



Monetary Policy Report

December 2015

S V E R I G E S R I K S B A N K

Correction 2015-12-15

Incorrect subtitle in chapter 1, page 9. The error has been corrected in this version.

Correction 2015-12-16

Incorrect figure numbering in chapter 1, page 10. The error has been corrected in this version.

Monetary Policy Report

The Riksbank's Monetary Policy Report is published six times per year. The report describes the deliberations made by the Riksbank when deciding what would be an appropriate monetary policy.¹ The report contains a description of the future prospects for inflation and economic activity based on the interest rate path that the Riksbank currently considers will provide a well-balanced monetary policy.

The purpose of the Monetary Policy Report is to summarise the background material for monetary policy decisions, and 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)). In the spring this takes the form of a report entitled "Account of Monetary Policy". In the autumn it takes the form of the Monetary Policy Report.

The Executive Board decided to adopt the Monetary Policy Report at its meeting on 14 December 2015. The Report is available on the Riksbank's website, www.riksbank.se. From this address a printed version of the report can be ordered free of charge or the report can be downloaded as a PDF file.

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Further information on the Riksbank can be found at:
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¹ A detailed description of the monetary policy strategy is given in the document Monetary Policy in Sweden. This document is available as a PDF file on the Riksbank's website www.riksbank.se.

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. In connection with these meetings, a Monetary Policy Report is published. 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 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

Development in the Swedish economy has been slightly stronger than expected since the October Monetary Policy Meeting. Demand has broadened and inflation expectations have begun to rise. However, global uncertainty remains and the upturn in inflation is volatile, as has been illustrated well by the most recent outcome in November. Many signs are indicating that the rising trend in inflation will continue, even though inflation is expected to be somewhat lower for some time to come when compared to the assessment in October. Monetary policy needs to remain very expansionary in order for inflation to continue to rise and stabilise around 2 per cent.

To safeguard the strength of the upturn in inflation, the Executive Board has decided to hold the repo rate at –0.35 per cent. Purchases of government bonds will continue for the first six months of 2016 as was decided in October. There is also a consistently high level of preparedness to make monetary policy even more expansionary, even between the ordinary monetary policy meetings. The expansionary monetary policy underlines the Riksbank's aim to safeguard the role of the inflation target as a nominal anchor for price-setting and wage-formation.

Economic activity is stronger

The recovery in the world economy is continuing as expected. Thanks to good domestic demand, developed countries have so far been relatively resistant to the slowdown in emerging market economies.

Inflation remains low among many of Sweden's most important trading partners but is expected to rise in the near future. Monetary policy abroad will continue to remain expansionary. The ECB extended its bond purchases and cut the deposit rate at the beginning of December. According to market pricing, the Federal Reserve is expected to raise the policy rate in December, but the expectation is that this will be done slowly from a low level. All in all, global growth and inflation are predicted to rise in the coming years.

Growth in the Swedish economy has been slightly stronger than expected since October. Demand has broadened. In addition to household consumption and housing investment, exports and business sector investment are also contributing to the growth. The humanitarian disaster as a result of wars in the Middle East has led a large number of people to seek refuge in Europe. In the coming years, refugee immigration is expected to help boost demand in Sweden. Public consumption will increase first and foremost in connection with the arrival of the refugees, but also private consumption will increase. Supported by the expansionary monetary policy, GDP is expected to grow by more than 3 per cent on average during the forecast period (see Figure 1:1 and 1:2).

The situation on the labour market is continuing to improve and indicators show that labour demand remains

Table 1:1.

Important factors for monetary policy
The upturn in inflation is volatile but the rising trend is continuing, and the CPIF will stabilise around 2 per cent during 2017. So far the upturn has principally been driven by the weak krona.
Inflation expectations have stabilised and begun to rise.
The recovery abroad is progressing in line with expectations, even though global uncertainty remains. Countries abroad generally have low inflation and very expansionary monetary policy.
The trade-weighted exchange rate, KIX, is in line with expectations. A slow appreciation is expected looking ahead.
Stronger Swedish economic activity, demand has broadened. GDP is expected to grow by over 3 per cent on average during the forecast period.
Conclusion: Monetary policy needs to remain expansionary in order to safeguard the strength of the inflation upturn.

Table 1:2.

Important revisions in the forecast
Statistics Sweden's population forecast revised upwards as a result of the rapid refugee immigration.
Swedish GDP revised upwards as a result of a stronger-than-expected outcome and because refugee immigration is expected to lead to higher demand.
Higher employment during the forecast period. Lower unemployment in the coming years, followed by higher unemployment as the labour force will grow more quickly than employment.
Slightly lower inflation for some time to come, principally as a result of lower energy prices. Higher demand will lead to higher inflation in 2017.

high. The added demand stimulus as a result of higher immigration is also expected to lead to higher employment, both in the public and the private sector, and thereby lower unemployment in the short term. How things will develop in the slightly longer term is more uncertain. Refugee immigration has so far led to a substantial upwards revision of the forecast for the working-age population. The assessment is that it will take time for the new arrivals to find work, however. For this reason unemployment will rise in the latter part of the forecast period.²

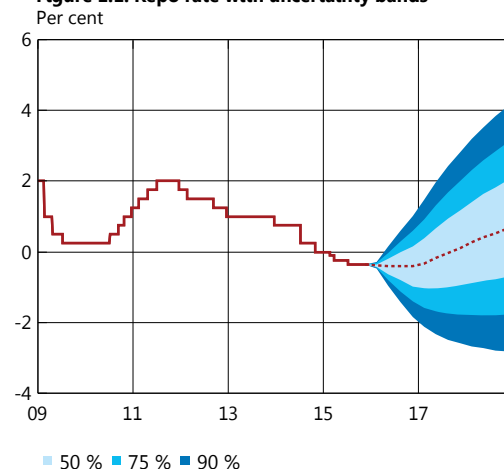
Even though the upturn in inflation is volatile, it has risen in line with the trend over the past year, which is most clear when looking at measurements that exclude energy prices. The Riksbank assesses that underlying inflation pressures will continue to rise despite the unexpectedly low outcome in November. Higher growth and lower unemployment, than earlier assessment, indicate that the rising trend in inflation will continue. A rapid rise also in CPI and CPIF inflation is expected in the coming months (see Figure 1:3 and 1:4). This is due to previously falling energy prices and interest expenses no longer subduing the rate of inflation to the same extent.

The depreciation of the krona seen in recent years remains an important explanation for the rising rate of inflation. The krona is expected to strengthen slowly in the coming period (see Figure 1:5). The positive contribution of the exchange rate to inflation will then gradually subside.

