

Monetary Policy Report

July 2017



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 conduct¹. 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 3 July 2017. 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 specified this as a target for inflation, according to which the annual change in the consumer price index (CPI) is to be 2 per cent.
- 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.
- 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

Since the April Monetary Policy Report, the international economic upswing has continued in line with the Riksbank's forecasts. The risk of setbacks is deemed to have decreased even though there is still economic and political uncertainty in many parts of the world. GDP growth in Sweden was weaker than expected in the first quarter but the overall picture is still one of strong development in the Swedish economy. Resource utilisation is higher than normal and will continue to be high in the coming years.

Inflation has been higher than expected in recent months and has approached 2 per cent. But it has taken time to bring up inflation and a continued expansionary monetary policy is required for it to stabilise around 2 per cent. The Executive Board has therefore decided to hold the repo rate unchanged at -0.50 per cent and purchases of government bonds will continue in the second half of 2017, as decided in April. The first rate increase is expected to occur in mid-2018, which is the same assessment as in April. The expansionary monetary policy underlines the Riksbank's aim to safeguard the role of the inflation target as anchor for price-setting and wage formation.

Economic upswing and reduced risk of setbacks

International economic activity continues to strengthen at a modest pace. Confidence indicators point to clear optimism among households and companies. Higher investment growth is giving support to the recovery in industrial output and global trade and means that the upturn in the global economy is now on firmer ground.

For some time, several factors have contributed to making it more difficult to predict economic developments. The result of the parliamentary election in the United Kingdom at the beginning of June has weakened the UK Government and increased the risk of a difficult Brexit process. The European banking system continues to be in need of reform. Many European banks still have a large proportion of non-performing loans and low profitability. This is not least true in Italy, which has had weak economic development for a long time.

But the risk of setbacks abroad is nevertheless deemed to have decreased somewhat since April. After the French presidential election in May, different indicators of political uncertainty have fallen and yield gaps in relation to Germany have decreased for many European countries. The strong development on equity markets and for other risky assets also reflects a slight reduction in uncertainty in recent times.

Overall, good outcomes and positive indicators point to global growth in line with the Riksbank's assessment in April. Global growth is expected to increase from 3.2 per cent in 2016 to 3.7 per cent in 2019. GDP growth in the countries that are most important for the Swedish economy (KIX-weighted) is expected to rise from about 2 per cent in 2016 to 2.5 in 2017.

Table 1:1.

Important factors for monetary policy
The global economic upswing is expected to continue. The risk of setbacks is deemed to have decreased but there is still economic and political uncertainty in many parts of the world.
Central banks around the world find themselves in different phases. The Federal Reserve is expected to increase its policy rate further while the ECB continues with its asset-purchasing programme.
Economic activity is strong in Sweden. Resource utilisation will continue to be higher than normal in the years ahead
Long-term inflation expectations are back close to 2 per cent and inflation will stabilise around 2 per cent at the beginning of 2019.
The krona is slightly stronger than forecast and is expected to strengthen at a slow rate in the period ahead.
Monetary policy needs to continue to be expansionary to keep inflation close to 2 per cent more sustainably. The repo rate is retained at -0.50 per cent and purchases of government bonds will continue during the second half of 2017, as decided in April.

Table 1:2.

Important forecast revisions
The forecast for GDP growth in Sweden has been revised down in the near-term. This is due to weaker outcomes than expected.
Swedish inflation has been higher than expected in recent months and in the near-term, inflation forecast has been revised up slightly.

In 2018 and 2019, growth in these countries is expected to be 2.3 per cent per year.

Inflation abroad will rise this year, which is largely connected to the rise in energy prices over the past 12 months. However, the oil price has fallen since April and is only expected to rise slowly in the period ahead, which means that the contribution by energy prices to inflation will decrease. Underlying inflationary pressures are still low in many areas, particularly in the euro area. Gradually higher resource utilisation means, however, that underlying inflation is expected to increase in the period ahead. CPI inflation abroad (KIX-weighted) is expected to amount to 2 per cent on average during the forecast period.

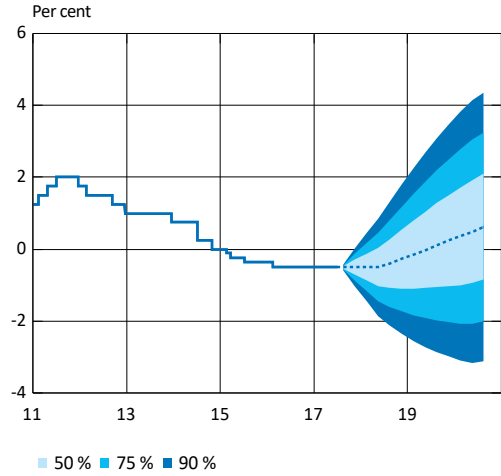
The larger central banks abroad have been conducting an expansionary monetary policy for a long time, but find themselves in different phases. The US Federal Reserve raised the interval for its policy rate from 0.75–1.0 to 1.0–1.25 per cent at its monetary policy meeting in June. The median of the forecasts made by the members of the monetary policy committee indicates another rate rise in 2017, which is also what the market is expecting according to survey responses. Since the Federal Reserve concluded its asset purchases in autumn 2014, it has continued reinvesting securities that have matured, resulting in the size of its balance sheet remaining largely unchanged. At the June meeting, the Federal Reserve repeated the message that these reinvestments will continue until the tightening cycle is well under way. The Federal Reserve also stated, however, that it expects to start scaling back reinvestments this year, provided that the US economy evolves broadly as anticipated.

The European Central Bank, the ECB, left monetary policy unchanged at its June meeting. The deposit rate, which is currently the rate that controls the overnight rate in the euro area, was left at -0.40 per cent. Net asset purchases are to continue until the end of December 2017, or beyond if necessary. Purchases will in any case continue until the ECB sees a sustained adjustment in the path of inflation consistent with its inflation aim. The ECB has said that it expects policy rates to remain at their present levels for an extended period of time and well past the horizon of the net asset-purchases.

Strong Swedish economic activity

Swedish economic activity is developing well and confidence indicators point to continued optimism among households and companies. GDP growth in the first quarter of 2017 was weaker than expected, however. Calculated at an annual rate, growth was 1.7 per cent compared with the fourth quarter of 2016. Export growth surprised on the downside, while domestic demand grew approximately as expected. The weak outcome in the first quarter means that the forecast for GDP growth has been revised downwards this year. In the years ahead, however, the forecast for Swedish GDP is more or less unchanged compared with the previous forecast and GDP is

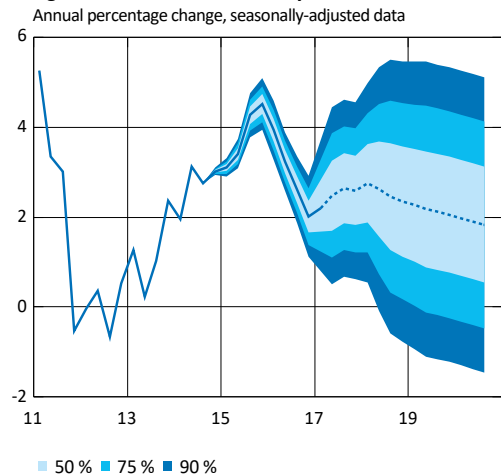
Figure 1:1. Repo rate with uncertainty bands



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

Source: The Riksbank

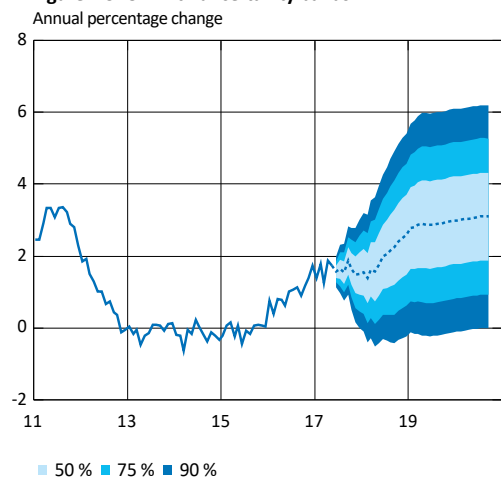
Figure 1:2. GDP with uncertainty bands



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. CPI with uncertainty bands



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

Sources: Statistics Sweden and the Riksbank

expected to grow by just over 2 per cent per year in 2017–2019 (see Figure 1:2). Finansinspektionen’s proposal at the end of May for tighter amortisation requirements for highly indebted households is expected to dampen consumption growth slightly and housing investment will develop more weakly than in the previous forecast. However, these factors will be counteracted mainly by the fact that exports are now expected to grow slightly more rapidly (see Figure 1:2).

Labour supply has grown rapidly for some time and the economic upswing has also led to a high demand for labour among companies. Since the beginning of the year, both the labour force and employment have increased more than expected, while unemployment has developed in line with the Riksbank’s forecast. Despite labour supply having grown rapidly, the situation on the labour market is deemed to be increasingly strained. The percentage of companies reporting a labour shortage is on a high level and recruitment times have increased. Lower population growth and increasing problems in matching companies and job seekers will contribute to subduing employment growth ahead.

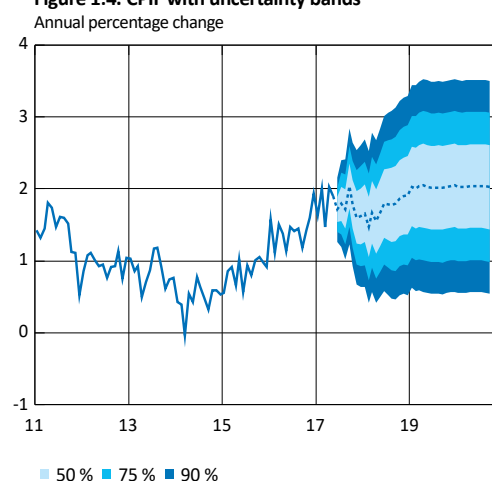
Wage development has been weak in many countries despite economic activity having strengthened. The high level of economic activity and the increasing difficulties for companies to recruit are expected to lead to a rising wage growth in Sweden going forward. But the central wage agreements concluded this year suggest that wage growth will nevertheless be relatively moderate in the years ahead and, in relation to the domestic economic situation, the Riksbank’s wage forecast is subdued. Relatively weak productivity growth and subdued wage development abroad is contributing to that but there are also other factors that may affect wage development (see the article “Strong economic activity but subdued wage increases” in this Monetary Policy Report).

Inflation to stabilise around 2 per cent

Inflation has been higher than expected in recent readings. In May, inflation was 1.7 per cent measured in terms of the CPI, 1.9 per cent when measured as the CPIF and 1.6 per cent when measured as the CPIF excluding energy (see Figures 1:5–1:7). Compared with the forecast in April, it is mostly prices for services, including foreign travel, that have increased more rapidly than expected. The strong economic situation and last year’s krona depreciation are expected to contribute to a continued rise in CPIF inflation excluding energy.

Since the monetary policy meeting in April, the krona in KIX-weighted terms has developed slightly stronger than the Riksbank’s forecast. The krona is expected to strengthen in the period ahead but strong economic activity in Sweden and rising international price pressures nevertheless mean that the conditions are good for CPIF inflation to be able to stabilise around 2 per cent. The inflation forecast remains largely unchanged compared with the forecast in April.

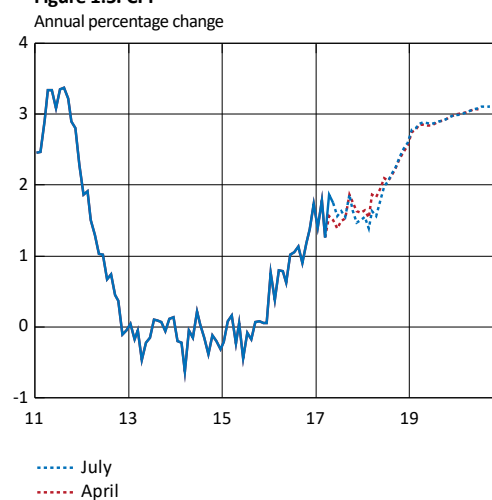
Figure 1:4. CPIF with uncertainty bands



Note. The uncertainty bands are based on the Riksbank’s historical forecasting errors. The CPIF is the CPI with a fixed mortgage rate.

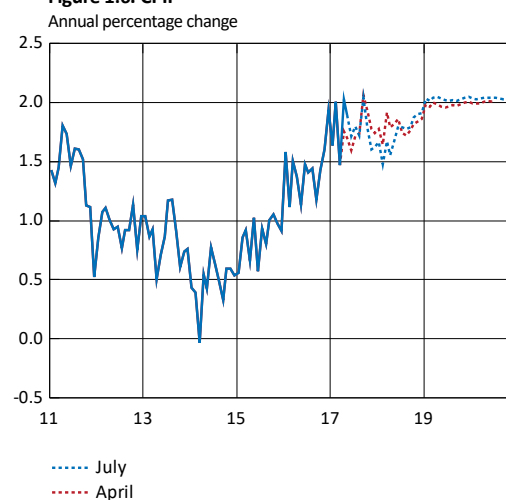
Sources: Statistics Sweden and the Riksbank

Figure 1:5. CPI



Sources: Statistics Sweden and the Riksbank

Figure 1:6. CPIF



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

Sources: Statistics Sweden and the Riksbank

Current monetary policy

Swedish monetary policy has for a long time been conducted in an environment characterised by uncertain economic developments, low global interest rates and weak inflationary pressures. The aim of the expansionary monetary policy is to stabilise inflation in Sweden around the target of 2 per cent and to keep inflation expectations in line with the target. High confidence in the inflation target creates the conditions for efficient price-setting and wage formation, thereby contributing to good economic development. Given these circumstances, the Riksbank has gradually cut the repo rate to -0.50 per cent and carried out extensive purchases of government bonds. Monetary policy has had a significant impact on short- and long-term interest rates and on the krona exchange rate.² Inflation has been rising since the beginning of 2014, as have long-term inflation expectations, which are once again close to 2 per cent. Economic activity in Sweden is also strong and unemployment has declined. Monetary policy is considered to have contributed to this development.

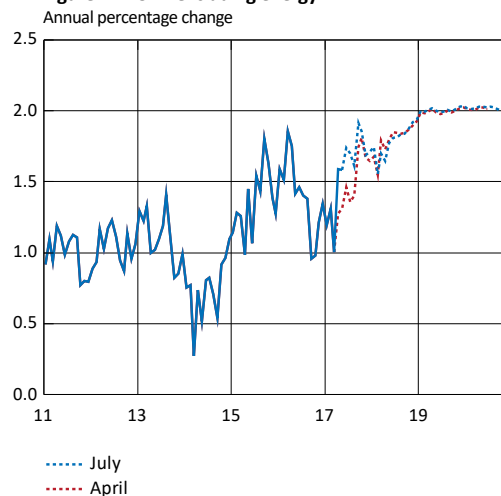
Expansionary monetary policy required for inflation to stabilise at 2 per cent

Since the April Monetary Policy Report, developments abroad have looked better and better, in line with the Riksbank's forecasts. Even if there is still economic and political uncertainty in many parts of the world, the risk of setbacks is deemed to have decreased somewhat. Global inflationary pressures are still subdued, however, and monetary policy abroad remains expansionary.

