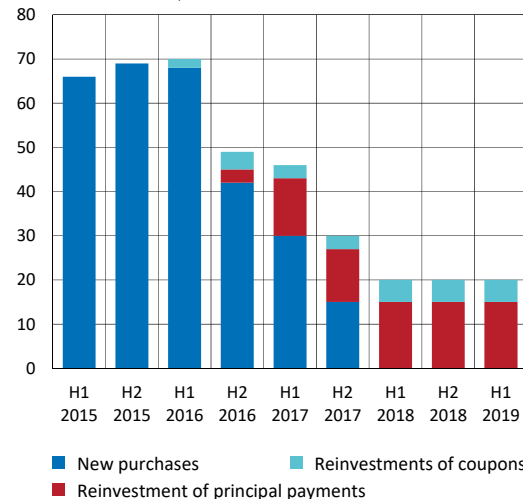
Figure 1:7. The Riksbank's holdings of government bonds
Nominal amounts, SEK billion



Note. Forecast up until June 2019, after that a technical projection with the assumption that no further reinvestments are made. The development of the holdings is also affected to a certain extent by the bonds' market prices and by which bonds the Riksbank chooses to reinvest in. The vertical line marks the shift between the forecast and technical projection.

Source: The Riksbank

Figure 1:8. The Riksbank's purchases and reinvestments
Nominal amounts, SEK billion



Note. The development for reinvestments from mid-2018 onwards is a forecast and refers to nominal amounts. The final amounts will depend on prevailing market prices.

Source: The Riksbank

underlying inflation is not as high. Various measures indicate that underlying inflation has been somewhat weaker than expected. Inflationary pressures are thus still moderate, which indicates that inflation needs continued support to remain at around 2 per cent when the positive contribution from energy prices fades. This indicates that it is too early to begin raising the repo rate now.

The Executive Board therefore considers it appropriate to hold the repo rate unchanged at -0.50 per cent for a further period and assesses that the repo rate will also be held unchanged at the monetary policy meeting in October. The forecast for the repo rate is thus revised down marginally and indicates that slow increases are set to be initiated either in December or February.

The Riksbank continues to exercise considerable vigilance as regards the development of inflationary pressures in the economy. The development of the Swedish krona also has a bearing on inflation. It is important that the krona exchange rate develops in a manner compatible with inflation remaining close to target. In addition, considerable uncertainty remains regarding international developments that may also influence the economic outlook and inflation prospects in Sweden. If the conditions for inflation were to change, so that it became higher or lower, the Executive Board is prepared to adapt monetary policy.

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 more and less favourable 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 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.

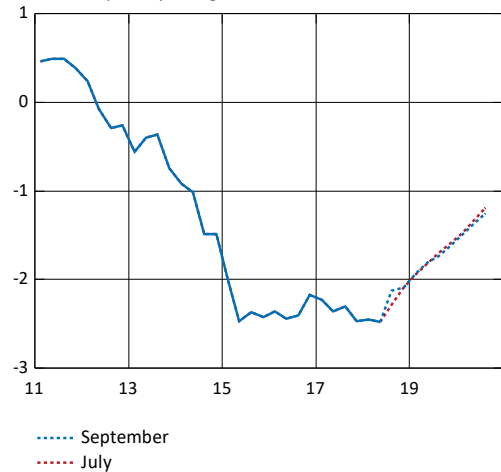
Uncertainty about growth abroad

The recent escalation in the trade conflict between the United States and China has also increased uncertainty regarding growth prospects abroad. The Riksbank's forecast assesses that the effects on the global economy will be limited, but if the conflict escalates further or spreads to even more countries, the effects on international growth risk being tangible.⁵

Growth in the US economy has otherwise been surprisingly strong recently, and the effects of the expansionary fiscal policy

Figure 1:9. Real repo rate

Per cent, quarterly averages



Note. The real repo rate is calculated as the mean of the Riksbank's repo rate forecast for the year ahead minus the inflation forecast (CPIF) for the corresponding period.

Sources: Statistics Sweden and the Riksbank

Risks of excessively low inflation

Monetary policy has a clear focus: to stabilise inflation around the inflation target of 2 per cent. The inflation target has been an important condition for the, in many ways, favourable developments in the Swedish economy since the mid-1990s. With a shared perception of how prices will develop in the future, it will be easier for economic agents to plan for the long term and the coordination of expectations lays the foundation for efficient price-setting and wage formation.

Persistently below-target inflation increases the risk of economic agents adjusting their expectations and starting to assume that inflation will not return to target even in the longer term. This would have an adverse effect on wage formation, for instance.

With an inflation rate and inflation expectations that are more permanently below target, the nominal interest rate will also be lower on average. This will increase the risk of the repo rate reaching its lower bound, in the same way as if the target were to be lowered. This reduces the Riksbank's scope for cutting the repo rate in the future if inflation becomes low or economic activity wavers. Moreover, too low inflation can make it difficult to adapt real wages between individuals in a company and between different industries, as nominal wages usually rise and are rarely lowered. This can impair the functioning of the labour market and lead to higher unemployment.

⁵ See the box "China now the focus in US trade conflicts" in this report.

may, in the short run, prove to be greater than in the Riksbank's forecast. In the slightly longer term, there is a risk of a more obvious slowdown in growth, particularly if question marks were to arise regarding the sustainability of public finances.

Development in the euro area remains strong. Confidence among households and companies is high, although it has declined recently. At the same time, there is considerable uncertainty surrounding the forecast. One uncertainty factor concerns developments in Italy, where representatives of the governing parties have previously signalled extensive unfunded reforms, which could prove problematic to implement, given the public finances situation and the EU regulations within the Stability and Growth Pact. Yields on Italian government bonds have remained at high levels over the summer. The substantial holdings of domestic government bonds by Italian banks increases the risks even more. Another lingering uncertainty factor for the European economy is the economic effects of the United Kingdom's exit from the EU.

There is also considerable uncertainty as regards developments in several emerging economies. High inflation, large current account deficits and political risks are making these countries vulnerable in an environment where international interest rates are increasing and the US dollar is strengthening. Recent developments in Turkey have been a particular cause for concern, illustrated by the sharp depreciation of the Turkish currency over the summer. The direct economic consequences for Sweden in terms of foreign trade and Swedish banks' exposures are minor. The primary risk is instead the contagion effects via the financial markets in other European countries, where some banks have larger exposures to the Turkish economy.

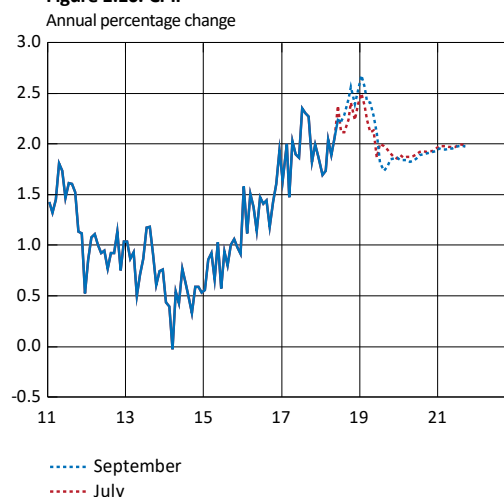
Uncertainty about inflation abroad

The risks that remain with regard to growth prospects could also lead to inflation abroad proving different from the Riksbank's forecast.

Another source of uncertainty regarding inflation abroad is the link between resource utilisation and inflation. According to the Riksbank's forecast, the rising resource utilisation will gradually lead to inflationary pressures increasing. But the possibility cannot be ruled out that the correlation between resource utilisation and inflation has been more permanently weakened, resulting in inflation rising more slowly than in the forecast. It has taken a long time and required a very expansionary monetary policy in many areas to get inflation to begin rising towards more normal levels.

On the other hand, were inflation to follow more normal historical correlations with resource utilisation, international inflation could instead be higher than is now expected. This is particularly true in the United States, where unemployment is at its lowest level for almost 20 years, while the expansionary fiscal policy is helping to push up growth in an economy that is already strong. If inflation in the United States goes higher than in the

Figure 1:10. CPIF



Sources: Statistics Sweden and the Riksbank

Side-effects of monetary policy

There is apprehension that the historically unusual monetary policy conducted in recent years may lead to undesirable side-effects. The Riksbank continuously analyses the effects of the negative repo rate and the extensive bond purchases.

One possible side-effect of low interest rates is that they 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. 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 limit the risks of their high indebtedness.

Another possible side-effect is that the functioning of the financial markets could be impaired by a negative repo rate and government bond purchases. So far, however, the markets have been able to manage negative interest rates relatively smoothly. As regards government bond purchases, the Riksbank's purchases have meant that a relatively large share of the stock is not available for trading on the market and there are signs that this is contributing to transactions taking somewhat longer to implement. However, Swedish National Debt Office dealers are contributing positively to liquidity in the market.

Neither do the negative interest rates seem to have led to increased 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 deposits that takes place at negative interest rates and then only from certain larger companies and parts of the public sector. Moreover, banks' profitability could decrease as a result of low and negative rates, something which could ultimately counteract the intended effect of monetary policy if lending rates were to go higher and credit supply was to diminish. The profitability of Swedish banks has recently been high and stable, however. Their profits and lending capacity have not been significantly affected either. They have compensated for the increased costs through increased income, partly with the aid of larger mortgage margins.

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

Riksbank's forecast, US interest rates may also rise more rapidly. This could exacerbate problems for emerging economies that are already being affected by international rate rises and the strengthening of the US dollar.

Uncertainty surrounding inflation in Sweden

As described above, inflation abroad can be both higher and lower than in the forecast. Historical correlations suggest that lower inflation abroad will also, all other factors being equal, lead to lower inflation in Sweden, and vice versa.⁶

The Riksbank's inflation forecast assumes that energy prices will increase significantly more slowly in the period ahead than they have recently. One reason for this is the sharply rising electricity prices in Sweden due in part to the dry weather, which are deemed to be temporary. However, there is a risk that the price rises that have already occurred will have a more lasting effect on inflation and inflation expectations going forward, which could then lead to inflation being higher than expected.

Changes in the krona exchange rate are as always difficult to forecast. The Riksbank's forecast predicts a gradual strengthening of the krona. A more rapid appreciation of the krona than expected would further dampen import prices, making it more difficult to stabilise inflation around the target. The krona may also be weaker than in the Riksbank's forecast, as has been the case this year. This could then contribute to higher inflation than in the forecast.

There is also considerable uncertainty about the development of domestic cost pressures in the period ahead. Despite the krona weakening, various measures of underlying inflation have been weaker than expected. The rate of increase in service prices, which is largely affected by domestic cost pressures, has been surprisingly low and had significance in this context. A circumstance that could lower companies' costs is unexpectedly weak wage development. But cost pressures also depend on productivity development and low wage increases need not therefore lead to lower inflation.⁷

There are thus a number of factors that could lead to both lower and higher inflation than is now being assumed, and the Riksbank is prepared to adapt monetary policy to ensure inflation is close to the target of 2 per cent. The risks of excessively low inflation merit particular attention, as at the prevailing interest rate levels, excessively low inflation is more difficult to manage than excessively high inflation. The problems could be particularly serious if confidence in the inflation target was once again to weaken and inflation expectations were to fall.

The risks in the housing market must be managed

During 2017, housing prices in Sweden began to fall (see Figure 1:11). In recent years, prices appear to have stabilised, but there is still considerable uncertainty and a weaker development in

The inflation target and measures of underlying inflation

The inflation target is formulated in terms of the CPIF, and monetary policy is normally focused on inflation being close to target a few years ahead. This is why monetary policy is based on forecasts for CPIF inflation. Inflation is constantly affected by temporary price movements that have little significance for the development of inflation in the longer term. To gain a better understanding of the longer-term trend in inflation or underlying inflation, the Riksbank also analyses other measures of inflation in addition to the CPIF. Measures of underlying inflation provide an indication of where inflation is heading in the slightly longer term.

Many central banks use measures of underlying inflation in their analysis and communication but there is no uniform definition of the concept. It is common to construct measures of underlying inflation by excluding individual components, whose price changes are deemed to be temporary, from the normal inflation measure. As these temporary variations tend to cancel each other out over time, a more even time series is derived that can reflect underlying inflation in a better way.

An example of a component that often varies considerably and hence has a major impact on the measured rate of inflation, is energy prices. Changes in energy prices may have effects on inflation that are not merely temporary, however. A more lasting strengthening in global economic activity often leads to a trend of higher energy prices. An increase in energy prices can also result in higher prices of other products, thereby gradually affecting wages and inflation expectations as well. Just as other measures of underlying inflation, a measure that excludes energy prices should therefore only be seen as an indicator.

Another way of measuring underlying inflation is to use statistical methods to systematically exclude or lessen the significance of prices that have historically been seen to vary sharply. The Riksbank's measures TRIM85 and UND24 are examples of this, but the Riksbank also regularly calculates other measures.

Inflation measured in terms of the CPIF has been close to the target of 2 per cent over the last year while several measures of underlying inflation declined during the second half of last year. The Riksbank sees this as an indication that trend inflation is lower than CPIF inflation and that continued expansionary monetary policy is needed to keep CPIF inflation close to 2 per cent going forward.

⁶ See, for instance, J. Lindé and A. Reslow, "Do Swedish forecasters properly account for Sweden's international dependence?" Economic Review No. 2 2017, Sveriges Riksbank.