An ever-stronger economy abroad is contributing to both higher international prices and a higher demand for Swedish goods and services. This leads to higher resource utilisation and increases cost pressures, making it easier for companies to raise their prices. Demand has been surprisingly positive so far this year, and will strengthen in the coming period as a result of increased immigration. This is expected to lead to slightly higher inflation during the forecast period, compared to the previous assessment. At the same time, the outcome of the most recent month has been somewhat lower than expected and there are factors, for example a lower forecast for rental increases and energy prices, which are contributing to a lower inflation forecast. All in all, the inflation forecast will be revised downwards for some time to come, but then revised upwards in 2017 (see Figure 1:6–1:8). When measured by the CPIF, inflation is expected to rise successively and then stabilise around 2 per cent during 2017, which is roughly the same outlook as in October.

² For a discussion about the importance of and uncertainty regarding key assumptions about the establishment of new arrivals on the labour market, see the article "Uncertain effects of increased immigration on the labour market".

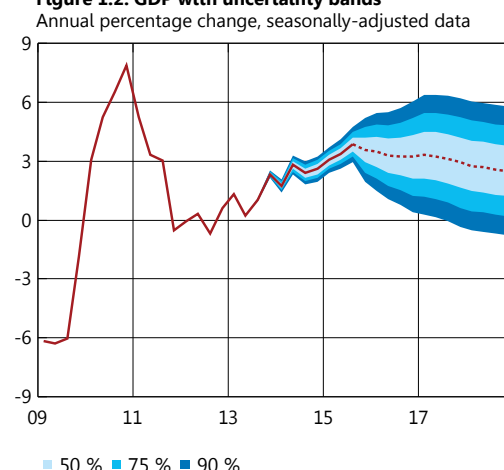
Figure 1:1. Repo rate with uncertainty bands



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

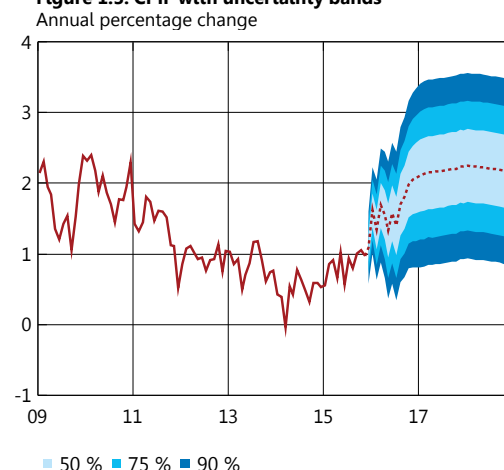
Figure 1:2. GDP with uncertainty bands



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. 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

Current monetary policy

In order to safeguard the role of the inflation target as a nominal anchor for price-setting and wage formation, monetary policy has become gradually more expansionary. Since January 2015, the Riksbank has cut the repo rate from 0.0 per cent to –0.35 per cent, adjusted the repo rate path downwards, purchased large amounts of government bonds and announced additional purchases during the first half of 2016.

The aim of this monetary policy is to push up inflation and stabilise it around the target of 2 per cent and help bring inflation expectations in line with the inflation target. Continued high confidence in the inflation target creates the conditions for good economic growth.

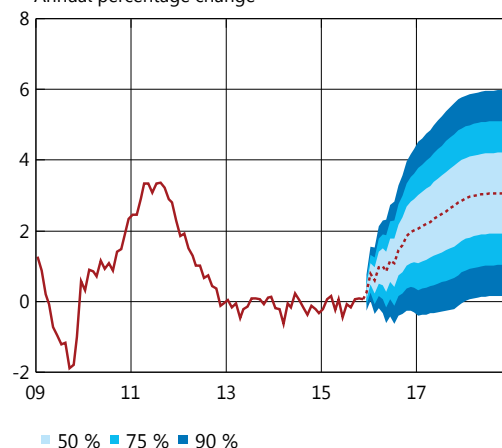
Continued very expansionary monetary policy

The Riksbank's very expansionary monetary policy is contributing to good growth, falling unemployment and an upward inflation trend. Overall, growth in the Swedish economy has been slightly stronger than expected since the October Monetary Policy Meeting. However, inflation is still not on a firm footing and to safeguard the resilience of the upturn in inflation, monetary policy still needs to be very expansionary.

The Executive Board of the Riksbank has therefore decided to hold the repo rate at –0.35 per cent. Purchases of government bonds will continue according to the decision in October. Purchases will thereby amount to a total of SEK 200 billion at the end of June 2016 (see Figure 1:9). They will then correspond to about 6 per cent of GDP and about 34 per cent of the current outstanding stock of Swedish nominal government bonds.³ The repo rate is not expected to be raised until CPIF inflation has stabilised around 2 per cent during the first half of 2017 (see Figure 1:10). According to the forecast, real interest rates will be still be very low in the latter stages of the forecast period (see Figure 1:11). By that time, the economy will be relatively strong and CPIF inflation will be around 2 per cent.

As inflation has been below the target for a longer period and long-term inflation expectations have fallen, it is not deemed to be a problem if inflation were to temporarily exceed the target more than in the Riksbank's forecast. The fiscal policy measures related to refugee immigration could, for example, lead to higher inflation than expected. This

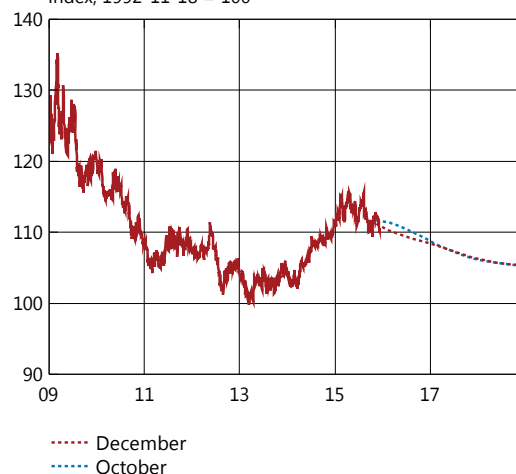
Figure 1:4. CPI with uncertainty bands
Annual percentage change



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

Sources: Statistics Sweden and the Riksbank

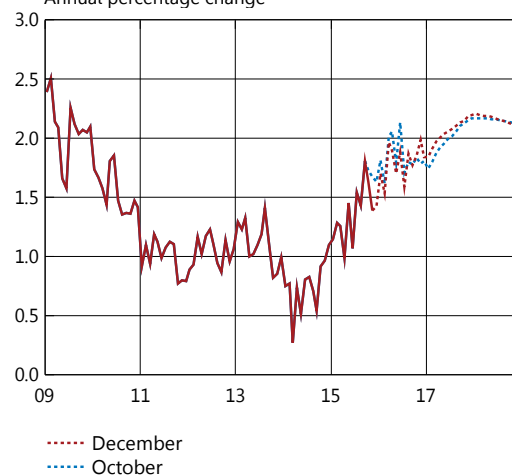
Figure 1:5. KIX-weighted nominal exchange rate
Index, 1992-11-18 = 100