In Sweden, economic activity is strong even though GDP growth was weaker than expected in the first quarter of this year. Developments on the labour market have been stronger than expected and inflation outcomes in recent months have been unexpectedly high. In the near term, labour market and inflation developments looks slightly better but the overall picture of the outlook for the economy and inflation in the years ahead is largely unchanged. Resource utilisation is assessed to be higher than normal and, like previous forecasts, the assessment is that CPIF inflation will stabilise around 2 per cent at the beginning of 2019.

Since the end of 2016, CPIF inflation has varied between 1.5 and 2 per cent. A prerequisite for more sustainable inflation of close to 2 per cent is that Swedish economic activity continues to be strong and gradually has a greater impact on price development. But inflation is also affected via other channels, and alongside high domestic demand, it is important that the krona exchange rate does not strengthen too quickly. This could happen if, for example, the Riksbank's monetary policy were to deviate clearly from that of other countries. The US central bank is in a tightening phase and expects to start

Figure 1:7. CPIF excluding energy



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

Sources: Statistics Sweden and the Riksbank

Risks of too low inflation

The expansionary monetary policy has a clear focus: that inflation shall rise and stabilise 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. With an inflation rate and inflation expectations that are below the target over a long period of time, the nominal interest rate will also be lower on average. A lower average nominal interest rate increases the risk that the repo rate will reach its lower bound, in the same way as if the target was lower than 2 per cent. This reduces the Riksbank's leeway for cutting the repo rate in the future if inflation becomes low or economic activity wavers. Too low an inflation rate can moreover make it more difficult to adapt real wages between individuals within companies and between different industries, as nominal wages usually rise and are rarely lowered. This could entail poorer functioning of the labour market and higher unemployment.

² See the article "The effects of monetary policy on financial variables" in the April 2017 Monetary Policy Report.

gradually reducing its bond holdings this year, while the European Central Bank is still extending asset purchases according to its announced plan. The krona has developed slightly more strongly compared with the earlier forecast and the assessment is still that it will strengthen slowly in the period ahead (see Figure 4:12).

The continued strength of the economy and inflation surprising on the upside and being close to 2 per cent could be arguments for somewhat less expansionary monetary policy. The risk of setbacks has also decreased even though there is still economic and political uncertainty abroad. But it has taken time and a great deal of support from monetary policy to bring up inflation. Continued expansionary monetary policy is needed to stabilise inflation around 2 per cent. It is important in the context to avoid large and rapid appreciation of the krona exchange rate, which would not only lead to major negative effects on inflation but also curb growth in the Swedish economy.

The fact that inflation has been below target for a long time means that there is a risk of inflation expectations being more sensitive than usual to downside surprises. Lower inflation expectations can make it even more difficult to stabilise inflation around the target.

The need of inflation stabilizing close to target and of well anchored inflation expectations therefore suggests that it is still too early to make monetary policy less expansionary.

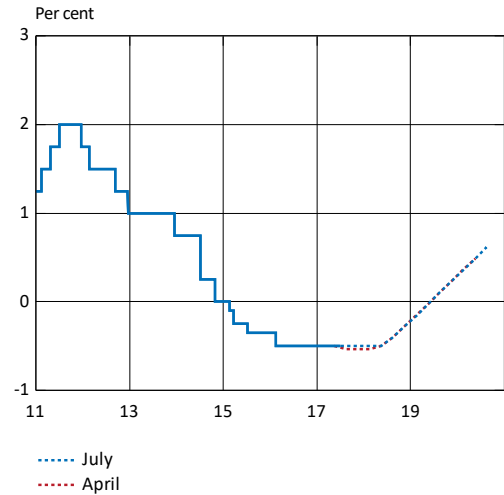
The Executive Board has therefore decided to hold the repo rate unchanged at -0.50 per cent. The repo rate is expected to stay at this level for another year before slow increases are initiated. This is the same assessment as in April (see Figure 1:8). The repo rate will thereby be significantly lower than the long-term normal interest rate level in the coming years.³ The forecast for the repo rate reflects that it is now slightly less likely than previously that the Riksbank will cut the rate in the near term. This does not rule out repo rate cuts in the period ahead. Just as before, the Riksbank can implement further monetary policy easing if necessary to stabilise inflation and safeguard the inflation target. The development of the krona exchange rate also continues to be very important in this context.

Purchases of government bonds will continue in the second half of 2017, as decided in April, and at the end of the year total purchases of government bonds will amount to SEK 290 billion, excluding reinvestments (see Figure 1:9). Until further notice, maturities and coupon payments will be reinvested in the government bond portfolio. During 2017, these maturities and coupon payments will amount to around SEK 30 billion, largely in nominal government bonds, and reinvestments are distributed throughout the year.

Just as in many other countries in the world, Swedish monetary policy is thus very expansionary and will remain so in

³ For a discussion of the repo rate's long-term level, see the article in the February 2017 Monetary Policy Report.

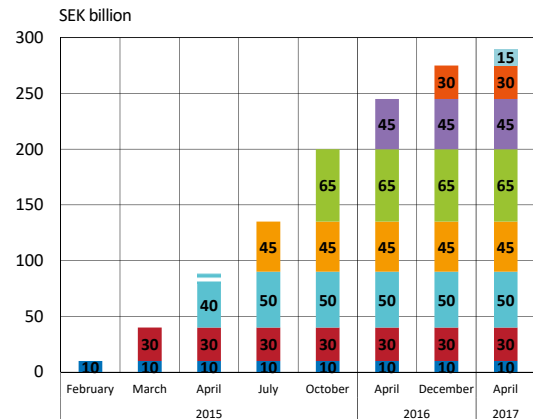
Figure 1:8. Repo rate



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

Source: The Riksbank

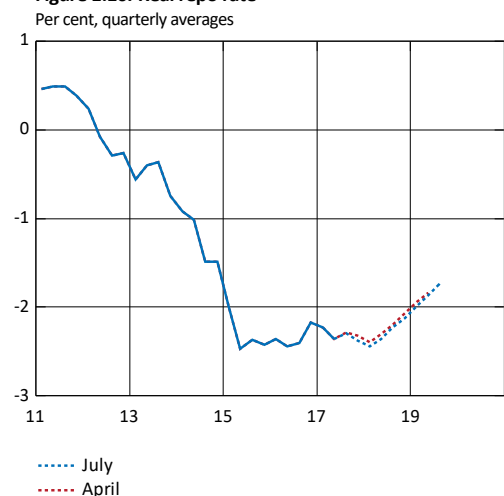
Figure 1:9. Purchases of government bonds decided by the Riksbank



Note. Purchases of government bonds, excluding reinvestments, will continue until the end of 2017.

Source: The Riksbank

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

the coming years. The real repo rate is expected to be negative throughout the forecast period (see Figure 1:10).

Side-effects of monetary policy

The monetary policy conducted by the Riksbank in recent years, with a policy rate below zero and extensive asset purchases, has been very expansionary in a historical perspective. The policy is largely a consequence of a globally declining trend in nominal and real interest rates (see Figure 1:11).

There are concerns that undesirable side-effects of monetary policy may arise. These concerns are, for example, about low and negative interest rates and government bond purchases possibly leading to excessive risk-taking in the economy and having a negative effect on the functioning of financial markets. In Sweden, it is above all developments on the housing market that are of concern, as housing prices, and consequently household indebtedness, have been rising sharply for a long time. The overall assessment regarding the Swedish government bond market is, however, that it continues to work satisfactorily. The Riksbank is closely monitoring liquidity in the government bond market by, inter alia, having close contacts with the various participants.

There is a risk that negative interest rates may lead to more cash withdrawals. But only a small share of deposits are subject to negative rates, and notwithstanding the negative interest rate, the demand for cash has continued to decrease. Negative rates could also reduce banks' profitability to a certain extent, which could ultimately counteract the intended effect of monetary policy if lending rates were to go higher and credit supply was to diminish. However, Swedish banks' profitability has remained high and stable in recent years.

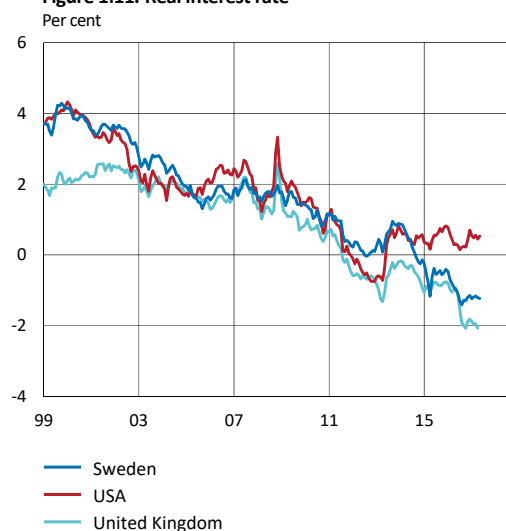
The Riksbank continuously analyses the effects of monetary policy and so far deems the negative side-effects to be manageable.

Uncertainty and risks

Forecasts of future economic developments are always uncertain, as illustrated by the uncertainty bands in figures 1:1–1:4. In the Riksbank's forecasts, the risks of both more and less favourable developments 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 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 1:11. Real interest rate



Note. 10-year yield on real government bonds in Sweden, the United Kingdom and the United States. The Swedish real interest rate is zero coupon yields interpolated from bond prices using the Nelson-Siegel method.

Sources: Bank of England, Federal Reserve, Thomson Reuters and the Riksbank

Uncertainty surrounding the inflation forecast

Although the Swedish economy is currently well-equipped, negative surprises can occur in the future that make it necessary to adapt monetary policy further. The Riksbank therefore is still prepared to make monetary policy more expansionary if inflation does not stabilise around 2 per cent and confidence in the inflation target weakens. All of the tools that the Riksbank has described earlier, most recently in the September 2016 Monetary Policy Report, can as always be used if necessary.

For some time, uncertainty around the world has contributed to making it more difficult to predict economic developments. It is a question of, among other things, uncertainty regarding the design of economic policy in the United States, risks of greater protectionism and concern for European cooperation as EU-critical parties have made headway in the opinion polls in several European countries.⁴

In Europe, the differences in government bond yields in relation to Germany have decreased for many countries after the French presidential election in May. In Italy, parliamentary elections are to be held no later than in May 2018. Proposals that could enable the election to be held as early as this autumn did not gain support in the country's parliament and Italian government bond yields fell significantly in June as a result. In light of this, the risk of setbacks abroad is deemed to have decreased since the monetary policy decision in April. But despite this, there is still economic and political uncertainty in many parts of the world.

Italy has had weak economic development for a long time, leading to a high level of public debt and major problems in the banking sector. EU-critical parties, whose agendas include proposals for referenda on leaving the European Monetary Union, have grown stronger in the opinion polls. In the UK, the result of the parliamentary election in early June weakened the UK Government. Uncertainty surrounding the UK's economic policy has therefore increased, as has the risk of a more difficult Brexit process. In the United States, several question marks remain regarding, for example, the design of fiscal policy. These are a few examples of economic and political uncertainty factors abroad that may ultimately subdue inflation both internationally and in Sweden.

The fluctuations in the krona over the past twelve months illustrate the very uncertain nature of exchange rate forecasts. A large and rapid appreciation of the krona would hold back import prices and demand, which would make it more difficult to reach the inflation target at the pace now anticipated by the Riksbank. The problems could be particularly serious if confidence in the inflation target was to once again weaken. This risk is significant given that inflation has been low for a long period. A large and rapid appreciation of the krona

⁴ See also the articles "The economic consequences of increased protectionism" and "The significance of international developments for monetary policy" in the April 2017 Monetary Policy Report.

exchange rate could also have significantly negative consequences for real economic development.

Resource utilisation is expected to be higher than normal during the forecast period. According to historical correlations, wages should therefore increase at a faster pace and inflation should rise going forward. The normative wage agreements concluded earlier this year indicate, however, that cost increases will be relatively moderate in the years ahead. This may suggest that factors other than the domestic economic situation have become more important when it comes to explaining wage development. In many countries, including Sweden, the underlying GDP growth per capita and real wage growth have been relatively weak in the last decade while real interest rates have been low. This has partly to do with weak global productivity growth after the financial crisis. An important issue is the extent to which it is an expression of more permanent changes in economies. In addition, price-setting and wage formation may have been adapted to the long period of low inflation. If these factors are of a more permanent nature, the correlation between the economic situation and wage development, which has previously been a good guide to the assessment of cost pressures, may have weakened (see the article “Strong economic activity but subdued wage increases” in this Monetary Policy Report).

The Riksbank’s forecast for wage development considers a large amount of information, where wage agreements are important. 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. The forecast is uncertain, however. If wage development is weaker than expected, it is likely that company costs will also develop more weakly, which will push down inflation. But the correlations between resource utilisation and wages and prices depend on which factors affect the development. Persistently lower productivity growth would, for example, mean that real wage growth, and hence growth in nominal wages, was lower but inflation would not necessarily be affected to any great degree. Even in this case, however, monetary policy could be affected, as permanently lower productivity growth is associated with a lower long-run level for the repo rate.⁵

Economic developments could also be stronger than forecast. Recently, the real economy has strengthened both abroad and in Sweden. If this development were to continue, resource utilisation and thus inflation may be pushed up fairly quickly. A higher wage rate than in the forecast, in line with historical correlations with resource utilisation, could also lead to higher inflation (see the article “Strong economic activity but subdued wage increases” in this Monetary Policy Report). However, inflation has been below target for a long time and, inflation temporarily exceeding the target would not

⁵ See the article “The repo rate in the long run” in the February 2017 Monetary Policy Report.

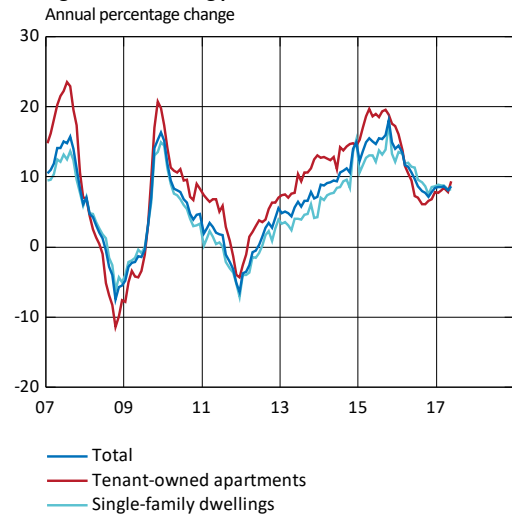
necessarily mean that monetary policy must be made less expansionary in the near future.

The risks associated with household indebtedness remain – urgent need for action

Housing prices have risen substantially for several years, and household indebtedness has risen in line with housing prices (see Figures 1:12 and 1:13). The high and increasing indebtedness may jeopardise financial and macroeconomic stability. A combination of measures in different policy areas is needed to attain a long-run sustainable development for the Swedish economy with stable economic activity and inflation. This is particularly important as interest rates are expected to remain low for a long time. Socioeconomic imbalances are expected to increase unless further measures are taken. This may ultimately be very costly for Sweden's economy.