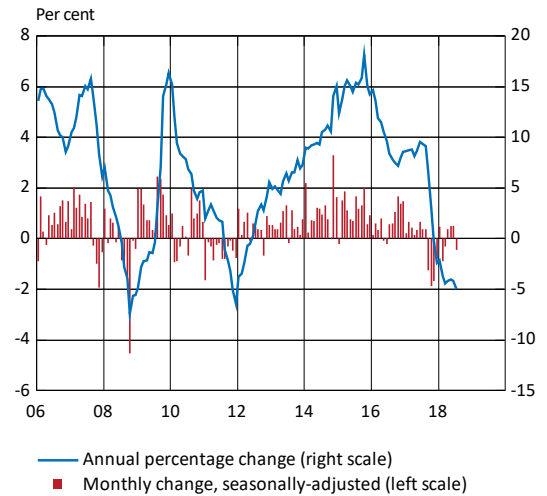
⁷ See the article "The Phillips curve and monetary policy" in Monetary Policy Report, July 2018, Sveriges Riksbank.

housing prices than in the Riksbank's forecast cannot be ruled out. This could lead to a more severe slowdown in housing investment than is assumed in the forecast. In this case, household consumption could also be negatively affected, especially as the household sector has substantial debt, mainly consisting of mortgages. According to the Riksbank's forecast, household debt as a percentage of disposable income is expected to continue to increase in the years ahead, even if the increase will occur at a slower rate than in recent years (see Figure 1:12).

Recently a number of new actors have begun to establish themselves on the Swedish mortgage market. These new players are increasing competition on the market and will probably contribute to lower mortgage rates than would otherwise have been the case. This development could also increase the demand for new mortgages and hence contribute to greater indebtedness among households. Although the amount that the borrower is allowed to borrow is also determined by their income and other credit conditions, mortgage actors that are not banks are not currently covered by macroprudential policy measures. It is therefore important that all future mortgages, regardless of lender, are subject to a thorough credit assessment and covered by current and future relevant macroprudential regulation.⁸

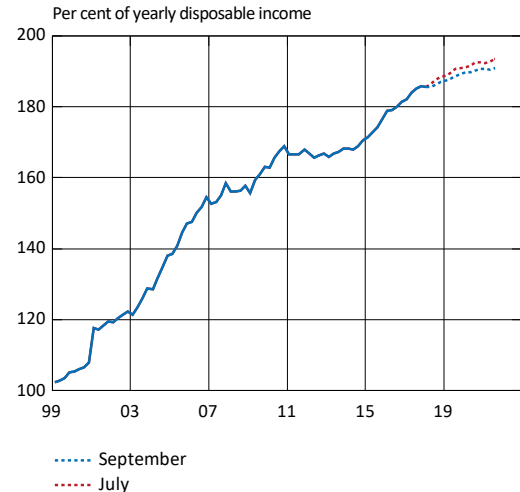
Finansinspektionen's decision on tighter amortisation requirements came into force in March. The Riksbank assesses that this will help bolster the resilience of households somewhat. At the same time, the fundamental causes of the high household indebtedness still remain. This has to do with long-term structural problems in the Swedish housing market. It is therefore a matter of urgency for the Government to take housing and tax policy measures to mitigate the risks associated with household indebtedness. Some examples of feasible measures include a review the rent-setting system, the taxation of capital gains from housing property sales as well as property tax and tax relief on interest expenditure.

Figure 1:11. House prices according to HOX Sweden



Sources: Valueguard and the Riksbank

Figure 1:12. Household debt ratio



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

Sources: Statistics Sweden and the Riksbank

⁸ See the article "New players on the mortgage market" in Financial Stability Report 2018:1, Sveriges Riksbank.

CHAPTER 2 – Financial conditions

Financial conditions in Sweden are still expansionary and the interest rates households and companies have to pay are still slow, while credit growth remains at a high level. According to market pricing, market participants have to some extent revised down their expectations regarding the level of the repo rate in the coming years. This, together with increasing uncertainty about economic developments in Turkey and Italy, has contributed to the krona weakening over the summer. Since raising its policy rate in June, the Federal Reserve has held its monetary policy unchanged, but its communication in connection with the most recent decision in August reinforced the picture of continued policy rate increases during the autumn. Financial conditions in the United States have become somewhat less expansionary in 2018. The European Central Bank, ECB, has continued to conduct unchanged expansionary monetary policy over the summer, while the Bank of England has raised its policy rate.

International developments

Continued policy rate raises in the United States expected in the autumn

During the summer, the central banks in the United States, the euro area and the United Kingdom have taken monetary policy decisions. The ECB announced at its monetary policy meeting at the beginning of the summer that it intended to hold the deposit rate, which has amounted to –0.4 per cent since March 2014, at the same level until at least the end of summer next year. The most recent monetary policy decision in July did not entail any changes in direction, and the earlier decision to slow down the pace of asset purchases after September, to EUR 15 billion per month, remains unchanged. The net purchases of assets are expected to be concluded at the end of the year. Expectations of the ECB's policy rate according to market pricing have remained relatively unchanged since July (see Figure 2:1). According to market pricing, the policy rate is now expected to be held unchanged for at least the next twelve months, in line with the ECB's communications. The communications from the ECB have contributed to keeping down interest rates in the euro area, and shorter interest rates up to two years are at roughly the same levels today as at the start of the year.

Unlike the euro area, the central banks in the United States and the United Kingdom are in a phase of rate rises. In the United Kingdom, the Bank of England raised its policy rate from 0.5 per cent to 0.75 per cent in August, but communicated as at earlier

Table 2:1.

Developments on the financial markets since the Monetary Policy Report was published in July
Market participants' expectations of future policy rates are more or less unchanged in the United States and the euro area, but have fallen in Sweden.
Government bond yields remain largely unchanged in the United States, the euro area, the United Kingdom and Sweden.
The krona is slightly weaker than forecast in July.
The share index has risen in the United States and Sweden, but fallen in emerging market economies.
Lending rates to companies have fallen somewhat, while lending rates to households are only marginally lower.
Continued good credit growth for households and non-financial corporations.

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.



monetary policy meetings that potential future rate rises would be limited in number and implemented gradually. When this message was delivered, market expectations of the future policy rate shifted upwards, but have since then shifted back and are only marginally higher than the expectations in July (see Figure 2:1). The Federal Reserve began to raise its policy rate as early as December 2015, and has since then raised the rate a further six times. The members of the Federal Open Market Committee, FOMC, which decides on monetary policy, are expecting continued raises from the current interval of 1.75 to 2.00 per cent, and at the monetary policy meeting in August the Federal Reserve observed that the labour market has continued to strengthen and that economic activity has increased at a rapid pace. In addition, it was noted that financial conditions were still expansionary although there had been no major changes in conditions over the summer.

The median forecast from the members of the monetary policy committee indicated, according to the most recent decision, that a further two rate raises of 0.25 percentage points would be made this year, three next year and one in 2020. Expectations of the future policy rate in the United States remain largely unchanged since July, according to market pricing (see Figure 2:1). Expectations still indicate somewhat fewer rate increases than the members' median forecast.

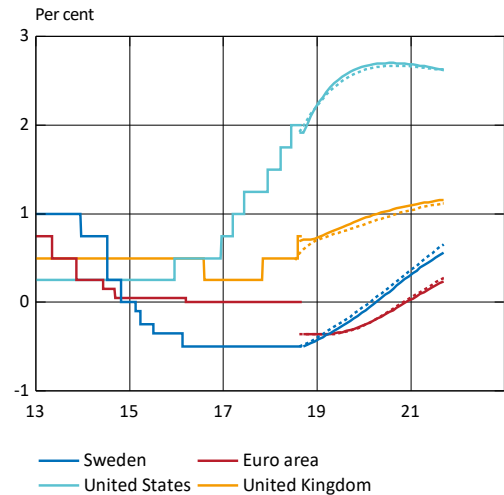
Bond yields reflect the difference in monetary policy

The development of government bonds abroad has reflected the difference in monetary policy expectations between countries, and it has been particularly clear with regard to developments in two-year bond yields. European and Swedish two-year bonds are at around the same levels as at the start of the year, while the American two-year bond yield has risen (see Figure 2:2). Contributory factors to the upturn in the United States have been expectations of higher future short-term rates, expectations of higher inflation and growth given the macroeconomic statistics, which have on the whole been good, and increased fiscal policy stimulation.

The longer bond yields abroad have showed stable development over the summer and are now at around the same levels as in July (see Figure 2:3). The difference in the levels between the countries is clear and reflects the difference in the monetary policy aim, where the longer US bond yields are more than two percentage points higher than the corresponding yields in the euro area and Sweden.

The development in bond yields in Europe has been affected by the political uncertainty, particularly in Italy, over the year. When the new Italian government took up office, market participants interpreted some of the budget proposals as something that could in the long run threaten fiscal policy stability with ensuing effects on the Italian banking sector. During the spring, there were therefore severe fluctuations on the bond markets and yields rose in Italy, and also other countries where there is uncertainty over economic policy (see Figure 2:4). At the

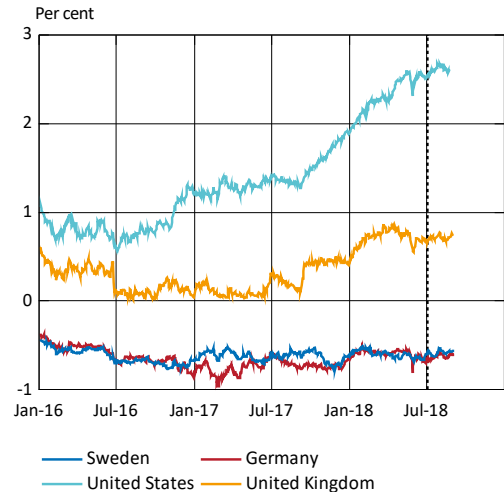
Figure 2:1. Policy rates and rate expectations according to forward rates



Note. Forward rates describe the expected overnight rate, which does not always correspond to the policy rate (the main refinancing rate for the euro area). Unbroken lines are estimated on 3 September 2018, broken lines are estimated on 3 July 2018.

Sources: The national central banks, Macrobond and the Riksbank

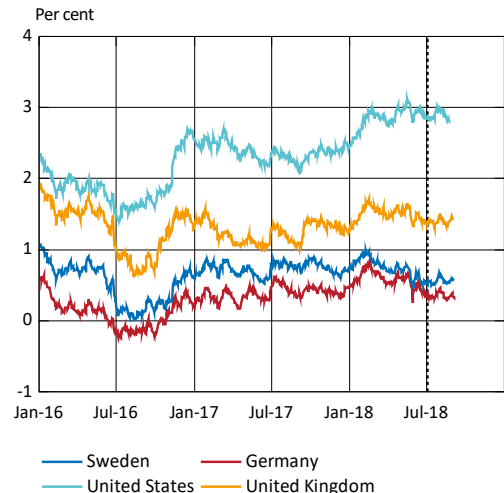
Figure 2:2. Government bond yields with 2 years to maturity



Note. Implied zero-coupon yields from government bonds. The vertical line indicates the Monetary Policy Meeting in July.

Sources: The national central banks and the Riksbank

Figure 2:3. Government bond yields with 10 years to maturity



Note. Implied zero-coupon yields from government bonds. The vertical line indicates the Monetary Policy Meeting in July.

Sources: The national central banks and the Riksbank

same time, government bond yields fell in the euro area countries perceived as more secure, such as Germany. During the summer, the differences in yields fell again, at the same time as the political situation gradually stabilised. Recently the differences in yields have increased again, a development that can be linked to the concern on the financial markets following increasing problems for certain emerging market economies (see Figure 2:4).

Dollar appreciation trend has come to a halt

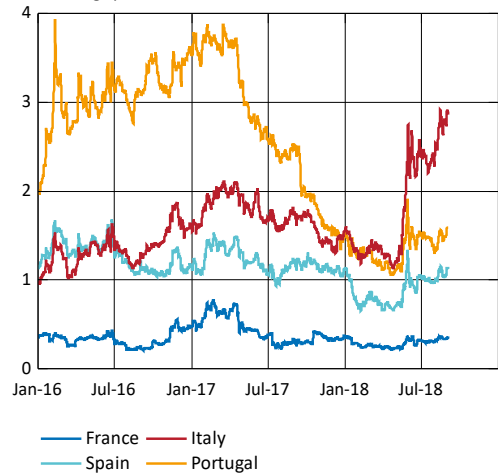
During the spring the dollar has continued to strengthen against most currencies, a development that has been supported by increased differences in yields between the United States and other economies. Since July, this tendency has come to a halt, although the dollar has continued to strengthen against some emerging market economies' currencies (see Figure 2:5). The weakening in emerging market economies' currencies has been particularly tangible for those countries where there are fundamental macroeconomic imbalances, such as high inflation, substantial national debt and large current account deficits. These problems have been particularly clear in countries such as Turkey and Argentina, whose currencies have continued to fall in value during the summer (see Figure 2:5).

Continued expansionary financial conditions in USA despite rate increases

Since July the stock markets in developed countries have risen in general, despite concern over the effects of extended trade barriers (see Figure 2:6). US stock markets have risen more than European ones, largely because of continued good profits for companies in the United States and expectations of higher growth. In the United States both corporate earnings and profits have continued to increase over the summer. As a result of the Federal Reserve's rate increases and the stronger dollar, financial conditions in the United States have become somewhat tighter in 2018. However, they are still expansionary and thus contribute to continued good economic growth in the US economy. Apart from the effects on individual emerging market economies, the increases in the US policy rate so far appear to have only had moderate contagion effects to other countries. In emerging market economies the stock markets have shown weak development since the start of this year, and this tendency continued over the summer (see Figure 2:6).