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

Sources: National sources and the Riksbank

Figure 1:6. CPIF excluding energy
Annual percentage change



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

Sources: Statistics Sweden and the Riksbank

³ As the market value of the bonds presently exceeds their nominal amount, the total purchases of a nominal amount of SEK 200 billion correspond to an actual purchase price of about SEK 240 billion, or about 6 per cent of GDP.

need not mean that monetary policy should be made less expansionary.⁴

Inflation not yet on a firm footing

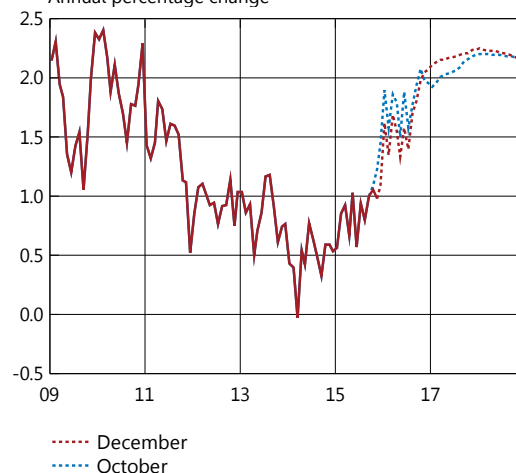
The Swedish economy is characterised by a now broad economic upturn, inflation rising in line with the trend over the past year and inflation expectations which have stabilised and begun to rise (see Figure 1:12). This upturn in inflation is volatile, however, and when compared to the assessment in October inflation is deemed to be somewhat lower for some time to come. The upturn in inflation still depends to a large extent on the weak krona, which has contributed to a rise in the prices of imported goods and services. The contribution to inflation made by the weak krona is expected to decrease in 2016. In order to also support an upturn in more domestically-generated inflation, continued high levels of demand are needed in the Swedish economy. Monetary policy therefore needs to remain very expansionary for some time to come.

In addition, there is still considerable global uncertainty. Globally speaking, inflation is low and many central banks around us are also pursuing a very expansionary monetary policy aimed at pushing up inflation towards their respective targets. The level of international interest rates is therefore expected to remain very low in the period ahead, which means that Swedish monetary policy also needs to continue to be expansionary. Otherwise, the krona exchange rate would risk appreciating earlier and at a faster rate than forecasted. This would then lead to the prices of imported goods and services increasing more slowly and demand for Swedish exports would fall. Such a development would make it more difficult for the Riksbank to push up inflation and stabilise it around 2 per cent.

Continued high level of preparedness to act

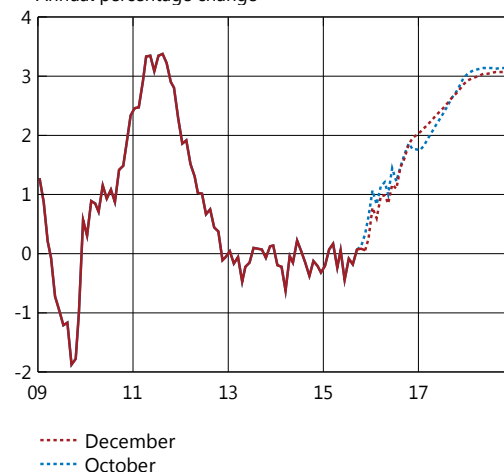
The Executive Board therefore still has a high level of preparedness to make monetary policy even more expansionary, even between the ordinary monetary policy meetings. The repo rate can be cut further, which is reflected in the repo rate path, and the Riksbank can purchase more securities. The Riksbank also stands ready to intervene on the foreign exchange market if the upturn in inflation were to be threatened by, for example, problematic developments on the markets. In addition, there is scope to launch a lending programme to companies via the banks should this be necessary. The measures taken already and the readiness to do more underline the Riksbank's aim to

Figure 1:7. CPIF
Annual percentage change



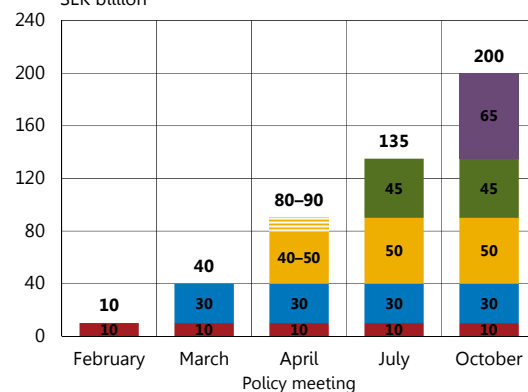
Note. The CPIF is the CPI with a fixed mortgage rate.
Sources: Statistics Sweden and the Riksbank

Figure 1:8. CPI
Annual percentage change



Sources: Statistics Sweden and the Riksbank

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



Note. Government bond purchases will continue until 30 June 2016.
Source: The Riksbank

⁴ This is illustrated in the scenario "Refugee immigration is deemed to have only minor effects on monetary policy in the near future."

safeguard the role of the inflation target as a nominal anchor for price setting and wage formation.

Uncertainty and risks

Forecasts of future economic developments are always uncertain. This is illustrated in a general way by the uncertainty bands around the forecasts in Figure 1:1–1:4. The Riksbank's forecasts are formulated so that the risks of a worsened outcome are, in principle, as large as the risks of a more favourable outcome. However, it is difficult to put a figure on uncertainty and risks. Consequently, monetary policy deliberations may need to pay particular attention to certain risks, the consequences of which may have a severe impact on the economic development.

Uncertainty about the inflation forecast

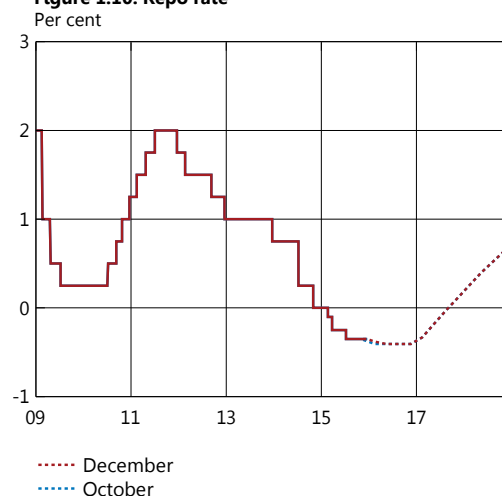
Since the development of costs and prices depends on several overseas and domestic factors, there are many sources of uncertainty in the forecast. For example, a hard landing in the Chinese economy could have tangible effects on the global economy. The krona's development is also uncertain. A more rapid appreciation of the krona exchange rate than forecast would dampen inflation and make it more difficult to stabilise it around the target. It is also difficult to assess the macroeconomic effects of large-scale refugee immigration. Stronger economic developments are predicted in the forecast compared to October. This could mean that inflation rises faster.⁵ The volatility in the upturn in inflation, illustrated well by the most recent outcome, is contributing to lingering uncertainty about how quickly inflation will rise to 2 per cent.

