

Monetary Policy Report

February 2018



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 would be 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 13 February 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 (the CPIF).
- At the same time as monetary policy is aimed at attaining the inflation target, it is also to 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. It thus 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 stretches between 1 and 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, the most important factors, however, are effective regulation and supervision. Monetary policy only acts as a complement to these.
- In some situations, as in the financial crisis 2008–2009, the repo rate and the repo-rate path may need to be supplemented with other measures to promote financial stability and ensure that monetary policy is effective.
- The Riksbank endeavours to ensure that its communication is open, factual, comprehensible and up-to-date. This makes it easier for economic agents to make good economic decisions. It also makes it easier to evaluate monetary policy.

DECISION-MAKING PROCESS

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

PRESENTATION OF THE MONETARY POLICY DECISION

The monetary policy decision is presented in a press release at 9.30 a.m. on the day following the monetary policy meeting. The press release also states how the individual Executive Board members voted and provides the main motivation for any reservations entered. A press conference is held on the day following the monetary policy meeting.

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CHAPTER 1 – Monetary policy considerations

Global economic activity continues to strengthen and in Sweden, growth is high, the labour market is strong and inflation is close to the target of 2 per cent. Since the monetary policy meeting in December, developments abroad have been in line with the Riksbank's forecasts. The overall economic outlook for Sweden is also basically unchanged, even though inflation is expected to be slightly lower in the year ahead. CPIF inflation is expected to be close to 2 per cent from 2019.

It has taken a long time and required very low interest rates and extensive asset purchases to bring inflation and inflation expectations back to 2 per cent. New outcomes for inflation and wages indicate that the underlying inflationary pressure is lower compared with the assessment in December and the inflation forecast has therefore been revised down slightly. For inflation to stabilise close to target going forward, it is important that economic activity continues to be strong and has an impact on price development, and that the Swedish krona does not strengthen too quickly. Monetary policy therefore still needs to be expansionary. In light of this, the Executive Board has decided to hold the repo rate unchanged at -0.50 per cent. Reinvestments of redemptions and coupon payments in the government bond portfolio will continue until further notice. The forecast for the repo rate is unchanged since December and indicates that slow repo rate rises will commence during the second half of the year. The expansionary monetary policy underlines the Riksbank's aim to safeguard the role of the inflation target as nominal anchor for price- and wage formation.

Good economic outlook both in Sweden and abroad

Economic activity abroad has continued to strengthen in line with the assessment in December. Recent falls on equity markets do not change the picture of a good economic outlook. Confidence among households and companies is on high levels. The prospects look better than they have in a long time, in the euro area in particular. Global growth is expected to be slightly higher this year than last year but will gradually slow down during the forecast period. Rising commodity prices of late favour emerging economies like Russia and Brazil, which have had very weak GDP growth in recent years.

Aggregated with the weights in the krona index (KIX), GDP abroad will grow by about 2.5 per cent per year on average during the forecast period.

Low inflationary pressures abroad

In several of the economies that are most important for Sweden, such as the euro area and the United States, resource utilisation is close to or slightly above normal levels. Despite this, underlying inflation is still low, due in part to the fact that it takes time before rising resource utilisation affects wages and inflation. However, the higher oil price is expected to contribute positively to aggregated inflation in the near term.

Table 1:1.

Important factors for monetary policy
Economic activity abroad continues to strengthen while global inflationary pressures are subdued.
There has been something of a shift in market participants' expectations of international monetary policy, in a slightly less expansionary direction.
The krona exchange rate will appreciate slowly going forward.
Strong Swedish growth and labour market, resource utilisation still higher than normal.
Although inflation is expected to be slightly lower in the year ahead, it will be close to target from 2019. Both short and long-term inflation expectations are close to 2 per cent.
Conclusion: Monetary policy needs to remain expansionary for inflation to stabilise close to the target of 2 per cent. The repo rate is to be held at -0.50 per cent and reinvestments of redemptions and coupon payments will continue.

Table 1:2.

Important forecast revisions
The rate of wage increases, and hence cost pressures, are expected to be lower in the coming years.
Inflation has been revised down, primarily in 2018, as a result of lower outcomes than expected and the fact that cost pressures are expected to rise more slowly.

The increasingly strong economic activity is helping to fuel expectations that aggregated KIX-weighted inflation will rise, albeit at a moderate pace during the forecast period, from just below to just above 2 per cent.

Slow normalisation of monetary policy abroad

Inflationary pressures abroad are still subdued, suggesting only a slow normalisation of monetary policy in other countries.

In the US, the policy rate was held unchanged in January and the forecasts from members of the Monetary Policy Committee point to about three rate increases in 2018 and a further two per year in 2019 and 2020. In October 2017, a slow tapering of the central bank’s asset holdings was initiated. According to market pricing, slightly faster rate increases are expected in the years ahead compared to expectations in December.

The European Central Bank (ECB) has communicated that net asset purchases will continue at least until the end of September 2018, but the rate of purchases has decreased since the turn of the year. The ECB has also stated that key policy rates are expected to remain at current levels long after the net purchases of assets have been concluded. The communication from individual executive board members has led market participants to revise down the probability of additional asset purchases after September. Many market participants are expecting a first rate increase during the first quarter of 2019 while others think it will happen later.

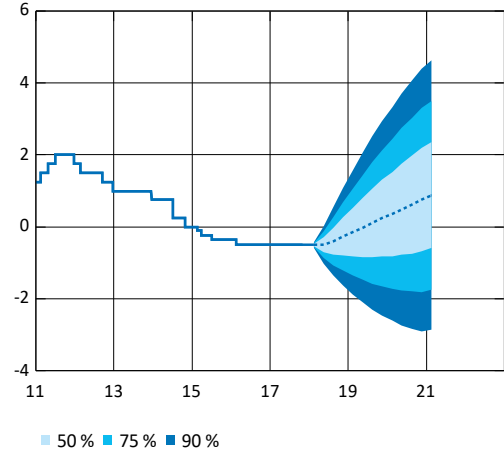
Lower housing investment subdues Swedish growth in 2019

There are several factors contributing to continued good GDP growth in Sweden in the year ahead. Thanks to the bright growth prospects in the euro area, demand for Swedish exports is stable. Household consumption continues to increase at approximately the same rate as in recent years. In addition, the high level of capacity utilisation is expected to contribute to a steady increase in business sector investment (excluding housing) in the coming years.

Housing prices have fallen in recent months. In December, the Riksbank deemed that housing prices would continue to fall for a while longer, then stabilise and thereafter increase at a moderate pace. The development since December has been in line with the Riksbank’s assessment. The price fall is expected to slow the number of housing starts this year, but as it takes time to complete construction, housing investment is expected to be affected with a time lag and make a clear impact on GDP-growth above all in 2019, see the article “Reduced housing construction is subduing GDP growth” in this report.

All in all, the assessment of growth in Sweden is largely unchanged compared with in December, which means that growth will slow down from close to 3 per cent this year to about 2 per cent in 2020 (see Figure 1:2).

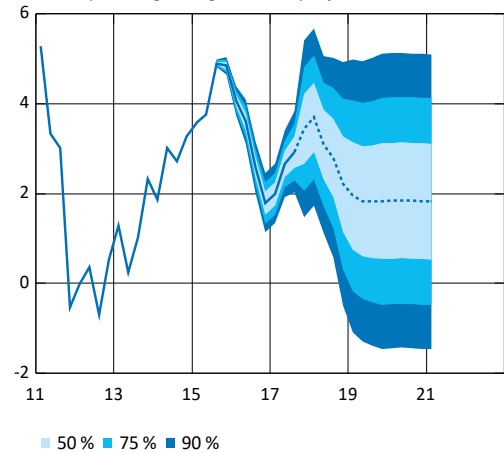
Figure 1:1. Repo rate with uncertainty bands
Per cent



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

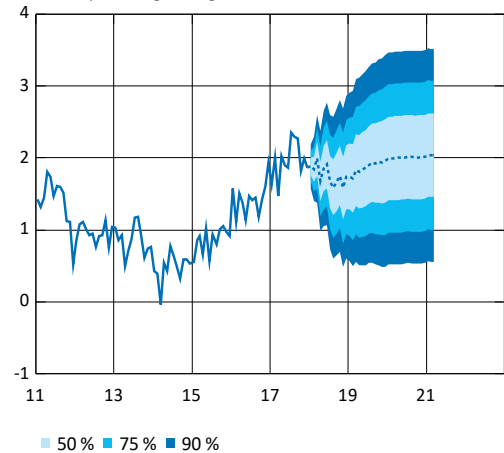
Figure 1:2. GDP with uncertainty bands
Annual percentage change, seasonally-adjusted data



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

High resource utilisation and a labour market with matching problems

Indicators provide a clear picture that resource utilisation is higher than normal. For example, the Riksbank's aggregate resource utilisation indicator is higher than the top levels reached before the financial crisis. The Riksbank's assessment is that resource utilisation will remain higher than normal during the entire forecast period.

The development of the Swedish labour market has been strong for several years. However, growth in the labour force and the number of persons employed is expected to slow down. Unemployment fell relatively slowly during 2017, and the Riksbank's assessment is that it will not fall much more during the forecast period. There have been signs for a long time that the matching of job-seekers to vacant jobs has been functioning poorly.² Structural changes that improve the functioning of the labour market are therefore probably needed in the years ahead to achieve a more significant reduction in unemployment.

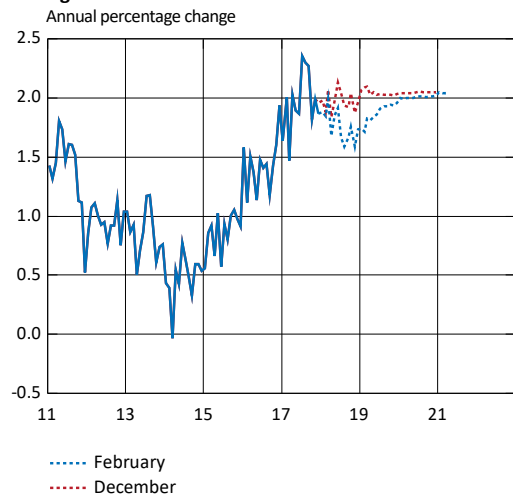
CPIF inflation slightly lower in the year ahead

CPIF inflation was 2.0 per cent on average during 2017, i.e. completely in line with the inflation target (see Figure 1:3). The fact that CPIF inflation has risen to a level close to target is partly due to the faster rate of increase in energy prices. But much of the inflation upturn is also due to prices for services having increased more quickly than before. An important explanation for this is the strong economic activity in Sweden, as service prices are, to a large extent, influenced by domestic demand.

The rate of increase in service prices has fallen in recent months, contributing to a slight downward revision in the assessment of underlying inflationary pressures. In addition, outcomes for wage increases have been lower than expected since the assessment in December and the wage forecast has been revised down. Therefore, the picture is still that the rate of wage increases will be moderate in the period ahead, despite the high level of resource utilisation. One explanation for this is weak productivity growth both in Sweden and internationally in recent years.³ Compared with December, the forecast for productivity growth has also been adjusted down slightly. The weaker wage development, however, means that the cost pressures, in terms of unit labour costs, are nevertheless expected to increase somewhat more slowly in the years to come. All in all, the inflation assessment is slightly lower in the year ahead (see Figures 1:4 and 1:5).

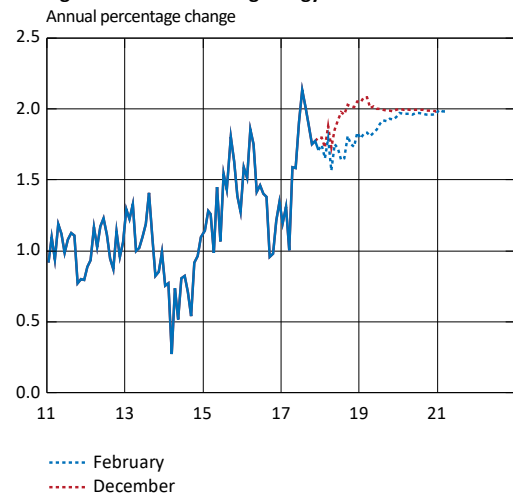
Despite everything, the conditions are good for inflation to be close to target in the period ahead. The strong economic situation affects companies' pricing with a time lag, and it is the Riksbank's assessment that companies will have more scope than previously for passing on their cost increases to consumer prices.

Figure 1:4. CPIF



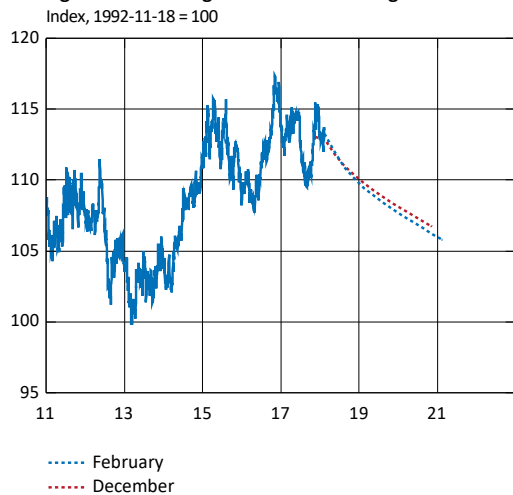
Sources: Statistics Sweden and the Riksbank

Figure 1:5. CPIF excluding energy



Sources: Statistics Sweden and the Riksbank

Figure 1:6. KIX-weighted nominal exchange rate



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

² See, for instance, Håkansson, C. "A divided labour market – on matching on the Swedish labour market after the economic crisis", Sveriges Riksbank Economic Review 2:2014, Sveriges Riksbank.

³ See the article "Strong economic activity but subdued wage increases" in the July 2017 Monetary Policy Report.

Inflation will be subdued by the fact that the krona exchange rate will continue to strengthen in the period ahead (see Figure 1:6). However, prices abroad are at the same time expected to rise slightly more quickly and, together with the high level of resource utilisation in Sweden, this is expected to counteract the negative effects on inflation of subdued import prices caused by the development of the krona. Overall, CPIF inflation is expected to be close to 2 per cent from 2019 onwards.

Current monetary policy

With a negative policy rate and extensive purchases of government bonds, the Riksbank's monetary policy is unusual in a historical perspective. The aim of the expansionary monetary policy is to stabilise inflation around the target of 2 per cent and to keep inflation expectations in line with the target.

Monetary policy has had a clear impact on short and long-term market rates and on the krona exchange rate.⁴ Since 2014, inflation has risen and over the past year, it has been close to the target. Both short- and long-term inflation expectations have also risen and are back close to 2 per cent. Economic activity is strong and unemployment has declined. Monetary policy has played a significant role in this development.

Inflation close to target with an expansionary monetary policy

Global economic activity continues to strengthen and in Sweden, growth is high, the labour market is strong and inflation is close to the target of 2 per cent. Since the monetary policy meeting in December, developments abroad have been in line with the Riksbank's forecasts. The overall economic outlook for Sweden is also basically unchanged, even though inflation is expected to be slightly lower in the year ahead. New outcomes for inflation and wages have been weaker than expected, indicating that underlying inflationary pressures will be slightly lower for some time compared with the assessment in December. The inflation forecast has hence been revised down slightly, primarily during 2018. But CPIF inflation is expected to be close to 2 per cent from 2019. And both short- and long-term inflation expectations are close to 2 per cent, which can be interpreted as agents in the Swedish economy having confidence in the inflation target.