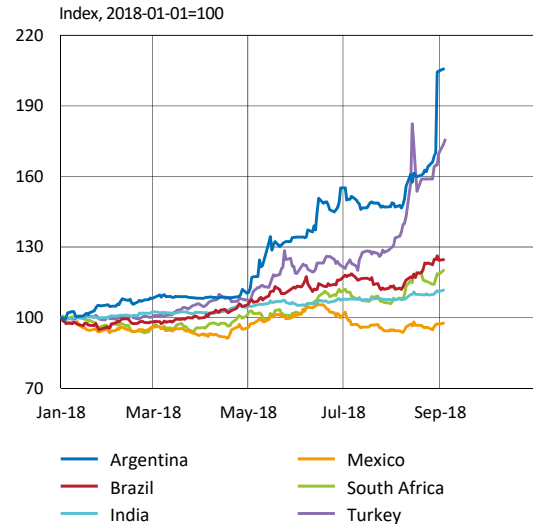
There are close links between financial markets in Sweden and those abroad. One example of such a link is the high covariation between Swedish and foreign government bond rates (see Figures 2:2 and 2:3). The expansionary financial conditions abroad thus contribute to expansionary financial conditions in Sweden, too.

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



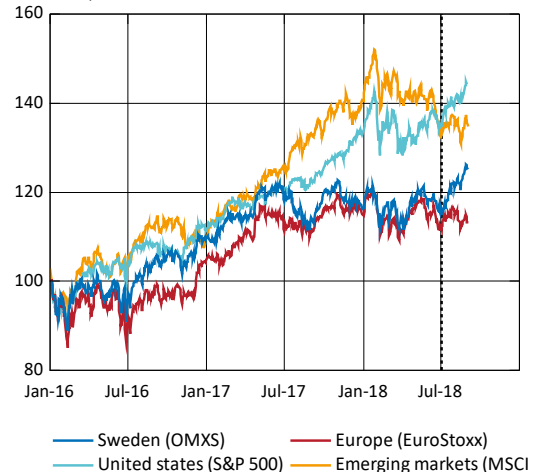
Note. Yield differentials refer to 10-year benchmark bonds.
Source: Macrobond

Figure 2:5. Emerging market economies' currencies against the dollar
Index, 2018-01-01=100



Note. A higher value indicates a weaker exchange rate.
Source: Macrobond

Figure 2:6. Stock market movements in local currency
Index, 2016-01-04 = 100



Note. The vertical line indicates the Monetary Policy Meeting in July.
Source: Macrobond

Financial conditions in Sweden

Market expectations of continued expansionary monetary policy

Since the monetary policy decision in July, expectations of the future level of the repo rate have fallen according to pricing on the financial markets and are now below the Riksbank's repo rate forecast, above all in the slightly longer term (see Figures 2:1 and 2:8). Market participants' expectations of the repo rate as shown in surveys have, however, been more in line with the Riksbank's repo rate path (see Figure 2:8).

Yields on longer government bonds in Sweden are at roughly the same levels as in July (see Figure 2:3). On the credit markets, yields on mortgage bonds and corporate bonds, particularly for longer maturities, have fallen in relation to government bond yields. This reinforces the picture that the dampening of housing prices has not entailed higher risk premiums for mortgage bonds (see Figure 2:9).

The Riksbank's bond purchases contribute to expansionary monetary policy

The Riksbank's purchases of government bonds are aimed at pushing down interest rates in the economy in general. The bond purchases contribute to lower yields on government bonds but also to falling yields on other bonds, such as corporate bonds. The purchases have thus supported the expansionary monetary policy and have contributed towards rising inflation and falling unemployment.

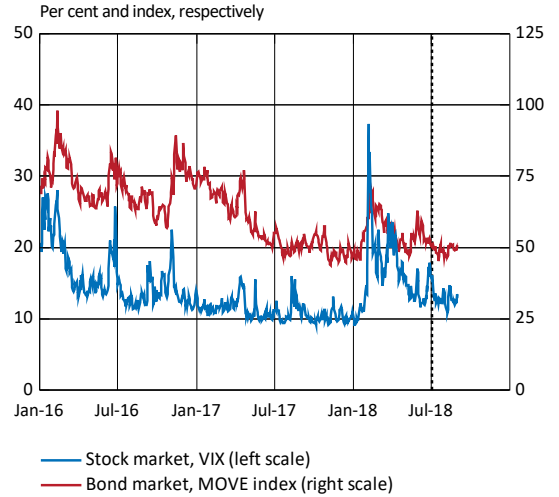
During 2018, the Riksbank is expecting to buy government bonds for around SEK 40 billion. According to the Swedish National Debt Office's most recent forecast, the issue volumes in Swedish government bonds will amount to SEK 41 billion in 2018.⁹ The pace at which the Riksbank purchases bonds is thus comparable with the pace at which the Swedish National Debt Office is issuing bonds. The Swedish National Debt Office is maintaining the issue volumes in Swedish government bonds, despite the continued surplus in public finances.

The large bond purchases made by the Riksbank could lead to undesirable side-effects. The Riksbank is therefore carefully tracking how the government bond market and adjacent markets are functioning, both by analysing data and through regular contact with market participants.

In recent years, turnover has decreased in the Swedish government bond market. Despite a somewhat lower turnover, the Riksbank assesses that Swedish investors in government bonds can buy and sell the bonds they need. This is because the Swedish National Debt Office's dealers are constantly offering to buy and sell bonds and thus contribute liquidity. However, the dealers have said that the lower turnover has had a negative effect on them and meant they are finding it more difficult to manage their holdings.

⁹These SEK 41 billion are comprised of SEK 32 billion nominal bonds and SEK 9 billion real bonds.

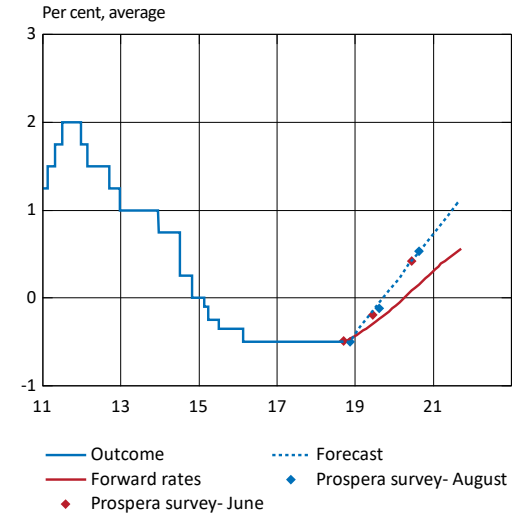
Figure 2.7. Volatility Indices



Note. Volatility Index (VIX) shows the expected volatility on the US stock market based on options prices. 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 July.

Sources: Chicago Board Options Exchange and Merrill Lynch

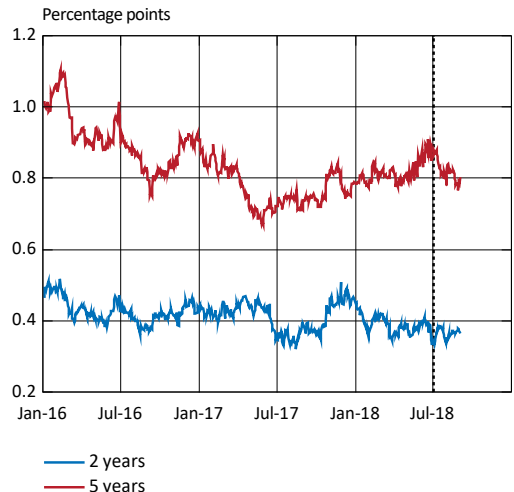
Figure 2.8. Repo rate and market expectations



Note. The forward rate is estimated on 2018-09-03 and is a measure of the expected repo rate. The survey responses show the average for money market participants 2018-05-30 respectively 2018-07-25

Sources: Macrobond, TNS Sifo Prospera and the Riksbank

Figure 2.9. Yield spread between mortgage bonds and government bonds



Note. Yields on mortgage bonds and government bonds are zero coupon yields calculated using the Nelson-Siegel method. The vertical line indicates the Monetary Policy Meeting in July.

Sources: Macrobond and the Riksbank

Krona somewhat weaker than forecast in July

When the monetary policy decision was announced in July, the krona appreciated by more than one per cent (see Figure 2:10). Recently, however, the krona has weakened and according to the KIX index it is now weaker than the Riksbank's forecast in July. Several factors may have contributed to this. For instance, the krona weakened in connection with the inflation outcome for July, and expectations of the future repo rate level have fallen over the summer. International developments, including increasing economic uncertainty in Turkey and Italy, may also have contributed to the most recent weakening.

Lower lending rates and increased indebtedness in household and corporate sectors

When a central bank lowers its policy rate, or in some other way conducts expansionary monetary policy, the financial conditions will sooner or later become more favourable. Lending rates charged to households and companies fall at the same time as the demand for credit rises. Since the Riksbank first cut the repo rate below zero, lending to both households and companies has continued to increase, and lending rates have fallen.

Mortgage rates paid by households have not fallen to the same extent as the Riksbank's repo rate (see Figure 2:11). There may be several explanations for this. For instance, banks may have compensated for lower deposit margins by charging marginally higher lending rates on mortgages. The lending margins on mortgages may also have been held up by the strong demand for housing and thus for mortgages. However, these lending rates have continued to fall over the summer. This could be partly due to the demand for mortgages slowing down, as the Swedish housing market has entered a somewhat calmer phase, which has also made household loan stock increase more slowly. Nevertheless, lending to households is still increasing more rapidly than their incomes and the debt-to-income ratio is thus continuing to rise (see Figure 1:12). Another explanation for the fall in lending rates could be increased competition both between existing lenders and as a result of new actors, even if the latter have a relatively limited market share.

Loans to companies have adapted more rapidly to the lower repo rate. Some larger companies have an alternative source of funding in the bond market, which offers competition to traditional bank lending. Banks must thus adapt their interest rates according to the situation on the bond market.

The part of the lending that takes the form of issuing securities has also grown very strongly over the past year, although the growth rate has recently declined somewhat. The most recent outcome in June shows an annual growth rate of 9 per cent. Low yield levels on the bond market may thus have contributed to holding down lending rates to companies, and resulted in companies' loan stock increasing from both the banks and the bond market (see Figure 2:12). Access to credit is still good for both companies and households, at the same time as interest rates are low.

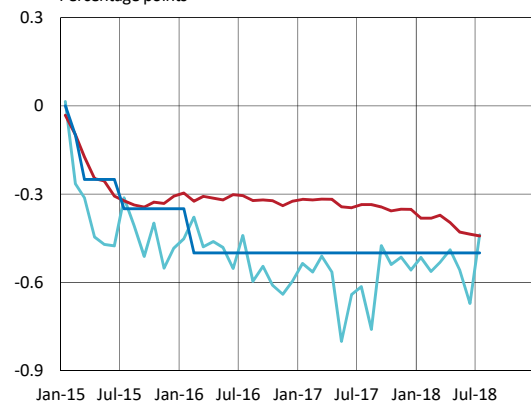
Figure 2:10. Competition-weighted nominal exchange rate, KIX Index, 1992-11-18 = 100



Note. KIX refers to an aggregate of countries that are important for Sweden's international transactions. The vertical line indicates the Monetary Policy Meeting in July.

Sources: National sources and the Riksbank

Figure 2:11. Change of repo rate and lending rates to households and companies since 2015
Percentage points

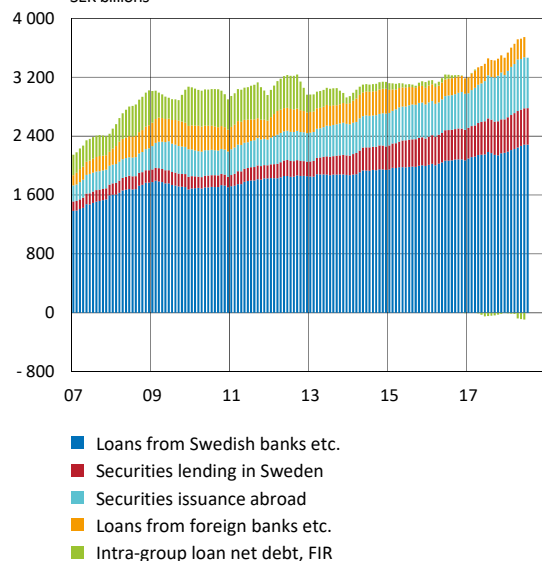


— Repo rate
— Loans to households, mortgages
— Loans to companies

Note. The cumulative changes in each rate since the start of January 2015. Outcomes are monthly data and lending rates are value-weighted averages of the actual lending rates reported by the banks.

Sources: Statistics Sweden and the Riksbank

Figure 2:12. Swedish companies' interest-bearing loan debt
SEK billions



Note. Outcomes for loans from foreign banks and intra-group loans extend until June. Outcomes for the rest of the variables are until July.
Sources: Statistics Sweden and the Riksbank

CHAPTER 3 – The current economic situation

In the countries most important for Sweden's trade, the high growth in 2017 was followed by somewhat slower growth this year, in line with the more restrained development of confidence indicators. Even if temporary factors can be deemed, to some extent, to explain the surprisingly strong growth rate in Sweden over the second quarter, the continued optimism in the business sector suggests that GDP will grow slightly faster than normal this year. Unemployment is not expected to decrease further as companies are finding it difficult to find the right skills among the unemployed. The warm and dry weather has contributed towards electricity prices having increased more than expected and inflation is expected to be above 2 per cent over the rest of the year, higher than was forecast in July. Various measures suggest that underlying inflation is lower.