If inflation prospects were to deteriorate, monetary policy may need to be even more expansionary, and the readiness to act is high should such a scenario materialise. There are also factors that could lead to inflation rising more quickly than expected. However, inflation has been below the target for a long time, while inflation expectations have fallen. This means that inflation which temporarily exceeds the target more than in the Riksbank's forecast does not have to lead to monetary policy being made less expansionary.

Risks linked to low inflation

It is important to safeguard the inflation target. A well-anchored inflation target makes it easier for households and companies to make well-founded economic decisions and

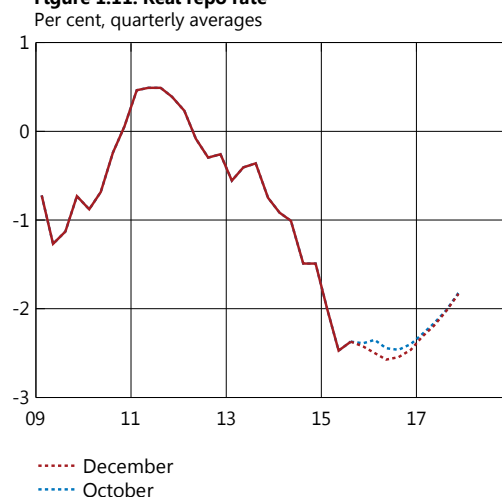
Figure 1:10. Repo rate



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

Source: The Riksbank

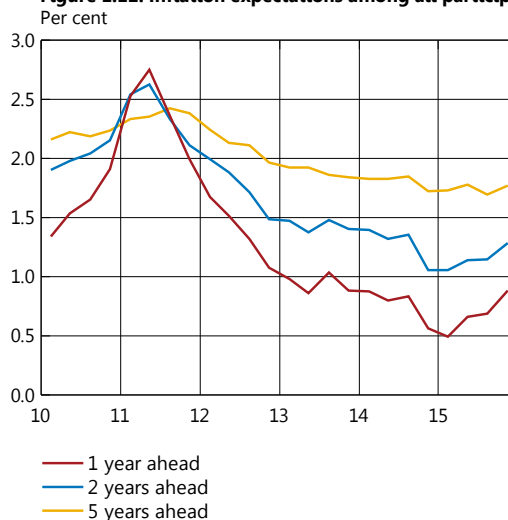
Figure 1:11. Real repo rate



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

Figure 1:12. Inflation expectations among all participants



Source: TNS Sifo Prospera

⁵ See also the article "Refugee immigration is deemed to have only minor effects on monetary policy in the near future."

lays the foundation for efficient price-setting and wage formation.

Furthermore, too low an inflation rate and falling inflation expectations increase the risk of a situation developing in which households and companies postpone consumption and investment, with lower growth and higher unemployment as a result. Low inflation also makes it more difficult to adjust real wages, which can lead to higher unemployment. Prolonged low inflation also leads to the nominal rate of interest also being low for a long period. This increases the risks associated with low interest rates and highlights the need to push up inflation.

The risks of low interest rates

The expansionary monetary policy in Sweden and other countries is necessary in order to stimulate economic growth and counteract the risks of too low inflation. The low interest rate level could however also create greater vulnerability in the financial system if it leads to assets becoming overvalued or different types of risk not being priced in full.⁶

The fact that the repo rate has been lowered to below zero and that certain market rates have become negative may, itself, pose a risk to certain financial markets. However, it is the Riksbank's assessment that the negative interest rates have not yet led to any impaired functionality in the financial system.

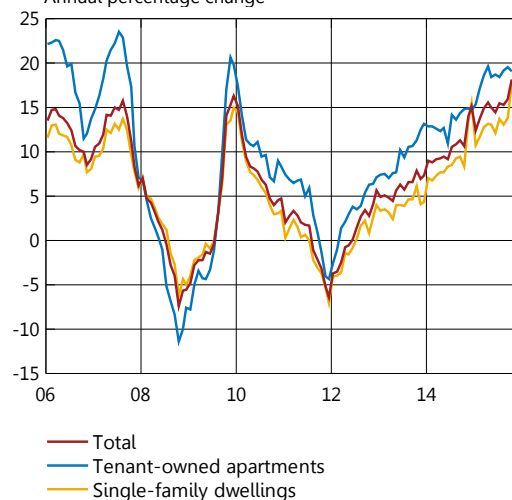
The low interest rates also contribute to the continuing rise in housing prices and household debt (see Figure 1:13 and 1:14). If the economic outlook were to deteriorate, highly-indebted households might choose to increase their savings rapidly, thus reducing their consumption. In such a scenario, an economic slowdown could be heavily exacerbated, particularly if housing prices also start to fall.

Increasing risks of household indebtedness - ever-greater need for urgent action

Fundamental reforms to the housing market are needed to create a better balance between supply and demand and thereby reduce the risks associated with household indebtedness. Such reforms would slow down the increase in house prices and hence reduce debt. However, reforms that make households less willing to take on debt are also important, such as a gradual reduction in the tax relief on interest payments. The responsibility for such reforms lies with the Riksdag and the Government.

It is also of the utmost importance that the Government and the Riksdag bring clarification to

Figure 1:13. Housing prices
Annual percentage change



Source: Valueguard

Figure 1:14. Household debt ratio
Per cent of disposable income



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

Sources: Statistics Sweden and the Riksbank

⁶ See also the Financial Stability Report 2015:2, Sveriges Riksbank.

Finansinspektionen's mandate for macroprudential policy. Finansinspektionen should be able to decide independently on macroprudential issues, since this is a prerequisite for pursuing an effective macroprudential policy. Regarding the need for macroprudential policy measures, the Riksbank considers that an amortisation requirement is a step in the right direction, but more measures are necessary, including a debt-to-income limit.

If no measures are taken, this, in combination with the low interest rate level, will further increase the risks, which may potentially lead to economic imbalances and in the long term be very costly for the national economy.

Scenario: Refugee immigration is deemed to have only minor effects on monetary policy in the near future

Refugee immigration has increased, which means increased expenditure for the public sector in the short term but also an increase in the labour force looking some years ahead. If the increased expenditure has a greater impact on the real economy than what has been assumed in the main scenario, inflation will also be higher. However, the fact that inflation may rise above the target temporarily does not need to mean that monetary policy should be made less expansionary. In the longer term, inflation may also be affected by how quickly new arrivals establish themselves on the labour market. Because it is highly uncertain how the labour market and inflation will be affected further in the future, however, the effects on monetary policy in the coming period are deemed to be minor.