It has taken a long time and required very low interest rates and extensive asset purchases to bring inflation and inflation expectations back to 2 per cent. For inflation to continue to remain close to target going forward, it is important that economic activity remains strong and has an impact on price development. Monetary policy therefore still needs to be expansionary. In light of this, the Executive Board has decided to hold the repo rate unchanged at -0.50 per cent.

The forecast for the repo rate is unchanged since December and indicates that slow repo rate rises will be initiated during the second half of this year (see Figure 1:7). The Riksbank's strategy

⁴ See the article "The effects of monetary policy on financial variables" in the April 2017 Monetary Policy Report.

for the gradual normalisation of monetary policy involves continuing to reinvest redemptions and coupon payments in the government bond portfolio until the repo rate has been raised to a suitable level.⁵

At the end of January, the Riksbank's government bond holdings amounted to SEK 310 billion, expressed as a nominal amount (see Figure 1:8). In addition to purchases made since 2015, the holdings also include the portfolio built up during 2012 and reinvestments of redemptions and coupon payments. Until further notice, redemptions and coupon payments will be reinvested in the government bond portfolio. At the monetary policy meeting in December, the Executive Board decided to bring forward reinvestments of the large redemptions that are due during the first half of 2019. To retain the Riksbank's presence in the market and attain a relatively even rate of purchase, the Riksbank has already started reinvestments in January and these will continue until the middle of 2019 (see Figure 1:9). This means that the Riksbank's holdings of government bonds will increase temporarily in 2018 and early 2019 (see Figure 1:8).

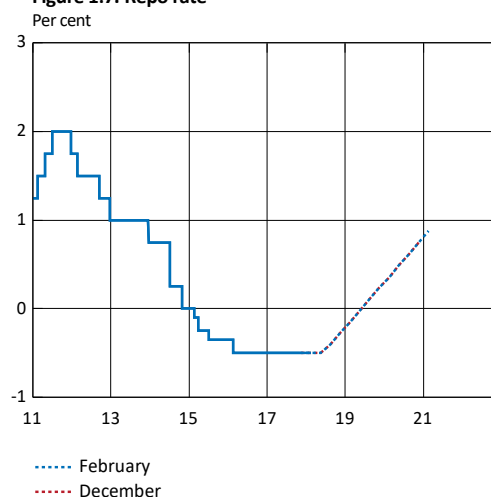
Just as in many other countries in the world, monetary policy is expansionary and will remain so in the coming years. For example, the real repo rate is expected to be negative throughout the forecast period (see Figure 1:10). Monetary policy will, as usual, be adapted to developments in economic activity and inflation. If necessary, monetary policy can be made even more expansionary, for instance, by further expanding the Riksbank's holdings of government bonds, cutting the repo rate again or postponing increases in the repo rate.

Monetary policy considerations

For inflation to stabilise close to target, it is important that economic activity continues to be strong and has an impact on price development. Monetary policy therefore needs to remain expansionary and the repo rate is now left unchanged at -0.50 per cent. Since April 2017, the forecast for the repo rate has been unchanged and, according to this forecast, the time is approaching when it is appropriate to slowly start raising the repo rate from its current, historically low level. But it is important not to start raising the rate too early. Economic activity is admittedly strong and inflation has been close to 2 per cent for some time. But there are factors that create uncertainty for the development of inflation in the period ahead.

On the one hand, underlying inflationary pressures are expected to be lower. CPI inflation, adjusted for energy prices, was slightly lower than expected in December. Moreover, the rate of increase in service prices has declined in recent months. In addition, there are indications that wages will continue to increase unexpectedly slowly. Overall, this has led to the inflation forecast being revised down, particularly for the year ahead. Low underlying inflationary pressures are creating uncertainty

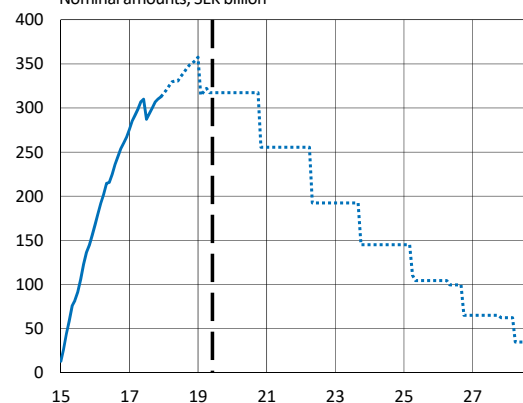
Figure 1:7. Repo rate



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

Source: The Riksbank

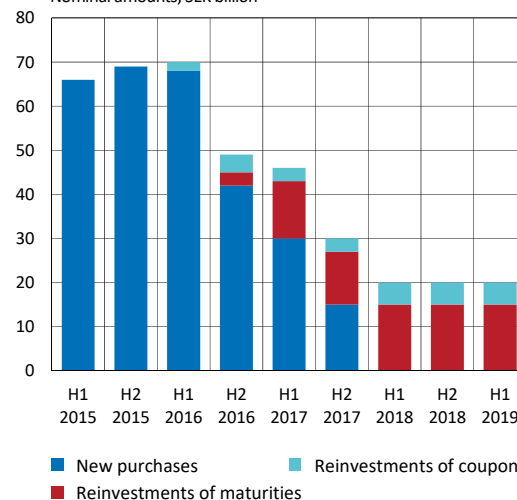
Figure 1:8. The Riksbank's holdings of government bonds
Nominal amounts, SEK billion



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 1:9. The Riksbank's purchases and reinvestments
Nominal amounts, SEK billion



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

Source: The Riksbank

⁵ See the article "The Riksbank's strategy for a gradual normalisation of monetary policy" in the December 2017 Monetary Policy Report.

regarding the conditions for inflation to stabilise close to the inflation target in the period ahead.

The development of the krona is also a source of uncertainty. In the Riksbank's forecast, the krona is expected to strengthen slowly. If the krona were to strengthen too rapidly, it could lead to prices of imported goods and services increasing more slowly and to a decline in the demand for Swedish exports. This would also make it more difficult to stabilise inflation close to the inflation target. Monetary policy abroad is still expansionary and normalisation is expected to proceed slowly. Something that could therefore lead to an overly rapid appreciation of the krona is if monetary policy in Sweden is normalised too early.

On the other hand, global economic activity looks increasingly strong and since December there has been a slight shift in market participants' expectations of monetary policy abroad, in a less expansionary direction. For example, market participants now expect more policy rate rises from the US central bank and that the European Central Bank will start its policy rate rises at the beginning of 2019.

In addition, the Swedish economy has been in a position of strong economic activity and close-to-target inflation for some time. Even though CPIF inflation is expected to be slightly under 2 per cent in the year ahead, it will be close to target from 2019 onwards and inflation expectations are in line with the inflation target.

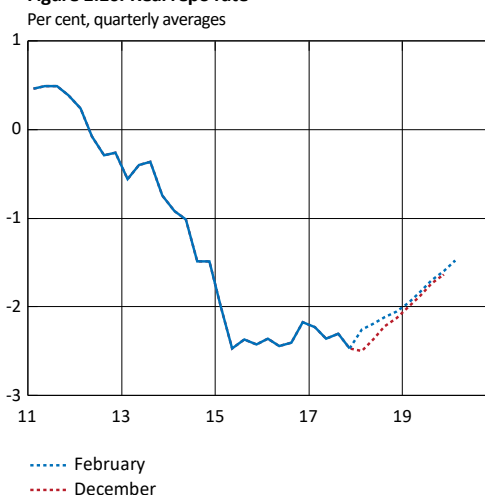
All in all, this suggests that it is now appropriate to leave the forecast for the repo rate unchanged and to begin slow rate rises at some point during the second half of the year. But it has taken a long time to bring up inflation and inflation expectations and the uncertainty surrounding the development of inflation means that monetary policy need to proceed cautiously. In light of this, the above-mentioned uncertainty factors could also be seen as arguments for postponing rate rises slightly. If conditions were to change, the Executive Board is prepared to adjust monetary policy.

Uncertainty and risks

Forecasts of future economic developments are always uncertain, as illustrated by the uncertainty bands in Figures 1:2–1:3. 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, in the monetary policy deliberations, one 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, one may need to await more information before monetary policy can be adjusted.

Figure 1:10. Real repo rate



Note. The real repo rate is a mean value 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

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 policy rate and the extensive government 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 being 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 that 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. In general, however, the markets have so far been able to manage negative interest rates relatively smoothly. As regards government bond purchases, the Riksbank's purchases mean 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 a slight delay in performing transactions. But the interest in participating in both the Riksbank's and the Swedish National Debt Office's auctions has been substantial and the overall assessment is that the Riksbank's bond purchases do not constitute any major problem on the market. The Riksbank is closely monitoring developments by, for example, having regular contacts with the various participants.

Neither do the negative interest rates seem to have led to an increased demand for cash; on the contrary, demand for cash has continued to decline. Furthermore, only a small proportion of deposits incur negative rates.

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.

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

Good economic activity abroad but uncertainty surrounding inflation

Developments in the euro area, Sweden's most important trading partner, have continued to show signs of strength. Confidence among households and companies is very high. The Riksbank's previous forecasts have underestimated growth in the euro area, and have gradually needed to be revised up. At the same time, many of the political uncertainty factors, which have characterised developments in recent years, diminished in strength last year. In light of this, growth abroad may turn out to be even stronger than in the Riksbank's forecast.

At the same time, it is important to emphasise that uncertainty remains regarding the economic effects of the United Kingdom's withdrawal from the EU. In addition, many of the structural problems in the euro area remain, for instance, regarding the bank sector.

One remaining uncertainty factor concerns international inflation. Despite an ever-brighter economic outlook, it remains low. Against this backdrop, the Riksbank's forecast indicates that the rising level of resource utilisation will only gradually have an impact on inflation, which is hence projected to rise at a slow pace. But the possibility cannot be ruled out that the relationship between resource utilisation and inflation has been more permanently weakened, resulting in inflation rising even more slowly. On the other hand, were inflation to follow a historically normal relationship with resource utilisation, international inflation could instead be higher than in the Riksbank's forecast.

Another uncertainty factor concerns the recent turbulence on global equity markets. In the wake of, for example, strong US wage statistics, expectations about both future inflation and the policy rate have risen. A more prolonged fall in equity prices could have confidence effects and thereby subdue global economic activity and inflation.

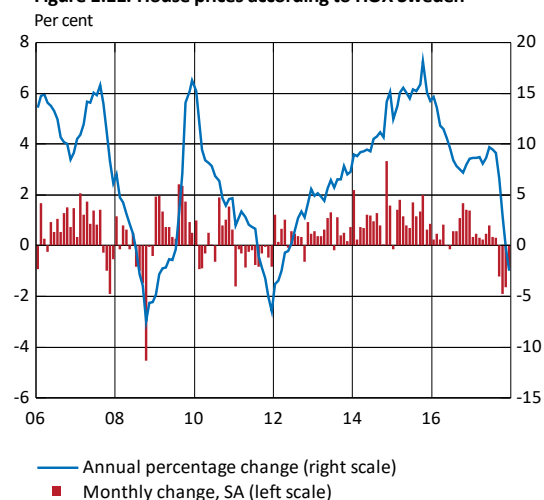
Housing market the greatest risk to growth in Sweden

The Riksbank has been discussing the risks on the Swedish housing market for a long time. In recent months, prices have fallen in Sweden (see Figure 1:11). In December, the Riksbank made the assessment that prices would continue to fall slightly further before picking up at a moderate pace. Developments since then have largely been in line with this assessment. The decline in housing investment is expected to be relatively limited even though it will subdue growth, above all in 2019, see also the article "Reduced housing construction is subduing GDP growth".

But uncertainty over price developments on the housing market is considerable, and a greater price fall cannot be ruled out. This could dampen housing investment substantially more than in the Riksbank's forecast, and have a significantly negative effect on household consumption as well.

A sharp price fall on the Swedish housing market could therefore have a negative impact on domestic demand. Normally, this would slow inflation in Sweden and lead to more expansionary monetary policy. But if international confidence in

Figure 1:11. House prices according to HOX Sweden



Sources: Valueguard and the Riksbank

the Swedish housing market and Swedish banks was to be undermined, it could lead to the krona depreciating and inflation rising higher than would otherwise be the case. How monetary policy ultimately reacts in such a scenario depends on the overall outlook for economic activity and inflation.

Uncertainty surrounding the inflation forecast

As described above, inflation abroad can be both higher and lower than in the Riksbank's forecast. Historical relationships strongly suggest that lower international inflation will also, all other factors being equal, lead to lower inflation in Sweden, and the opposite when inflation abroad rises.⁶

Changes in the krona exchange rate are as always difficult to forecast. The Riksbank's forecast predicts a slow strengthening of the krona. A faster appreciation of the krona would subdue import prices, making it more difficult to stabilise inflation around the target. The problems could be particularly serious if confidence in the inflation target was once again to weaken and inflation expectations were once again to fall.

The slowdown in the rate of increase in service prices in recent months illustrates the uncertainty surrounding the strength of underlying inflation. Wage development in the Swedish economy has been conspicuously weak in relation to the economic situation in recent years.⁷ The Riksbank and other analysts have been overestimating wage growth for a relatively long period of time. It cannot be ruled out that the factors holding back wage increases in recent years are more permanent and that wage growth in the period ahead will not increase in the way the Riksbank expects. One of these factors is the sharp increase in labour supply. There have been recent signs that new arrivals are establishing themselves on the Swedish labour market more quickly than they have done previously.⁸ This could signify a more rapid increase in labour supply than estimated, which may further dampen wage development.

All in all, the Riksbank's forecasts means that the rate of wage increases is expected to be relatively moderate in the years ahead, and lower than what historical correlations with resource utilisation indicate. If wage development weakens even further, it is likely that company costs will also be more subdued, which will push down inflation.

The Riksbank's assessment is that a continued high level of resource utilisation is needed in the Swedish economy to ensure that inflation stabilises close to 2 per cent. Resource utilisation is deemed to be higher than normal throughout the forecast period and there is a risk that this will lead to a stronger upturn in wages

Risks of excessively low inflation

The expansionary monetary policy has a clear focus: stabilising inflation around the 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 early 1990s. With a shared perception of how prices will develop in the future, it is 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 the 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 in turn 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 an inflation rate can make it more 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.

⁶ See, for instance, J. Lindé and A. Reslow, "Do Swedish forecasters take sufficient account of Sweden's international dependence?", Economic review no 2 2017, Sveriges Riksbank.

⁷ See the article "Strong economic activity but subdued wage increases" in the July 2017 Monetary Policy Report.

⁸ Register data from Statistics Sweden for 2016 show that refugees received by municipalities, who have been in Sweden for two years or longer, are finding work at a faster rate.

and inflation than expected by the Riksbank. Such an upturn would be more in line with historical correlations.⁹

There are thus a number of factors that could lead to both lower or higher inflation than is now being assumed. The assessment is, however, that the downside risks deserve particularly close attention in the current situation, and, against this backdrop, the Riksbank still has the contingency to make monetary policy more expansionary should the need arise. All of the tools that the Riksbank has described earlier can be used in such a situation.