Inflation in Sweden

Inflation 2.2 per cent in July

In July, CPIF inflation amounted to 2.2 per cent (see Figure 3:1). This was slightly above the forecast in the Monetary Policy Report in July, due to electricity prices in particular having increased faster than expected. When adjusted for energy prices, CPIF inflation amounted to 1.3 per cent.

The increasingly improved Swedish economy has contributed to rising inflation in recent years. Krona depreciations, which have an effect on prices of food and other imported goods, have also contributed to higher inflation.

During 2017, the increase in inflation was partly due to temporarily higher service price inflation. For example, prices for international travel and banking services increased unusually quickly. Given this, service prices have since increased at a somewhat slower pace, and food and goods price inflation has fallen somewhat during the summer (see Figure 3:2). Measures of underlying inflation are developing similarly and the median value of the different measures fell slightly to 1.5 per cent in July, which largely corresponds to the level of the median value in 2016 (see Figure 3:3).

Inflation over 2 per cent remainder of year

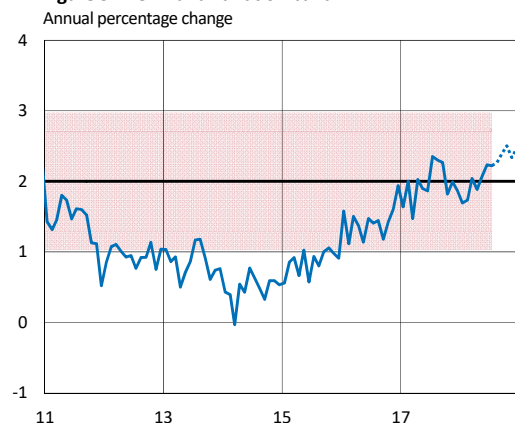
The warm and dry weather has meant that hydroelectric reservoirs are at unusually low levels for this time of the year, which has pushed up electricity prices. Forward pricing indicates continued high electricity prices and, in addition, the price of fuel is expected to remain high in the period ahead. This summer's drought is also expected to contribute to slightly higher prices for food towards the end of the year (see the article "Small effects on production and inflation of the summer's drought and forest fires"). All in all, this means that inflation is now expected to be over 2 per cent for the rest of the year, meaning an upward revision for the recent period compared with the forecast in July.

Table 3:1.

Expected development in July MPR	Actual development
CPIF inflation 2.1 per cent and CPIFxe inflation 1.4 per cent in July.	CPIF inflation was 2.2 per cent and CPIFxe inflation was 1.3 per cent.
GDP growth 2.6 per cent in second quarter.	GDP growth was 4.2 per cent.
Unemployment 6.2 per cent in second quarter.	Unemployment was 6.2 per cent.
GDP growth in the euro area 1.6 per cent, second quarter.	GDP growth was 1.5 per cent.
GDP growth in the United States 3.0 per cent in second quarter.	GDP growth was 4.2 per cent.

Note. MPR refers to the Monetary Policy Report. Inflation refers to the annual percentage change. GDP growth refers to the seasonally-adjusted quarterly change in per cent, annualised. Unemployment refers to percentage of the labour force.

Figure 3:1. CPIF and variation band



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

Sources: Statistics Sweden and the Riksbank

The Riksbank's short-term models, which summarise the information in a large number of indicators, suggest that the CPIF excluding energy will increase at a slightly lower pace at the end of the year (see Figure 3:4). According to the Economic Tendency Survey, more companies than normal, particularly within the trade sector, expect prices to increase over the next three months (see Figure 3:5). Domestic consumer goods producer price inflation has risen somewhat in recent months. Imported consumer goods producer price inflation has also risen apace with the krona depreciation.

The CPIF excluding energy is largely expected to increase in line with the model forecasts and the rate of increase will rise to about 1.7 per cent towards the end of the year, which is slightly lower than in the forecast in July. This is primarily because inflation according to this measure was unexpectedly low over the summer.

Inflation expectations close to 2 per cent

Inflation expectations are close to 2 per cent over all time horizons. Expectations over the longer term have been close to 2 per cent in recent years and, as inflation has become higher, expectations have also risen over the shorter term.

According to TNS Sifo Prospera's survey in August, inflation expectations among money market participants were largely unchanged since the survey in July. Five years ahead, the respondents expect CPI inflation to be 2.0 per cent (see Figure 3:6). The long-term inflation expectations for the CPIF in the same survey amounted to 1.9 per cent.

Global and Swedish economic activity

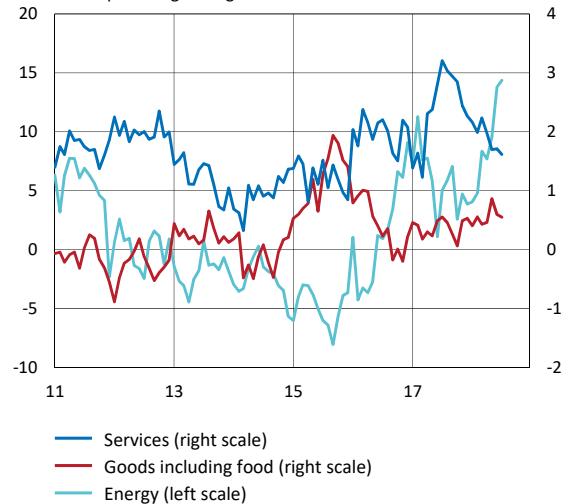
Weak international development at the beginning of 2018

Last year's high GDP growth abroad has been followed by slightly weaker development over the first six months of this year. Growth in world trade has slowed down since the start of the year. Together with lower export order indicators, this is compatible with more normal GDP growth in the period ahead. Uncertainty persists over the United States' trade policy and its consequences (see the box "China now the focus in US trade conflicts" in Chapter 4).

GDP growth was lower in most countries in the first and second quarters, compared with the last quarter of last year. In the euro area, GDP in the second quarter increased by almost 1.5 per cent against the first quarter, calculated at an annual rate. Industrial production has developed weakly since the start of the year, while the retail trade made a recovery in the second quarter. Corporate optimism over future development has also continued to slacken, while optimism remains high among households. Over the next few quarters, GDP is expected to grow at approximately the same rate as over the second quarter.

In the United States, annualised growth in the second quarter was higher, over 4 per cent, against the first quarter. This was

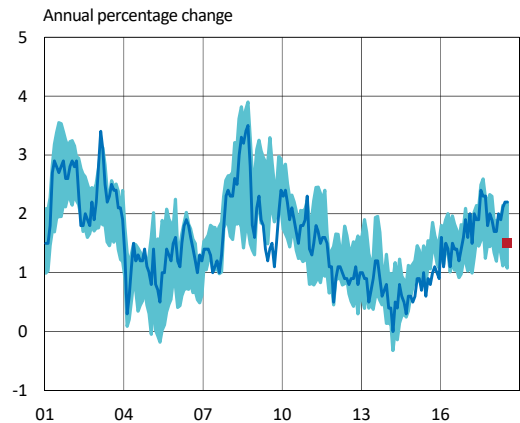
Figure 3:2. Prices of energy, services and goods in the CPI
Annual percentage change



Note. Goods including food is a combination of the aggregate goods and food in the CPI. Together, these account for 45 per cent of the CPI. Service prices and energy prices account for 45 and 7 per cent, respectively, of the CPI.

Sources: Statistics Sweden and the Riksbank

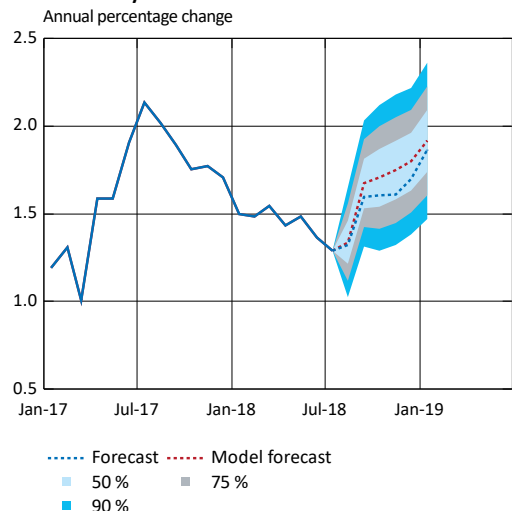
Figure 3:3. The CPIF and different measures of underlying inflation
Annual percentage change



Note. The field shows the highest and lowest outcomes among different measures of underlying inflation. As of this report, the calculations are based on the CPIF instead of the CPI. The measures included are the CPIF excluding energy, UND24, Trim85, CPIF excluding energy and unprocessed foods, persistence-weighted inflation, factors from principal component analysis and weighted median inflation. The line represents the CPIF. The red dot represents the median in July 2018 of all included measures.

Sources: Statistics Sweden and the Riksbank

Figure 3:4. CPIF excluding energy, model forecast with uncertainty bands
Annual percentage change



Note. The uncertainty bands are based on the models' historical forecast errors. The model forecasts are adjusted to the new seasonal pattern following method changes in the calculation of the price index for package holidays.

Sources: Statistics Sweden and the Riksbank

unexpectedly strong and may be due to the expansionary fiscal policy having slightly greater effects than expected. Indicators of confidence among companies and households continue to be on high levels, even if a slight cooling off has been noticeable recently. In the next few quarters, growth is thus expected to slow down somewhat compared with the second quarter.

At the same time, several factors indicate good global growth during the second six months of the year. Corporate and household confidence continues to be high, despite slightly weaker outcomes recently. The situation on the labour market has also continued to improve in most countries. In addition, financial conditions in general continue to be favourable for growth in terms of interest rates and credit terms for both companies and households.

Underlying inflation in the euro area remains low

Unease over increased trade barriers has contributed towards the fall in commodity prices since the start of the year. Lowered production restrictions within OPEC have also contributed to a slight fall in recent months in the price of oil, which has increased over the last year.

Nevertheless, inflation has still increased in total in the most important regions for Sweden over the most recent period (see Figure 4:4). In the euro area, inflation amounted to 2.0 per cent in August, according to preliminary statistics, above all due to rising energy prices. Inflation excluding energy and food prices was lower, amounting to 1.0 per cent (see Figure 3:7), but it is expected to rise somewhat in the coming quarters, thanks to the continuing improvement of the labour market situation and higher wage growth.

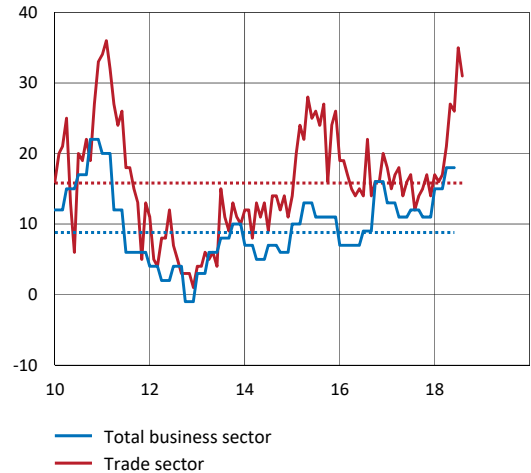
In the United States, inflation has increased in recent years and, in July, CPI inflation increased further to 2.9 per cent. Underlying inflation, measured in terms of the consumption deflator excluding energy and food, amounted to 2.0 per cent (see Figure 3:7).

Surprisingly strong Swedish growth

The preliminary compilation of the National Accounts shows that Swedish GDP grew by just over 4 per cent in the second quarter against the first quarter, at an annualised rate. The strong growth rate surprised most analysts, including the Riksbank. However, part of this growth is deemed to be due to temporary factors. For example, the number of newly registered private cars increased strongly in June before falling by almost the same extent in July when changed tax regulations came into effect. Nevertheless, the Riksbank’s overall assessment is that the Swedish economy in 2018 will be slightly stronger than in the forecast in July.

The Economic Tendency Survey increased slightly in July and August and is higher than its historical average (see Figure 3:8). The view of development in the manufacturing industry differs in the Economic Tendency Survey and the Purchasing Managers’ Index, with the Economic Tendency Survey showing significantly stronger confidence. After having fallen for seven months in a

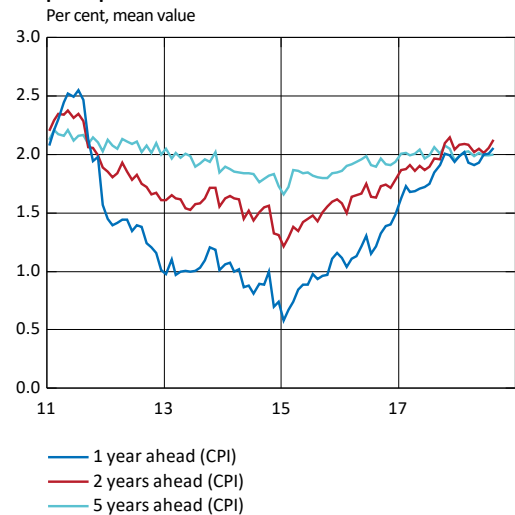
Figure 3:5. Price plans in the business sector and trade sector
Net figures, seasonally-adjusted data



Note. The net figure is the balance 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.