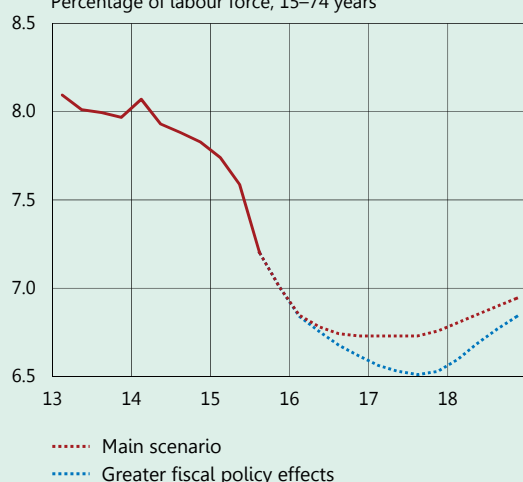
The increase in refugee immigration affects the Swedish economy in several different ways. Greater public investment is required in the short term, for example in housing and education for the newly arrived refugees. In a few years' time, a larger population also means a larger labour force and more employment. How this affects inflation, and hence monetary policy, depends for example on how large the positive effects on demand will be and on how quickly new arrivals enter the labour market.

It is assumed in the main scenario that the increase in public consumption and transfer payments caused by refugee immigration will lead to GDP growth being 0.2 per cent higher per year over the next three years. But the effects on GDP are uncertain and depend on the fiscal policy measures that are implemented and on how the increased public expenditure is funded, for example.

Slightly higher inflation need not mean that monetary policy should be made less expansionary

To highlight the fact that the effects of increased refugee immigration on inflation are uncertain, we present one

Figure 1:15. Unemployment
Percentage of labour force, 15–74 years



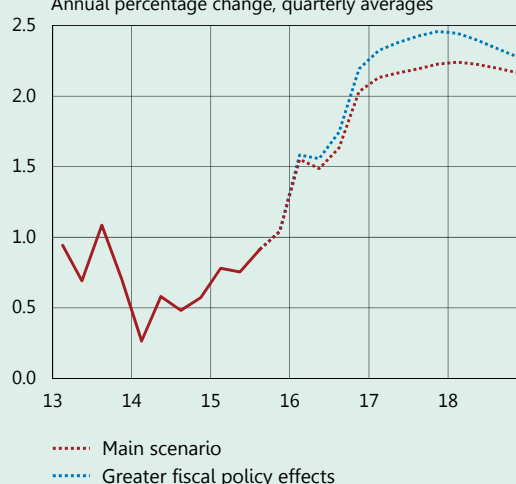
Sources: Statistics Sweden and the Riksbank

alternative scenario here.⁷ In the scenario, it is assumed that the fiscal policy measures related to refugee immigration will have greater positive effects on GDP growth than in the main scenario, especially during 2016 and 2017. This also means that the labour market will grow stronger, which is illustrated here by lower unemployment than in the main scenario (see Figure 1:15). Higher demand for labour also implies faster wage growth. Companies costs then rise more rapidly, making inflation higher than in the main scenario. In 2017, inflation will be markedly higher than the target and then fall back slightly in 2018 (see Figure 1:16). As inflation has been low for a longer period and long-term inflation expectations have fallen, it is not deemed to be a major problem if inflation were to temporarily exceed the target more than in the main scenario. Such a development need not therefore lead to a less expansionary monetary policy.

Uncertain effects of increased labour supply in the longer term

The increase in refugee immigration will lead to an increase firstly in the working-age population, and later on in the

Figure 1:16. CPIF
Annual percentage change, quarterly averages



Note. The CPIF is the CPI with a fixed mortgage rate.
Sources: Statistics Sweden and the Riksbank

⁷ Monetary policy in the scenario is assumed to be the same as in the main scenario (see Figure 1:1).

labour force. The greatest increase in the labour force is assessed to take place towards the end of the forecast period, and particularly in the years following it. How inflation, and hence monetary policy, will be affected towards the end of the forecast period depends to a large extent on developments on the labour market in the longer term. In the main scenario, it is assumed that the increased labour supply towards the end of the forecast period will lead to more spare capacity, a slightly lower rate of increase in labour costs and a slightly lower inflation. But how great these effects will be is uncertain and depends on many factors.⁸ The Riksbank's forecasts and monetary policy will therefore need to be adapted gradually as new information about developments on the labour market becomes available. Since it is a question of forecasts a few years ahead or even further ahead, uncertainty is expected to remain high for some time and the forecasts will gradually be adjusted.

Faster or slower entrance onto the labour market can affect inflation

Just how quickly the labour force and employment will rise when the new arrivals enter the labour market is thus very uncertain. It is possible that entry onto the labour market will occur more quickly and that the labour force participation rate for new arrivals will increase more quickly than in the alternative scenario.⁹ In order for also employment to be able to increase more quickly, labour costs will likely need to increase more slowly, either through wages increasing more slowly or through jobs being subsidised. A slower increase in labour costs leads to a rise in companies' demand for labour, resulting in employment increasing more rapidly than in the alternative scenario. The fact that companies' costs increase more slowly also means that inflation will be lower than in the alternative scenario towards the end of the forecast period. Inflation will then fall slightly more quickly in 2018 and come closer to the main scenario.

If it were instead to take longer for new arrivals to enter the labour market than is assumed in the alternative scenario, the effects will be the opposite of those described above. Labour supply will be lower than in the alternative scenario and labour costs will increase more rapidly. Inflation will therefore be higher than in the alternative scenario in 2018. The fact that inflation will be markedly

higher than the target for a longer period of time could mean that monetary policy may need to be made less expansionary. However, the employment rate among new arrivals could be low for a longer time if they have difficulty entering the labour market. The extent to which monetary policy can influence developments on the labour market in the longer term is limited, however. It is primarily other policy areas which have the opportunity to implement measures which improve new arrivals' chances of establishing themselves on the Swedish labour market.

Limited effects on monetary policy in the short term

In conclusion, the increase in refugee immigration entails an increase in both public sector expenditure and labour supply. If higher demand leads to inflation rising temporarily above the target, this does not need to mean that monetary policy should be made less expansionary. If new arrivals were to enter the labour market more quickly or more slowly than in the main scenario, this might also affect inflation. But as it will take time for the new arrivals to start entering the labour market, and since the effects of this on inflation are uncertain, the short-term consequences for monetary policy are deemed to be limited.

⁸ See the article "Uncertain effects of increased immigration on the labour market" in this Monetary Policy Report.

⁹ In the alternative scenario described above, the same assumptions are made about the labour force participation rate and employment rate of new arrivals as in the main scenario. In the article referred to above, factors are mentioned that could affect how quickly new arrivals come into the labour force and employment.

CHAPTER 2 – Financial conditions

Financial conditions in Sweden are still expansionary. Swedish market rates are low and the banks can obtain funding cheaply. This has contributed to pushing down interest rates for households and companies to historically low levels. In competitiveness-weighted terms, the krona is marginally stronger than in the Riksbank's forecast in October. Stock markets have fallen slightly since the end of October. Market developments during the period have been driven primarily by the actions of the major central banks and the expectations placed upon them.

Monetary policy and government bond yields

Focus on the central banks

Financial markets have seen relatively stable development in November and at the beginning of December. Market developments during the period have been driven primarily by the actions of the major central banks and the expectations placed upon them.