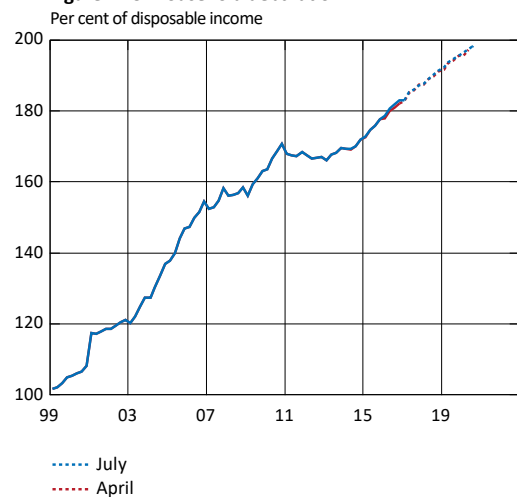
It is urgent that the Government take targeted measures within housing policy and tax policy to mitigate the risks associated with household indebtedness. Politicians need to take a holistic approach and review taxation of capital gains from housing property sales as well as property tax and tax relief on interest expenses. The Riksbank has called for further macroprudential policy measures and therefore welcomes Finansinspektionen's proposal of 22 June for tighter amortisation requirements, which are proposed to come into force on 1 January 2018. The Riksbank has also stated that it is important that Finansinspektionen's assignment and goals for macroprudential policy, and the process for allocating tools to Finansinspektionen, be clarified and set out in law. Earlier this year, the Government presented proposals for further tools for macroprudential policy, which have now resulted in a proposal referred to the Council on Legislation for consideration. The Riksbank sees the proposals as a step in the right direction.

Figure 1:12. Housing prices



Source: Valueguard

Figure 1:13. 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

CHAPTER 2 – Financial conditions

Since the last Monetary Policy Report was published in April, there has been a rise on the stock exchange in the United States and measures of uncertainty are at record low levels. The Federal Reserve has continued to make monetary policy less expansionary, while the European Central Bank is continuing its monetary policy stimulation. At the same time, government bond yields have risen slightly in Germany but are more or less unchanged in the United States and Sweden. The krona is slightly stronger than the forecast in April. Households and companies are still paying low interest rates at the same time as the credit growth is high. All in all, the financial conditions in Sweden are deemed to be favourable for growth in the short term.

International developments

Federal Reserve raised its policy rate in June

At the monetary policy meeting in June, the Federal Reserve raised the interval for the policy rate. This decision was expected and the market's reactions were thus minor. Since April, market expectations are more or less unchanged and indicate approximately two more increases before the end of 2019 (see Figure 2:1).

At the meeting in June, the plan was also repeated for maintaining the existing policy of reinvestments of all maturities in the securities portfolio until the tightening cycle is well under way. The Federal Reserve stated that it expects to begin implementing a balance sheet normalisation programme this year, provided that the economy evolves broadly as anticipated. It is planned to make this reduction gradually with a limit for how extensive the decrease of assets may be per month. This limit will be set low to start with, and then gradually raised. However, the message will be that changes will take place gradually and will be communicated in good time ahead of implementation.

At the ECB's monetary policy meeting in June, monetary policy was left unchanged. The deposit rate, which is currently the rate that controls the overnight rate in the euro area, was left at -0.40 per cent. Net asset purchases are to continue until the end of December 2017, or longer if necessary. Purchases will in any case continue until the ECB sees a sustainable improvement in the outlook for inflation. The ECB also reported that it is ready, if necessary, to extend net asset purchases in terms of

Table 2:1.

Developments on financial markets since the April Monetary Policy Report
Largely unchanged government bond yields in the United States and Sweden. Somewhat higher government bond yields in Germany.
The krona is slightly stronger in competition-weighted terms than the forecast in April.
Stock market indices have risen in the United States and measures of uncertainty on the financial markets are at low levels.
Continued low interest rates for households and companies.
Continued high growth in lending to households and non-financial corporations.

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

The repo rate has a direct effect on short-term interbank rates and government bond yields via the overnight rate. Expectations regarding the future repo rate and government bond purchases affect the development of long-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 impact banks' funding costs. This ultimately affects the lending rates for households and companies.



size or duration. It also pointed out that its policy rates will remain at their present levels for an extended period of time, and well past the horizon of the net asset purchases. At a press conference, Mario Draghi, the Governor of the ECB, emphasised that further policy rate cuts would not be ruled out either, if necessary. Over the longer term, the market's expectations of the ECB's deposit rate have remained basically unchanged since April and the rate is not expected to be raised until the start of 2019 (see Figure 2.1).

The Bank of England held its monetary policy unchanged at its meeting in June. However, this decision was not unanimous, as three of the eight members of the Monetary Policy Committee voted to raise the policy rate. In Norway, the central bank decided to leave monetary policy unchanged in June, but raised its near-term repo rate path. The Japanese central bank also left its monetary policy unchanged at its meeting in June.

US government bond yields nearly unchanged

US interest rates rose in the autumn 2016 in conjunction with expectations of increased fiscal policy stimulation, which led inflation expectations to rise. As the promised reforms have failed to materialise, inflation expectations have fallen, which has also caused longer-term nominal government bond yields to fall (see Figure 2:2). The recent communication from some central banks have contributed to higher bond yields internationally including the US bond Yields. Since the Riksbank's decision in April the US government bond yields with long maturities are nearly unchanged.

In Germany, government bond yields were very low ahead of the French presidential election, which may partly be due to assets considered safe being in greater demand in periods of great political uncertainty. At the same time, demand for assets considered more high-risk decreased, which led yields to rise in many other European countries. After the outcome of the election, yields fell in these countries and they have subsequently continued to fall. In contrast, German yields rose directly after the French presidential election and have risen further due to communication from the ECB.

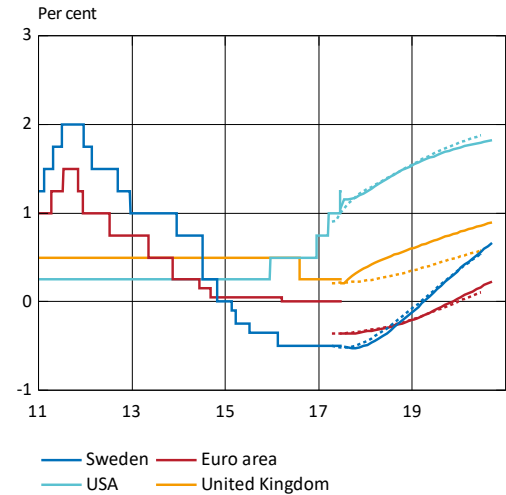
Following the election in June, it remains difficult to assess the general development of the economy in the United Kingdom. The outcome of the election in June did not significantly affect yields but longer-term bond yields have risen somewhat since April in line with the international development (see Figure 2:2).

Stock prices in the United States have risen

Since April, stock prices have risen in the United States, at the same time as profits have developed relatively well. The stock exchanges in many developing countries have also risen. In Europe, the stock exchanges have fallen slightly since April (see Figure 2:3).

Measures of uncertainty, as the expected volatility on the stock markets are at low levels in both the United States and Europe. In the United States, the cost of insuring oneself against

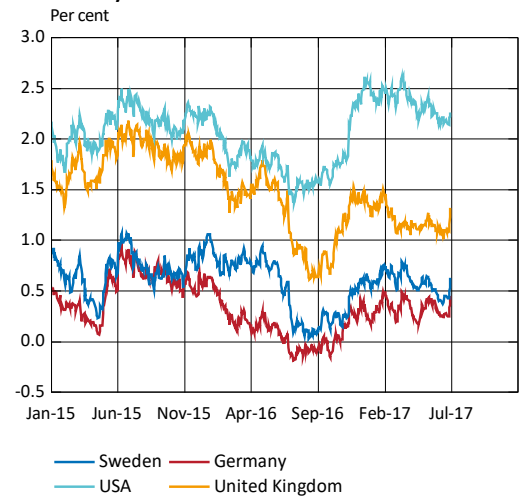
Figure 2:1. Policy rates and rate expectations according to forward rates



Note. Forward rates describe the expected overnight rate, which does not always correspond to the policy rate. There is no published overnight rate in Sweden, but it normally follows the repo rate closely. Unbroken lines are estimated on 29 June 2017, broken lines are estimated on 26 April 2017.

Sources: Macrobond and the Riksbank

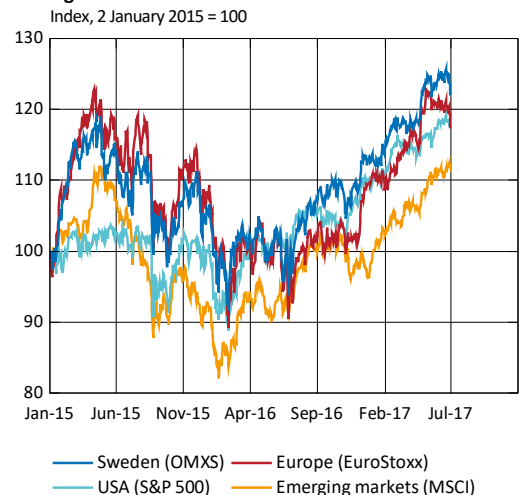
Figure 2:2. Government bond rates with 10 years left to maturity



Note. Zero-coupon rates interpolated from bond prices using the Nelson-Siegel method.

Sources: Macrobond and the Riksbank

Figure 2:3. Stock market movements



Sources: Macrobond and Thomson Reuters

major stock exchange falls via the options market has decreased and the so-called SKEW-index⁶ has retreated since the Monetary Policy Report in April (see Figure 2:4).

Financial conditions in Sweden

Small changes in Swedish market rates

According to pricing on the financial markets, expectations of the future repo rate in near term have fallen slightly since April. Expectations fell in conjunction with the Riksbank's decision to expand bond purchases by SEK 15 billion over the second six months of 2017 and to postpone the forecast for the first repo rate increase by a quarter. Forward rates are certainly slightly above the Riksbank's repo rate path in the short term, but they are in line with the repo rate path in the slightly longer term. At the same time, surveys of market participants' expectations about the future repo rate are slightly higher than the Riksbank's interest rate forecasts one and two years ahead (see Figure 2:5).

Swedish government bond yields have risen recently in line with the international development and are basically unchanged compared with April. Yields on other types of bonds, including covered bonds and corporate bonds, and are nearly unchanged.

Yields with shorter maturities have fallen slightly, however, and the yield on a treasury bill with a short maturity is significantly lower than the policy rate. One contributory factor to this is the Riksbank's purchases of government bonds. The purchases of government bonds have meant that the Riksbank now holds around 40 per cent of outstanding nominal government bonds in Swedish kronor. This means that a relatively large proportion of the government bonds is not available for trade on the market, which could influence the functioning of the market. In recent years, however, different types of new financial regulations have been introduced that may also have affected the market's functionality. Even if the picture is not clear-cut, several indicators suggest that the Riksbank's bond purchases have had a limited impact on market liquidity. The overall assessment is that the Swedish government bond market is still functioning satisfactorily.⁷

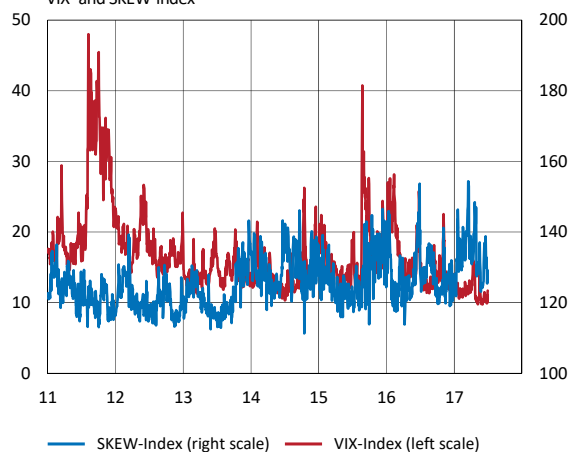
Slightly stronger krona

In competition-weighted terms, KIX, the krona is slightly stronger than the Riksbank's forecast in April. The krona has appreciated against most currencies, but has depreciated somewhat against the euro (see Figure 2:6). The strong development of the euro can primarily be explained by the decrease in uncertainty connected with the result of the French election at the same time

⁶ The SKEW-index indicates the probability of negative outcomes on the stock exchange, calculated on the basis of options prices. The SKEW-index rises when put options are expensive in relation to call options, reflecting the relatively increased expense of insuring oneself against larger stock exchange falls.

⁷ For a discussion of the indicators of market liquidity, see Bonthron, F. Johansson, T. and Mannent, J. Market liquidity on the Swedish bond market and its importance for financial stability, Economic Commentary no. 3, 2016. Sveriges Riksbank. See also Financial Stability Report 2017:1.

Figure 2:4. Volatility and risk of large falls on the stock market
VIX- and SKEW-index

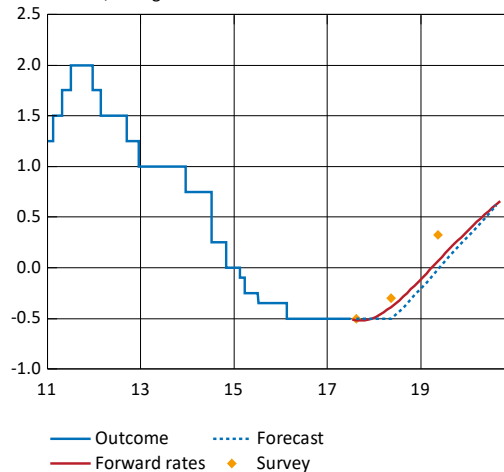


Note. Both VIX and SKEW are calculated on the basis of option on the S&P 500 share index. The VIX-index matches the expected volatility of the stock market, while the SKEW-index shows how expensive it is to purchase protection against large stock exchange falls.

Source: Thomson Reuters

Figure 2:5. Repo rate and market expectations

Per cent, average

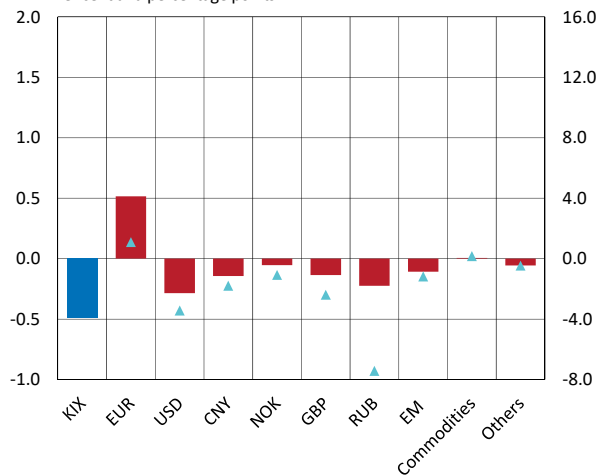


Note. The forward rates are estimated as of 29 June 2017 and measure the expected repo rate. The survey responses show the average for money market participants on 24 May 2017.

Sources: Macrobond, TNS Sifo Prospera and the Riksbank

Figure 2:6. Contributions and changes to KIX and exchange rate

Per cent and percentage points



■ Percentage change in the KIX (left scale)
■ Contribution to change in the KIX (left scale)
▲ Currencies' percentage change (right scale)

Note. The figure shows change in KIX and contributions from different currencies between 8 a.m. 27 April 2017 and 10 a.m. 30 June 2017. 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.