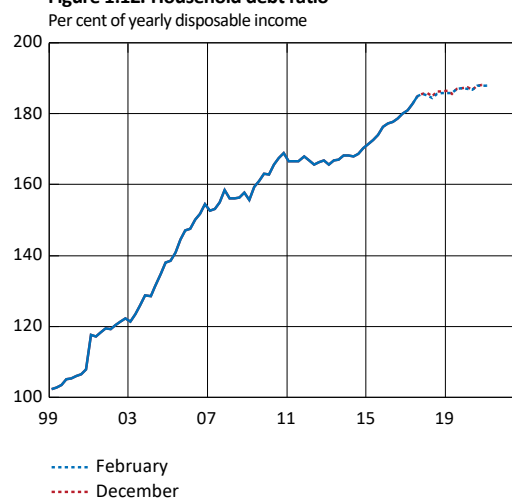
Important with tighter amortisation requirements, but the main problem is a poorly functioning housing market

Households' high indebtedness is making their consumption sensitive to falling housing prices and rising interest expenditure.¹⁰ Several different measures are needed to strengthen households' resilience. Although the subdued development of housing prices is expected to lead to household indebtedness rising more slowly than before, households' debt-to-income ratios is still high and increasing (see Figure 1:12).

With regard to macroprudential policy measures, the Riksbank welcomes Finansinspektionen's decision on tougher amortisation requirements, which comes into force in March 2018. This will help bolster the resilience of households slightly.

At the same time, the fundamental causes of the high household indebtedness still remain. This has to do with long-term structural problems on the Swedish housing market. It is therefore a matter of urgency for the Government to take targeted housing and tax policy measures to mitigate the risks associated with household indebtedness. Politicians need to take a holistic approach and review issues such as 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 1:12. Household debt ratio



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

Sources: Statistics Sweden and the Riksbank

⁹ See also the article, "Is activity in the Swedish economy too high?" in the October 2017 Monetary Policy Report.

¹⁰ See the article "How are households affected by rising interest rates?" in the December 2017 Monetary Policy Report.

CHAPTER 2 – Financial conditions

Since the Monetary Policy Report in December, market participants expect faster policy rate increases from some central banks and government bond yields have risen both in Sweden and abroad. The higher yields are the result of market expectations of continued good growth prospects and higher inflation and communication from a number of central banks. Prices on equity markets have fallen since the end of January, partly due to expectations of higher policy rates. In Sweden, households and companies are continuing to pay low interest rates at the same time as credit growth remains high. The krona is slightly weaker compared with the Riksbank's forecast in December.

International developments

Expectations of policy rate rises have increased

In conjunction with the monetary policy meeting in January, the European Central Bank (ECB) held the policy rates unchanged. The net asset purchases will continue until at least the end of September 2018, but since the start of the year the monthly rate of purchases has been lower than in 2017. Market participants' expectations of policy rate increases have risen since December. Communication from individual members on subjects such as the prospects for the purchase programme and expectations of continued good economic activity have contributed to this development. According to market pricing, a first deposit rate rise may take place in the first half of 2019 (see Figure 2:1).

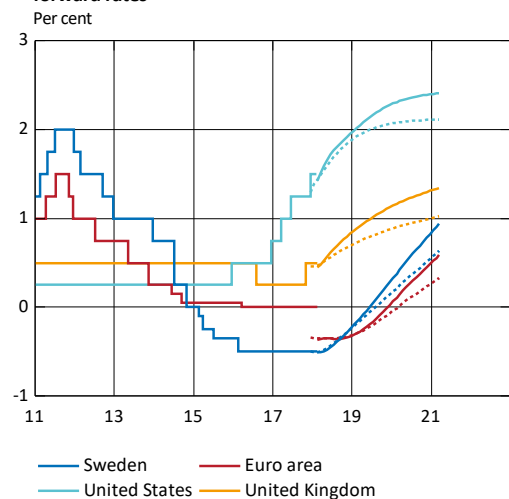
The US central bank, the Federal Reserve, held the interval for the policy rate unchanged in conjunction with the monetary policy meeting in January. At the same time, the tapering of the balance sheet initiated in October last year is continuing via the gradual reduction of reinvestments of redemptions. This is being carried out by only reinvesting maturing asset holdings to the extent that they exceed a pre-specified cap. The cap for the amount that is not reinvested is to be increased every month by USD 10 billion until it reaches USD 50 billion. Since January, the cap has been USD 20 billion per month, more than half of which concerns holdings of government bonds.

The median forecast by the members of the monetary policy committee in December indicated about three rate rises, each of 0.25 percentage points, in 2018 and two rate rises per year over the two subsequent years. The expectations of policy

Table 2:1.

Developments on financial markets since the Monetary Policy Report in December 2017
Market participants expect faster policy rate increases.
Government bond yields have risen both in Sweden and abroad.
The krona is approximately unchanged in competition-weighted terms.
The share indices have risen both in Sweden and abroad.
Lending rates for households and companies are unchanged.
Credit growth to households continues to be high.
Borrowing by non-financial corporations has increased.

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 9 February 2018, broken lines are estimated on 18 December 2017.

Sources: The national central banks, Thomson Reuters and the Riksbank

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.



rate rises in the United States, according to pricing on the financial markets, have risen since December (see Figure 2:1). This is partly due to higher wage increases than expected and communication from the central bank regarding more rate rises. However, the market's pricing indicates fewer policy rate rises during 2019—2020 than the central bank's own assessment.

In conjunction with the first policy rate rise in ten years in November 2017, the British central bank communicated that continued rate rises will take place gradually and to a limited extent. At the monetary policy meeting in February, the policy rate was held unchanged, but the Bank of England highlighted the need for a slightly less expansionary monetary policy than in its assessment in November. Expectations of rate rises have also risen in the United Kingdom since December (see Figure 2:1).

In summary, market expectations of policy rate rises from the larger central banks have risen in comparison with December. However, the market participants' overall view is still that the normalisation of monetary policy will continue at a slow pace. Global monetary policy will thereby remain expansionary.

Higher government bond yields

Yields on the government bond markets abroad have risen, above all since the start of the year (see Figures 2:2 and 2.3). The uptick can largely be explained by rising policy rate expectations among market participants as a result of the central banks' communication, continued good growth prospects and rising commodity prices. Unexpectedly high wage increases in the United States have also contributed to this development.

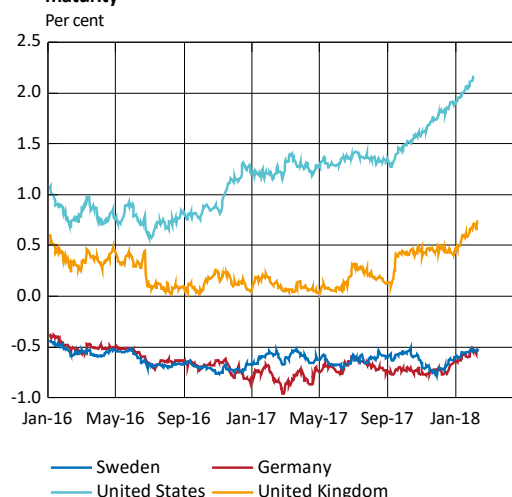
In the European countries, the gap between different countries' government bond yields and the German equivalents has decreased (see Figure 2:4). The macroeconomic development, stronger public finances and decreased political risk have contributed to this.

Lower equity prices and weaker dollar

The new year began with upturns on equity markets that reached historically high levels at the end of January (see Figure 2:5). The effects of the corporate tax reform in the United States, and good global growth prospects, as well as company reports in line with or above expectations all contributed to this development. Equity prices have fallen since the end of January, however, partly due to rising expectations of higher policy rates. The downturns on equity markets have also meant that the expected volatility has increased. On the credit markets, yields have developed in approximately the same way as the corresponding government bond yields.

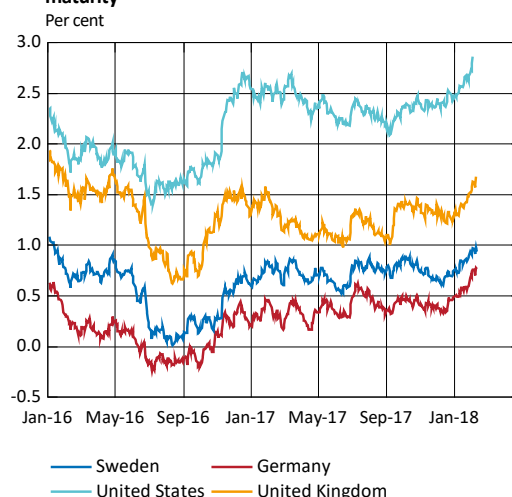
The US dollar weakened up to the end of January against most currencies and then strengthened again in connection with the downturn on equity markets. All in all, the dollar has weakened by around 3 per cent in trade-weighted terms since the December Monetary Policy Report.

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



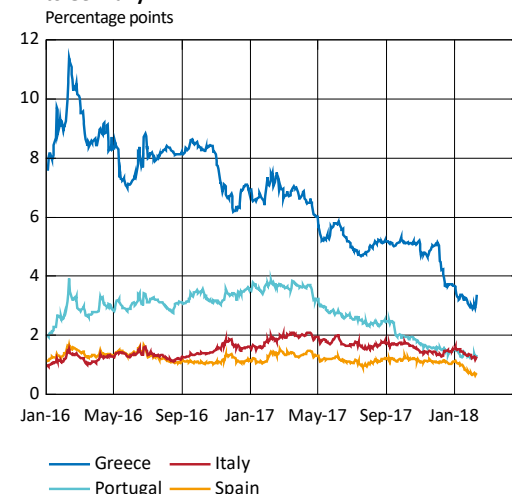
Note. Implied zero-coupon yields from government bonds.
Sources: The national central banks and the Riksbank

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



Note. Implied zero-coupon yields from government bonds.
Sources: The national central banks and the Riksbank

Figure 2:4. Differences in government bond yields compared to Germany



Note. Government bonds with approximately 10 years left to maturity.
Source: Macrobond

Financial conditions in Sweden

Market expectations are in line with the repo rate path

Ahead of the monetary policy meeting in December, expectations of future repo rate rises, according to market pricing, had fallen. The Riksbank’s decision not to change the repo rate path and market participants’ interpretation of the Riksbank’s communication have since then contributed to a slight rise again in expectations, which are now in line with the repo rate path (see Figure 2:1). Market participants’ expectations of the policy rate according to surveys are somewhat higher, however (see Figure 2:6).

Higher yields and lower equity prices

Since the monetary policy meeting in December, Swedish government bond yields have risen in line with international developments (see Figures 2:2 and 2:3). On the credit markets, yields on covered bonds and corporate bonds have developed approximately the same as government bond yields. Recent months’ falling housing prices do not appear to have led to any increase in risk premiums for covered bonds (see Figure 2:7).

The Swedish stock exchange has followed the international development with upturns around the turn of the year and downturns since the end of January (see Figure 2:5).

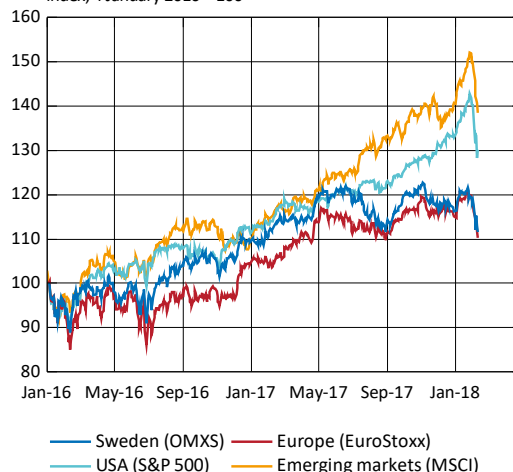
The Riksbank’s bond purchases are deemed to be working satisfactorily

The Riksbank’s bond purchases have contributed to lower market rates, not least to lower rates on government bonds. The purchases have thus contributed to the expansiveness of monetary policy. Interest for participating in the Riksbank’s reverse auctions has been considerable. Over the full year 2017, bids were received for an average volume 3.2 times as great as the Riksbank had offered to purchase, which is higher than the average since bond purchases were initiated in 2015. Interest in participating in the Swedish National Debt Office’s auctions has also been high over the period. The Riksbank has thus been able to fulfil its monetary policy task and the Swedish National Debt Office has been able to fulfil its task of administering the national debt.

However, when the Riksbank purchases government bonds, the volume that is available for trade on the market decreases, which may affect the way the market functions. For example, this could entail primary dealers only being willing to offer final investors trade in smaller amounts and it therefore taking a longer time for investors to purchase or sell larger amounts of government bonds.

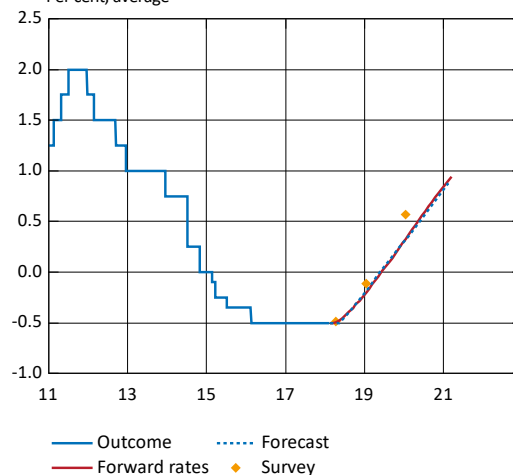
The Riksbank carefully monitors developments through the analysis of quantitative data and through the compilation of qualitative information collected via the Riksbank’s existing channels. The overall assessment is that the Riksbank’s bond purchases are functioning satisfactorily.

Figure 2:5. Stock market movements in local currency Index, 4 January 2016 = 100



Sources: Macrobond and the Riksbank

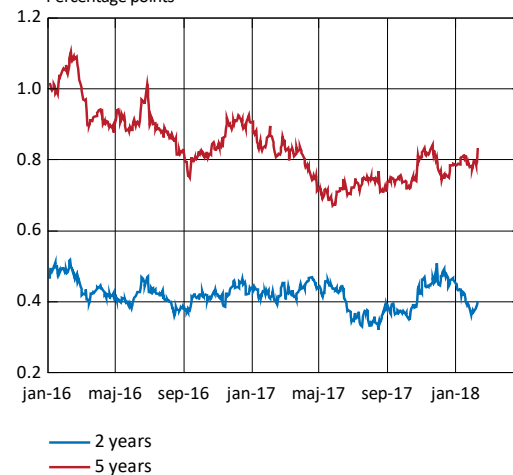
Figure 2:6. Repo rate and market expectations Per cent, average



Note. The forward rates are estimated as of 09 February 2018 and measure the expected repo rate. The survey responses show the average for money market participants on 17 January 2018.

Sources: Macrobond, TNS Sifo Prospera and the Riksbank

Figure 2:7. Yield differential between covered bonds and government bonds with different maturities Percentage points



Note. Yields on covered bonds and government bonds are zero coupon yields calculated using the Nelson-Siegel method.

Sources: Macrobond and the Riksbank

The krona is approximately unchanged since December

The Swedish krona strengthened against most currencies until the end of January and then weakened in connection with the downturn on equity markets. According to market participants, the appreciation was due to expectations of faster repo rate increases and less concern over the development of the Swedish housing market. The depreciation over recent weeks follows the pattern of the krona often weakening when volatility is high on global equity markets. The krona has basically remained unchanged, according to the competition-weighted krona index (KIX), since the monetary policy meeting in December (see Figure 4:4 and Figure 2:8). Compared with the forecast in December, the krona is slightly weaker.