The European Central Bank, ECB, chose to make its monetary policy more expansionary at its meeting at the beginning of December. It cut the deposit rate to –0.3 per cent and extended its programme for purchasing different securities. The programme will now run at least until the end of March 2017. The ECB also broadened the array of asset types it can buy to include local authority and regional bonds. It also announced that bonds which mature will be reinvested. The financial markets had been expecting even more expansionary measures however, and expectations regarding future policy rates, measured using forward pricing, shifted upwards after the announcement. This came after expectations had successively shifted downwards ahead of the announcement (see Figure 2:1).

In the United States, the Federal Reserve is expected to go in the opposite direction and start to raise the policy rate from the 0.0–0.25 per cent interval. It is above all the communication from the Federal Reserve after its

Table 2:1.

Developments on financial markets since the October Monetary Policy Report	
Government bond yields	Swedish government bond yields have risen slightly in line with US yields. The yield differential in relation to Germany has increased.
The foreign exchange market	In competitiveness-weighted terms, the Swedish krona has become marginally stronger compared to the Riksbank's forecast.
Interest rates for households and companies	Financial market statistics show that interest rates for households and companies remain at record-low levels.
Credit growth	Financial market statistics show that interest rates for households and companies remain at record-low levels.

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 affected by foreign yields. Government bond yields act as an anchor for other types of bond yields, which in turn affect the banks' funding costs. This ultimately affects the interest rates offered to households and companies.



meeting in October and the ever-stronger labour market that have fuelled expectations of an initial interest rate rise within the near future. Forward prices indicate a considerable likelihood of an initial rate rise on 16 December (see Figure 2:1). This picture is also shared by market participants according to various surveys.

The Riksbank's decision in October to leave the repo rate unchanged but to postpone the first rate rise for six months, as well as extend its purchases of government bonds, came as somewhat of a surprise to the financial market. Prior to the announcement, market participants felt a repo rate cut was relatively likely, while government bond purchases were expanded slightly more than had been expected. Market fluctuations in the shortest interest rates were, however, limited in conjunction with the decision. Forward pricing stood relatively still only to shift upwards slightly after the ECB's decision, but it is still basically in line with the published repo rate path (see Figure 2:1).

Rising government bond yields

The actions of various central banks have also had a manifest effect on the government bond market. As the Federal Reserve's first rate increase approaches, US government bonds have risen (see Figure 2:2). Most evident is the upturn in the shorter-term segment where, for example, two-year government bonds have risen by about 0.3 percentage points since the end of October. They are now at their highest level for over 5 years.

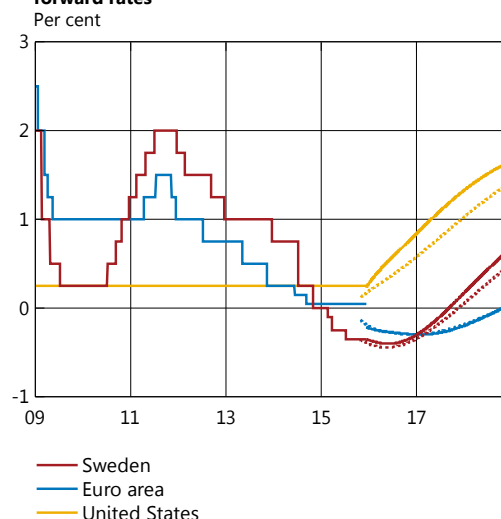
German government bond yields rose in the first half of November, only to fall back prior to the ECB's monetary policy decision amid rising expectations of additional measures. After the decision, German yields rose dramatically and overall are now slightly higher than at the end of October.

The Riksbank's decision to extend government bond purchases at its Monetary Policy Meeting in October led to a fall in longer-term Swedish government bond yields. These have risen somewhat since then, however (see Figure 2:2). A number of factors not directly linked to monetary policy can explain this upturn. One is the substantial number of refugees arriving in Sweden during the autumn, which is expected by many market participants to lead to increased borrowing requirements. Another is the relatively strong development of the Swedish economy. Yet another factor is the renewed faith in interest rate increases from the Federal Reserve which has driven up US yields, and in turn have had consequential effects on Swedish yields. Finally, Swedish government bond yields also rose dramatically following the ECB's monetary policy announcement. The development has

Which is the ECB's most important policy rate?

Different central banks have different monetary policy control systems, or in other words the set of interest rates and rules used to control the shortest interest rates on loans between banks. Moreover, what guides the level of these rates in practice can change over time. In the euro area, the so-called refi rate is the guiding interest rate when liquidity levels are more normal. However, liquidity among banks has increased considerably as a result of the ECB's asset purchasing programme, among other factors. The ECB's deposit rate is therefore currently more important. The shortest market rates are therefore currently controlled in practice by the ECB's deposit rate, which is lower than the refi rate. This can be seen with the overnight rate, EONIA, for example, which is now near the level of the ECB's deposit rate of -0.3 per cent.

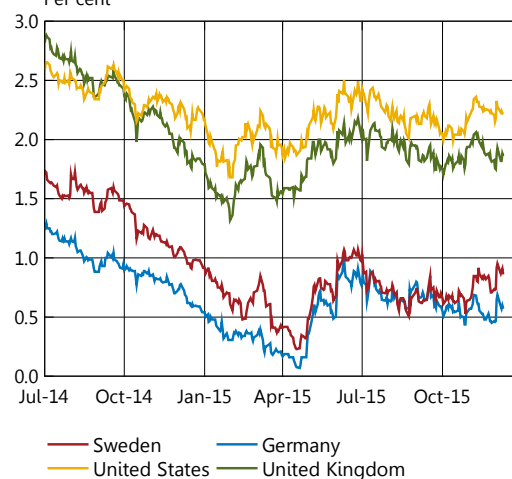
Figure 2:1. Policy rates and rate expectations according to forward rates



Note. Forward rates describe the expected overnight rate, which does not always correspond to the policy rate (refi rate for the euro area). Unbroken lines are estimated 10 December 2015, broken lines 27 October 2015.

Sources: Macrobond and the Riksbank

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



Source: Macrobond

led to a slight increase in the yield differential between Sweden and Germany during the period (see Figure 2:3).

The financial situation for companies and households

Favourable conditions for bank lending

The conditions for bank lending remain favourable. The interest rate at which banks can issue covered bonds has risen slightly since the October Monetary Policy Report, but remains at a very low level. At the same time, the three-month interbank rate, Stibor, which affects banks' funding of loans with short interest-rate fixation periods, has fallen by about 0.1 percentage points during the same period. This is probably a temporary effect, however, of the banks wishing to reduce their balance sheets before the end of the year given that the size of these constitutes the basis of the banks' fees to both the stability fund and the new resolution fund. Deposit rates remain basically unchanged (see Figure 2:4).