Source: Thomson Reuters and the Riksbank

as economic indicators have shown a slightly brighter outlook than expected. The US dollar has instead weakened in conjunction with market participants' changing expectations of the future economic policy of the United States. The dollar has primarily weakened against the euro but also against the krona.

The Swedish stock exchange has remained basically unchanged since April (see Figure 2:3). In Sweden, the company profits have developed strongly and many companies have presented stronger reports than expected.

Credit growth among households and companies still high

The banks' continuing good funding conditions mean that lending rates to households and companies remain on historically low levels. The average mortgage rate for new agreements remained at 1.6 per cent in May, while the average interest rate for new bank loans for non-financial corporations fell compared with April and amounted to 1.1 per cent (see Figure 2:7).

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, while lending rates to companies have fallen slightly more. Average deposit rates for households and companies have remained largely unchanged since the middle of 2015 and are close to zero.⁸ Overall, the impact of the repo rate on deposit and lending rates has been in line with the Riksbank's expectations.

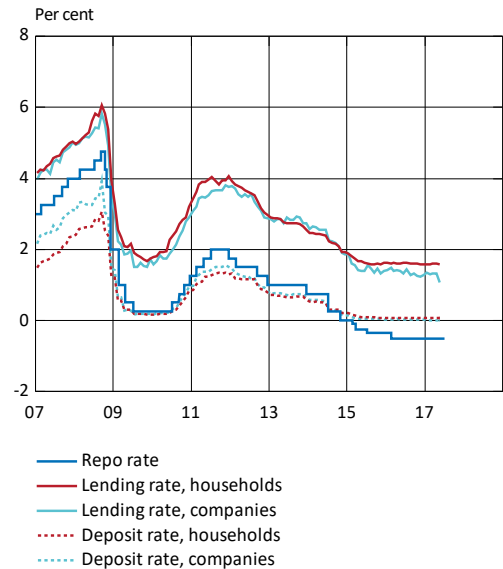
Growth in loans to households continues to be high, even if it has slowed down slightly since mid-2016. In May, the annual growth rate in bank loans to households was 6.9 per cent. The rate of increase in lending to companies decreased slightly compared with April, and amounted to 4.7 per cent (see Figure 2:8). The rate of increase in corporate borrowing in securities also fell slightly and amounted to 14.7 per cent in May. Surveys show that companies' funding conditions continue to be good.

The rate of increase in housing prices has been stable since the end of 2016, although there are still considerable regional differences. In May, housing prices rose by an annual rate of 8.6 per cent (see Figure 1:12). Surveys show that the general public and estate agents continue to expect housing prices to rise, although optimism among estate agents has weakened slightly.

Financial conditions in Sweden are still expansionary

Financial developments can be summarised in a financial index, which indicates that the financial conditions in Sweden are still expansionary (see Figure 2:9).⁹ The main contributors to this trend are the low interest rates and low uncertainty, as well as the high growth rate in housing prices, strong growth in lending

Figure 2:7. Repo rate together with the deposit and lending rate to households and companies, new contracts



Note. MFIs' average deposit and lending rates for households and companies.

Sources: Statistics Sweden and the Riksbank

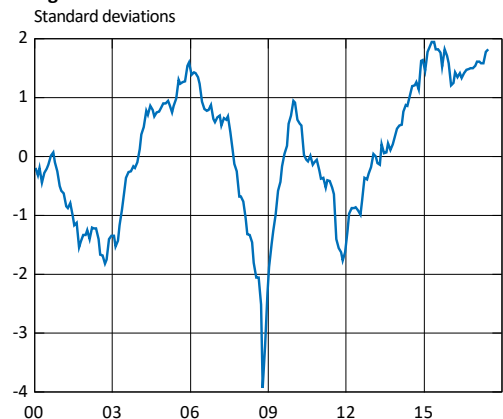
Figure 2:8. Bank lending to households and companies



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

Source: Statistics Sweden

Figure 2:9. Financial index for Sweden



Note. The index is based on a principal component analysis of twelve different financial variables. A higher value indicates more favourable financial conditions.

Sources: Thomson Reuters and the Riksbank

⁸ 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.

⁹ For more information on the index, see Fransson, L. and Tysklind, O. An index for financial conditions in Sweden, Economic Review 2017:1, 2017. Sveriges Riksbank.

and favourable funding terms. All in all, the financial conditions are deemed to be favourable for GDP growth in the short term.

CHAPTER 3 – The current economic situation

The Swedish economy is still strong and inflation has risen more rapidly than expected. In May, inflation was 1.9 per cent in CPIF terms, and 1.6 per cent when adjusted for energy prices. Overall, the current economic situation is continuing to provide support to the upturn in inflation. Although GDP growth was lower than expected in the first quarter, it is expected to rise over the next six months. Confidence indicators for households and companies are at high levels both abroad and in Sweden. The growth in employment and labour force is still high. At the same time, many companies are reporting a shortage of labour and resource utilisation in the economy is deemed to be higher than normal. The depreciation of the krona over the last year is also expected to contribute positively to inflation in the months ahead.

Inflation

Inflation has risen from a low level

Inflation has risen more rapidly than expected. In May, it was 1.9 per cent in CPIF terms, and 1.6 per cent when adjusted for energy prices (see Figure 3:1). Prices for services increased more rapidly than a historical average despite rents, which make up about a quarter of prices for services, still rising slowly. Prices of goods and food rose at a historically normal rate (see Figure 3:2). Compared with the forecast in April, it was mostly prices for services that increased more rapidly than expected.

Both CPIF inflation and different measures of underlying inflation have shown a rising trend since 2014 (see Figure 3:1). The upturn in inflation reflects, among other things, the economic upswing.¹⁰ Production costs increase more quickly when resource utilisation rises and high demand makes it easier for companies to raise their prices. The rising inflation is also partly a consequence of the weaker krona, which affects food and goods prices, among others. The depreciation of the krona over the past year is also expected to contribute to rising inflation in the months ahead.

Inflation upturn set to continue

Indicators suggest the upturn in inflation will continue. Positive sentiment among households and companies according to the Economic Tendency Survey points to continued high demand. In the producer channel, prices for consumer goods are increasing ever more rapidly (see Figure 3:3). The depreciation of the krona has contributed to a faster rise in the import prices of consumer goods. The rate of price increase for consumer goods produced in Sweden has also increased gradually in recent years, according to the home market price index.¹¹ According to the Riksbank's business survey in May, however,

¹⁰ See also the article "The relationship between resource utilisation and inflation" in the Monetary Policy Report, October 2016.

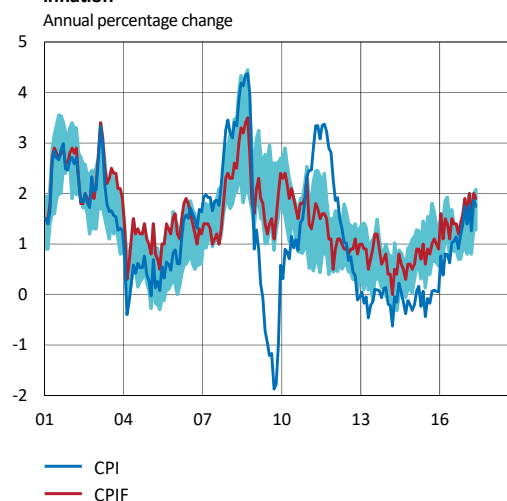
¹¹ Producer prices are measured, respectively, in the first distribution channel when the products are delivered from Swedish producers and in the first purchasing channel when the products enter Sweden.

Table 3.1.

Expected development in April MPR	Actual development
CPIF inflation 1.8 per cent in April and 1.7 per cent in May.	CPIF inflation 2.0 and 1.9 per cent respectively in April and May.
GDP growth 3.4 per cent in first quarter.	GDP growth was 1.7 per cent.
Unemployment 6.7 per cent in second quarter.	Monthly outcomes for April and May are in line with the forecast.
GDP growth in the euro area 2.0 per cent in first quarter.	Outcomes in line with the forecast.
GDP growth in the US 1.4 per cent in first quarter.	Outcomes in line with the forecast.

Note. MPR refers to the Monetary Policy Report. The CPIF is the CPI with a fixed mortgage rate. 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, seasonally adjusted.

Figure 3.1. The CPI, CPIF and different measures of underlying inflation



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.

Sources: Statistics Sweden and the Riksbank

trade companies report that they are having difficulty rising their prices faced with tough competition.¹² According to the Economic Tendency Survey, the price expectations of retailers are close to a historical average.

One way of utilising information from outcomes and indicators to make forecasts is to use statistical models. The overall result from various models suggests that CPIF inflation excluding energy will rise over the next six months (see Figure 3:4). In the months ahead, the Riksbank’s forecast is slightly higher than the model forecast. One of the reasons for this is that the models are not considered to fully capture the development in charter travel prices.¹³ The upturn in inflation is therefore expected to continue. Compared with the forecast in the April Monetary Policy Report, CPIF inflation excluding energy has been revised up slightly in the near term. However, oil prices are expected to be slightly lower than in the previous assessment, and CPIF inflation is therefore in line with the forecast in April. The development in household interest expenditure is holding back CPI inflation compared with the CPIF.

Long-term inflation expectations close to 2 per cent

Inflation expectations have risen significantly from low levels since 2015 (see Figure 3:5). According to Prospera’s survey for June, five-year inflation expectations of all participants were 2.1 per cent. They have therefore been close to 2 per cent for the last twelve months. Inflation expectations one and two years ahead were 1.7 and 2.0 per cent, respectively.

Global and Swedish economic activity

Optimistic confidence indicators abroad

Recently published international confidence indicators show that both households and companies are largely optimistic about economic development (see Figure 3:6). Measures of economic policy uncertainty have also fallen in recent times.

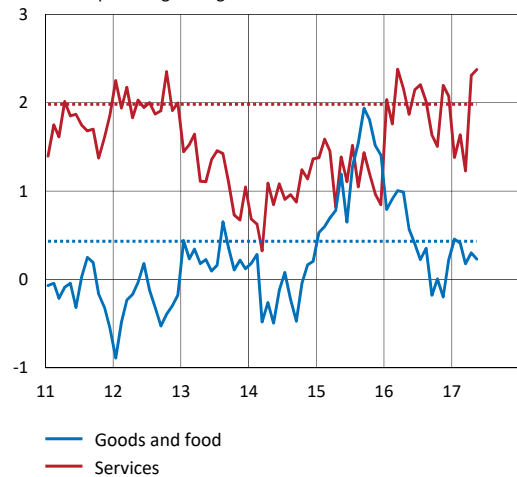
GDP in the euro area rose by 2.0 per cent in the first quarter, compared with the immediately preceding quarter and calculated at an annual rate. Growth thereby increased compared with the fourth quarter last year. The indicators point towards GDP continuing to rise at roughly the same rate in the next few quarters. Not least companies in the industrial sector are reporting higher confidence, although this has so far not been fully reflected in rising output.

In the United States, growth slowed somewhat in the first quarter to 1.4 per cent compared with the immediately preceding quarter and calculated in annualised terms. However, the confidence of both households and companies is at levels that suggest higher growth in the quarters ahead. Monthly outcomes for output and consumption also indicate that growth

¹² See the Riksbank’s Business Survey in May 2017.

¹³ A change in the way Statistics Sweden calculates charter travel prices has increased the seasonal variation.

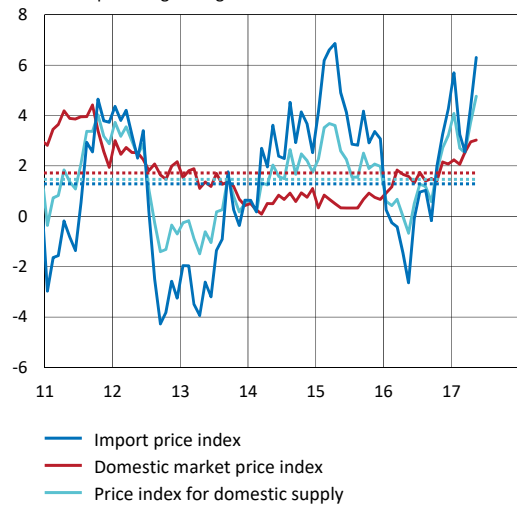
Figure 3:2. Prices of goods and services in the CPI
Annual percentage change



Note. Goods and food is a combination of the aggregate goods and food in the CPI. Together, these account for 43 per cent of the CPI. Service prices account for 45 per cent of the CPI. The broken lines represents the mean value since January 1995.

Sources: Statistics Sweden and the Riksbank

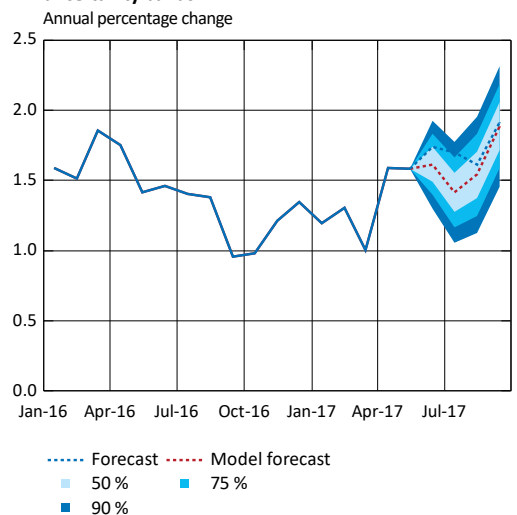
Figure 3:3. Producer prices for consumer goods
Annual percentage change



Note. The import price index measures how much Swedish importers pay for their goods at the border. Domestic market prices measure how much Swedish producers are paid for their goods when sale takes place in Sweden. The price index for domestic supply is an aggregate of the import price index and home market price index, which thereby measures changes in the prices of those goods sold in Sweden. Broken lines refer to average rate of increase since January 2000.

Sources: Statistics Sweden and the Riksbank

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



Note. The uncertainty bands are based on the models’ historical forecast errors. The CPIF is the CPI with a fixed mortgage rate.

Sources: Statistics Sweden and the Riksbank

will rise in the second quarter. Although there is uncertainty surrounding the design of fiscal policy, this does not change the picture of a continued strengthening of economic activity in the United States.

KIX-weighted GDP rose by 2.8 per cent in the first quarter, compared with the immediately preceding quarter and calculated at an annual rate. Growth was largely unchanged compared with the fourth quarter but higher than earlier quarters last year. In the quarters ahead, growth is expected to slow slightly to about 2.3 per cent. The forecast is in line with the Monetary Policy Report in April.

Slightly lower inflation abroad in the near term

Oil prices rose gradually last year after bottoming out at the beginning of 2016, which helped boost inflation. But despite a new agreement on prolonging supply restrictions in OPEC until the start of 2018, the oil price has fallen slightly since the Monetary Policy Report in April. In the period ahead, the oil price according to forward pricing is expected to remain at about its current level of around 50 US dollars a barrel.

Inflation in the euro area has slowed from 1.8 per cent on average during the first quarter to 1.4 per cent in May. The high inflation at the beginning of the year is mostly explained by large temporary contributions from energy prices. Underlying inflation in the euro area is still low, around 1 per cent (see Figure 3:7). In the US, underlying inflation has slowed from 1.8 per cent at the start of the year to 1.5 per cent in April (see Figure 3:7). Overall, outcomes and indicators point to inflation abroad slowing slightly in the near term. Compared with the Monetary Policy Report in April, this means a slightly lower inflation forecast, which can largely be explained by the fall in the oil price.