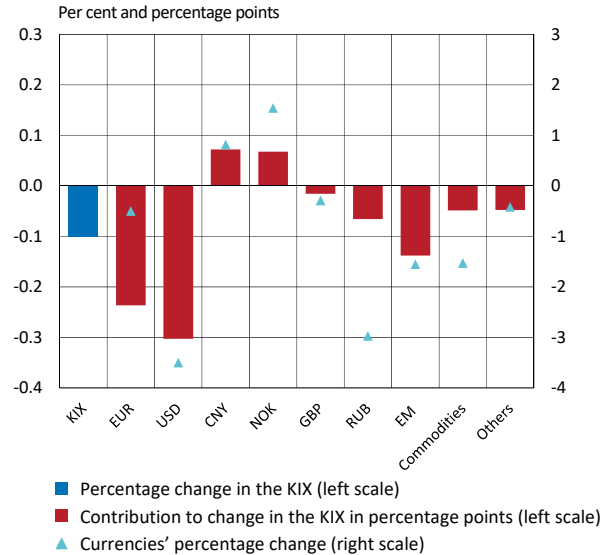
Corporate and household indebtedness is increasing

The good economic growth and continued expansive monetary policy have contributed towards the banks' funding terms and profitability developing favourably. The conditions for households and companies to obtain credit thereby remain good. Households' bank loans are continuing to increase at a high rate, faster than incomes. Credit growth averaged 7 per cent last year. Bank loans still form the primary source of funding for Swedish companies, even if securities borrowing is increasing and now corresponds to about one-third of total corporate borrowing. The annual growth rate of securities borrowing was just over 20 per cent in the three last quarters of last year and was primarily driven by property companies, while growth rates for bank borrowing were at around 4.5 per cent during the same period (see Figure 2:9).

Since the repo rate entered negative territory for the first time in February 2015, lending rates to households have fallen slightly less than the repo rate. The average mortgage rate for new agreements has averaged about 1.6 per cent since mid-2015. The average interest rate for new bank loans to non-financial corporations at the same time amounted to about 1.4 per cent (see Figure 2:10). Average deposit rates for households and companies have remained largely unchanged since the middle of 2015 and are close to zero.¹¹ Overall, the impact of the repo rate on deposit and lending rates has been in line with the Riksbank's expectations.

¹¹ Most financial undertaking corporations and some non-financial corporations and municipalities are experiencing negative deposit rates. For technical reasons, however, the negative deposit rate is usually reported as a charge and is therefore not always visible in the figures from Statistics Sweden. Despite this, deposits at negative rates form a small portion of total deposits from non-financial corporations. See the article "Perspectives on the negative repo rate" in Monetary Policy Report July 2016.

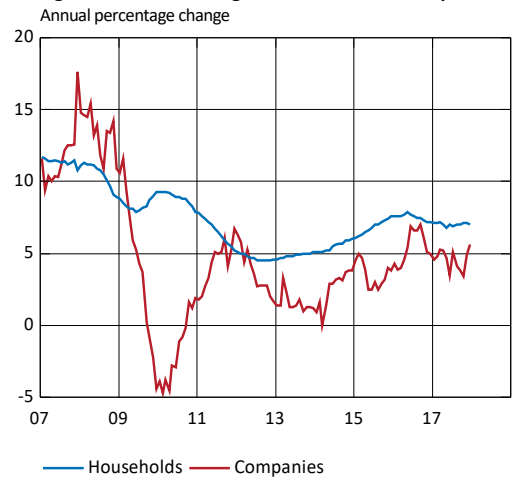
Figure 2:8. Changes to KIX exchange rates



Note. The figure shows changes in KIX and contributions from different currencies between 20 December 2017 and 9 February 2018. EM refers to Brazil, Hungary, India, Mexico, Poland and Turkey. Commodities refer to Australia, Canada and New Zealand. Other refers to Czech Republic, Denmark, Iceland, Japan, South Korea and Switzerland.

Sources: Thomson Reuters and the Riksbank

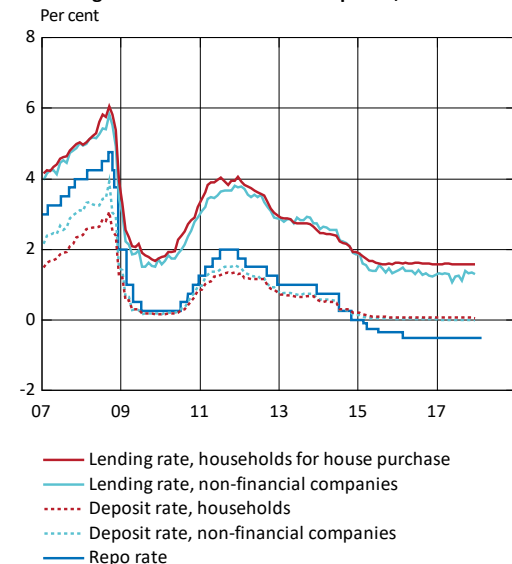
Figure 2:9. Bank lending to households and companies



Note. MFIs' lending to households and non-financial companies adjusted for reclassifications and traded loans since 2006 according to financial market statistics.

Source: Statistics Sweden

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



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

Sources: Statistics Sweden and the Riksbank

CHAPTER 3 – The current economic situation

Companies and households both abroad and in Sweden are optimistic about the economic outlook. In the near term, the downturn in housing prices during the autumn is not expected to affect Swedish GDP growth and the labour market to any great extent. Economic activity is strong in Sweden, with higher-than-normal resource utilisation and inflation that has been close to the target over the last year. In December, inflation was 1.9 per cent according to the CPIF and, adjusted for energy prices, the rate of increase of the CPIF was 1.7 per cent, slightly lower than expected. CPIF inflation is expected to be just below 2 per cent in the early part of 2018.

Inflation in Sweden

CPIF inflation 1.9 per cent in December.

In December, inflation was 1.9 per cent in CPIF terms (see Figure 3:1), which was slightly lower than the forecast in the Monetary Policy Report from December. Adjusted for energy prices, the rate of increase in the CPIF was 1.7 per cent, which was also slightly lower compared with the forecast.

The rate of increase in prices for services has fallen in recent months, but is still relatively high. Prices in the service sector are affected by domestic conditions to a great degree and the rapid increase of these prices should be seen in light of the strong development of the real economy in Sweden. In 2017, service prices were affected by a new method of measuring overseas travel, which meant that this gained a new seasonal pattern. Even if prices for overseas travel are disregarded, prices for services slowed down towards the end of the year (see Figure 3:2).

The rate of increase in food prices has continued to rise. At the same time, prices of goods are developing at a historically normal rate. Increased competition within the retail trade has contributed towards pushing prices down for a long time, which is one of the findings from the Riksbank’s business survey. Prices of both fuel and electricity decreased marginally from November to December, which was in line with the forecast.

Underlying inflation close to 2 per cent

Both CPIF inflation and different measures of underlying inflation have shown a rising trend since 2014. The measures are still close to 2 per cent, although the upturn has been subdued somewhat in recent months (see Figure 3:3). After several years in which price increases have been low in relation to cost increases, the current strong economic activity seems to have made it easier than before for companies to raise their prices. The fact that inflation has risen is also a consequence of the earlier krona depreciation, which affects prices of food, other goods and so on with a time lag.

Table 3:1.

Expected development in MPR December	Actual development
CPIF inflation 2.0 per cent in December.	Somewhat lower than expected. CPIF inflation was 1.9 per cent.
GDP growth 3.6 per cent in fourth quarter.	Indicators suggest a development that is slightly stronger than forecast.
Unemployment 6.6 per cent in fourth quarter.	Slightly lower than forecast. Unemployment was 6.5 per cent.
GDP growth in the euro area 2.5 per cent, fourth quarter.	Slightly lower than forecast. GDP growth in the euro area was 2.3 per cent.
GDP growth in the United States 2.7 per cent, fourth quarter.	Slightly lower than forecast. GDP growth in the United States was 2.6 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, calculated at an annual rate. Unemployment refers to percentage of the labour force.

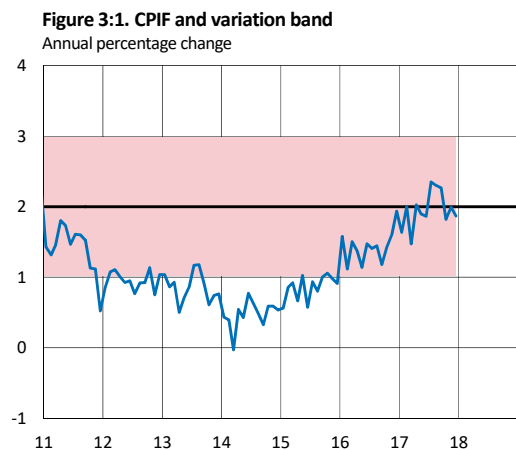


Figure 3:1. CPIF and variation band
Annual percentage change

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

Sources: Statistics Sweden and the Riksbank

Slightly lower inflation in the immediate future

Inflation is expected to be just under 2 per cent in the immediate future. Expectations of price rises among trading companies are largely in line with the historical average, according to the Economic Tendency Survey. According to the home market price index, the rate of increase in the producer prices of consumption goods has increased over the past year and is still above its historical rate of increase. According to the import price index, the rate of increase in imported consumption goods has fallen and is now below its historical average.

The Riksbank’s short-term models, which summarise the information in a large number of indicators, imply that the rate of increase in the CPIF excluding energy will be slightly below 2 per cent during the first six months of 2018 (see Figure 3:4). The Riksbank’s assessment for this period is approximately in line with the model forecasts.

The forecast for the CPIF excluding energy has been revised down somewhat in relation to the December forecast, primarily because inflation was lower than expected in December. The forecast for the development of energy prices at the start of the year is on the whole in line with the December forecast, meaning that the forecast for the rate of increase in the CPIF has also been revised slightly downwards.

Inflation expectations close to 2 per cent

After having been very low at the start of 2015, inflation expectations have risen in the last three years. Expectations over the longer term have been close to 2 per cent over the last year and, as inflation has risen, inflation expectations over the shorter term have also risen to close to 2 per cent. The pricing of financial instruments also indicates that long-term inflation expectations have risen in recent years.

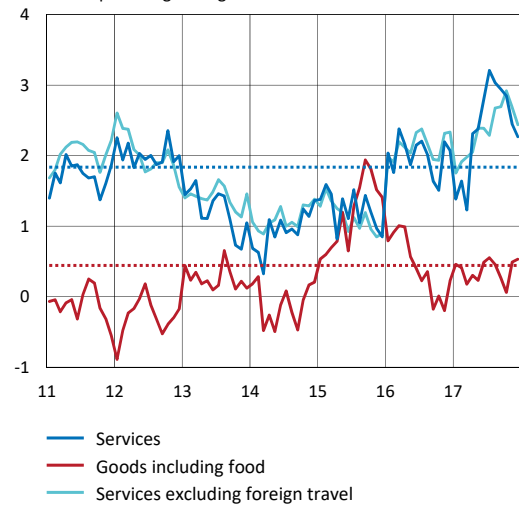
According to TNS Sifo Prospera’s survey, inflation expectations for the CPI rose weakly in January, at the same time as inflation expectations for the CPIF, which have been included in the survey since October, were unchanged. Five years ahead, money market participants expect that CPI inflation will be 2.0 per cent. Long-term inflation expectations for the CPIF are slightly lower and, in January, amounted to 1.9 per cent (see Figure 3:5).

Global and Swedish economic activity

Global economic activity is strong

Economic activity abroad is continuing to strengthen and the upturn is broad in terms of both countries and sectors. World trade in goods increased slightly more slowly in October but recovered strongly in November. Significant optimism among households and companies suggests that these positive economic developments will also persist over the start of the year (see Figure 3:6).

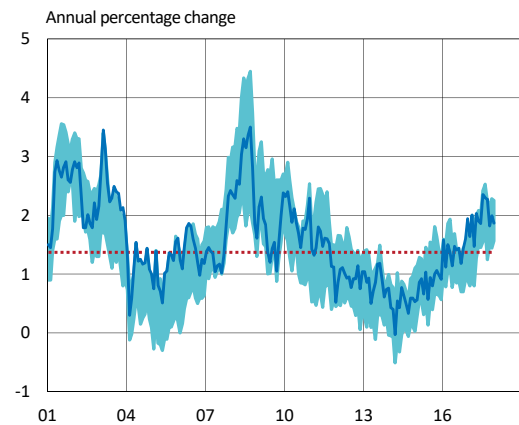
Figure 3:2. Prices of goods and services in the CPI
Annual percentage change



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 account for 45 per cent of the CPI. The broken lines represents the mean value since January 2000.

Sources: Statistics Sweden and the Riksbank

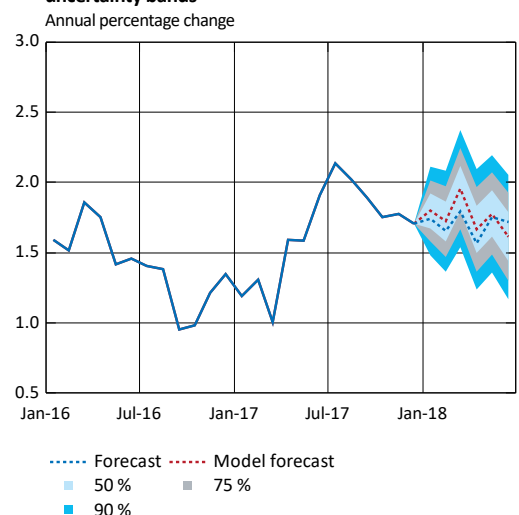
Figure 3:3. The CPIF and different measures of underlying inflation
Annual percentage change



Note. The field shows the highest and lowest outcomes among different measures of underlying inflation. The measures included are the CPIF excluding energy, the CPIF with constant tax, UND24, Trim85, HICP excluding energy and unprocessed food, persistence-weighted inflation, factors from principal component analysis and weighted mean inflation. The broken line represent the mean value since January 2000 for all different measures of underlying inflation.

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.

Sources: Statistics Sweden and the Riksbank

The US economy is in one of the longest expansionary phases since the post-war period. GDP growth in the fourth quarter amounted to 2.6 per cent on an annual rate. The increase in employment in January was in line with the expectations of many, and the low unemployment persisted, indicating that there is little spare capacity on the labour market.

In the euro area, resource utilisation is approximately normal but rising. GDP is increasing at a good rate and growth in the fourth quarter was 2.3 per cent on an annual rate. Employment is rising rapidly and unemployment is continuing to fall. Unemployment in December was almost one percentage point below the average since 1999. In Germany, unemployment is at the lowest level since the early 1980s and it is falling the most rapidly in several of the countries where it is currently highest. However, broader measures of unemployment that include latent job-seekers and involuntary part-time work indicate that spare capacity is greater than suggested by the usual measures.