Funding situation for companies still favourable

The funding situation for companies is also deemed to still be favourable. Interest rates on new bank loans to non-financial companies remain at record-low levels (see Figure 2:4). Yields on issued corporate bonds have risen slightly over the period, but they also remain at low levels. The annual growth rate in borrowing from banks increased marginally in October while issues of corporate bonds increased at a faster rate (see Figure 2:5).

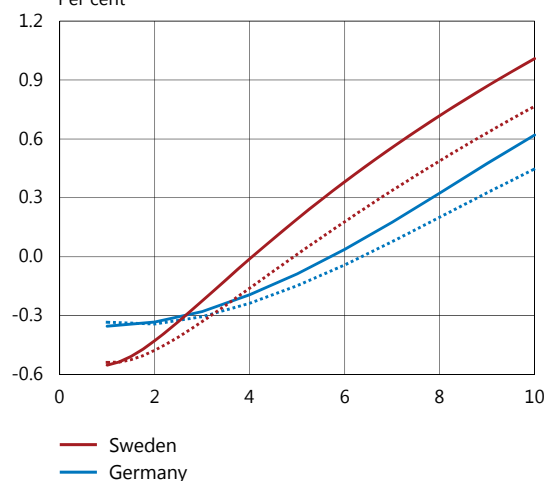
Surveys from both the National Institute of Economic Research and ALMI show that the opportunities for companies to secure bank loans are generally good.

Households borrowing more at historically lower rates

Households continue to borrow at very low interest rates. In recent months, the average rate for new mortgages has been stable at 1.6 per cent (see Figure 2:4), which is the lowest level ever. At the same time, households continue to borrow more. The annual growth rate in lending in October was 7.2 per cent. Neither do the outcomes in recent months show any sign of the growth rate starting to slow down. It is still mortgages and especially mortgages for the purchase of cooperatively owned housing that are behind the high growth rate. The annual growth rate for such mortgages was 13.4 per cent in October (see Figure 2:6).

This development can be explained first and foremost by rapidly rising housing prices. In October, they increased

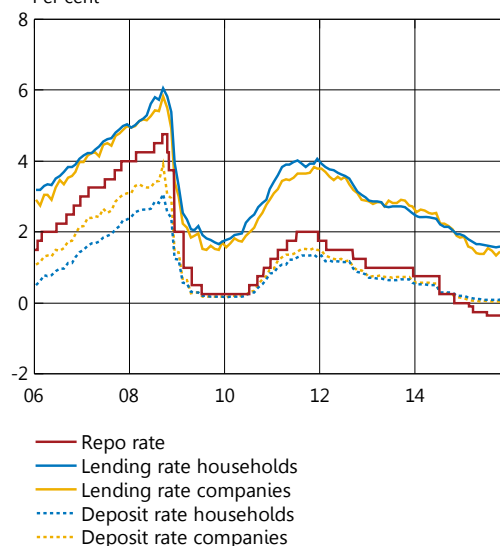
Figure 2:3. Yield curves in Sweden and Germany
Per cent



Note. Horizontal axis shows maturities in years. The yield curve is zero coupon yields interpolated from bond prices in accordance with the Nelson-Siegel-method. Unbroken lines are estimated 27 October 2015, broken lines 10 December 2015.

Sources: Macrobond, Thomson Reuters and the Riksbank

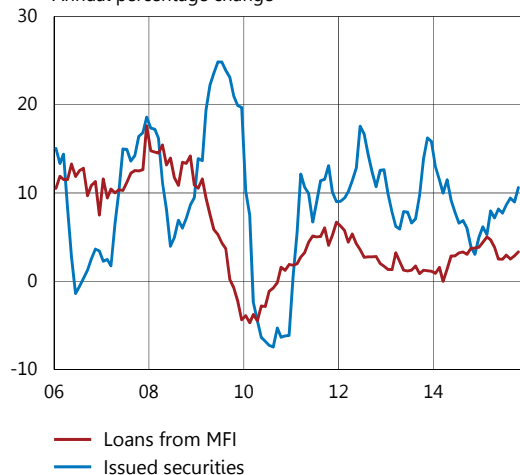
Figure 2:4. Repo rate together with the deposit and lending rate to households and companies, new contracts
Per cent



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

Sources: Statistics Sweden and the Riksbank

Figure 2:5. Lending to non-financial corporations
Annual percentage change



Note. The figure shows the annual growth rate for loans to non-financial corporations from financial market statistics as well as the annual growth rate for issues of securities.

Source: Statistics Sweden

by 19 and 18 per cent for collectively owned homes and owner-occupied homes respectively, compared with the same month the year before. According to SEB's housing price indicator, a large majority of households believe that housing prices will continue to increase even if the percentage has decreased slightly in recent months.

The foreign exchange market

Krona marginally stronger than forecast

The fact that the ECB has made monetary policy more expansionary at the same time as the Federal Reserve is preparing to raise the US base rate is also reflected on the FX market. After the Federal Reserve's meeting at the end of October, which the market interpreted as signalling an initial rate rise in December, the US dollar has appreciated strongly as US market rates have risen. The ECB's signals of a more expansionary monetary policy have driven the euro in the opposite direction as shorter-term European market rates have fallen back. After the ECB's decision, which was slightly less expansionary than was expected by the financial markets, the euro has once again strengthened slightly.

In competitiveness-weighted terms, the Swedish krona has become marginally stronger compared with the Riksbank's forecast (see figure 1:5). This appreciation can be mostly explained by a generally weaker euro (see Figure 2:7), although major movements against the currencies of oil-exporting countries, including the Norwegian krone and Russian rouble, have contributed a weakening in these currencies as oil prices have once again fallen back.

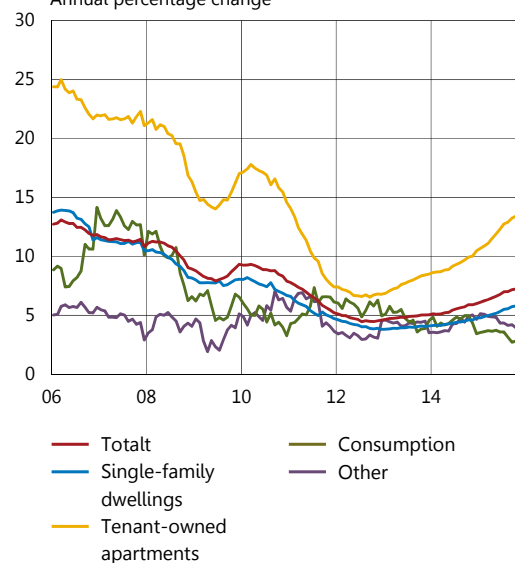
Global asset prices

Lower commodity prices

The Swedish stock exchange has fallen slightly since the end of October in line with the equity markets in Europe and the United States (see Figure 2:8). Commodity prices have also fallen back due to for example the increasingly strong US dollar and the risk of an economic slowdown in emerging market economies going forward. Most obvious is the fall in the oil price, which is now at its lowest level since 2009, after OPEC decided to increase its output limit.