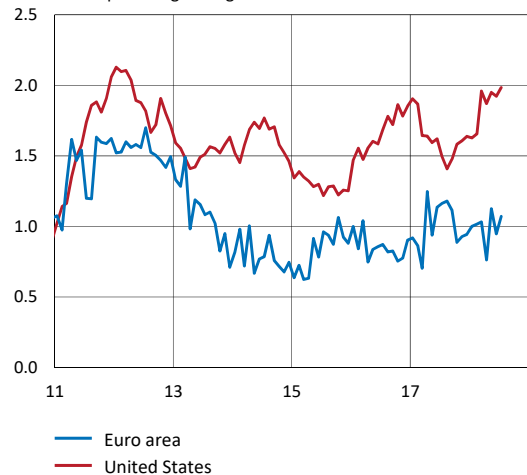
Source: National Institute of Economic Research

Figure 3:6. Inflation expectations among money market participants
Per cent, mean value



Source: TNS Sifo Prospera

Figure 3:7. Underlying inflation abroad
Annual percentage change



Note. The HICP excluding energy, food, alcohol and tobacco is shown for the euro area. The deflator for private consumption excluding energy and food is shown for the United States.

Sources: The Bureau of Economic Analysis and Eurostat

row, the household confidence indicator has also turned upwards in recent months. Household confidence in the development of the economy is thus close to normal but slightly higher. On the other hand, turnover in the retail trade developed weakly in July, which is deemed partly to be due to the warm weather.

The Riksbank's models for short-term forecasting, which use the information from a large number of indicators, point to GDP growing by just under 3 per cent, slightly faster than trend growth, in the third quarter (see Figure 3:9). However, the Riksbank's forecast is lower than the model forecast – primarily because the models are not deemed to be able to fully consider all factors, but also, to an extent, because the outcome for the second quarter is uncertain as it has been calculated using incomplete data material. Among other things, the Riksbank makes the assessment that both the changed tax regulations for private cars and the unusually warm weather in July, with severe forest fires and crop losses, will contribute towards lower growth in the third quarter (see the article “Small effects on production and inflation of the summer's drought and forest fires”). Neither are the models deemed to be fully capable of capturing the ongoing slowdown in housing construction. As a whole, GDP growth for the full year 2018 is nevertheless expected to grow slightly faster than normal and has been adjusted upwards slightly in relation to the forecast in July.

Stabilisation of prices on the housing market

Housing prices have developed weakly since last autumn, even if they have stabilised in recent months. Measured using the HOX price index, prices for detached and semi-detached houses have fallen by just over 5 per cent since peaking in August 2017.

The recent weak development in prices is expected to be followed by a lower housing construction this year in line with the Swedish National Board of Housing, Building and Planning's forecast in June for the number of housing starts. Indicators such as the number of housing starts, the number of building permits granted and forward-looking indicators for the construction industry in the Economic Tendency Survey also suggest a downturn in construction.

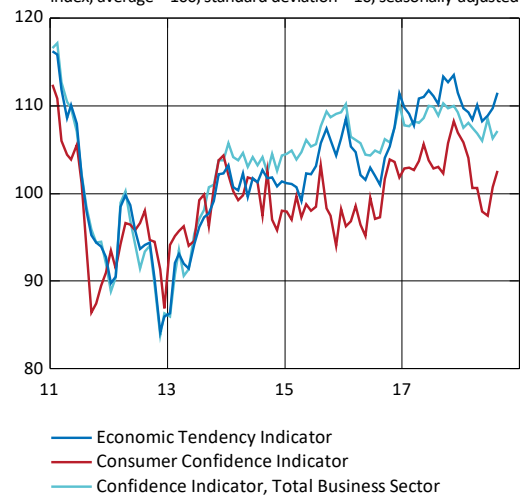
Continued high demand for labour but unemployment is not expected to fall further

During 2018, developments on the Swedish labour market have remained strong, both the number of persons employed and the number of persons in the labour force have increased and unemployment has fallen to 6.2 per cent. This is the lowest unemployment since the start of 2008. In July, the labour force increased at a faster pace than employment, which led to a slight rise in unemployment. Developments in June were stronger than expected, but outcomes during the summer months should be interpreted with caution, partly due to the non-response frequency in the labour force surveys being greater than normal.

Indicators for the labour market in the period ahead remain positive. The number of notices of redundancy is very low and

Figure 3:8. Confidence indicators

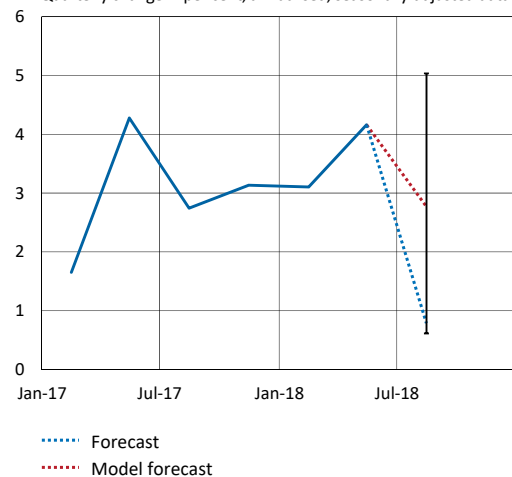
Index, average = 100, standard deviation = 10, seasonally-adjusted data



Source: National Institute of Economic Research

Figure 3:9. 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

Figure 3:10. Vacancies and recruitment plans

Thousands and net figures, respectively, seasonally-adjusted data



Note. Recruitment plans refer to expectations of the number of employed in the business sector three months ahead. Recruitment plans for 2018 Q3 refer to an average of the monthly outcomes in July–August 2018. The broken line represents the average of recruitment plans since 1996.

Sources: The National Institute of Economic Research and Statistics Sweden

there are both many newly-registered job vacancies according to Arbetsförmedlingen (the Swedish public employment service) and job vacancies according to Statistics Sweden. The Economic Tendency Survey indicates historically extensive recruitment plans in the business sector, which suggests that employment growth will continue to be good (see Figure 3:10).

Employment is thus expected to continue to increase over the second half of the year, albeit at a somewhat slower rate than during the first half. As unemployment has become lower in recent years, companies have found it increasingly difficult to find the competence they need among the unemployed, which is contributing towards unemployment not being expected to fall any further.

High resource utilisation in the Swedish economy

The amount of spare capacity in the economy affects the development of wages and prices with a certain time lag. As it is not possible to observe resource utilisation in the economy, the Riksbank’s analysis is based on a number of different indicators.

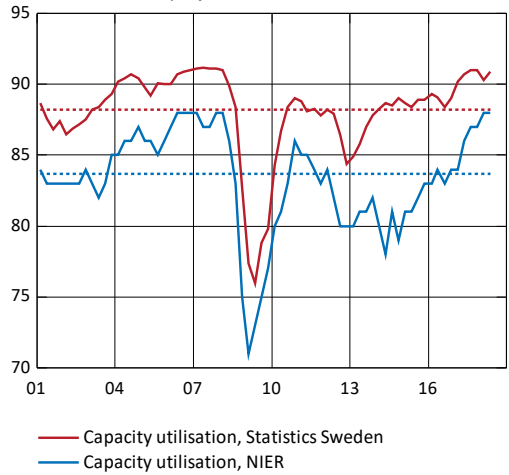
According to the Economic Tendency Survey, companies state that there is a major shortage of labour. The vacancy rate, which measures the percentage of unstaffed positions that need to be filled immediately, is also at a high level. In addition, capacity utilisation within the manufacturing industry is high from a historical perspective, according to both the National Institute of Economic Research and Statistics Sweden (see Figure 3:11). The Riksbank’s overall assessment is that resource utilisation in the economy is higher than normal. Despite a minor decline in recent quarters, the Riksbank’s RU indicator supports this assessment (see Figure 3:12).

Continued low wage growth

Although resource utilisation has been high for a time and the labour market situation has become increasingly strained, the annual percentage rate of wage increase continued to be restrained in the second quarter, according to short-term wage statistics. The National Mediation Office’s estimates indicate that the annual percentage growth in wages according to these statistics averaged about 2.5 per cent during the first six months of the year, which is largely the same rate of increase as in 2016 and 2017 (see Figure 3:13). However, for the business sector, development this year has been slightly stronger than last year.

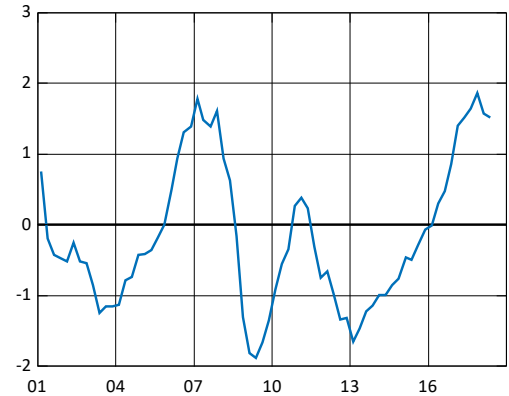
According to the preliminary compilation of the National Accounts, hourly wages and labour costs per hour in the economy as a whole increased slightly faster than wages measured as short-term wage statistics over the second quarter. Like wages, productivity has increased relatively slowly in recent years and average unit labour costs are expected to develop at a historically normal rate in the third and fourth quarters. The Riksbank deems that, in light of the unexpectedly weak short-term wage statistics in May and June, wage growth will be slightly lower in the second half of the year than in the forecast in July.

Figure 3:11. Capacity utilisation in manufacturing industry
Per cent, seasonally-adjusted data



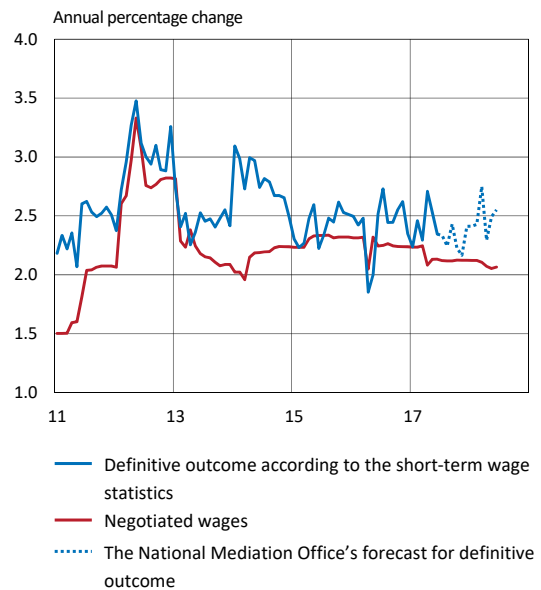
Note. The broken lines represents the mean value since 1996.
Sources: National Institute of Economic Research and Statistics Sweden

Figure 3:12. 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 3:13. Wages and wage agreements in the economy as a whole
Annual percentage change



Source: National Mediation Office

ARTICLE – Small effects on production and inflation of the summer's drought and forest fires

The drought of the summer of 2018 has hit agriculture and forestry hard with poor harvests and forest fires. Individual farmers and forest owners have lost considerable value, but the macroeconomic effects are deemed to be small. All in all, the drought is expected to mean that GDP growth in the third quarter will be slightly lower than it would if the weather had been more normal. The lack of rain has also led to abnormally low levels of water in reservoirs, which has contributed to rising electricity prices and higher CPIF inflation over the summer. The summer's weather is not expected to have any effect on GDP growth or inflation in the slightly longer term.

Major forest fires, but limited impact on GDP

There have been major forest fires in Gävleborg, Jämtland and Dalarna Counties during the summer. Approximately 25,000 hectares of forest, corresponding to 2.6 million cubic metres of forest, valued at about SEK 900 million, has been damaged by fire.¹⁰ Significant economic value has thus been lost, even if the affected areas only make up about one-thousandth of Sweden's forests.

GDP is used to measure the value of the goods and services produced in a country over a certain period. Forestry production takes place continually as forests grow and is recorded in the National Accounts (NA) as stocks of growing forest. When forest is destroyed in some way, such as by fire or storm, the stocks of growing forest are reduced, which, all other factors being equal, has a negative effect on growth.¹¹ However, the forests were not totally destroyed in the fires, but some trees will be usable as saw logs and fuel. This means that stocks of timber, another item in the National Accounts, will increase, so the net effect on companies' stocks will therefore be smaller. In addition, GDP will increase as a consequence of the work carried out due to the fires: firefighting, clearing and repairs. All in all, the effects on GDP growth of the summer's forest fires are expected to be weakly negative.

As a comparison, the effect on stocks of forest and GDP of the major storm that hit Sweden in 2005 and which came to be known as Gudrun can be examined. Gudrun impacted considerably larger areas and almost 30 times as much cubic metres of forest were affected compared to the summer's fires. In the first quarter of 2005, stocks of growing forest decreased, which contributed significantly negatively to GDP growth. However, this was almost completely counteracted

by the increase in stocks of timber. The negative net effect on GDP growth was thereby very small.

Reduced harvests contribute towards increased food prices

The summer's drought has hit both agriculture and livestock farming. The Swedish Board of Agriculture has estimated that the cereal harvest will be almost 30 per cent smaller than last year.¹² The agricultural sector has, however, decreased over time in significance for Sweden's GDP and currently stands for about 0.3 per cent of output. The effect on GDP of lower agricultural output this year is thus expected to be small.

The small harvests have contributed to rising price of wheat and other cereals. This is expected to lead to slightly faster price increases of cereal-based foodstuffs in the autumn. At the same time, feed shortages have made it necessary to conduct the emergency slaughter of livestock, which means that the supply of Swedish meat will increase and prices may be subdued. All in all, rising food prices due to the poor harvest are expected to contribute towards an inflation rate of about 0.1 percentage points higher than it would otherwise have been towards the end of the year.