Low inflation abroad

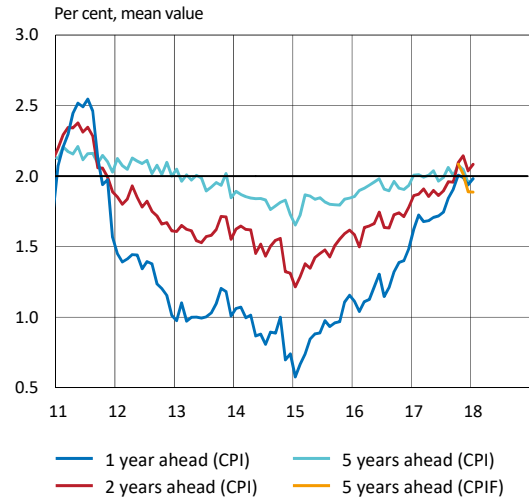
Even if growth is relatively high, inflationary abroad continues to be low. However, the recent strong upswing in the price of oil will contribute to slightly higher inflation in the short term. Inflation in the euro area was 1.3 per cent in January, measured as the HICP, and according to preliminary statistics. Underlying inflation, measured using the rate of increase in the HICP excluding energy and food, rose slightly during 2017 but still amounted to only 1.2 per cent in January this year. In the United States, CPI inflation was 2.1 per cent in December, while underlying inflation, measured using the rate of increase in the PCE excluding energy and food, was unchanged at 1.5 per cent (see Figure 3:7).

Swedish GDP growth higher than normal

Indicators for the fourth quarter suggest that GDP growth picked up at the end of last year. Both companies and households are optimistic and the Economic Tendency Survey remains at high levels, despite having fallen slightly in recent months (see Figure 3:8). Monthly indicators for demand and output also indicate that GDP growth at the end of last year was stronger than normal. Both industrial and services production have increased at a good rate over the fourth quarter, while construction output has had a weaker development.

The Riksbank’s short-term model forecasts, which summarise information from a large number of indicators, suggest higher growth than normal in the fourth quarter. The model forecasts indicate GDP growth of 3.9 per cent during the fourth quarter, compared with the previous quarter and calculated at an annual rate (see Figure 3:9). The Riksbank’s forecast is in line with the model forecast. During the first quarter of 2018, GDP is expected to increase by 3.0 per cent.

Figure 3:5. Inflation expectations among money market participants



Source: TNS Sifo Prospera

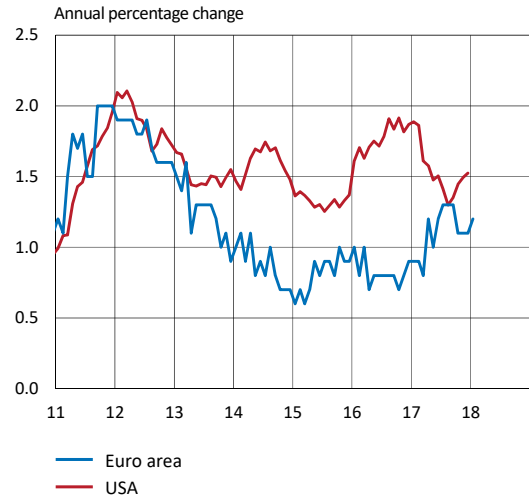
Figure 3:6. Confidence indicators abroad



Note. The series have been normalised from January 1999. The Riksbank’s aggregate of confidence in the US manufacturing and service sectors.

Sources: Institute for Supply Management (ISM), Markit Economics, European Commission, University of Michigan and the Riksbank

Figure 3:7. Underlying inflation abroad



Note. HICP excluding energy and unprocessed food is shown for the euro area. Deflator for PCE excluding energy and food is shown for the United States.

Sources: Bureau of Economic Analysis and Eurostat

Falling housing prices

The decrease in housing prices that started in the autumn continued in December. Housing prices according to the aggregate price index HOX fell by 0.9 per cent compared with November, in seasonally adjusted terms (see Figure 1:11). The decline has been greatest for tenant-owned apartments, particularly in Stockholm. An important explanation for the decrease seems to be the increased supply of newly produced tenant-owned apartments. As it takes time to complete an initiated housing project and many housing construction projects are now under way, the large flow of newly produced tenant-owned apartments is expected to continue for a while yet, dampening price growth. However, this is to a large degree counteracted by the strong economic situation and low level of interest rates, which will continue to keep up the demand for housing. So far, corporate and household confidence has not been affected to any great extent and the fall in prices is expected to have very limited effects on GDP growth in the fourth quarter of 2017 and first quarter of 2018.

Continued positive development on the labour market

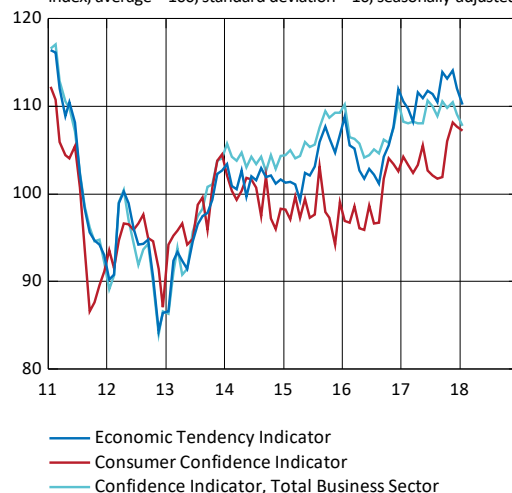
Last year, the number of redundancy notices reported to Arbetsförmedlingen (the Swedish public employment agency) was at the lowest level since 2007 and the level of newly reported vacant positions was very high (see Figure 3:10). The strong demand meant that both the employment rate and the labour force participation rate reached historically high levels (see Figure 4:9). The large increase in the labour force led to unemployment, despite the rapid employment growth, decreasing relatively slowly (see Figure 4:11). In the fourth quarter, unemployment amounted to 6.5 per cent.

Labour force participation has increased among both Swedish-born persons and those born abroad. Among those born in Sweden, the increase last year was particularly evident among older people. This is partly due to the strong economic situation and partly due to structural factors such as a population that is living longer and longer. Participation has also clearly increased among those born abroad, even if the rapid population increase and the selection procedure in the labour force surveys may have led to the labour force participation rate among those born abroad being overestimated.¹² Unemployment among those born in Sweden is now very low, while unemployment among those born abroad is significantly higher. Unemployment has not fallen further among those born abroad partly because the inflow of labour in this group has been large, but also primarily because people born outside Europe, on average, have a lower education and a weaker connection to the labour market.

Indicators show that the demand for labour remains high. In addition to the number of new vacancies being high, recruitment plans in the business sector are on a high level in all

Figure 3:8. Confidence indicators

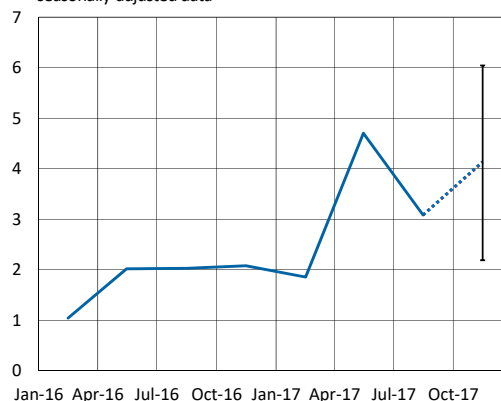
Index, average = 100, standard deviation = 10, seasonally-adjusted data



Source: National Institute of Economic Research

Figure 3:9. GDP, model forecast with uncertainty bands

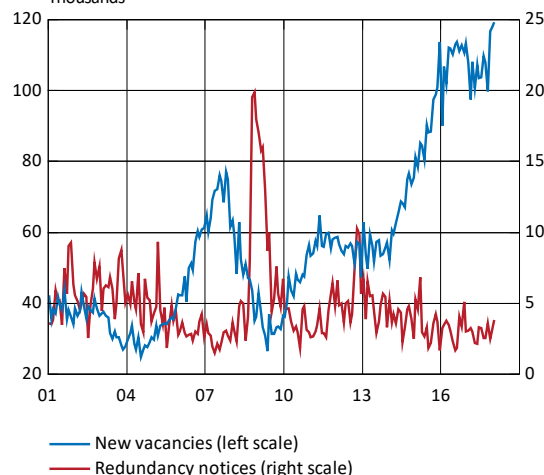
Quarterly change in per cent, calculated as an annual percentage change, seasonally-adjusted data



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. New vacancies and redundancy notices

Thousands



Note. Seasonally-adjusted data for new vacancies.
Sources: Employment Service and the Riksbank

¹² See the article "Rapid population growth making LFS difficult to interpret" in Monetary Policy Report, April 2017.

industries, according to the Business Tendency Survey. All in all, the indicators suggest the continued positive development of the labour market over the start of the year and the employment rate is expected to rise slightly further.

Resource utilisation in the economy is higher than normal

The amount of spare capacity in the economy is affecting the development of wages and prices with a certain time lag. However, resource utilisation in the economy is not observable, but must be assessed using a number of different indicators.

For example, capacity utilisation within the manufacturing industry is presently high from a historical perspective, according to both Statistics Sweden and the national Institute of Economic Research. At the same time, many companies report that they have a shortage of labour (see Figure 3:11). Shortages are high within all sectors and, within the manufacturing industry, considerable shortages of both white-collar technicians and skilled blue-collar workers are being reported. To a certain extent, the high level of shortages is a consequence of employment increasing rapidly, but also other indicators suggest that the amount of spare capacity on the labour market is small. Among other things, the vacancy rate, which measures the number of unstaffed positions that need to be filled immediately, is at a high level, at the same time as the average recruitment time in the business sector is long.

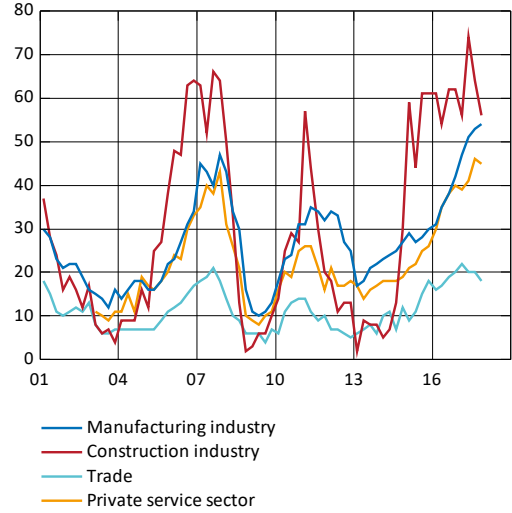
All in all, the Riksbank deems that resource utilisation in the economy is higher than normal, which is supported by the Riksbank’s indicator of resource utilisation, which rose further in the fourth quarter to the highest level yet (see Figure 3:12).

Downwardly revised forecast for the rate of wage increases in 2017

Preliminary outcomes for short-term wages in 2017 have been published for the period until the end of November. Estimates indicate that the definitive outcome for short-term wages in the economy as a whole for the full year 2017 will, on average, increase by 2.5 per cent, which entails a downward revision compared with the forecast in December (see Figure 3:13). Even if a large proportion of retroactive wage payments are still absent from the statistics, the preliminary rate of wage increase is significantly higher in the public sector than in the business sector. It is, above all, wage growth in municipalities that is pushing up public sector salaries, while wage growth within the retail sector is contributing towards restraining business sector salaries.

As resource utilisation affects wages and inflation subject to a certain time lag, the Riksbank deems that wage growth will rise somewhat faster in the period ahead. However, recent outcomes indicate that wage increases at the start of 2018 will also be lower than in the Riksbank’s assessment from December.

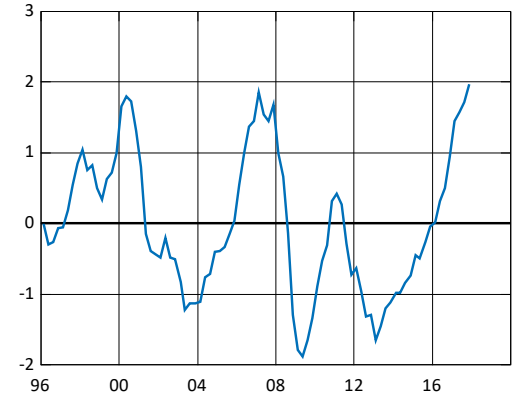
Figure 3:11. Labour shortage
Yes-responses, per cent, seasonally-adjusted data



Note. Construction industry refers to the proportion of firms that have quoted a labour shortage as their main obstacle to increased construction. Other industries refers to the proportion of firms responding yes to the question of whether there is a labour shortage.

Source: National Institute of Economic Research

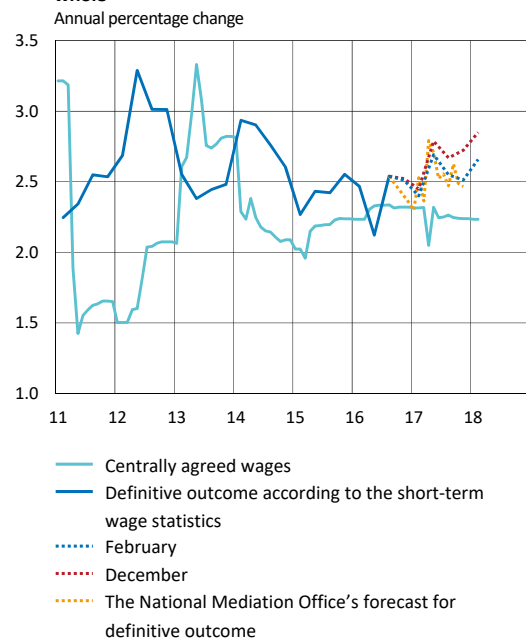
Figure 3:12. Resource utilisation indicator
Standard deviation



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



Note. The National Mediation Office’s forecast for definitive outcome for the period 2016:12–2017:11.

Sources: National Mediation Office and the Riksbank

CHAPTER 4 – The economic outlook and inflation prospects

Economic activity abroad continues to strengthen. In the years ahead, resource utilisation in the developed economies will continue to rise resulting in lower unemployment and gradually increasing inflation. The Swedish economy is also developing strongly and this year, Swedish exports will benefit from the uptick in global industrial activity. The decline in housing prices will, however, also lead to a gradual slowdown in housing investment. The employment rate, which is at historically high levels, is expected to rise further even if employment growth will be subdued due to a decline in the growth of the working-age population. Wage development has been revised down slightly compared with the forecast in December, but high resource utilisation on the labour market is expected to lead to the rate of wage growth gradually increasing. The inflation outcome for December, signs of weakness in the development of service prices and the lower cost pressures in the forecast have led to a slight downward revision in the inflation forecast for this year and next year to just below 2 per cent.

International developments

Stronger international economic activity

International economic activity continues to strengthen. Both global trade and industrial output are growing at a healthy rate and many confidence indicators are at high levels.

The international economic upswing is expected to continue over the coming years. KIX-weighted GDP, in which the countries that are most important for the Swedish economy are included, is expected to have increased last year by almost 3 per cent (see Figure 4:1). This is in line with the assessment in December. Although growth will slow somewhat in the coming years, especially in developed economies, resource utilisation will continue to rise. At the same time, growth in emerging economies will remain high. Overall, global GDP will grow on average by just over 3.5 per cent per year during the forecast period, which coincides with the average for the last 30 years.