Swedish economic situation still strong

According to the National Accounts, Swedish GDP grew by 1.7 per cent in the first quarter, compared with the preceding quarter and calculated at an annual rate. This was a surprisingly low figure given the strongly confidence indicators, high employment growth and strongly monthly outcomes for output. Above all, it was growth in exports that was lower than expected after two quarters of high growth. At the same time, housing investment continued to increase at a rapid rate.

Monthly indicators suggest that Swedish economic activity is still strong. Similar to many other countries, confidence indicators paint a picture of high demand in the current situation (see Figure 3:8). Sentiment according to the Economic Tendency Survey is stronger than normal in all industries, but particularly in the manufacturing sector. According to the Riksbank’s business survey in May, demand has continued to broaden during the spring and companies believe that the strong economic situation will continue in the months ahead. Monthly outcomes for demand suggest a slightly weaker development than the confidence indicators, however. Retail sales were again subdued in May after strong growth in April. The development of goods

Figure 3:5. Inflation expectations among all participants



Source: TNS Sifo Prospera

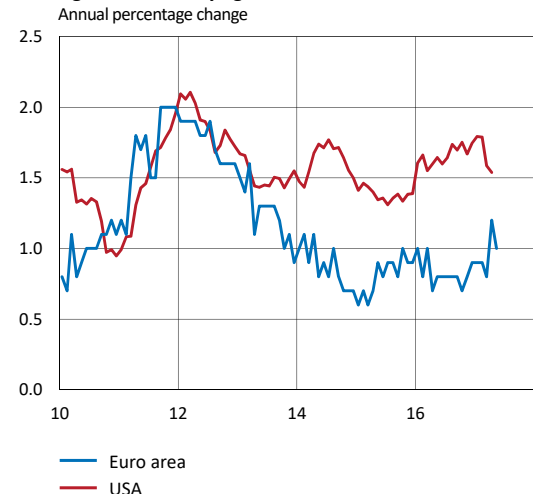
Figure 3:6. Confidence indicators abroad



Note. The series have been normalised from January 1999.

Sources: Institute for Supply Management (ISM), Markit Economics, OECD, 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. PCE excluding energy and food is shown for the United States.

Sources: Bureau of Economic Analysis and Eurostat

exports supports reports from industrial companies of rising demand for exports according to the Economic Tendency Survey and the Purchasing Managers' Index. The overall assessment is therefore that the relatively low GDP growth in the first quarter was temporary. Growth in the second and third quarters is expected to be higher than the historical average growth rate, approximately in line with the assessment in the April Monetary Policy Report.

The information in a large number of GDP growth indicators in the second quarter can be summarised with the help of statistical models. The model forecasts indicate GDP growth of 2.4 per cent during the second quarter, compared with the previous quarter and calculated at an annual rate (see Figure 3:9). The Riksbank's forecast is close to the average of the model forecasts.

High recruitment plans but shortage of labour

Growth in employment and labour force has been high in recent quarters.¹⁴ Monthly data for the second quarter and indicators of labour demand point to employment growing rapidly over the next few quarters. For example, both the number of vacancies according to Statistics Sweden and recruitment plans in the business sector according to the Economic Tendency Survey are on high levels. The strong development on the labour market means that the employment rate will continue to rise and unemployment will decline slightly further (see Figure 3:10).

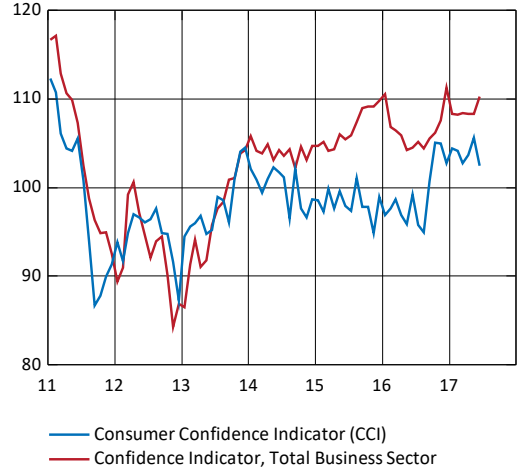
As employment has risen and unemployment has fallen, the indicators for resource utilisation on the labour market have also increased. The percentage of companies reporting a labour shortage has increased to high levels. The vacancy rate, which measures the percentage of unstaffed position that need to be filled, is on a high level and the average recruitment time in the business sector is long. This suggests that it is currently difficult to find the necessary skilled labour.

The supply of labour and the matching of the need for and supply of skilled labour affect output and employment growth. The increasing shortage of labour also affects the development of inflation via higher wage increases, albeit with a certain time-lag. The Riksbank's RU-indicator, which is a measure of the amount of spare capacity in the economy, is on a historically high level. The Riksbank's overall assessment is that resource utilisation in the economy is higher than normal. This is in line with the assessment in the April Monetary Policy Report.

¹⁴ The Riksbank's assessment is that some of the recent development on the labour market does not reflect the actual development but is a result of the Labour Force Survey sampling procedure, which leads to an overestimation of growth. See "Over- and undercoverage in the Swedish Labour Force Surveys (LFS) – a register-based study", Statistics Sweden, 2017 and a box in the April 2017 Monetary Policy Report.

Figure 3:8. Confidence indicators

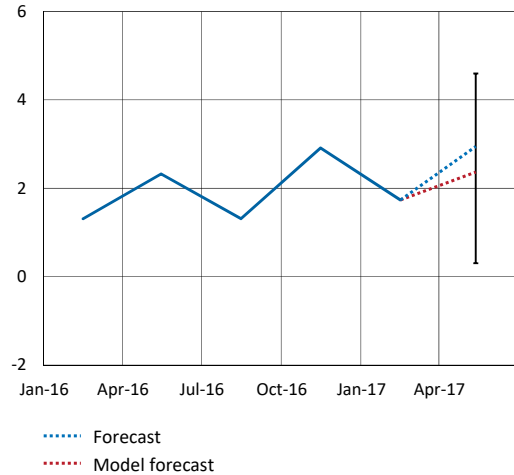
Index, average = 100, standard deviation = 10, seasonally-adjusted data



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. The uncertainty band is based on the models' historical forecast errors. One explanation for the wide uncertainty interval is the large variation in growth outcomes between different quarters.

Sources: Statistics Sweden and the Riksbank

Figure 3:10. Employment and unemployment rate

Per cent of population and labour force, respectively, 15–74 years



Sources: Statistics Sweden and the Riksbank

CHAPTER 4 – The economic outlook and inflation prospects

The recovery in the global economy is set to continue and inflation abroad will rise as economic activity improves. The Swedish economy is in a strong position even if GDP is expected to grow at a more normal rate in the period ahead. The major asylum immigration in 2015 will leave a smaller imprint on public sector consumption growth this year and the pace of housing construction is expected to slow from 2018 onwards. An increasingly strained labour market is expected to lead to a rise in wage growth. Inflation is expected to stabilise around 2 per cent at the beginning of 2019.

International developments

Global recovery set to continue

The recovery in the global economy is set to continue. Growth in investment is increasing and in turn strengthening the development in global trade. GDP growth is being held back, however, by factors such as weak underlying productivity growth and an ageing population in many areas.

Overall, global GDP growth is expected to rise gradually from 3.2 per cent in 2016 to 3.7 per cent in 2019. KIX-weighted GDP growth, which shows developments in the countries that are important for the Swedish economy, is expected to rise from 2 per cent in 2016 to 2.5 per cent this year, after which it will slow slightly until 2019, when it will amount to 2.3 per cent (see Figure 4:1). The forecast for GDP growth abroad is thereby largely unchanged compared with the forecast in April.

Economic activity set to strengthen further in the United States

In the United States, consumption growth is benefiting from the continued increase in employment, at the same time as a rising wage rate is helping to maintain growth in household income. In addition, several years' of rising property and equity prices have made households wealthier. After a period of low growth in investments, it is expected to increase at a slightly faster rate and contribute to slightly stronger productivity growth in the period ahead.

The US labour market has developed well and unemployment is low. As an ever-greater share of the working-age population find employment, the employment rate is expected to slow and GDP growth will weaken slightly during the forecast period.

Continued recovery in the euro area

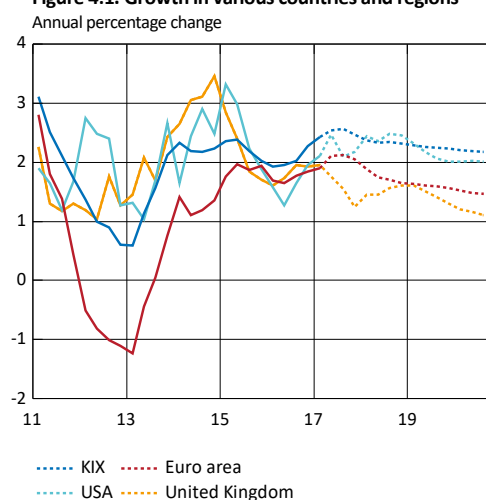
In the euro area, GDP is continuing to grow more quickly than trend growth and confidence indicators are unusually strong (see Figure 4:2).

The recovery is benefiting as a result of the after-shocks of the global financial crisis, in the form of higher private and public saving and inhibited lending due to weakened banks, continuing to subside. From being primarily driven by consumption, growth

Table 4:1.

The forecast in brief
The recovery in the global economy will continue and global trade will increase more quickly than it has done in recent years.
Inflationary pressures abroad are low, but are expected to rise as resource utilisation increases.
The Swedish economy finds itself in a strong position even if the GDP growth rate will gradually slow in the years to come. The krona will appreciate slowly.
Slower population growth and matching problems will contribute to a more subdued development on the labour market.
Higher resource utilisation and higher international price pressures are then expected to contribute towards underlying inflation continuing to rise. CPI inflation will stabilise close to 2 per cent at the beginning of 2019.

Figure 4:1. Growth in various countries and regions



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

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

is now being fuelled to an increasing extent by investment. Higher capacity utilisation in the industrial sector, combined with a stronger construction sector, will help investment grow more quickly in the period ahead. The recovery in investment is being held back, however, by continued uncertainty about political developments and lingering weaknesses in some parts of the banking system.

Overall, GDP growth in the euro area is expected to increase to 2.0 per cent in 2017 and then to fall back marginally in the years ahead. This is expected to increase resource utilisation during the forecast period.

Effects of the election result in the United Kingdom difficult to assess

In the United Kingdom, weak and declining growth is expected in the wake of poorer purchasing power and investment, hampered by an uncertain development in the country’s relationship to other countries. So far, it is difficult to say how the result of the election in early June, in which the governing party lost its overall parliamentary majority, will affect the Brexit negotiations and the economy more permanently.

Higher growth in emerging economies

The upturn in commodity prices in recent years, together with greater infrastructure investment, means that growth will rise slightly in emerging market economies. In China, infrastructure investment is helping to maintain a high level of growth. This year, the Chinese economy is expected to grow in line with the government’s goal of 6.5 per cent before slowing thereafter. The highly indebted corporate sector constitutes a risk that can threaten development in the Chinese economy, even though corporate debt is now growing more slowly. Regulations in the property and financial sectors, combined with communication from the political leadership, indicate a growing awareness of the debt problems and may lead to a slowdown in credit growth in the period ahead.

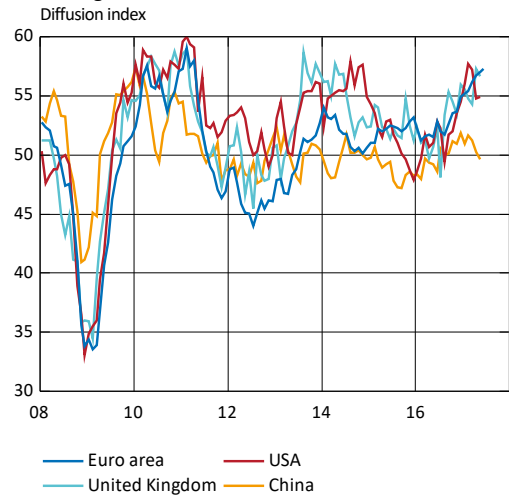
The Brazilian economy is still developing weakly and political instability has increased as a result of the suspicions of corruption levelled at the president. In Russia, GDP is expected to increase slightly this year after last year’s stagnation.

Low but rising inflationary pressures abroad

This year, the development of energy prices in the past 12 months will help boost inflation abroad (see Figures 4:3 and 4:4). When the contribution from increases in energy prices diminishes in the period ahead, other prices are instead expected to rise at a faster rate as a result of rising resource utilisation.

This is not least true in the United States, where unemployment has fallen to a low level and wage growth is rising. In the euro area, where there is still plenty of spare capacity in most areas, wages and prices are not expected to rise as quickly.

Figure 4:2. Purchasing Managers' Index in various countries and regions



Note. Diffusion index (DI) is a transformation of net numbers (NN): $DI = NN/2 + 50$.

Sources: Institute for Supply Management (ISM) och Markit Economics

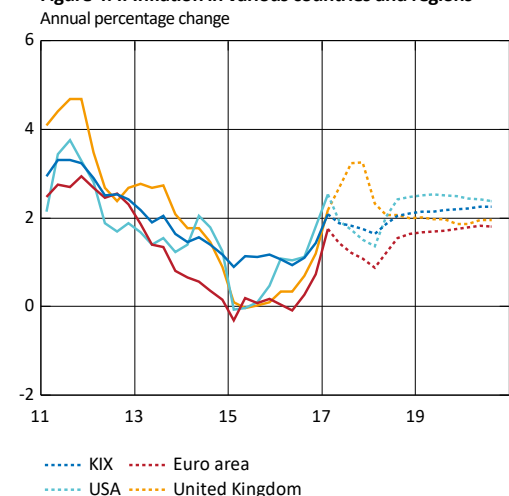
Figure 4:3. Price of crude oil



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

Sources: Macrobond and the Riksbank

Figure 4:4. Inflation in various countries and regions



Note. KIX is an aggregate of the countries that are important to Sweden’s international transactions. When calculating KIX-weighted inflation, the HICP is used for the euro area and the CPI for other countries. Inflation for the euro area shown is measured using the HICP and for the United States and the United Kingdom measured using the CPI.

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

Overall, average inflation abroad (KIX-weighted) is expected to rise gradually from 1.9 per cent this year to just over 2.2 per cent at the end of the forecast period.

Sweden

Strong economic activity but lower growth

The Swedish economy finds itself in a strong position after a few years of high GDP growth. In the years ahead, growth is expected to slow to a more normal pace. The major asylum immigration in 2015 will leave a smaller imprint on public sector consumption growth this year and growth in housing construction is expected to slow from 2018 onwards. In addition, the working-age population will increase more slowly in the period ahead. The increase in the number of hours worked will therefore slow in the coming years while growth in productivity is expected to recover slightly compared with its weak development after the financial crisis.