Temporarily high energy prices

The drought has also led to water levels in Nordic reservoirs becoming very low. As a result, electricity prices have risen.

The rising electricity prices are contributing towards exacerbating the differences between inflation measured as the CPIF and as the CPIF excluding energy. Over the next year, CPIF inflation is expected to exceed CPIF inflation excluding energy. However, this increase will be temporary and, as of the end of next year, the CPIF and the CPIF excluding energy will increase at about the same rate.

¹⁰ See "Skog för över 900 miljoner kronor har brunnit" (Forest worth more than SEK 900 million has burned), press release 23 July 2018, Swedish Forest Agency.

¹¹ It remains unclear whether Statistics Sweden will define the forest fires as a natural disaster. According to the manual of the European System of National and Regional Accounts, in this case, the damaged forests would be recorded in the National

Accounts and the reduced stocks of forest would thus not affect GDP growth negatively.

¹² See "Crop production forecast for cereals and oilseed crops", Statistical Report, JO 29 SM 1801, Swedish Board of Agriculture, 2018.

CHAPTER 4 – The economic outlook and inflation prospects

Economic activity abroad remains favourable. As resource utilisation in developed economies rises in the period ahead, wage growth and underlying inflation are also expected to increase gradually. Growth abroad will, however, then be successively dampened as more and more economies reach normal resource utilisation and monetary policy is gradually normalised. Swedish economic activity has grown ever stronger in recent years and is deemed to be stronger than normal. This is explained both by healthy global growth and good domestic demand, which has risen partly as a result of the expansionary monetary policy. Swedish growth is also expected to slow slightly in the years ahead, but economic activity will continue to be strong. The increasingly strong labour market is expected to contribute to wage growth rising gradually, which will contribute to higher inflation in Sweden. On the other hand, energy prices are not expected to contribute to inflation to the same extent as they have over the last two years. In addition, the krona is expected to strengthen gradually, which will also dampen inflation. Overall, CPI inflation is expected to be around 2 per cent during the forecast period.

International developments

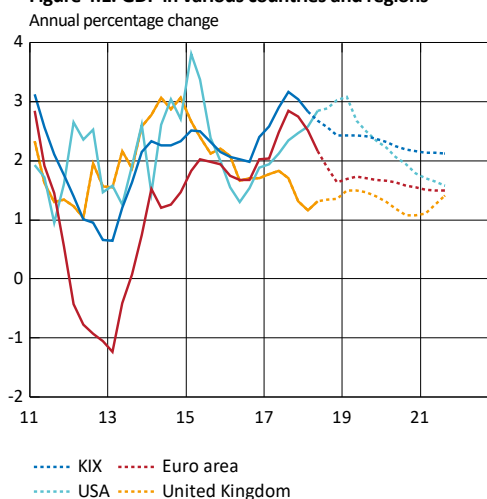
Continued favourable international economic activity

After strong GDP growth in 2017, the overall growth rate during the first half of this year has been slightly subdued in those countries that are most important for Swedish trade (see Figure 4:1). This includes the euro area, whereas the United States, where growth has instead increased, is the main exception. Even though growth has slowed, continued healthy economic activity has led to unemployment in the euro area and several other developed economies continuing to fall (see Figure 4:2). Both households and companies remain optimistic, even if confidence has been slightly subdued in recent months. Rising resource utilisation is expected to contribute to an increase in underlying inflation abroad in the period ahead. At the same time, monetary policy will gradually become less expansionary and growth in Sweden's most important trading partners (KIX-weighted) will gradually slow, from 2.6 per cent this year to 2.2 per cent in 2020. In emerging economies, continued high growth is expected and overall global growth adjusted for purchasing power parity is expected to amount to just under 4 per cent per year in 2018–2020.

Strong economic activity in the United States

Confidence among US companies and households remains on a high level. This indicates good GDP growth in the short term. Economic activity is strong and unemployment is at its lowest level for almost 20 years. The expansionary fiscal policy in the form of tax cuts and increased public expenditure is expected to contribute to higher GDP growth this year and next year. Financial conditions continue to be favourable for growth, even if they become less expansionary when the Federal Reserve continues to raise its policy rate and reduce its asset holdings.

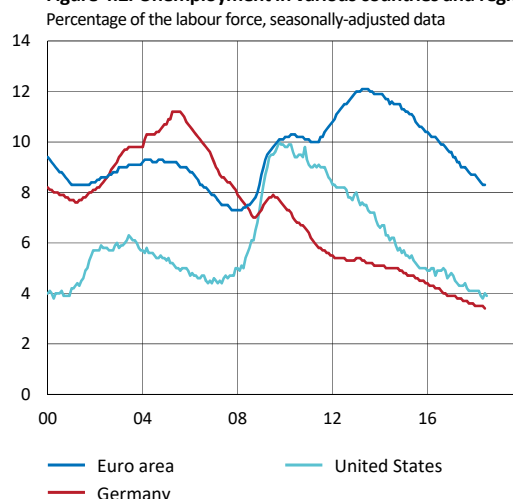
Figure 4:1. GDP in various countries and regions



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. Unemployment in various countries and regions



Source: OECD

GDP growth is expected to be just under 3 per cent this year and then to decline to around 2 per cent in 2020.

The trade conflict between the US and China has increased in July and August (see the box “China now the focus in US trade conflicts”). The tariffs introduced so far cover a relatively small part of the economy and are therefore assessed to only have a slightly dampening effect on US and Chinese growth. If the trade conflict between the US and other countries escalates or spreads, however, the effect could be greater for both the US and other countries.

Gradually lower growth in the euro area

Growth in the euro area has slowed during the first half of this year compared with 2017. Earlier indications of a temporary slowdown have not been confirmed by new statistics. The retail trade and industrial output have indeed recovered slightly, but growth is still lower than last year. Confidence among companies and households has also waned. Unemployment, which has fallen steadily since the sovereign debt crisis, will continue to decrease in the period ahead but this will happen more slowly as resource utilisation is now close to normal levels. The growth in consumption and investment will slow as unmet needs have been satisfied. Overall, GDP growth is expected to remain relatively high this year, but it is now more evident that peak growth has been passed. In the years ahead, GDP growth will slow further to a more normal rate. In Italy, the political unease is expected to contribute to slower growth, although this will only marginally affect growth in the euro area as a whole.

Increasing challenges for some emerging market economies

In recent months, emerging economies have been affected by the rising oil prices, the stronger dollar and US trade restrictions. Oil-exporting economies like Russia have benefited from the rise in the oil price (see Figure 4:3). A stronger dollar and rising US interest rates have increased concern in countries that are dependent on dollar funding, such as Argentina and Turkey. The unease in Turkey has also been exacerbated by low confidence in economic policy and US sanctions. This has contributed to a sharp weakening of the Turkish currency. In Argentina and Brazil development is also being hampered by reduced confidence in economic policy.

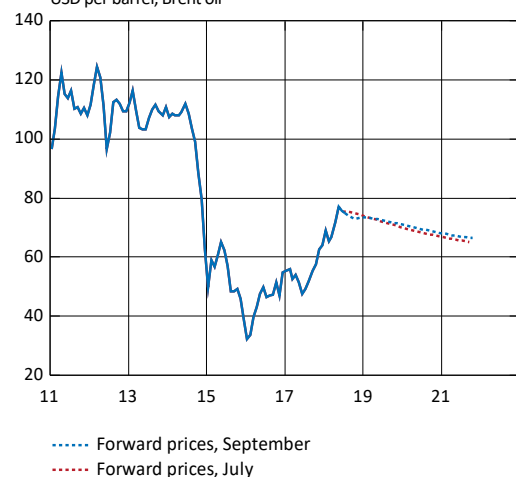
In China, there are signs of slightly subdued domestic demand. One contributory factor is that new regulations have contributed to a slowdown in credit growth. The trade conflict between the US and China has also worsened during the summer. However, the depreciation of the Chinese exchange rate against the dollar may to some extent counteract the negative effects on trade of higher trade barriers. The trade barriers and the slowdown in demand mean that the authorities are now expected to conduct a more expansionary fiscal policy. Overall, GDP growth this year is expected to be in line with the government’s growth target of around 6.5 per cent. Thereafter, the growth rate is expected to fall gradually as the readjustment

China now the focus in US trade conflicts

On 23 March this year, the United States introduced import tariffs on steel and aluminium of 25 and 10 per cent respectively. Several countries, including EU member states, were initially granted exemptions, but the tariffs have also applied to these countries since 1 June. On 22 June, the EU introduced counter-measures, including increased tariffs on motorcycles and steel, aluminium and agricultural products. The United States is also looking into introducing tariffs on the import of motor vehicles and vehicle components. These are not expected to be introduced as long as negotiations to reduce the already introduced trade barriers between the EU and the United States are ongoing.

The US also introduced 25-percent tariffs on import goods from China for USD 34 billion from 6 July and for a further USD 16 billion from 23 August. China responded with equivalent tariff increases on goods from the US. In addition, the US is considering introducing further import tariffs of up to 25 per cent on Chinese goods for USD 200 billion. China has responded by saying it intends to increase import tariffs on goods from the US for USD 60 billion. The value of goods included can be compared to US imports of goods from China worth about USD 505 billion in 2017, while corresponding exports to China were worth about USD 130 billion. Overall, the measures introduced are expected to have limited effects on global growth. But if the trade conflict between the US and other countries was to escalate or spread, the effects on the global economy may be greater.

Figure 4:3. 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

towards more consumption-driven growth continues. In 2020, growth is expected to be about 6 per cent.

Slowly rising inflationary pressures abroad

During the first half of 2018, a higher oil price has fuelled expectations of inflation rising faster in many parts of the world in the period ahead (see Figures 4:3 and 4:4). In the euro area, rising oil prices are expected to help inflation remain around 2 per cent during the second half of the year. Going forward, the oil price is expected to fall slightly, gradually lessening the contribution from energy prices to inflation.

Core inflation, that is, inflation excluding energy and food prices, is expected to rise somewhat abroad, but nevertheless remain relatively moderate. Core inflation in the euro area is still low. However, more strained resource utilisation means that wages are projected to rise a little faster in the period ahead, which is expected to contribute to a gradual rise in core inflation, from around 1 per cent now to just below 2 per cent towards the end of the forecast period. In the US, core inflation is in line with the Federal Reserve’s inflation target. The forecast is for it to remain so, due in part to continued high resource utilisation in the years ahead.

Weak krona to strengthen gradually

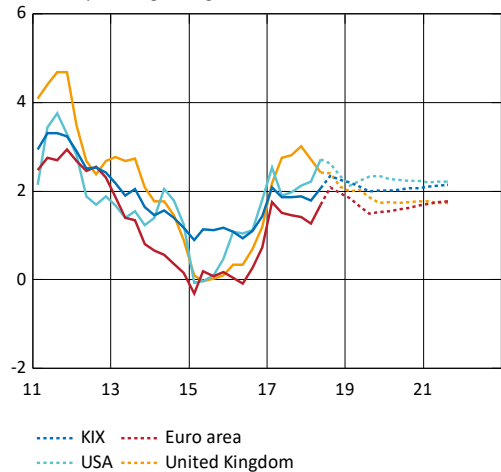
The krona exchange rate has weakened over the year, in both real and nominal terms (see Figure 4:5). The krona tends to weaken in times of increased uncertainty about international developments. Uncertainty about economic developments in Turkey and Italy may therefore have contributed to the development. The fact that Swedish monetary policy expectations have moved in a more expansionary direction than international monetary policy expectations may also have played a part. In real terms, the krona is now historically weak despite Sweden having experienced stronger real economic development than other countries for quite some time. This suggests that the krona exchange rate will strengthen in the longer term, but to what level and how quickly this will happen remains uncertain. Given that the krona has recently been weaker than the Riksbank had forecast, the strengthening of the exchange rate is now expected to occur at a slightly slower pace than in the previous forecast.

Sweden

Strong economic activity continues

Strong global economic activity together with the expansionary monetary policy and extensive housing construction have laid the foundation for ever stronger economic activity in recent years. Resource utilisation is expected to continue to be higher than normal, but Swedish growth will slow as construction and growth on important Swedish export markets decrease. Overall, GDP growth is expected to amount to just under 3 per cent this year

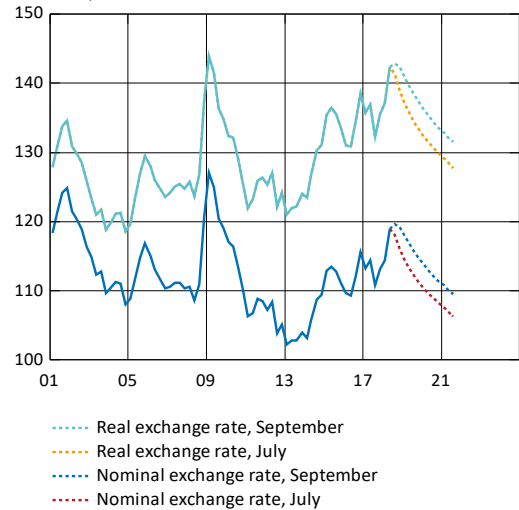
Figure 4:4. Inflation in various countries and regions
Annual percentage change



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

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

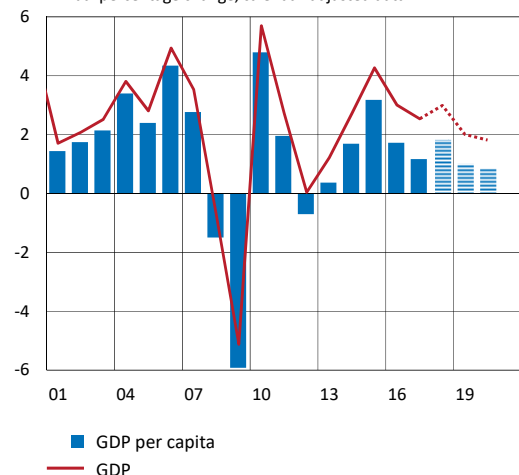
Figure 4:5. Real and nominal exchange rate, KIX
Index, 1992-11-18 = 100



Note. The real exchange rate is calculated using the CPI for Sweden and the CPI for the rest of the world. Outcomes for the real exchange rate, nominal exchange rate and forecasts refer to quarterly averages. The KIX is an aggregate of 32 countries that are important for Sweden's international transactions.