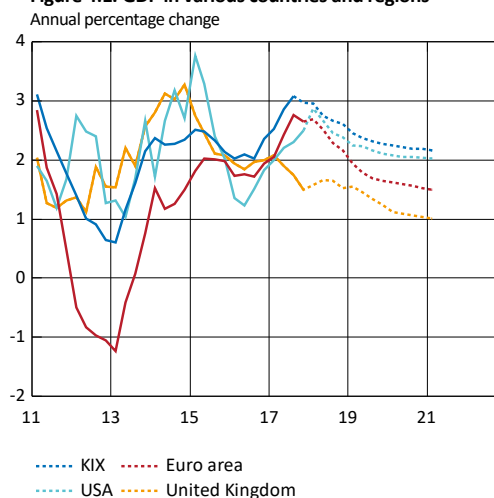
Good economic activity in the United States

In the US, confidence among companies, and particularly among households, is on a high level. The labour market is strong and broader measures of unemployment, which include latent job-seekers and involuntary part-time work, are at low levels. The strong development of the labour market and rising wealth levels will help to sustain household consumption. However, the labour force participation rate is judged to be able to increase further which, together with a certain recovery of productivity growth, will enable continued good GDP growth in the next few years. The recently negotiated tax reform is also set to provide some growth stimulus during the forecast horizon. Financial conditions continue to be favourable for growth, even if they become less expansionary going forward when the Federal Reserve continues to raise the interest rate and reduce its asset holdings. All in all,

Table 4.1.

The forecast in brief
International economic activity will strengthen further. Resource utilisation will continue to rise and unemployment will fall.
Underlying inflation abroad is still low but will rise as resource utilisation increases.
Growth in Sweden will strengthen further this year but will subsequently slow down primarily to lower housing investment.
The strength of the labour market will persist but matching problems and slower population growth will contribute to a slowdown in employment growth.
Wage growth has been revised down slightly compared with in December, but will increase gradually as a result of the high level of resource utilisation on the labour market.
Inflation will be just below 2 per cent in the year ahead and then gradually return to 2 per cent. High resource utilisation and gradually increasing inflation abroad will counteract the negative contribution from a stronger krona in the years ahead.

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

growth in the US is expected to increase slightly this year and then slow down to just over 2 per cent per year (see Figure 4:1).

Continued economic upswing in the euro area

Even in the euro area, confidence among companies and households is on a high level and the economy has continued to recover with rising exports and strong domestic demand. The strong demand, along with a higher level of capacity utilisation, will cause investment growth to increase and GDP to grow at a relatively rapid pace this year. Unemployment in the euro area, which is still higher than before the financial crisis, will hence fall further and resource utilisation will rise. As resource utilisation increases and the pent-up need of consumption and investment is satisfied, growth will slow slightly (see Figure 4:1). Monetary policy in the euro area continues to be very expansionary and not until later in the forecast period are monetary policy and the financial conditions expected to become slightly less expansionary.

High growth in emerging market economies

Growth in emerging market economies is currently high. More commodity-dependent economies, including Brazil and Russia, are being supported by the increase in commodity prices that has been going on since the summer. In India, the economy is expected to continue to grow rapidly thanks to previously implemented structural reforms and investment in the business sector.

Last year, growth in China was 6.9 per cent, which is slightly higher than the government's growth target of about 6.5 per cent. The readjustment towards more consumption-driven growth in China is ongoing. State investment in infrastructure nonetheless continued to grow rapidly in 2017. The rapid credit growth after the financial crisis poses risks to GDP growth in the longer term, even if a high level of household saving, a current account surplus and low foreign debt can provide some protection in the near term.¹³ The measures introduced in order to reduce credit growth will subdue GDP growth in the near term, but these will at the same time be offset by increased international demand. All in all, growth in the Chinese economy is expected to decrease gradually to about 6 per cent in 2020.

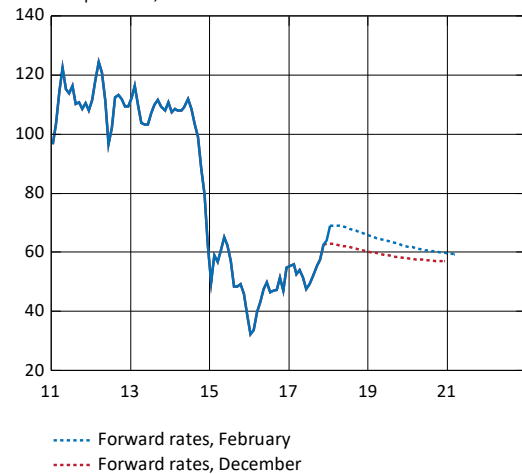
Slowly rising inflationary pressures abroad

The upturn in oil prices helped push up international inflation last year. Despite resource utilisation in many countries now being close to normal, underlying inflation remains low.

In the United States, the rate of wage increases has shown a rising trend but it is still relatively modest compared to historical relationships with unemployment. Underlying inflation is expected to rise, however, as the effects of temporary restraining factors, such as weak price growth in, for example, healthcare-

¹³ For a deeper analysis of the risks associated with credit growth in China, and of the extent to which China-specific buffers can mitigate these risks, see Chen, S. and Shik Kang, J. "Credit Booms – Is China Different?", IMF Working Paper, January 2018.

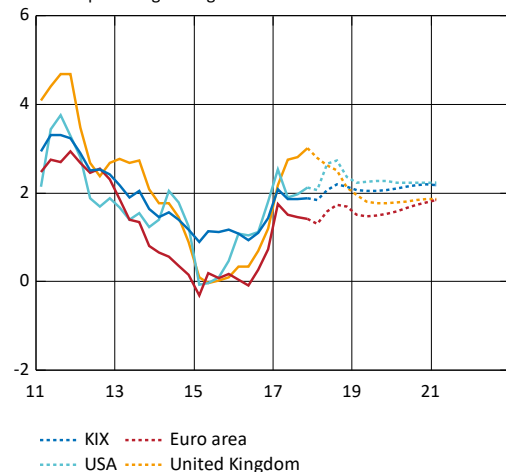
Figure 4.2. Price of crude oil
USD per barrel, Brent oil



Note. Forward rates are calculated as a 15-day average. The outcome refers to monthly averages of spot prices.

Sources: Macrobond and the Riksbank

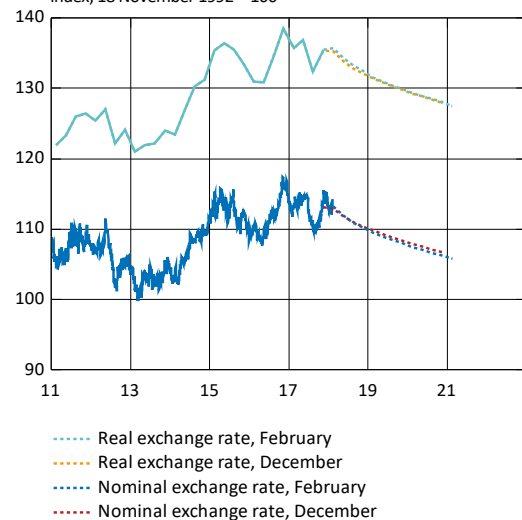
Figure 4.3. Inflation in various countries and regions
Annual percentage change



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 4.4. Real and nominal exchange rate, KIX
Index, 18 November 1992 = 100



Note. The real exchange rate has been calculated with the CPI for Sweden and the CPI for the rest of the world. Outcomes are daily data for the nominal exchange rate, outcomes for the real 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

related goods and services as well as telecommunication services, wear off while resource utilisation becomes increasingly strained.

Inflation in the euro area is still low. One factor is the earlier appreciation of the euro, which will continue to restrain inflation at the start of the year. After that, inflation is expected to increase gradually as resource utilisation increases further and wage growth also picks up. In Germany, for example, many wage agreements are due to expire this year. The strong economic situation meant that recently concluded agreements within the engineering industry were higher than agreements in recent years. The agreement can also point the way for agreements in other sectors in Germany.

This year, the continued upturn in the oil price will also contribute to slightly higher inflation abroad (see Figure 4:2). In the years ahead, the development in energy prices will instead subdue inflation somewhat, although underlying inflation will increase as resource utilisation continues to rise. All in all, inflation abroad is therefore expected to rise modestly in the next few years (see Figure 4:3).

The krona to appreciate slowly

The assessment of the krona’s development over the coming years is uncertain and depends on factors such as how competitive the Swedish economy is and how monetary policy is formulated in Sweden and abroad. Historically, the krona has been strong in good times, but it is relatively weak in the current situation. Like many other analysts, therefore, the Riksbank expects the krona to strengthen in the long term (see Figure 4:4). However, there is major uncertainty as regards how quickly this will happen.

Sweden

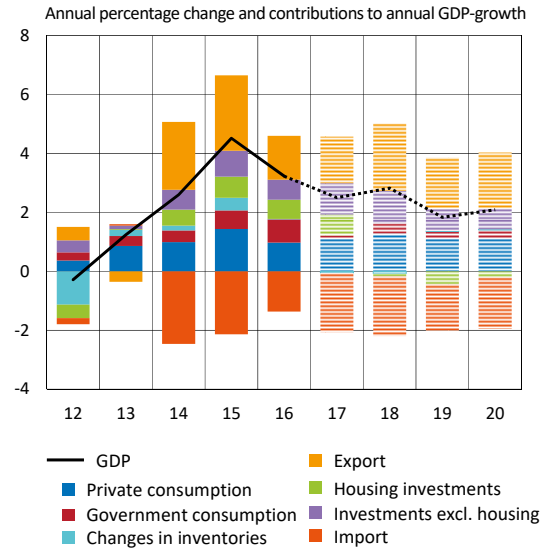
Strong GDP growth this year

Growth in the Swedish economy has been relatively high since 2014. Explanations for this development include an increased labour supply and a recovery on Swedish export markets, but also by a sharp increase in housing construction and rising public consumption (see Figure 4:5). The economic growth has led to an increase in resource utilisation in the economy, which is now assessed to be higher than normal. GDP growth is expected to continue to be relatively strong this year as well, as a result of both higher exports and higher household consumption. Thereafter, GDP growth will slow somewhat, due in part to a decline in housing investment, but resource utilisation will continue to be higher than normal in the coming years.

More impetus from abroad

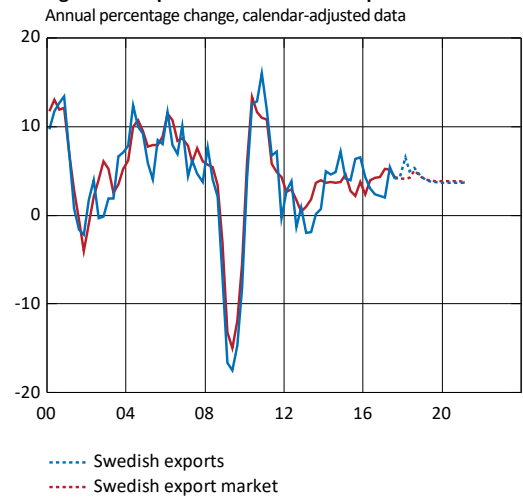
Particularly this year, but also in the years ahead, strong global industrial activity will boost the demand for Swedish exports (see Figure 4:6). This in turn creates the right conditions for a healthy rate of business sector investment (excluding housing) in the

Figure 4:5. Contributions to GDP-growth



Sources: Statistics Sweden and the Riksbank

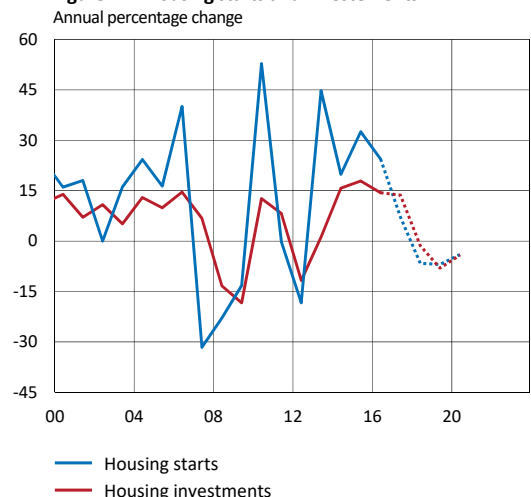
Figure 4:6. Exports and the Swedish export market



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

Sources: Statistics Sweden and the Riksbank

Figure 4:7. Housing starts and investments



Sources: Statistics Sweden and the Riksbank

years ahead, especially in a situation when capacity utilisation in the manufacturing sector is already high.

Decline in housing investment

Housing construction is expected to decrease as a result of the decline in housing prices that has occurred since the autumn of 2017. This is supported by the Economic Tendency Survey, in which the prospects for the construction market one year ahead fell back significantly in January. This decrease should be seen in the light of the substantial housing construction in recent years. It is the assessment of the Riksbank that housing prices will fall slightly further at the beginning of 2018. Strong development on the labour market and low mortgage rates at the same time point to a continued high demand. As new construction slows, however, prices will stabilise this year and then rise slightly.

It takes time to complete a housing start and housing investment in GDP is affected throughout the construction period. The decline in the number of housing starts this year will not therefore subdue housing investment more significantly until 2019 (see Figure 4:7). In a historical perspective, the Riksbank deems that construction will continue to be relatively high in the coming years despite the decline, see the article “Reduced housing construction is subduing GDP growth”.

Household income to increase strongly this year

The strong economic situation has led to growth in household income and wealth. However, households have saved an increasingly large share of their income and there has only been a relatively modest development in consumption. This year, household incomes will be further strengthened in part by an increase in the child allowance while the tax on pensioners will be lowered. This is expected to lead to a slightly faster increase in consumption this year and make a greater contribution to GDP growth (see Figure 4:8 and Figure 4:5). In the following years, employment growth will soften and mortgage rates will rise, contributing to a slowdown in income growth. Households are expected to compensate for this by reducing their saving in favour of consumption. Saving as a proportion of income, known as the “saving ratio”, will therefore decrease slightly in 2019–2020 but will remain high in a historical perspective.

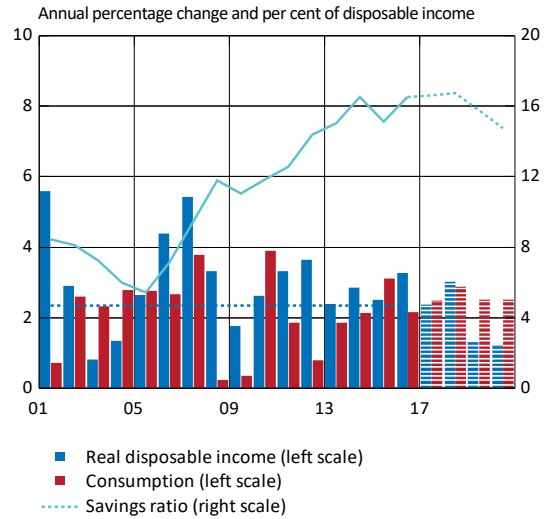
The decline in housing prices will help subdue the rate of increase in household debt with a certain time lag. Overall, the growth in debt is expected to continue to increase more quickly than income and the debt-to-income ratio will rise slightly further (Figure 1:12).

The labour market continues to strengthen

As a result of reforms aimed at stimulating supply and a high demand for labour, developments on the labour market have been strong for several years.¹⁴ Both labour force participation

¹⁴ see Flodberg, C. and Löf, M., “The supply of labour has increased surprisingly rapidly”, Staff memo, Sveriges Riksbank, 2017 for a description of labour force developments since 2006.