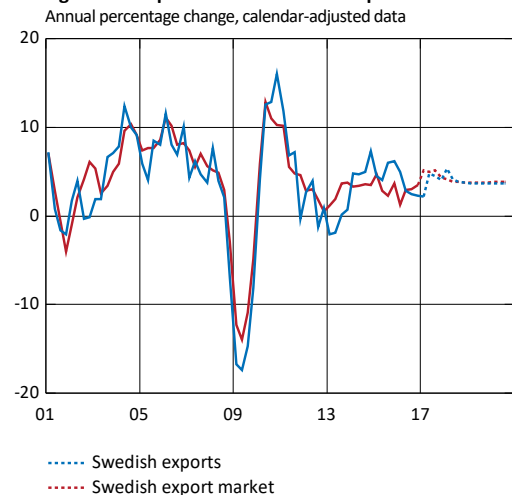
Demand on the Swedish export market weakened last year, causing Swedish exports to grow slowly in a historical perspective (see Figure 4:5). Stronger economic signals from abroad suggest, however, that the demand for Swedish goods and services will increase slightly more quickly in the years ahead. The rate of increase is low, however, compared with previous upturn phases, partly as a result of lower productivity growth abroad.

The strong economic activity has led to household income increasing at a healthy rate in recent years. Rising asset prices also mean that household wealth has increased. At the same time, household saving is high (see Figure 4:6). Real disposable household income is expected to rise more slowly towards the end of the forecast period once inflation is slightly higher, employment growth slightly lower and the interest rates have begun to rise. Households are then expected to reduce their saving and consumption is expected to increase approximately at its historically average rate. Finansinspektionen's proposal for tighter amortisation requirements is expected to help dampen the development in household consumption slightly.

Housing investment has increased very rapidly in recent years and this year is expected to be almost 6 per cent of GDP, a very high figure in a historical perspective. However, capacity limitations, such as a shortage of labour and planned land, are expected to make it difficult to continue to increase construction at the same rate. At the same time, the next few years will be characterised by a slightly softer demand for housing, which will hold back housing investment slightly starting in 2019. On the other hand, growth in other business sector investment is expected to increase slightly, when the demand for new investment rises as a result of continued high resource utilisation.

All in all, Swedish GDP is expected to rise on average by 2.3 per cent in 2017–2019 (see Figure 4:7).

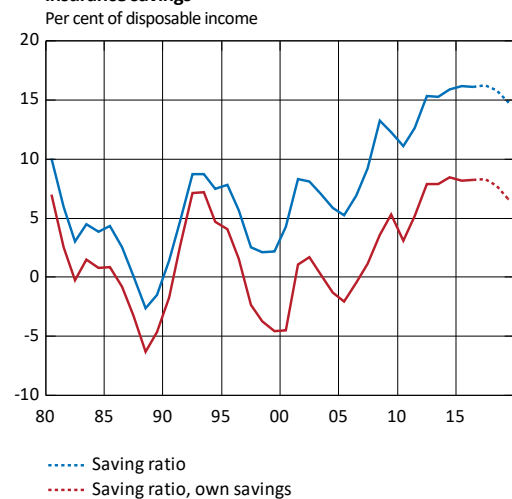
Figure 4:5. Exports and the Swedish export market



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 4:6. Household savings with and without collective insurance savings

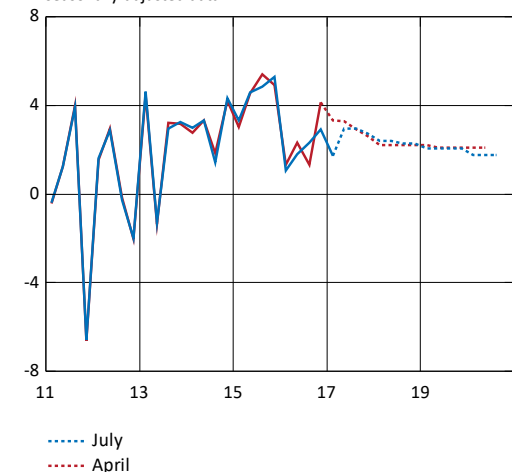


Note. Total household savings include collective insurance savings. The former definition, which was also termed 'total household saving', excluded collective insurance savings and the savings are the difference between income and consumer expenditure.

Sources: Statistics Sweden and the Riksbank

Figure 4:7. GDP in Sweden

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



Sources: Statistics Sweden and the Riksbank

Housing prices and household debt increasing slightly more slowly

Housing prices and household debt continue to increase more rapidly than household income. The rate of increase is expected to slow, however, once mortgage rates start to go up and household income rise slightly more slowly. Finansinspektionen’s proposal for tighter amortisation requirements for highly indebted households is also expected to contribute to housing prices and debt rising slightly more slowly. Overall, however, both house prices and debt are expected to continue to rise more rapidly than household income even in the years to come and at some point in 2020, debt is expected to approach 200 per cent of disposable household income (see Figure 1:13).

Growth in the labour market set to slow in the years ahead

The supply of labour has been increasing rapidly for several years. This is a result of both a rapidly growing working-age population (see Figure 4:8) and rising demand. The supply reforms implemented have also been of significance.¹⁵

Growth in the labour force and the number of employed persons are expected to decline in the years ahead when the population increase diminishes and mostly consists of asylum and family member immigrants, a group that has historically had a weak connection to the labour market. The composition of the unemployed has also changed and currently consists largely of people belonging to “vulnerable groups” according to the Swedish Public Employment Service’s statistics.¹⁶

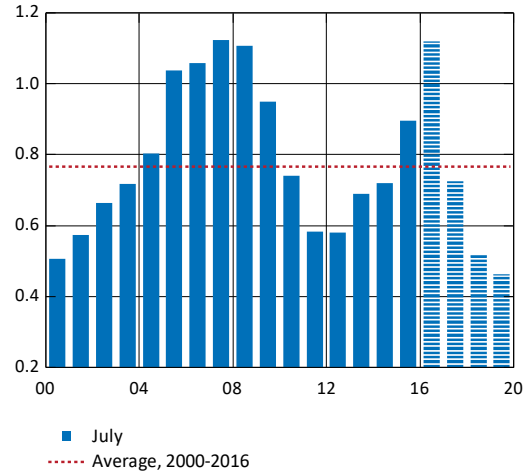
Indicators of imbalances in the labour market, such as shortages and recruitment times also suggest that it is increasingly difficult for companies to find the staff they are looking for. This will also contribute to a slowdown in the employment rate in the years ahead. The labour force participation rate and the employment rate are expected to level off at high levels and unemployment is expected to rise slightly towards the end of the forecast period (see Figure 4:9). Nevertheless, the development of the labour market is still strong enough to maintain a high level of resource utilisation (see Figure 4:10).

Other areas set to follow wage agreements in the industrial sector

At the end of March, the parties in the industrial sector signed new collective wage agreements with a cost framework of 6.5 per cent over three years. The other areas of the labour market have so far followed this benchmark. Up until mid-June, 225 collective agreements have been entered into and reported to the Swedish National Mediation Office (NMO). A further 270 collective agreements still need to be renegotiated this year.

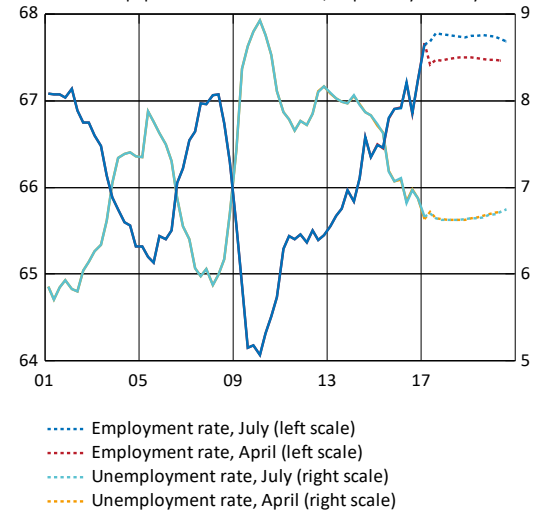
¹⁵ See the article “The long-term development of the Swedish labour market” in the July 2012 Monetary Policy Report.
¹⁶ According to these statistics, “vulnerable groups” now form about three-quarters of the registered unemployed. These are unemployed persons without upper-secondary education, those born outside Europe, those aged over 55 years and/or persons with functional impairments leading to reduced work capacity.

Figure 4:8. Population growth, 15–74 years
Annual percentage change



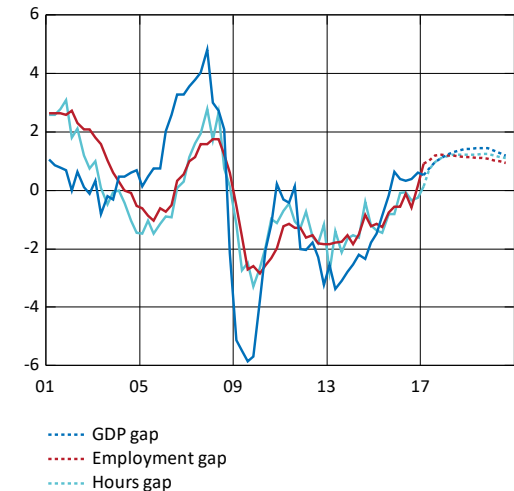
Sources: Statistics Sweden and the Riksbank

Figure 4:9. Employment and unemployment rate
Per cent of population and labour force, respectively. 15–74 years



Sources: Statistics Sweden and the Riksbank

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



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

Preliminary outcomes in the NMO wage statistics the first months this year have been low. The Riksbank's forecast for wages in the whole economy according to the NMO wage statistics has therefore been revised down slightly and wages are expected to increase by about 2.7 per cent as an annual percentage change, while, according to the National Accounts, hourly wages will increase by 3.2 per cent. The central agreements are an indication that wage growth will be subdued in the years ahead, in relation to strong domestic economic activity (see the article "Strong economic activity but subdued wage increases"). The Riksbank therefore expects wage growth to be moderate but that it will rise as a result of the ever-tighter labour market. The difficulties of companies to find the right skills are expected to have an impact on forthcoming local wage agreements and on wage drift, which means that wages over and above centrally agreed ones are expected to increase more rapidly in the years ahead. Recent Riksbank business surveys also indicate a growing share of companies who believe that wage drift will be higher in the coming twelve-month period than in the current one.

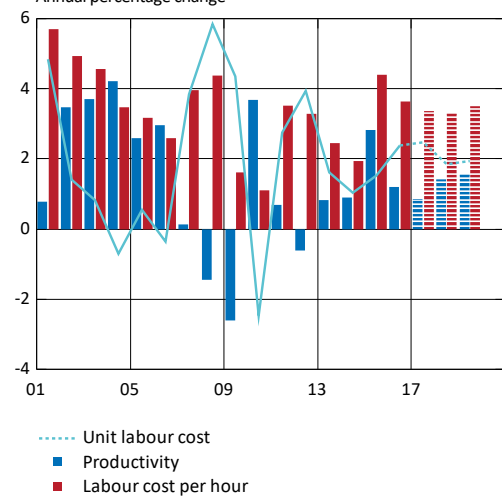
National Accounts hourly wages and labour costs, i.e. wages and payroll taxes added together, continued to be significantly higher than the corresponding measure in the NMO wage statistics during the first quarter. During the forecast period, hourly wages and labour costs are expected to increase moderately despite strong economic activity. Although productivity growth is expected to recover slightly during the forecast period, the development will still be weak in a historical perspective. Unit labour costs will hence develop in 2018 and 2019 in line with the historically average rate of increase (see Figure 4:11).

Upturn in inflation set to continue

CPIF inflation has shown a rising trend since 2014 and amounted to 1.9 per cent in May. Over the past twelve months, rising energy prices have contributed to the upturn. CPIF inflation excluding energy is therefore lower and amounted to 1.6 per cent in May.

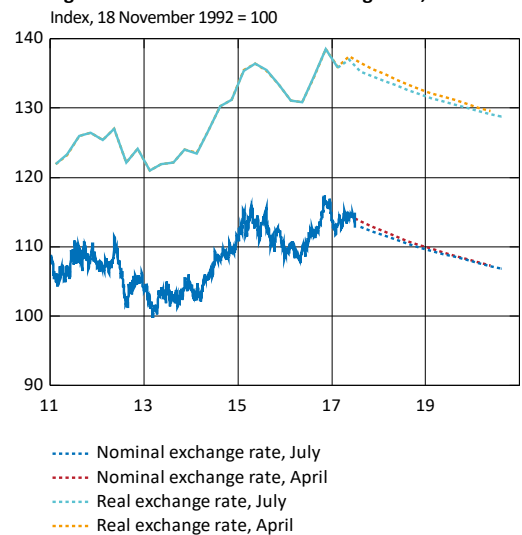
The contribution from energy prices to inflation is expected to be smaller in the period ahead, when the oil price is expected to increase more slowly in line with forward pricing (see Figure 4:3). The Riksbank nevertheless considers that the conditions are in place for the upturn in inflation to continue. One factor suggesting this is that resource utilisation in the economy has risen and is expected to continue to be above normal during the forecast period. Neither is the rising resource utilisation seen over the last year yet to have its full impact on inflation, as this is usually affected after a time lag.¹⁷ Stronger economic activity, both in Sweden and abroad, normally leads to companies' costs increasing more rapidly, at the same time as it becomes easier for companies to raise their product prices. Although wage growth is

Figure 4:11. Cost pressures in the economy as a whole
Annual percentage change



Sources: Statistics Sweden and the Riksbank

Figure 4:12. Real and nominal exchange rate, KIX



Note. The real exchange rate has been deflated with the CPIF for Sweden and the CPI for the rest of the world. The CPIF is the CPI with a fixed mortgage rate. 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 countries that are important for Sweden's international transactions.

Sources: National sources, Statistics Sweden and the Riksbank

¹⁷ See also the article "The relationship between resource utilisation and inflation" in the Monetary Policy Report, October 2016.

assessed to be moderate it increases during the forecast period and unit labour costs will rise more or less in line with their historical average of 2 per cent (see the article “Strong economic activity but subdued wage increases”).

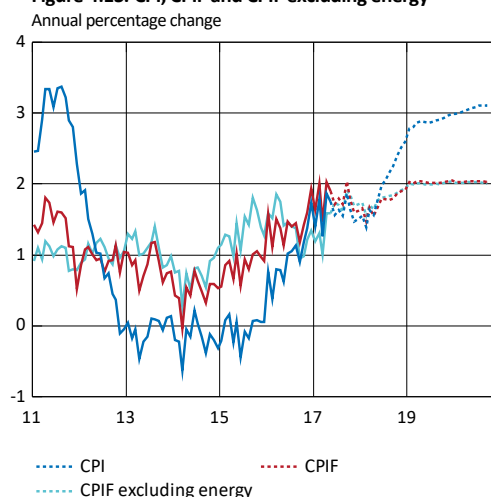
Another factor that affects inflation is the krona exchange rate. The krona is weaker compared to 12 months ago (see Figure 4:12). In the years ahead, the exchange rate is expected to strengthen slightly and thereby make a less positive contribution to inflation. But higher resource utilisation and higher international price pressures are then expected to contribute towards continued rising inflation.

Inflation expected to stabilise around 2 per cent at the start of 2019

CPIF inflation is expected to stabilise around 2 per cent at the beginning of 2019. This is in line with the assessment made in the last Monetary Policy Report. Just as in the last forecast, energy prices will increase more rapidly than other prices this year and contribute to higher CPIF inflation than inflation measured by CPIF excluding energy (see Figure 4:13).