Sources: National sources, Statistics Sweden and the Riksbank

Figure 4:6. GDP and GDP per capita
Annual percentage change, calendar-adjusted data



Sources: Statistics Sweden and the Riksbank

and then fall to about 2 per cent in 2019 and 2020 (see Figure 4:6). As the population is set to grow during this period, annual GDP growth per capita is expected to be about one percentage point lower. The weak (in comparison with previous years) GDP growth per capita in the coming two years is due to several different factors. Productivity growth is expected to be relatively weak and the economic situation will not continue to strengthen, which will slow down the total GDP growth rate. At the same time, the non-working age population is increasing faster than the population as a whole, which does not affect GDP very much, but means that GDP per capita grows more slowly.

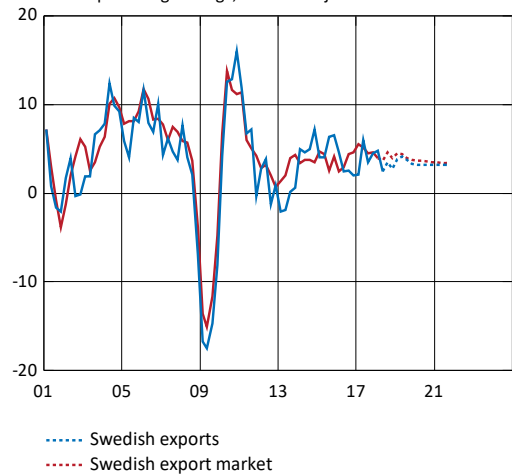
Growth in foreign demand will slow slightly in the coming years

Many important Swedish export markets have experienced strong economic recovery in recent years. In the period ahead, however, their growth is expected to slow slightly, which in turn will contribute to somewhat weaker demand for Swedish exports. The effects on Swedish exports of the recent weak krona are expected to be moderate, however, partly because the krona depreciation is deemed to be temporary and because Swedish export goods contain a large proportion of imported input goods. Overall, exports of Swedish goods and services are expected to grow by 3 to 4 per cent a year in the years ahead (see Figure 4:7).

The slowdown on the housing market is dampening domestic demand

The high level of capacity utilisation in the manufacturing sector together with the growing demand for Swedish goods and services are increasing the need of the business sector for new investment. Developments on the housing market are having the opposite effect, however, where several years of very rapidly growing housing investment have saturated the demand for certain types of homes and contributed to lower housing prices. The price fall is admittedly only moderate compared with the increase in preceding years, but it nevertheless is expected to contribute to slower growth in the supply of new homes in the period ahead. As the number of newly built rented homes, in line with the assessment of the Swedish National Board of Housing, Building and Planning in June, is not set to decrease to any great extent, it is primarily the number of new tenant-owned apartments and single-family houses that is expected to fall. The overall decline in these types of homes will amount to just under 30 per cent in 2018 and 2019, compared with 2017. The number of new housing starts will nevertheless remain high in a historical perspective, as good employment growth and low interest rates will lay the foundations for continued high demand for homes. Overall housing investment, which in addition to the construction of new homes also comprises conversions of existing homes, is set to only fall marginally this year, but will decrease by more than ten per cent in 2019. The development of housing investment will thereby weigh down annual GDP growth starting in 2019 in contrast to the significant positive contribution it has made to GDP growth over the past four years. In 2020, housing

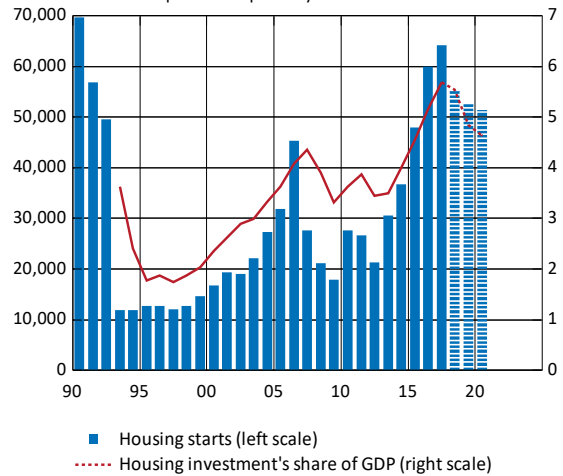
Figure 4:7. Exports and the Swedish export market
Annual percentage change, calendar-adjusted data



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

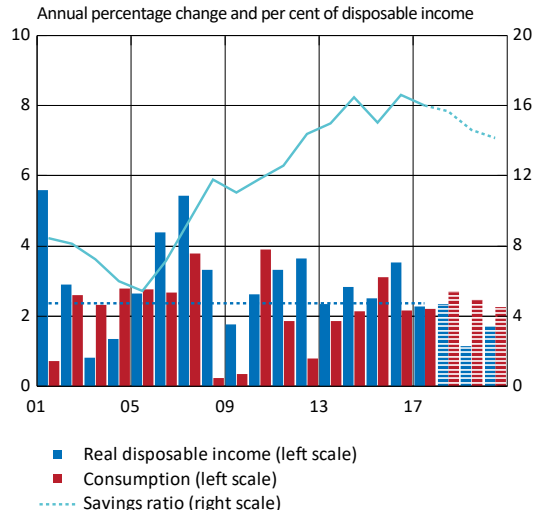
Sources: Statistics Sweden and the Riksbank

Figure 4:8. Housing starts and housing investments
Number and per cent respectively



Sources: Statistics Sweden and the Riksbank

Figure 4:9. Households' real disposable income, consumption and savings ratio
Annual percentage change and per cent of disposable income



Note. Disposable income has been deflated using the household consumption deflator. Broken line is the average of consumption growth 1994–2017.

Sources: Statistics Sweden and the Riksbank

investment is expected to comprise just over 4.5 per cent of GDP, which is high compared with a historical average, despite the downturn (see Figure 4:8), but not in an international comparison.

The slowdown in the housing market is deemed to have contributed to lower household confidence, but is expected to have only a moderate bearing on the development of consumption in the years ahead. Households have for a long period of time saved an increasingly large share of their income. As disposable household income increases more slowly when employment growth slows down and mortgage rates start to rise, average household saving is expected to decline somewhat to maintain a continued good growth in consumption in the coming years (see Figure 4:9).

Debt continues to rise despite lower housing prices

Despite the downturn in housing prices, debts are continuing to increase, albeit at a slower pace. This is because a person buying housing today pays on average a much higher price than the seller did previously. As a result, the loans taken out to fund housing purchases today are also larger than the average loan taken out by those selling their homes. The turnover of homes will thereby contribute to a rise in total household sector debt. The historically high new construction also contributes to the number of home-owners with mortgages increasing relatively rapidly.

Recent, dampened prices, turnover and new construction are expected to contribute to lower growth in household debt over the coming years. However, debt is still growing somewhat faster than disposable household income and the debt-to-income ratio will continue to increase (see Figure 1:12).

Poor matching on the labour market

The situation on the labour market has continually improved since the start of 2013, with a rising employment rate and falling unemployment (see Figure 4:10). Demand for labour is still considerable and the number of employed persons is expected to increase by almost 2 per cent this year. Labour supply has been increasing rapidly for several years, but is expected to decrease in the years ahead as growth in the working-age population slows.

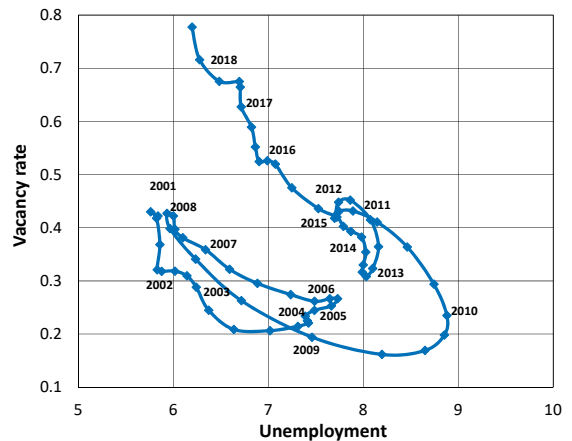
At the same time as developments on the labour market have been favourable, there are signs that it is difficult to match job-seekers with vacant jobs. Labour shortages are on a high level and recruitment times are long. A common way of illustrating how well matching on the labour market is functioning is to use the Beveridge curve that shows the correlation between unemployment and the vacancy rate. Rising vacancy rates are normally associated with falling unemployment and vice versa. After the financial crisis, unemployment has been higher for a given vacancy rate, illustrated by the Beveridge curve shifting outwards, a sign that matching on the labour market has deteriorated compared to the period before the financial crisis (see Figure 4:11). An explanation for this is probably that the

Figure 4:10. Employment and unemployment rate
Per cent of population and labour force, respectively, 15–74 years, seasonally-adjusted data



Sources: Statistics Sweden and the Riksbank

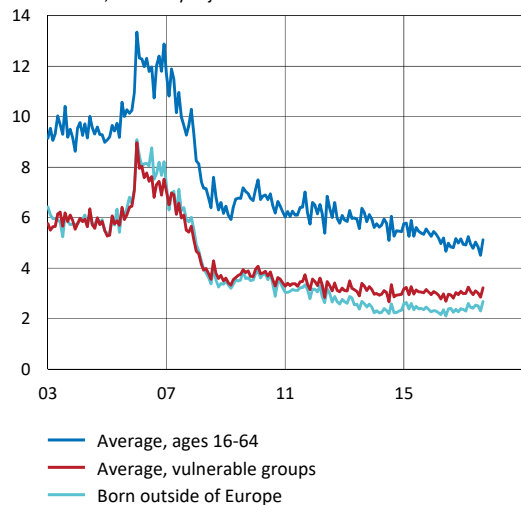
Figure 4:11. Beveridge curve
Percentage of the labour force, seasonally-adjusted data, 15–74 years, trend values



Note. Dates denote first quarter of each year respectively.

Sources: Statistics Sweden and the Riksbank

Figure 4:12. Job-finding rate
Per cent, seasonally-adjusted data



Note. The job-finding rate is calculated as the proportion of people who have left unemployment or a programme for unsubsidised work against the number of people registered as such in the previous month.

Source: Swedish public employment service

inflow into the labour force, particularly of people born outside Europe, has been considerable since the financial crisis. This has also led to a rise in the percentage of people registered as unemployed who belong to “vulnerable” groups, which is now more than 75 per cent.¹³ The percentage of registered unemployed who receive an unsubsidised job per month, what is known as the job-finding rate, has fallen in recent years (see Figure 4:12). For those born outside of European and other unemployed persons belonging to a vulnerable group on the labour market the job-finding rate is relatively low. The fact that the proportion of people born outside Europe in the labour force is expected to rise in the period ahead has led the Riksbank to conclude that unemployment will rise slightly.

Resource utilisation is currently deemed to be higher than normal. The difficulties companies are having to find staff, despite many people being unemployed, and a slower increase in the labour force will contribute to lower employment growth in the years to come. The strong developments on the labour market will contribute to the relatively high level of resource utilisation going forward. But demand will grow more slowly in the period ahead and resource utilisation will decrease slightly in the coming years (see Figure 4:13).

Wages to increase at a moderate pace

The increasingly strong labour market is expected to help gradually push up the rate of wage increases according to Sweden’s short-term wage statistics during the forecast period, but it is nevertheless expected to continue to be moderate in relation to resource utilisation (see Figure 4:14). Several other factors also indicate higher wage increases in the period ahead; for example, inflation has risen and wages in the euro area are expected to increase slightly more rapidly going forward. Productivity growth is also expected to rise, even though it is projected to remain relatively low during the forecast period. According to surveys by the Riksbank and TNS Sifo Prospera respectively, the wage growth expectations of companies and the labour market parties have shown a rising trend in recent years (see Figure 4:15). For much of the labour market, the current collective agreements expire at some point in 2020, making it more difficult to assess wage development in that year.

While short-term wages are used as the official measure of wage development in the Swedish economy, labour costs in the National Accounts, i.e. the sum of wages and employers’ social security contributions, provide a broader measure of companies’ actual costs for labour. During the forecast period, both these costs and hourly wages in the National Accounts are expected to rise at roughly the same pace. In the years ahead, the growth rate in productivity is expected to be lower than a historical average, and unit labour costs will rise by about 2 per cent per year, a relatively normal rate of increase (see Figure 4:16).