Figure 4:8. Households' real disposable income, consumption and savings ratio

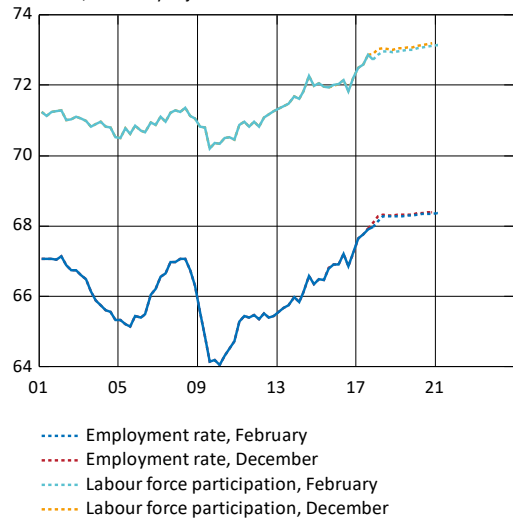


Note. Disposable income has been deflated using the household consumption deflator. Broken line is the average of consumption growth 1994–2016.

Sources: Statistics Sweden and the Riksbank

Figure 4:9. Employment rate and labour force participation

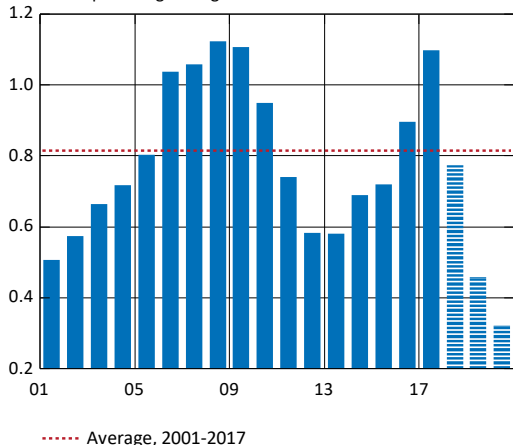
Employment and labour force as percentage of the population, aged 15–74, seasonally-adjusted data



Sources: Statistics Sweden and the Riksbank

Figure 4:10. Working-age population, 15–74 years

Annual percentage change



Sources: Statistics Sweden and the Riksbank

and the employment rate have risen to historically high levels and are expected to be able to increase slightly more in the coming years (see Figure 4:9). At the same time, growth in the working-age population will decline in the coming years (see Figure 4:10). This is due to an ageing Swedish-born population and lower immigration in the future. Overall, growth in the labour force, the number of persons employed and the number of hours worked will all decline compared with the strong development of recent years.

Unemployment has decreased relatively slowly during 2016 and 2017, and is not expected to decline much more in the years ahead (see Figure 4:11). At the same time as the development of the Swedish labour market has been favourable, there are signs that matching between job-seekers and job vacancies is working less well. One such sign is that the job-finding rate, i.e. the flow from unemployment into employment, is still relatively low despite healthy economic activity. One reason is that a relatively large percentage of those unemployed are currently persons who on average have a lower job-finding rate, for example, those born outside Europe. The strong economic situation is making it easier for new arrivals to enter the labour market, but structural reforms to the functioning of the labour market are probably also needed in order to reduce unemployment more significantly.¹⁵

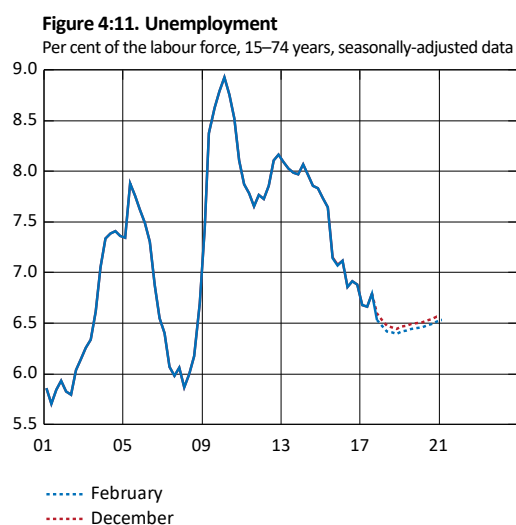
All in all, resource utilisation on the labour market, and in the economy as a whole, is expected to rise further this year and be higher than normal in the years ahead (see Figure 4:12).

Relatively weak development in productivity

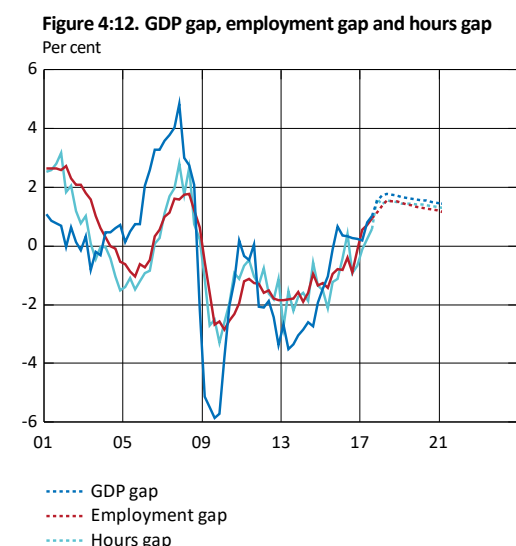
Apart from in 2010 and 2015, productivity growth has been relatively low since the financial crisis (see Figure 4:13). In Sweden, much of the growth prior to the financial crisis was driven by developments within information and communications technology (ICT), but the contribution from this sector has decreased since then. Many countries have experienced weak development since the financial crisis, however, which suggests the existence of common explanatory factors. There is no consensus on why development has been weak, however, and the likelihood is that several factors have contributed.¹⁶ In the period ahead, productivity growth is expected to recovery somewhat, but it is still slower than before the financial crisis and slightly lower than the forecast in December.

Rate of wage increases set to increase in the years ahead

Three-year collective agreements, concluded last year, with centrally agreed wage increases of 2.1 per cent per year on average, apply to most of employees. Around 30 collective

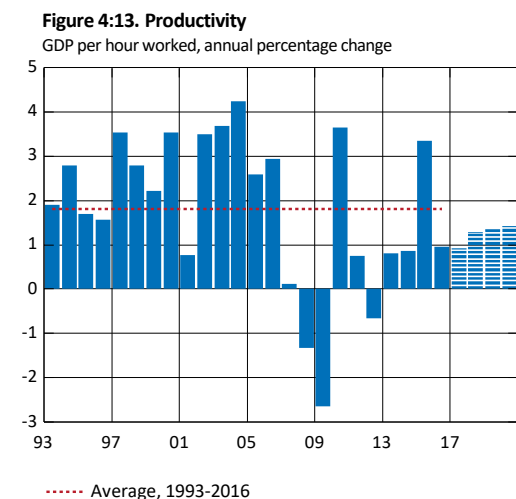


Sources: Statistics Sweden and the Riksbank



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



Sources: Statistics Sweden and the Riksbank

¹⁵ Register data for 2016 show that refugees received by municipalities, who have been in Sweden for longer than two years, found work at a faster rate than previously. In all likelihood, this is a result of the strong economic situation, although earlier structural reforms have probably also been of significance.

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

agreements, the most extensive of which is the teachers' agreement, are due to expire in 2018.

Compared with the forecast in December, wage development has been revised down slightly, mainly because outcomes continue to be surprisingly low. In the years ahead, the high level of resource utilisation on the labour market is expected to cause the rate of wage increases to rise. Despite this, however, the rate of wage increases, in a historical perspective, is expected to remain moderate in relation to resource utilisation (see Figure 4:14). The weak productivity growth is a contributory factor to this, as is the subdued wage development abroad.¹⁷ The development of hourly wages and labour costs, according to the National Accounts, is expected to increase at the same pace as wages according to the short-term wage statistics.

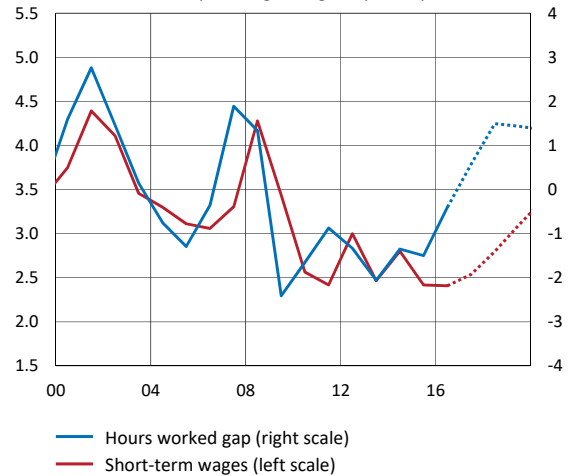
The link from wages to inflation goes mainly via cost pressures, measured as unit labour costs. This means that even relatively subdued wage development can be inflationary if productivity growth is concurrently weak. Cost pressures are expected to increase by an average of 1.9 per cent a year over the coming years (see Figure 4:15). This is a relatively normal rate of increase for cost pressures, albeit slightly lower than in the previous forecast.

Inflation just under 2 per cent in the year ahead

Inflation has shown a rising trend since 2014 and in December amounted to 1.9 per cent, measured in terms of the CPIF. Last year, some temporary factors contributed to the increase, although there has also been a relatively broad increase in service prices since 2014. The upturn reflects the rising resource utilisation, which is one factor that makes it easier for companies to raise their prices. After many years of price increases being low relative to cost pressures, it seems to have become easier for companies to raise prices (see Figure 4:15). The fact that inflation has risen is also partly a consequence of the earlier depreciation of the krona, which is affecting the prices of food and other goods. As some of the upturn last year was a result of rising energy prices, inflation measured in terms of the CPIF excluding energy has been slightly lower (see Figure 4:16).

In the years ahead, the expected appreciation of the krona suggests that inflation will slow down. At the same time, however, the high level of resource utilisation will not only cause the rate of wage increases to rise but also continue to make it easier for companies to charge higher prices. At the same time, international inflation will rise slightly as global resource utilisation increases. The oil price is expected to be higher this year than last year, in line with what forward pricing indicates, which means that energy prices will contribute positively to inflation. All in all, it is the Riksbank's assessment that CPIF inflation will amount to just under 2 per cent in the year ahead (see Figure 4:16). Once the repo rate, and hence mortgage rates, start to rise at some point during the second half of 2018,

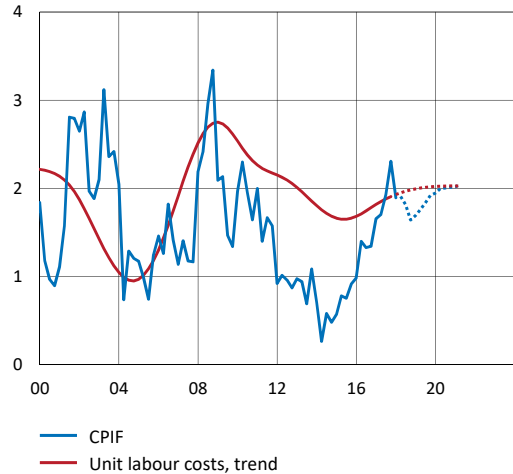
Figure 4:14. Hours worked gap and short-term wages
Per cent and annual percentage change, respectively



Note. The hours worked gap refers to the deviation in the number of hours worked from the Riksbank's assessed trend.

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

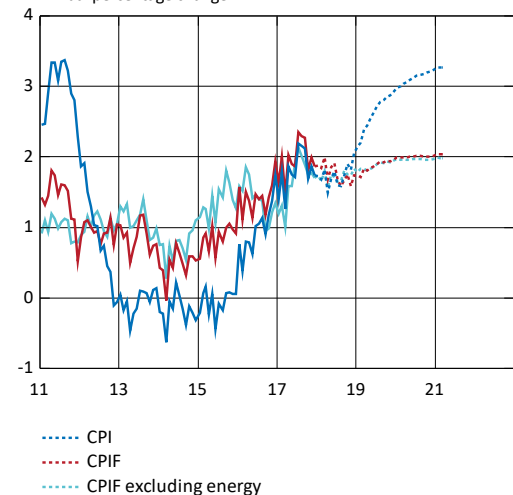
Figure 4:15. Inflation and unit labour costs
Annual percentage change



Note. The trend in unit labour costs has been calculated using a so-called HP filter. To calculate the trend, the Riksbank's forecast in February 2018 and an assumption that unit labour costs will increase by 2 per cent beyond the forecast horizon are used.

Sources: Statistics Sweden and the Riksbank

Figure 4:16. CPI, CPIF and CPIF excluding energy
Annual percentage change



Sources: Statistics Sweden and the Riksbank

¹⁷ See the article "Strong economic activity but subdued wage increases" in the July 2017 Monetary Policy Report.

households interest expenditure will increase more rapidly. This means that CPI inflation to increase more rapidly than CPIX.

The forecast for inflation has been revised down slightly

The Riksbank's assessment of the conditions for the development of inflation in the coming years remains largely unchanged since December. Resource utilisation is still high, the krona has developed slightly weaker compared with the assessment in December and the view of inflation abroad is largely unchanged. Compared with the forecast in December, the latest inflation outcome has been slightly lower than expected and the increase in service prices has weakened slightly. In addition, cost pressures are now expected to increase slightly more slowly than in the forecast in December. Overall, these factors have led to inflation being revised down slightly for this year and next year. However, inflation is expected to remain close to 2 per cent from 2019.

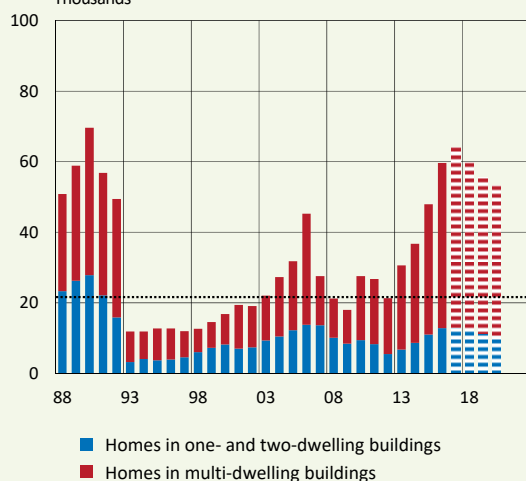
ARTICLE – Reduced housing construction is subduing GDP growth

Housing investment has been an important driving force in the economic upturn of recent years and housing construction has now reached a historically high level. Recently, housing prices have fallen. Even if the fall in prices is small, so far, in comparison with price rises in recent years, it will contribute towards dampening housing investment in the period ahead and will thereby affect general demand in the economy. However, the Riksbank deems that demand for housing is sufficiently high to justify the assessment that there will only be a modest reduction in housing construction. Housing prices are expected to stabilise during the year before rising slightly in 2019 and 2020. Even so, this assessment is highly uncertain as it is difficult to identify the driving forces behind variations in housing construction and housing prices.

Rapidly growing housing investment is an important factor in the economic upswing

The number of housing starts has increased sharply in recent years and in 2017, construction on just under 65,000 homes is judged to have been started. This is the highest number of housing starts in a single year since 1990 and can be compared to an average for the period 1995–2012 of just over 20,000 homes per year (see Figure 4:17).

Figure 4:17. Housing starts, 1988–2020
Thousands



Note. The number of housing starts 2017–2020 constitutes the Riksbank's forecasts. Broken line refers to the mean value from 1995–2012.