Inflation in terms of the EU-harmonised HICP price index will be slightly lower than CPIF inflation during the forecast years as the HICP, in contrast to the CPIF, pays less attention to the rising housing costs of households (see Figure 4:14). When the repo rate, and thereby mortgage rates, starts to rise in 2018, household interest expenses will also rise and the CPI will then increase more rapidly than the CPIF (see Figure 4:13).

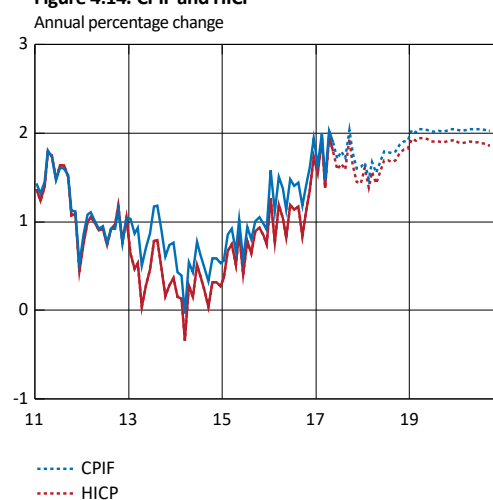
Figure 4:13. CPI, CPIF and CPIF excluding energy



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

Sources: Statistics Sweden and the Riksbank

Figure 4:14. CPIF and HICP



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

Sources: Statistics Sweden and the Riksbank

CPI, CPIF and HICP

The most common measure of inflation in Sweden is the Consumer Price Index, CPI. The CPI is the target variable for monetary policy, but the aim of the measure is also to calculate the impact of price fluctuations on households' living costs and it is used, among other things, to calculate the price base amount. The CPI includes households' mortgage costs, which are directly affected by the Riksbank's repo rate. Instead, it can therefore be appropriate to use the CPIF, in which mortgage rates are held constant. The EU-harmonised inflation measure HICP is not directly affected by changes in mortgage rates either, as households' housing costs are largely excluded. In contrast to the CPI, the HICP is not intended to be a cost of living index but is instead intended to be a measure that is good for monetary policy purposes. The HICP is therefore often referred to as an inflation index and forms a target variable for monetary policy in the euro area, United Kingdom and elsewhere. The fact that the CPI, CPIF and HICP have different purposes means that they are calculated in somewhat different ways. Despite the differences in construction, there are similarities between inflation according to the HICP and according to the CPIF, while CPI inflation varies more. Further information on various measures of inflation and related issues can be found in the Riksbank Study “The Riksbank's inflation target – target variable and interval” (September 2016). The Riksbank is considering a change of target variable to the CPIF in autumn 2017. A referral concerning this was circulated for comment on 16 May.

ARTICLE – Strong economic activity but subdued wage increases

Discussion is ongoing both in Sweden and abroad as to whether the relation between wage increases and the level of economic activity has weakened since wages are currently rising slowly despite strengthening economic activity. The Riksbank expects Swedish wage development in the years ahead to be moderate in relation to the domestic economic situation. Comparatively weak productivity growth, together with a subdued wage rate abroad, is contributing to this. The link from wages to inflation goes mainly via unit labour costs. This means that even relatively subdued wage development, in relation to economic activity, can be inflationary if productivity is concurrently weak. There are other factors that can affect wage growth, however, such as structural changes to the labour market and the possible adjustment of wage and inflation expectations to the long period of low inflation. This brings an element of uncertainty to the Riksbank's forecasts in the years ahead.

Moderate wage increases in the coming years

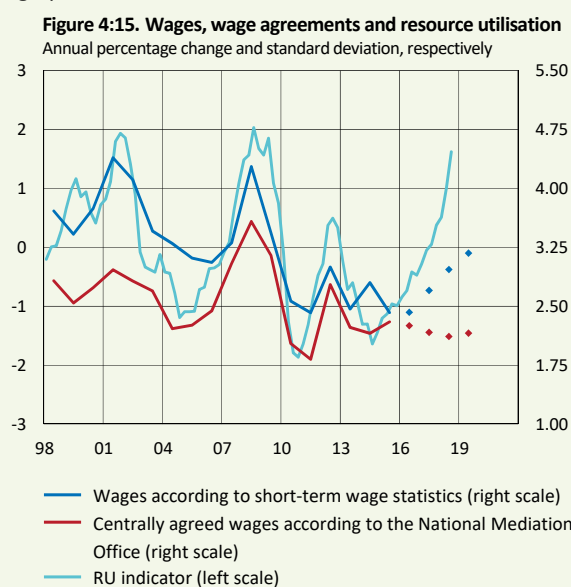
Wage development affects household income and corporate costs, and thereby inflation and monetary policy. Historically, the covariation between wage increases and economic activity in Sweden has been relatively strong (see Figure 4:15).¹⁸ When resource utilisation has increased, so too has wage growth a few quarters later. Most recently, however, this relation has been weaker.¹⁹ This may be due to temporary factors, but recently concluded central wage agreements indicate that wage increases also in the years ahead will be moderate in relation to historical correlations with the economic situation. The Riksbank's wage forecast, which refers to total wage increases, is based on the assumption that the strong economic activity with increasing difficulties for companies to recruit staff means that wage increases over and above agreement will successively increase over the forecast period (see Figure 4:15). But the forecast nevertheless means that wages will increase moderately. Historical correlations with domestic resource utilisation could suggest an even higher wage rate.

The discussion on whether the relationship between wage development and resource utilisation in the economy has changed is also taking place internationally and a number of explanatory factors have been highlighted.²⁰ This article is based on this debate and highlights a number of factors that may explain why wage increases in Sweden are expected to be moderate in the years ahead.

Many factors influencing wage development

Apart from the economic situation, short-term wage development can be explained by factors such as productivity growth, inflation expectations and the profit situation in

companies. When the social partners negotiate central agreements, international competitiveness and wage growth in other countries are also important. Resource utilisation abroad is thus also relevant for wage development. Also, more institutional factors, such as the unions' bargaining strength and changes in tax and compensation systems that influence the incentive to work can be significant, as can changes in the labour force for demographic reasons.



Note. The RU-indicator has been moved forward six quarters in the figure. Blue points represent Riksbank forecasts. Red points represent the National Mediation Office's forecasts of centrally agreed wages for the coming years.

Sources: National Mediation Office, Statistics Sweden and the Riksbank

¹⁸ The covariation is particularly strong with the Riksbank's RU indicator, but wage development has also covaried well with various labour market gaps.

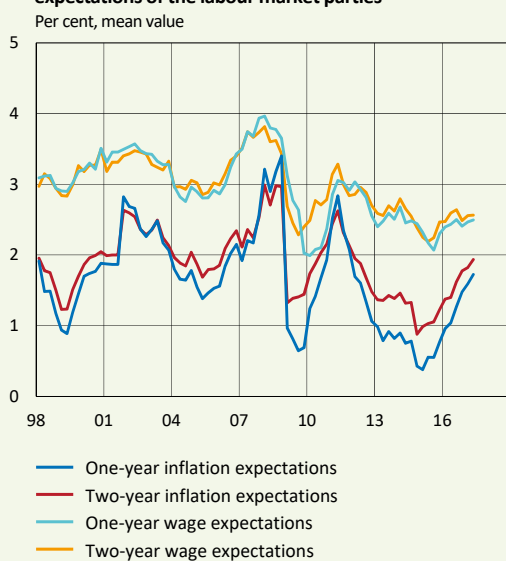
¹⁹ This is above all true for the wage rate according to the NMO wage statistics, but to a certain extent also for wage growth according to the National Accounts.

²⁰ See, for instance, articles in "Inflation Report - February 2017", Bank of England, and in "European Economic Forecast – Spring 2017", European Commission and "Labour Market and Wage developments in Europe - Annual Review 2016", European Commission.

Weak productivity growth

Rising productivity is a pre-condition for real wages to be able to rise more sustainably. Since the financial crisis, productivity has developed weakly, both in Sweden and in many other developed economies.²¹ The Riksbank does consider that productivity growth in Sweden will recover somewhat in the years ahead (see Figure 4:11). However, development is expected to continue to be weaker than the historical average rate of increase, which is expected to hold wage development back in the years ahead.

Figure 4:16. Average inflation expectations and wage expectations of the labour market parties



Source: TNS Sifo Prospera

Inflation expectations and adjustment after the financial crisis

It is possible that wage increases have been affected by inflation having been below target for several years.²² Since 2015, however, both actual inflation and the partners' inflation expectations have risen clearly. Nevertheless, wage expectations one and two years ahead continue to be lower than what they have been historically and have not risen in step with inflation expectations (see Figure 4:16).

Another explanation for moderate wage increases presented internationally is that nominal wages were not adjusted downwards enough in conjunction with the financial crisis, which meant that it was necessary to have a long period of restrained wage development.²³ Based on data and

indicators, the need for such an adjustment does not seem to be particularly great in Sweden currently. During the period 2012–2015, real wages increased relatively quickly as inflation was lower than the social partners had expected. However, the profit share in the business sector has recovered in recent years, although it is still lower than the historical average²⁴. But survey-based measures, such as the profitability assessments in the Economic Tendency Survey, suggest that companies are satisfied with their profitability. Relative to other countries, however, the profit share has developed slightly more weakly in the manufacturing industry, which sets the standard for wages.²⁵ This may have affected the level in the central agreements.

Wage development even more subdued in the euro area

Sweden is a small, open economy and is greatly affected by international developments. Since the Industrial Agreement was adopted in 1997, collective wage agreements in the industrial sector have set the standard for the rest of the labour market. One argument for the industrial sector setting the standard for wages is that it is exposed to international competition. Among other things, international competitiveness is usually assessed on the basis of various comparisons of cost development in competitor countries. Earlier, economic activity in Sweden has covaried to a high degree with economic activity in the euro area. However, in recent years and particularly in 2015, growth in the Swedish economy has been relatively high and, at present, resource utilisation in Sweden is deemed to be higher than normal, while it is slightly lower than normal in the euro area (see Figure 4.17).²⁶

A lower resource utilisation in the euro area has most likely contributed to wage development in the euro area being subdued in recent years in comparison with Sweden. When the most recent industrial agreement was concluded in Sweden, the parties pointed to competitiveness and cost development abroad as being two of the most important factors for the level of centrally agreed wage increases.²⁷ This means that the weak wage development abroad has affected the result of the wage negotiations. But ultimately, competitiveness does not just depend on the relative development of nominal wages. Also factors such as relative productivity growth and the exchange rate have an influence.

²¹ For an overview, see "OECD Compendium of Productivity Indicators 2017".

²² For an analysis of how earlier inflation has affected wage development in the euro area, see "Recent wage trends in the euro area", Economic Bulletin, Issue 3/2016, ECB.

²³ For a discussion on the United States, see Daly, M. and Hobijn, B. "Why Is Wage Growth So Slow?", Federal Reserve Bank of San Francisco Economic Letter, 2015.

²⁴ A relatively large share of the decrease in the profit share since the mid-1990s can, however, be explained by the changed composition of the business sector, see "Lönebildningsrapporten 2016" (in Swedish only, summarised as Wage Formation in Sweden 2016), National Institute of Economic Research.

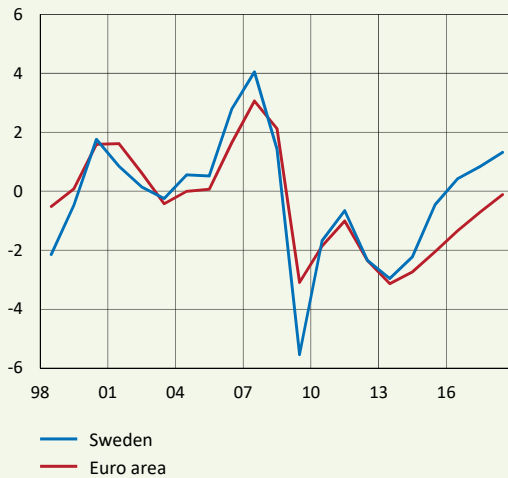
²⁵ See "Lönebildningsrapporten 2016" (in Swedish only, summarised as Wage Formation in Sweden 2016), National Institute of Economic Research.

²⁶ There is considerable uncertainty surrounding the amount of spare capacity in the euro area. In addition to unemployment still being higher than it was before the

financial crisis, the number of persons who are available but not seeking work and underemployed persons are also on higher levels. This indicates that the amount of spare capacity may be greater than unemployment figures suggest, see, for instance, the article "Assessing labour market slack" in ECB Economic Bulletin, 3/2017. The equivalent does not apply in Sweden, where both the number of underemployed persons and the numbers of persons who are available but not seeking work are on low levels.

²⁷ See "AVTAL 2017 - Industrins konkurrenskraft avgör" (AGREEMENTS 2017 - Competitiveness in the industrial sector the deciding factor), In Swedish only, Teknikföretagen (Association of Swedish Engineering Industries), 2016 and "Ekonomiska bedömningar Hösten 2016" (Economic assessments Autumn 2016), In Swedish only, Facken inom industrin (Swedish Unions within Industry), 2016.

Figure 4:17. Output gap in Sweden and the euro area
Per cent



Note. The output gap for the euro area is an average of estimates made by the European Commission, IMF and OECD.

Sources: European Commission, IMF, OECD and the Riksbank

Changed bargaining power

Other factors being discussed internationally and that may have affected wage development are: a potentially weaker bargaining power for employees as a result of globalisation; a lower unionisation share coupled with an increase in more flexible forms of employment.²⁸ In Sweden, the unionisation share is still on a high level in an international perspective and collective agreements cover the majority of employees. Since the early 1990s, however, unionisation has decreased by 16 percentage points. The decline over the last decade has been particularly significant among foreign-born persons, a group that has concurrently seen strong employment growth.²⁹ This may have had a restraining effect on wage growth.

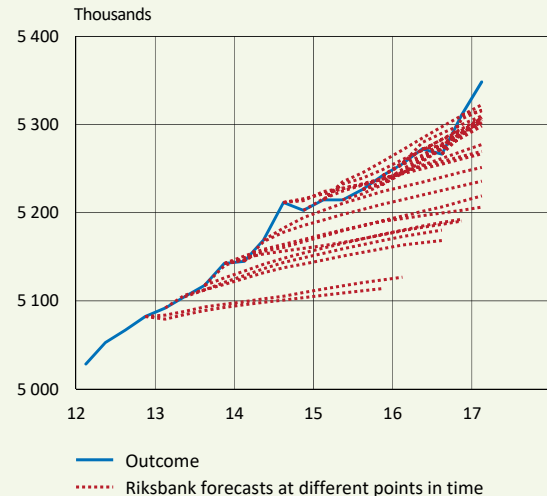
There have also been other changes on the labour market. For example, the use of agreements without centrally specified wage margins, known as 'figureless agreements', has increased in recent years. So far, it has not been possible to prove that this change has had any effect on individual wage development.³⁰ Also, the share of employees with fixed-term contracts has increased. Persons with fixed-term contracts have a weaker foothold on the labour market and probably also a weaker bargaining position, which may have subdued wage development somewhat.