Figure 4:13. GDP gap, employment gap and hours gap
Per cent



Note. The gaps refer to the deviation in 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 4:14. Wages according to the short-term wage statistics and the RU indicator 6 quarters earlier

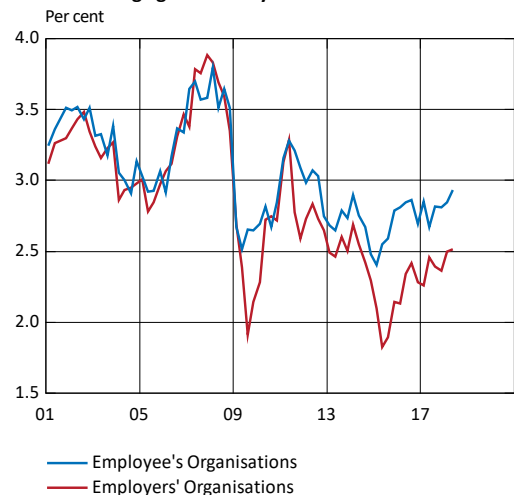
Annual percentage change and standard deviation respectively



Note. The National Mediation Office’s forecast for definitive outcomes for short-term wages 2017Q3–2018Q2. The RU indicator is a measure of resource utilisation. It is normalised so that the mean value is 0 and the standard deviation is 1.

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

Figure 4:15. Expectations among labour market parties of annual wage growth two years ahead
Per cent



Source: TNS Sifo Prospera

¹³ Vulnerable groups refer to unemployed persons who lack upper-secondary school education, are born outside Europe, have a disability and/or are aged 55-64.

Inflation close to 2 per cent in the years ahead

In July, CPIF inflation amounted to 2.2 per cent (see Figure 4:17). Higher-than-expected energy prices contributed to inflation being somewhat higher than in the forecast in the July Monetary Policy Report. Various measures point to underlying inflation, which provides an indication of where inflation is heading, being lower. The median of a number of such measures was 1.5 per cent in July (see Figure 3:3). One of these measures, CPIF inflation excluding energy, amounted to 1.3 per cent in July, somewhat lower than the Riksbank’s forecast (see Figure 4:18).

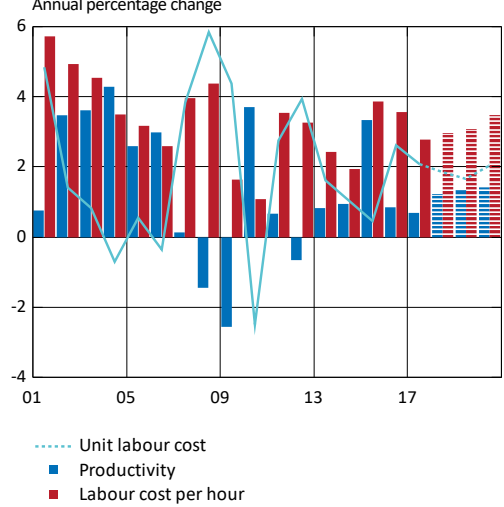
The increasingly improved level of activity in the Swedish economy has contributed to rising inflation in recent years. Krona depreciations, which have an effect on prices of food and other imported goods, have also contributed to higher inflation. In addition, higher energy prices have contributed to rising CPIF inflation. During 2017, the upturn in inflation was partly due to temporarily higher service price increases. Given this, service prices have since increased at a somewhat slower pace, and the price increases for food and goods has fallen somewhat during the summer (see Figure 3:2). Over the past year, the upturn in CPIF inflation has therefore come to a halt and stayed around 2 per cent. The fact that service prices have increased at a slower pace has been counteracted by energy prices rising at a faster pace.

In the coming years, the high resource utilisation in Sweden is expected to continue to function as a driving force behind inflation. In addition, underlying inflation abroad is rising. At the same time, the krona is expected to strengthen gradually, which has a dampening effect on the rate of inflation. Energy prices are not expected to contribute to inflation to the same extent as in recent years. Overall, it is the Riksbank’s assessment that CPIF inflation will be close to 2 per cent in the coming years (see Figure 4:17). When the repo rate and thereby also mortgage rates begin to rise towards the end of 2018, household interest expenditure will increase faster, which means that CPI inflation will rise faster than CPIF inflation.

Minor revisions to the inflation forecast

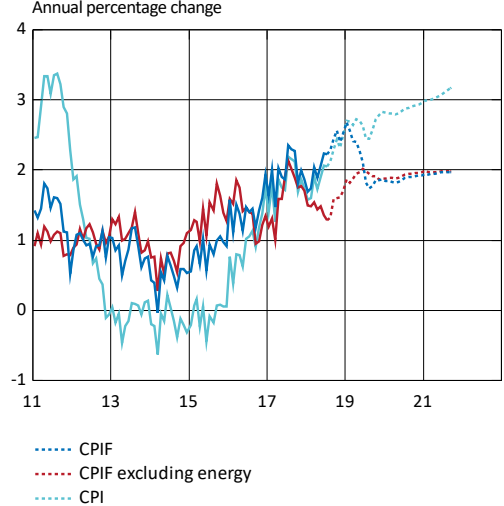
The cyclical conditions for inflation are assessed to be largely unchanged since the previous Monetary Policy Report. Resource utilisation is expected to remain high in the coming years. Despite a somewhat weaker krona, the somewhat lower rate of wage increase, combined with lower outcomes than expected, will contribute to CPIF excluding energy prices being somewhat lower this year and next year. In the longer run, the forecast for the CPIF excluding energy is unchanged at close to 2 per cent. Compared with the forecast in July, energy prices are expected to be high in the coming year. This means that CPIF inflation is expected to increase at a faster pace than was forecast in July. But during 2019, energy price increases will instead slow down and inflation will fall back to just below 2 per cent. In the slightly longer term, however, the forecast is unchanged (see Figure 1:10).

Figure 4:16. Labour costs – total economy



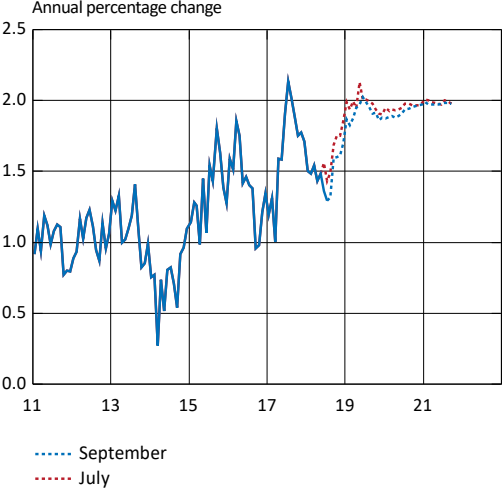
Sources: Statistics Sweden and the Riksbank

Figure 4:17. CPIF, CPIF excluding energy and CPI



Sources: Statistics Sweden and the Riksbank

Figure 4:18. CPIF excluding energy



Sources: Statistics Sweden and the Riksbank

Tables

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

Table 1. Repo rate forecast

Per cent, quarterly averages

	Q2 2018	Q3 2018	Q4 2018	Q3 2019	Q3 2020	Q3 2021
Repo rate	-0.50	-0.50 (-0.50)	-0.50 (-0.43)	-0.05 (0.01)	0.52 (0.57)	1.09 (1.15)

Source: The Riksbank

Table 2. Inflation

Annual percentage change, annual average

	2016	2017	2018	2019	2020
CPIF	1.4	2.0	2.2 (2.1)	2.1 (2.1)	1.9 (1.9)
CPIF excl. energy	1.4	1.7	1.5 (1.6)	1.9 (2.0)	1.9 (2.0)
CPI	1.0	1.8	2.0 (2.0)	2.7 (2.7)	2.9 (2.9)
HICP	1.1	1.9	2.1 (2.0)	2.1 (2.0)	1.8 (1.8)

Note. The CPIF is the CPI with a fixed mortgage rate. 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

	2016	2017	2018	2019	2020
Repo rate	-0.5	-0.5	-0.5 (-0.5)	-0.1 (-0.1)	0.4 (0.5)
10-year rate	0.5	0.7	0.7 (0.8)	1.4 (1.5)	2.1 (2.2)
Exchange rate, KIX, 18 November 1992 = 100	111.7	112.9	118.0 (116.9)	116.3 (112.8)	112.6 (109.3)
General government net lending*	1.2	1.3	1.0 (0.8)	0.9 (0.9)	0.7 (0.9)

* Per cent of GDP

Sources: Statistics Sweden and the Riksbank

Table 4. International conditions

Annual percentage change, unless otherwise stated

GDP	PPP-weights	KIX-weights	2016	2017	2018	2019	2020
Euro area	0.11	0.48	1.8	2.5 (2.6)	2.0 (2.1)	1.7 (1.7)	1.6 (1.6)
USA	0.15	0.09	1.6 (1.9)	2.2 (2.3)	2.8 (2.8)	2.6 (2.5)	2.0 (2.0)
Japan	0.04	0.02	1.0	1.7	0.9 (1.0)	1.0 (0.9)	0.4 (0.4)
China	0.19	0.09	6.7	6.9	6.6 (6.6)	6.1 (6.2)	6.1 (6.1)
KIX-weighted	0.75	1.00	2.1	2.9	2.6 (2.7)	2.4 (2.4)	2.2 (2.2)
World (PPP-weighted)	1.00	-	3.2	3.7 (3.7)	3.8 (3.9)	3.8 (3.8)	3.7 (3.7)

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 2018. 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	2016	2017	2018	2019	2020
Euro area (HICP)	0.2	1.5	1.8 (1.8)	1.6 (1.7)	1.6 (1.6)
USA	1.3	2.1	2.5 (2.6)	2.3 (2.3)	2.2 (2.2)
Japan	-0.1	0.5	0.9 (0.9)	1.2 (1.3)	1.8 (1.9)
KIX-weighted	1.1	1.9	2.1 (2.2)	2.1 (2.1)	2.0 (2.0)

	2016	2017	2018	2019	2020
Policy rates in the rest of the world, per cent	-0.1	-0.1	0.1 (0.1)	0.2 (0.2)	0.5 (0.5)
Crude oil price, USD/barrel Brent	45.1	54.8	72.3 (72.9)	72.4 (72.1)	69.6 (68.4)
Swedish export market	3.6	4.9	4.1 (3.8)	4.1 (3.9)	3.6 (3.5)

Note. Policy rates in the rest of the world refer to a weighted average of USA, the euro area, 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

	2016	2017	2018	2019	2020
Private consumption	2.2	2.2	2.7 (2.6)	2.5 (2.4)	2.3 (2.3)
Public consumption	3.1	0.4	0.7 (0.8)	1.0 (1.0)	1.2 (1.1)
Gross fixed capital formation	5.6	5.9	3.7 (3.7)	0.5 (0.4)	2.8 (2.8)
Inventory investment*	0.0	0.1	0.3 (0.1)	0.2 (0.2)	-0.1 (-0.1)
Exports	3.3	3.6	3.2 (4.0)	3.8 (3.9)	3.7 (3.7)
Imports	3.4	4.8	2.7 (4.1)	3.3 (3.6)	3.5 (3.5)
GDP	3.2	2.3	2.9 (2.5)	2.0 (1.9)	2.1 (2.1)
GDP, calendar-adjusted	3.0	2.5	3.0 (2.6)	2.0 (1.9)	1.8 (1.8)
Final domestic demand*	3.1	2.5	2.3 (2.3)	1.5 (1.4)	2.0 (2.0)
Net exports*	0.1	-0.3	0.3 (0.1)	0.4 (0.3)	0.2 (0.2)
Current account (NA), per cent of GDP	4.7	4.2	3.9 (3.9)	3.8 (4.0)	3.9 (4.0)

*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

	2016	2017	2018	2019	2020
Population, aged 15–74	0.9	1.1	0.8 (0.8)	0.6 (0.6)	0.5 (0.5)
Potential hours worked	0.9	0.8	0.8 (0.8)	0.8 (0.8)	0.8 (0.8)
Potential GDP	2.2	2.2	2.2 (2.2)	2.2 (2.2)	2.1 (2.1)
GDP, calendar-adjusted	3.0	2.5	3.0 (2.6)	2.0 (1.9)	1.8 (1.8)
Number of hours worked, calendar-adjusted	2.1	1.8	1.7 (1.4)	0.7 (0.6)	0.4 (0.4)
Employed, aged 15–74	1.5	2.3	1.7 (1.6)	0.8 (0.6)	0.5 (0.5)
Labour force, aged 15–74	1.0	2.0	1.3 (1.1)	0.8 (0.7)	0.6 (0.6)
Unemployment, aged 15–74 *	6.9	6.7	6.2 (6.2)	6.3 (6.3)	6.4 (6.4)
GDP gap	0.8	1.1	1.9 (1.5)	1.7 (1.2)	1.4 (0.9)
Hours gap	0.0	1.0	2.0 (1.6)	1.9 (1.4)	1.5 (1.1)

* Per cent of the labour force

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

	2016	2017	2018	2019	2020
Hourly wage, NMO	2.4	2.4 (2.4)	2.6 (2.7)	2.9 (3.1)	3.4 (3.4)
Hourly wage, NA	2.2	2.7	2.8 (3.0)	3.0 (3.1)	3.4 (3.4)
Employers' contribution*	0.7	-0.1	0.1 (0.1)	0.1 (0.1)	0.1 (0.1)
Hourly labour cost, NA	3.0	2.6	2.9 (3.1)	3.1 (3.2)	3.5 (3.5)
Productivity	0.9	0.7	1.2 (1.2)	1.3 (1.3)	1.4 (1.4)
Unit labour cost	2.6	2.1	1.8 (2.0)	1.7 (2.0)	2.0 (2.1)

* Contribution to the increase in labour costs, 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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PRODUKTION SVERIGES RIKSBANK.
ISSN 1654-1030 (print)
ISSN 2000-2076 (online))