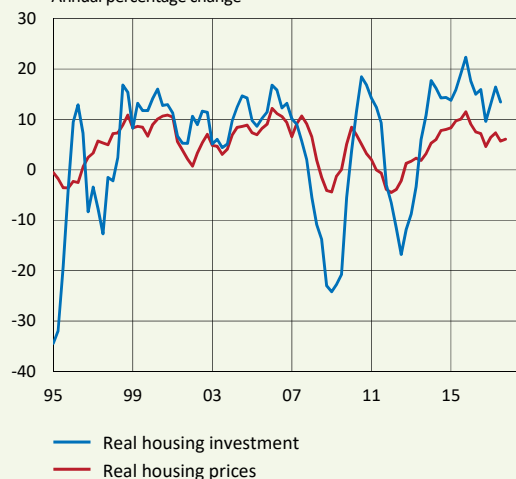
Sources: Statistics Sweden and the Riksbank

On average, it takes about 1–2 years for a housing construction start to be completed and, in the National Accounts, this is recorded as a housing investment during the production time.¹⁸ The development of housing investment

thereby reflects the development of the number of housing construction starts, but with a certain time lag. Even though housing investment forms a relatively small proportion of GDP, the rapid increase in new construction has made a clear impression in the increasingly strong economic activity in Sweden in recent years (see Figure 4:5). Over the same period, housing prices have continued to increase rapidly.

Since the autumn of 2017, housing prices have decreased and, in December, prices were just under 6 per cent lower than at their highest point in August.¹⁹ Historically, housing prices have covaried with housing investment and housing investment's share of GDP has also

Figure 4:18. Housing investment and housing prices
Annual percentage change



Note. Housing prices are the Property price index deflated with the CPIF.

Sources: Statistics Sweden and The Riksbank

increased significantly in recent years (see Figure 4:18 and Figure 4:20). This has led to a discussion concerning how the decline in prices may affect the development of housing

¹⁸ New builds constitute two-thirds of housing investment, while reconstructions and conversions make up about 25 per cent. The remaining portion of housing

investment is made up of expenditure for the construction of holiday homes and ownership transfer.

¹⁹ According to the seasonally adjusted HOX price index for all housing.

investment in the years ahead and, ultimately, the consequences for GDP growth.

Imbalances in the housing stock take time to correct and may create variations in prices and construction

In Sweden, as in many other countries, developments on the housing market have historically been characterised by large variations in both construction and prices (see Figure 4:18).

Variations around the long-term trends for price and construction mainly depend on the fact that it takes time for the supply of housing to adapt to a change in demand.²⁰

Among other reasons, this is due to it taking a long time to plan and complete housing projects. Moreover, the number of new builds only make up a small part of the total housing stock and very large changes in new construction may thus be needed to correct an imbalance in the stock.²¹

Furthermore, a consequence of rigidities in the adjustment of housing supply is that periods may occur when new construction and housing prices fall even though demand for housing in the stock does not change. If, for example, there is an increase in demand, housing prices rise as the number of new builds cannot directly satisfy the higher demand. The higher prices provide an incentive to builders to build more which gradually reduces the imbalance between demand and supply in the stock. Housing prices fall back and the incentive to build decreases.

A change in housing demand can thus give rise to relatively large variations in construction and prices. As construction affects GDP growth, this will be important from the perspective of economic activity. Housing prices affect the confidence of households and companies in economic development and are also a key factor from a financial stability perspective. The rising housing prices have contributed to high indebtedness, not least because housing often acts as collateral for household indebtedness. This has made households vulnerable to changed economic conditions.

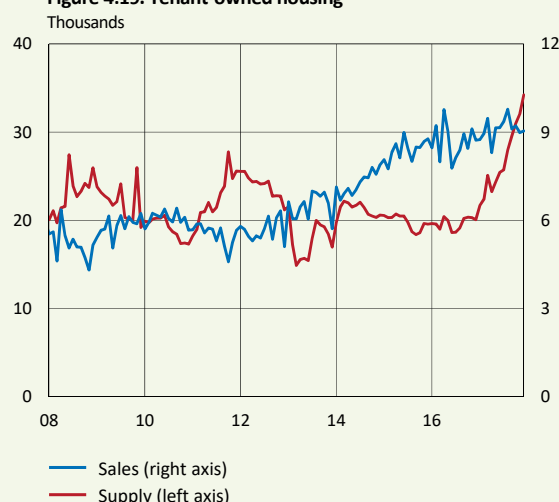
The Riksbank's forecast is that housing construction will decrease in the years ahead

The forecast for housing construction (housing investment) is based on an assessment of the development of demand and supply in the period ahead, as well as on estimates of possible imbalances in the initial housing stock.

The Riksbank deems that housing construction, at least in the years following the financial crisis, was lower than the

long-term demand for housing, considering that several fundamental demand factors developed strongly.²² This contributed to rapidly rising housing prices. The price rise, in turn, contributed to the number of new builds rising to historically high levels in recent years. Over the last year, turnover of tenant-owned homes has been relatively stable, but supply has continued to rise (see Figure 4:19).²³ This can be interpreted as a decrease in the deficit of housing, which has caused a certain decline in prices over the second half of 2017.²⁴

Figure 4:19. Tenant-owned housing



Note. Supply of tenant-owned housing comprises the number of advertisements during the month on the online residential property trading website, Hemnet. Sales comprise the number of reported sales according to the independent housing price statistics supplier, Mäklarstatistik.

Sources: Hemnet and Mäklarstatistik

The Riksbank deems that the decline in housing prices will lead to a slowdown in housing construction. However, demand for housing is expected to be sufficiently high to justify a continued high rate of housing construction from a historical perspective. In the forecast, the number of housing starts will decrease from just under 65,000 last year to just under 55,000 in 2020 (See Figure 4:17). At the same time, housing prices are expected to stabilise in 2018 before then rising slightly in the following years.²⁵

Lower housing investment will contribute towards restraining GDP growth marginally this year, by 0.4 percentage points in 2019 and a further 0.2 percentage points in 2020 (see Figure 4:5). Housing investment's share of

²⁰ In the long term, the number of homes in the stock and prices for housing can be expected to depend on how fundamental demand and supply factors develop. Factors affecting supply include access to land, construction costs, required rates of return (competition), access to and costs for funding of housing construction. Factors affecting demand include, for example, demographics, income growth, user costs, access to credit, preferences and expectations.

²¹ According to Statistics Sweden, the total stock of housing in 2016 amounted to about 4.8 million homes. The almost 65,000 new homes judged to have been started in 2017 thereby form less than 1.5 per cent of the stock.

²² For example, the population in Sweden has increased rapidly in recent years.

²³ As not all housing for sale is announced on the Hemnet website, this measure of supply is an underestimate. A large part of the heavy increase in the supply of tenant-owned homes over the last year consists of newly produced tenant-owner homes.

²⁴ To the extent that the macroprudential measures of recent years have contributed towards increasing user costs, this can, to a certain degree, be expected to have contributed towards reducing demand.

²⁵ The forecast is based on the fact that reconstructions and conversions, which constitute just under 25 per cent of housing investment, covary with new construction according to historical patterns.

GDP will decrease by just under one percentage point to about 5 per cent (see Figure 4:20).²⁶

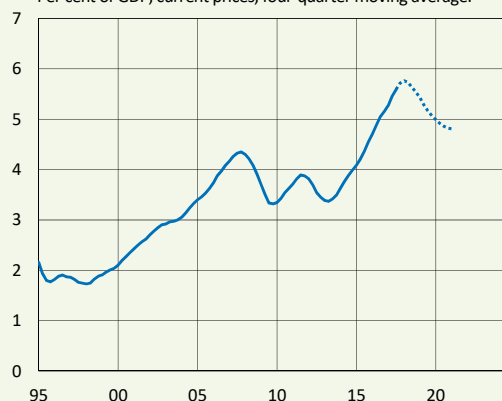
The development of the housing market is difficult to assess

The Riksbank's forecast for housing construction and housing price development is based on a series of assessments and assumptions. The current housing stock and housing prices are deemed to a large extent to reflect the development of fundamental determinants. If, on the other hand, it should turn out that demand for housing has been driven by temporary factors such as expectations of incomes, housing costs and housing prices that are not realised, this may lead to greater falls in prices and a heavier slowdown in housing construction than the Riksbank has forecast.

An aggregate analysis of the housing market has its limitations. Housing differs, for example, depending on its geographical location, form of tenure and standard.²⁷ For the housing market to function efficiently, not only is the number of new homes important but also what kind of homes they are and where they are built. The recent price fall has primarily affected tenant-owned homes. The need of rented accommodation is deemed by many analysts, including most municipalities, to be considerable. The National Board of Housing, Building and Planning (Boverkett) suggests that the reduced construction of tenant-owned homes, combined with the increase of investment grants for rented accommodation, presented in the Budget Bill for 2018, may pave the way for the construction of more rented homes.²⁸ This could be a factor leading to less of a slowdown in housing investment in the years ahead than in the Riksbank's assessment.

Figure 4:20. Housing investment

Per cent of GDP, current prices, four-quarter moving average.



Sources: Statistics Sweden and the Riksbank

²⁶ The assessment of the development of housing investment in the years ahead is very similar to the one made in the Monetary Policy Report from December 2017.

²⁷ For a slightly more detailed discussion of matching on the housing market, see G. Katinic, "Perspectives on housing construction", Economic Commentary no. 2, 2018, Sveriges Riksbank.

²⁸ Boverkets indikatorer, november 2017 [Boverkett's indicators, November 2017].

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

	Q4 2017	Q1 2018	Q2 2018	Q1 2019	Q1 2020	Q1 2021
Repo rate	-0.50	-0.50 (-0.50)	-0.50 (-0.50)	-0.15 (-0.15)	0.36 (0.36)	0.88

Source: The Riksbank

Table 2. Inflation

Annual percentage change, annual average

	2016	2017	2018	2019	2020
CPIF	1.4	2.0 (2.0)	1.8 (2.0)	1.9 (2.0)	2.0 (2.0)
CPIF excl. energy	1.4	1.7 (1.7)	1.7 (1.9)	1.9 (2.0)	2.0 (2.0)
CPI	1.0	1.8 (1.8)	1.7 (2.0)	2.6 (2.8)	3.1 (3.1)
HICP	1.1	1.9 (1.9)	1.7 (1.9)	1.8 (2.0)	1.9 (1.9)

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

Sources: Statistics Sweden and the Riksbank

Table 3. Summary of financial forecasts

Per cent, unless otherwise stated, annual average

	2016	2017	2018	2019	2020
Repo rate	-0.5	-0.5 (-0.5)	-0.4 (-0.4)	0.0 (0.0)	0.6 (0.6)
10-year rate	0.5	0.7 (0.7)	1.2 (1.1)	2.0 (1.9)	2.6 (2.5)
Exchange rate, KIX, 18 November 1992 = 100	111.7	112.9 (112.9)	111.6 (111.5)	108.7 (109.1)	106.9 (107.3)
General government net lending*	1.2	1.2 (1.2)	0.9 (0.8)	0.9 (0.9)	0.8 (0.8)

* 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 (2.4)	2.4 (2.4)	1.8 (1.8)	1.6 (1.6)
USA	0.15	0.09	1.5	2.3 (2.3)	2.6 (2.5)	2.2 (2.1)	2.1 (2.0)
Japan	0.04	0.02	0.9	1.8 (1.8)	1.4 (1.3)	0.8 (0.8)	0.3 (0.3)
China	0.19	0.09	6.7	6.9 (6.8)	6.4 (6.2)	6.1 (6.1)	6.1 (6.1)
KIX-weighted	0.75	1.00	2.1	2.9 (2.8)	2.7 (2.7)	2.4 (2.3)	2.2 (2.2)
World (PPP-weighted)	1.00	-	3.2	3.7 (3.7)	3.8 (3.7)	3.7 (3.7)	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 (1.5)	1.6 (1.5)	1.5 (1.5)	1.7 (1.7)
USA	1.3	2.1 (2.1)	2.5 (2.4)	2.3 (2.3)	2.2 (2.3)
Japan	-0.1	0.5 (0.4)	1.0 (0.9)	1.5 (1.5)	2.0 (2.0)
KIX-weighted	1.1	1.9 (1.9)	2.1 (2.0)	2.1 (2.0)	2.2 (2.2)

	2016	2017	2018	2019	2020
Policy rates in the rest of the world, per cent	-0.1	-0.1 (-0.1)	0.1 (0.1)	0.3 (0.2)	0.8 (0.6)
Crude oil price, USD/barrel Brent	45.1	54.8 (54.7)	68.0 (61.8)	63.9 (59.1)	60.8 (57.4)
Swedish export market	3.7	4.7 (5.2)	4.5 (4.3)	3.9 (3.9)	3.8 (3.8)

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	2.5 (2.5)	2.9 (2.9)	2.5 (2.5)	2.5 (2.5)
Public consumption	3.1	0.4 (0.4)	1.4 (1.4)	1.0 (1.0)	1.2 (1.2)
Gross fixed capital formation	5.6	7.4 (7.3)	4.0 (4.7)	1.2 (0.7)	2.0 (2.0)
Inventory investment*	0.0	-0.1 (-0.1)	-0.1 (-0.1)	0.0 (0.0)	0.0 (0.0)
Exports	3.3	3.6 (3.5)	5.1 (4.8)	3.8 (3.8)	4.1 (4.0)
Imports	3.4	5.1 (5.1)	5.0 (5.0)	3.8 (3.8)	4.2 (4.1)
GDP	3.2	2.5 (2.5)	2.8 (2.9)	1.8 (1.7)	2.1 (2.1)
GDP, calendar-adjusted	3.0	2.8 (2.7)	2.9 (3.0)	1.9 (1.7)	1.8 (1.8)
Final figure for domestic demand*	3.1	3.0 (3.0)	2.6 (2.8)	1.7 (1.5)	1.9 (1.9)
Net exports*	0.1	-0.4 (-0.4)	0.3 (0.1)	0.2 (0.2)	0.1 (0.1)
Current account (NA), per cent of GDP	5.1	4.6 (4.6)	4.5 (4.3)	4.5 (4.3)	4.4 (4.2)

*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 (1.1)	0.8 (0.7)	0.5 (0.5)	0.3 (0.3)
Potential hours worked	0.9	0.8 (0.8)	0.7 (0.7)	0.6 (0.6)	0.5 (0.5)
GDP, calendar-adjusted	3.0	2.8 (2.7)	2.9 (3.0)	1.9 (1.7)	1.8 (1.8)
Number of hours worked, calendar-adjusted	2.1	1.8 (1.6)	1.6 (1.5)	0.5 (0.7)	0.4 (0.4)
Employed, aged 15–74	1.5	2.3 (2.3)	1.4 (1.3)	0.5 (0.5)	0.4 (0.4)
Labour force, aged 15–74	1.0	2.0 (2.0)	1.1 (1.1)	0.5 (0.5)	0.5 (0.5)
Unemployment, aged 15–74 *	6.9	6.7 (6.7)	6.4 (6.5)	6.4 (6.5)	6.5 (6.5)

* 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	2.5 (2.7)	2.8 (3.0)	3.1 (3.3)	3.4 (3.4)
Hourly wage, NA	2.2	2.9 (3.1)	2.9 (3.1)	3.2 (3.3)	3.4 (3.4)
Employers' contribution*	0.7	0.0 (0.0)	0.0 (0.0)	0.1 (0.1)	0.1 (0.1)
Hourly labour cost, NA	3.0	2.8 (3.1)	2.9 (3.1)	3.3 (3.4)	3.5 (3.6)
Productivity	0.9	0.9 (1.1)	1.3 (1.4)	1.3 (1.1)	1.4 (1.4)
Unit labour cost	2.6	2.0 (2.0)	1.6 (1.7)	1.9 (2.3)	2.1 (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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