Increased labour supply

The size and flexibility of labour supply may also affect wage development. Increased possibilities for recruiting personnel from other countries are, for example, one factor that may have affected the unions' bargaining power, although the number of labour migrants in Sweden on a more temporary basis is low as a share of the total labour force.³¹ The use of so-called 'posted workers', i.e. workers who are sent to another country by their employer to work there for a fixed period, also seems to have been relatively limited according to available statistics. In some industries, foreign labour constitutes a larger proportion of the workforce and there is also uncertainty surrounding the reporting. On the margin, the presence of foreign labour supply, regardless of its size, may have an effect on wage development.³²

How labour supply develops is affected to a large degree by demography. In Sweden, the working-age population registered as resident has increased, mainly as a result of a long period of immigration (see Figure 4:8). This has contributed to an unexpectedly rapid increase in labour (see Figure 4:18), which tends to subdue wage growth.

Figure 4:18. Outcomes and forecasts for the number of people in the labour force
Thousands



Sources: Statistics Sweden and the Riksbank

New regulations on the labour market can also affect labour supply as behaviours, and hence the functioning of the labour market, change. For example, in Sweden, the various earned income tax credits and changes in the unemployment insurance have led to it being more profitable to work, compared with not doing so. This has also contributed towards an increase in labour supply. In the near term, the

²⁸ See, for instance, a speech by Haldane, A. "Work, Wages and Monetary Policy", Bank of England, June 2017.

²⁹ Refers to foreign-born workers, see Kjellberg, A. "Kollektivavtalens täckningsgrad samt organisationsgraden hos arbetsgivarförbund och fackförbund" (The coverage ratio of collective agreements and degree of unionisation among employers' confederations and trade unions), in Swedish only, Lund University, 2017.

³⁰ See "Sifferlösa avtal och andra avtalskonstruktioner" (Figureless agreements and other agreement constructions), in Swedish only, SACO (Swedish Confederation of Professional Associations), 2016. The study compares wage development for academics with and without figureless agreements between 2013 and 2014.

³¹ See "Ett välfungerande system för arbetskraftsinvandring?" (summarised as "An effective labour immigration system?"), Swedish National Audit Office, 2016.

³² Lex Laval was repealed on the 1 June, which means that Swedish employee organisations are now allowed to take industrial action to get posted workers' employers to sign collective agreements. They may only set requirements for equivalent minimum wages and other minimum terms and conditions in accordance with the Posting of Workers Act, see Swedish Work Environment Authority, www.av.se.

regulations can also have a restraining effect on wage demands by contributing to a lower net replacement rate.³³ The Riksbank's assessment is that labour growth will slow in the years ahead mainly due to that population growth is expected to decline.

Wage forecasts in a Phillips curve

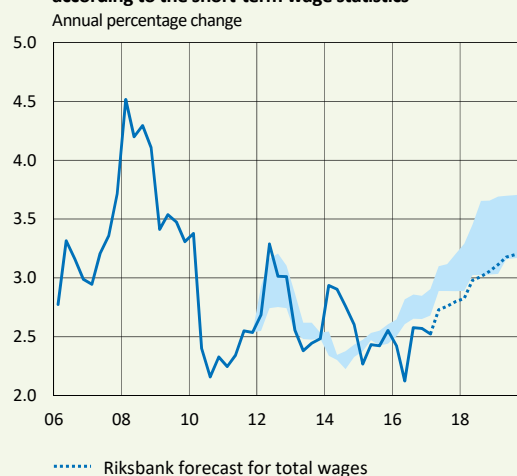
By estimating different variations of a so-called 'Phillips curve' for wages, it is possible to investigate wage growth that could be expected against the backdrop of domestic resource utilisation, international developments and productivity growth. The following specification is used:

$$\Delta w = \alpha + \pi^e + \beta_1 RU^{SE} + \beta_2 RU^{EA} + \beta_3 PROD + \varepsilon$$

in which Δw is wage development according to NMO expressed as an annual percentage change, π^e is inflation expectations five years ahead, $PROD$ is the Riksbank's assessment of trend productivity growth in Sweden and RU^{SE} and RU^{EA} are three different measures of resource utilisation in Sweden and the euro area respectively.^{34,35,36} A total of nine different regressions are estimated. All the explanatory variables apart from productivity growth have various degrees of time lag.

The light-blue field in Figure 4:19 shows the predicted NMO wage growth according to the estimated regressions. The model forecasts indicate that wage growth will rise in the years ahead, in line with the Riksbank's forecast showed in the dashed line. However, historical correlations with only domestic resource utilisation would suggest higher wage growth than both in the light blue field and the Riksbank's forecast. Relatively weak productivity growth and continued low resource utilisation in the euro area go some way to explaining why wage increases are expected to be subdued in relation to the domestic economic situation in the years ahead. In the estimations, productivity growth and resource utilisation will hold back wage increases by about 0.1–0.2 percentage points each in the years ahead.

Figure 4:19. Outcome and forecasts for the wage increase according to the short-term wage statistics



Note. The field shows adjusted values between 2012 and the first quarter of 2017. Thereafter, model forecasts are shown.

Sources: National Mediation Office and the Riksbank

Wages over and above centrally agreed ones

Given that recently concluded wage agreements point to a relatively unchanged wage growth in the years ahead, the Riksbank's wage forecast implies that wages over and above central agreements are gradually expected to increase more rapidly (see Figure 4:15). Historically, labour shortages, low agreed wage increases and higher inflation have led wages over and above agreement to increase slightly more rapidly.³⁷ Wages over and above agreement depend on several factors. Local wage formation has an effect, both via negotiations between the employer and the local union or individual worker and via individual agreements with new recruits. The measured wages over and above agreement are also affected by changes to the composition of the labour force.³⁸ Internationally it has been noted that changes to the composition of the labour force have held back wage development.³⁹ Most recently, wages over and above agreement have developed weakly in Sweden (see Figure 4:15). At the same time, wage growth among persons employed at the same company with the same position has been higher than the average wage development.⁴⁰ This indicates that wages over and above agreement can have held back by changes in the composition of the labour force, which could also affect development in the period ahead.

³³ See Bennmarker, H. et al. "Earned income tax credits, unemployment benefits and wages: empirical evidence from Sweden", working paper 2013:12, Institute for Evaluation of Labour Market and Education Policy (IFAU). In conjunction with the 2016 Budget Bill, some of the tightening on unemployment benefit was reversed. This increased the rate of pay after tax, i.e. the share of the previous wage replaced by unemployment insurance.

³⁴ The Riksbank does not forecast the RU indicator and inflation expectations. In the projection, they are assumed to remain at their current level.

³⁵ The equations are estimated based on data for the period 1998Q1–2017Q1. For the euro area, the GDP gap according to the IMF, European Commission and OECD is used. For Sweden, the Riksbank's RU indicator, unemployment gap and employment gap are used.

³⁶ As the economic situations in Sweden and the euro area are closely correlated, this could affect estimates of the coefficients in the equations. However, in this case, the correlation is not strong enough to affect the estimates noticeably.

³⁷ See the article in the labour market report "Tudelningar på arbetsmarknaden" (Divisions on the labour market), Swedish Labour Policy Council (AER), 2017.

³⁸ The total wage increases are measured as the difference in average wages between two points in time. If, for example, staff with a high average wage are replaced by staff with a low average wage between two points in time, this will affect the growth figures.

³⁹ See, for instance, "Inflation Report February 2016", Bank of England.

⁴⁰ Refers to wage development 2015, see, for instance, "Collective bargaining and wage formation 2016", National Mediation Office.

Development may also have been influenced by previously mentioned changes in the labour market.

Cost pressures relatively normal in the years ahead

The link from wages to inflation primarily goes via unit labour cost, which means that even a subdued wage development can be inflationary if productivity growth is concurrently weak. In the Riksbank's forecast, both wages and productivity develop more weakly than historically. Unit labour costs are, however, expected to rise in line with the historically average growth rate and thereby contribute to rising inflation. The assessment of both wage development and productivity growth in the years ahead is associated with uncertainty, however. Weaker productivity growth or a higher wage rate would lead to higher cost pressures and vice versa.

Moderate wage increases expected but forecast is uncertain

The Riksbank has been influenced by the factors discussed in this article and the main scenario for wage development is therefore in the lower span of the model forecasts in Figure 4:19. It is possible that the effects of these factors are greater. At the same time, historical relationships with resource utilisation in the economy suggest stronger wage development than in the Riksbank's forecast in the years ahead. Therefore there are both upwards and downwards risks in the forecast.

Tables

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

Table 1. Repo rate forecast

Per cent, quarterly averages

	Q2 2017	Q3 2017	Q4 2017	Q3 2018	Q3 2019	Q3 2020
Repo rate	-0.5	-0.5 (-0.5)	-0.5 (-0.5)	-0.4 (-0.4)	0.1 (0.1)	0.6

Source: The Riksbank

Table 2. Inflation

Annual percentage change, annual average

	2015	2016	2017	2018	2019
CPI	0.0	1.0	1.6 (1.6)	2.0 (2.1)	2.9 (2.9)
CPIF	0.9	1.4	1.8 (1.8)	1.7 (1.8)	2.0 (2.0)
CPIF excl. energy	1.4	1.4	1.6 (1.4)	1.8 (1.8)	2.0 (2.0)
HICP	0.7	1.1	1.7 (1.6)	1.6 (1.7)	1.9 (1.9)

Note. The CPIF is the CPI with a fixed mortgage rate. HICP is an EU harmonised index of consumer prices.

Sources: Statistics Sweden and the Riksbank

Table 3. Summary of financial forecasts

Per cent, unless otherwise stated, annual average

	2015	2016	2017	2018	2019
Repo rate	-0.3	-0.5	-0.5 (-0.5)	-0.4 (-0.4)	0.0 (0.0)
10-year rate	0.8	0.5	0.8 (0.9)	1.5 (1.6)	2.1 (2.3)
Exchange rate, KIX, 18 November 1992 = 100	112.6	111.7	113.2 (113.6)	110.7 (111.2)	108.8 (109.0)
General government net lending*	0.3	0.9	0.8 (0.6)	0.8 (0.7)	0.9 (0.9)

* Per cent of GDP

Sources: Statistics Sweden and the Riksbank

Table 4. International conditions

Annual percentage change, unless otherwise stated

GDP	PPP-weights	KIX-weights	2015	2016	2017	2018	2019
Euro area	0.12	0.47	1.9	1.7	2.0 (1.8)	1.7 (1.7)	1.6 (1.6)
USA	0.15	0.08	2.6	1.6	2.2 (2.0)	2.4 (2.4)	2.1 (2.1)
Japan	0.04	0.02	1.1	1.0	1.2 (1.2)	0.9 (0.9)	0.8 (0.8)
China	0.18	0.08	6.9	6.7	6.6 (6.6)	6.2 (5.9)	6.0 (5.7)
KIX-weighted	0.75	1.00	2.2	2.0	2.5 (2.4)	2.3 (2.3)	2.3 (2.2)
World (PPP-weighted)	1.00	—	3.4	3.2	3.5 (3.4)	3.7 (3.6)	3.7 (3.6)

Note. Calendar-adjusted growth rates. The PPP-weights refer to the global purchasing-power adjusted GDP-weights, according to the IMF. The Riksbank updates the weights for the KIX krona index at the start of every year with a time lag of three years. The figures in the table are based on the new KIX weights for 2014 that are used for 2017, and on an assumption that the weights will develop according to the trend of the past five years in the coming forecast years.

CPI	2015	2016	2017	2018	2019
Euro area (HICP)	0.0	0.2	1.4 (1.6)	1.3 (1.5)	1.7 (1.7)
USA	0.1	1.3	1.9 (2.2)	2.1 (2.3)	2.5 (2.5)
Japan	0.8	-0.1	0.6 (0.7)	1.2 (1.2)	1.6 (1.7)
KIX-weighted	1.1	1.1	1.9 (2.0)	1.9 (2.0)	2.2 (2.2)

	2015	2016	2017	2018	2019
Policy rates in the rest of the world, per cent	0.1	-0.1	-0.1 (-0.1)	0.1 (0.1)	0.3 (0.3)
Crude oil price, USD/barrel Brent	53.5	45.1	50.2 (54.8)	49.3 (55.2)	50.6 (54.6)
Swedish export market	3.4	2.7	4.9 (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

	2015	2016	2017	2018	2019
Private consumption	2.7	2.4	1.8 (2.1)	2.3 (2.5)	2.4 (2.4)
Public consumption	2.5	2.9	0.5 (1.4)	1.6 (1.2)	1.3 (1.2)
Gross fixed capital formation	7.0	5.3	5.3 (3.9)	3.8 (3.7)	2.4 (3.0)
Inventory investment*	0.3	0.1	-0.2 (-0.3)	0.0 (0.0)	0.0 (0.0)
Exports	5.6	3.5	3.4 (4.2)	4.1 (3.6)	3.6 (3.6)
Imports	5.5	3.8	3.4 (2.6)	4.4 (4.0)	3.8 (4.0)
GDP	4.1	3.2	2.2 (2.8)	2.4 (2.3)	2.1 (2.1)
GDP, calendar-adjusted	3.8	2.9	2.5 (3.1)	2.5 (2.4)	2.2 (2.2)
Final figure for domestic demand*	3.5	3.1	2.2 (2.3)	2.4 (2.3)	2.0 (2.1)
Net exports*	0.3	0.0	0.2 (0.9)	0.1 (0.0)	0.1 (0.0)
Current account (NA), per cent of GDP	4.7	5.1	4.9 (5.6)	4.8 (5.4)	4.7 (5.2)

*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

	2015	2016	2017	2018	2019
Population, aged 15–74	0.7	0.9	1.1 (1.1)	0.7 (0.7)	0.5 (0.5)
Potential hours worked	0.9	0.8	0.7 (0.6)	0.6 (0.6)	0.6 (0.5)
GDP, calendar-adjusted	3.8	2.9	2.5 (3.1)	2.5 (2.4)	2.2 (2.2)
Number of hours worked, calendar-adjusted	1.0	1.7	1.6 (1.2)	1.1 (1.1)	0.6 (0.6)
Employed, aged 15–74	1.4	1.5	2.1 (1.8)	0.8 (0.7)	0.5 (0.5)
Labour force, aged 15–74	0.8	1.0	1.8 (1.5)	0.7 (0.7)	0.5 (0.5)
Unemployment, aged 15–74 *	7.4	6.9	6.7 (6.7)	6.6 (6.6)	6.7 (6.7)

* 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

	2015	2016	2017	2018	2019
Hourly wage, NMO	2.4	2.4 (2.4)	2.7 (2.8)	3.0 (3.1)	3.2 (3.2)
Hourly wage, NA	3.5	3.2	3.2 (3.2)	3.2 (3.3)	3.4 (3.4)
Employers' contribution*	0.9	0.5	0.2 (0.1)	0.1 (0.1)	0.1 (0.1)
Hourly labour cost, NA	4.4	3.6	3.4 (3.3)	3.3 (3.4)	3.5 (3.5)
Productivity	2.8	1.2	0.8 (1.8)	1.4 (1.3)	1.5 (1.5)
Unit labour cost	1.5	2.4	2.5 (1.4)	1.9 (2.1)	1.9 (1.9)

* 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 divided by the seasonally adjusted total number of hours worked. Unit labour cost is defined as labour cost divided by seasonally-adjusted value added at constant prices.

Sources: National Mediation Office, Statistics Sweden and the Riksbank



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