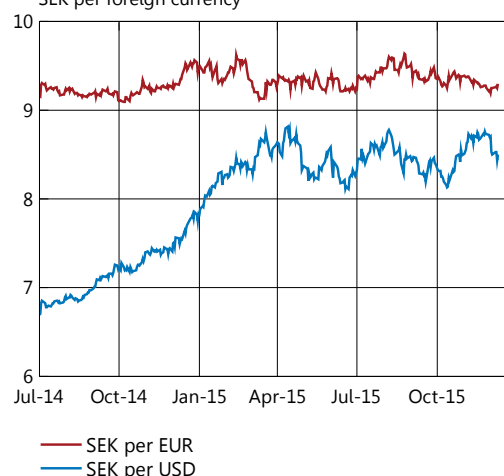
On the credit market, the rate of increase in the yield differential between riskier assets, such as corporate and covered bonds, and government bonds, has slowed. Yield differentials on certain markets have even decreased slightly.

Figure 2:6. Lending to households, different purposes
Annual percentage change



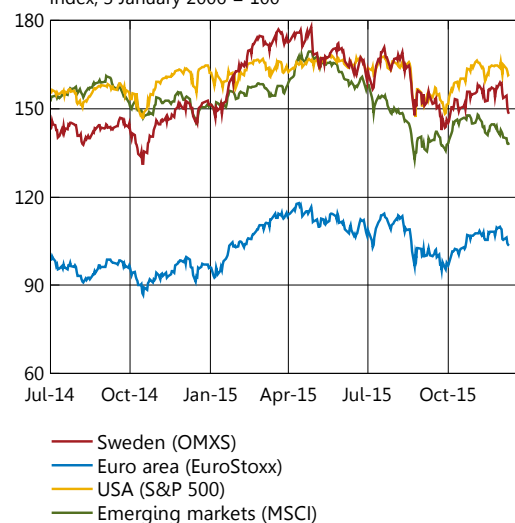
Note. The figure shows the annual growth rate for household loans as well as the growth rate for loans divided up into different types of collateral.
Source: Statistics Sweden

Figure 2:7. Development of the krona against the euro and the dollar
SEK per foreign currency



Source: Macrobond

Figure 2:8. Stock market movements
Index, 3 January 2006 = 100



Sources: Macrobond and Thomson Reuters

CHAPTER 3 – The current economic situation

The assessment of the current economic situation and of recent developments forms the basis for forecasts in the slightly longer term. The global recovery is continuing in many developed countries. GDP growth in Sweden was higher than expected in the third quarter, and developments in the first six months of 2015 have also been revised upwards slightly. The labour market is developing strongly. So far it is difficult to see any clear impact of the increased refugee immigration on economic statistics. The rising trend in inflation is continuing, but developments are volatile. CPI inflation is expected to rise at a relatively fast rate over the coming months when the effects of the earlier falls in energy prices and the Riksbank's previous inflation rate cuts fade.

Inflation

Gradually higher inflation, but developments are volatile

Different measures of underlying inflation, such as the CPIF excluding energy for example, have been rising in line with the trend since the beginning of 2014 (see Figure 3:1). The outcome for inflation in November was lower than the Riksbank's previous assessment, however. The annual rate of increase in the CPIF excluding energy was subdued at 1.4 per cent, as a result of an unexpectedly weak increase in prices for foreign travel, among other things. Consistently low prices for electricity and fuel along with low mortgage costs for households meant that CPIF and CPI inflation came to 1.0 and 0.1 per cent respectively in November (see Figure 3:2).

The negative effects on inflation from both falling energy prices and interest expenditure have been subdued in recent months (see Figure 3:3). A less negative impact from these areas in the coming months is expected to contribute to a relatively fast upturn in CPI and CPIF inflation (see Figure 1:3 and 1:4). Due to the renewed fall in oil prices recently, the annual rate of increase in the CPI and CPIF is expected to be lower than the rate of increase in the CPIF excluding energy for a while longer.

It is clear that the weakening of the krona seen in recent years can explain many of the price rises for imported foodstuffs and products. Different indicators, such as price developments in the producer and import channels, price plans in the Economic Tendency Survey and business surveys generally support the outlook that prices will continue to rise at a good rate over the coming months.

Tax increases will contribute to higher CPI inflation in January 2016. The reduction in tax deductions for RUT (Cleaning, Maintenance and Laundry) and ROT (Repairs, Conversion and Extension) and amended indexing of energy

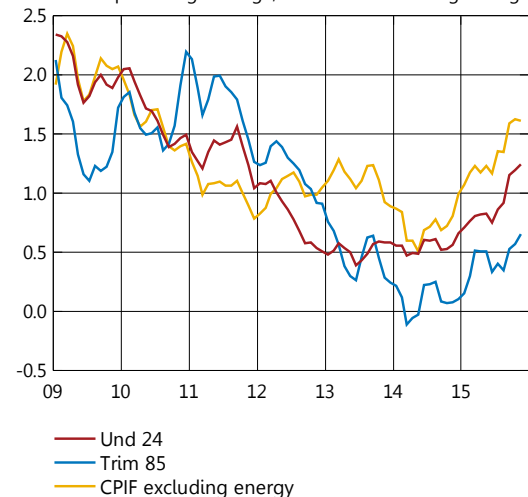
Table 3:1

Expected development in October MPR	Actual development
CPIF inflation 1.2 per cent in November.	Lower than forecast, CPIF inflation 1.0 per cent in November.
GDP growth 1.7 per cent, third quarter.	Higher than expected, 3.4 per cent, third quarter.
Continued reduction in unemployment to 7.2 per cent, fourth quarter.	Employment stronger than expected, unemployment lower.
GDP growth in the euro area 1.6 per cent, third quarter.	Outcome slightly weaker than expected.
GDP growth in the euro area 2.1 per cent, third quarter.	Outcome slightly higher than expected.

Note. Monetary Policy Review (MPR). The CPIF is the CPI with a fixed mortgage rate. CPIF inflation measured as annual percentage change. GDP growth refers to the quarterly change in per cent, calculated as an annual rate.

Figure 3:1. Measures of underlying inflation

Annual percentage change, three months moving average



Note. Und 24 and Trim 85 are statistical measures calculated on the basis of the CPI divided into approximately 70 subgroups. Und 24 is weighted and adjusted for the historical standard deviation. In Trim 85 the 7.5 per cent highest and the 7.5 lowest yearly price changes have been excluded.

Sources: Statistics Sweden and the Riksbank

taxes will together raise CPI inflation by around 0.4 percentage points during 2016. Higher network charges for electricity will also help to push inflation upwards in January 2016.

Model forecasts can be used to summarise the information from different indicators. Figure 3:4 shows such a forecast from the CPIF excluding energy. When the recent increases in producer prices and the exchange rate are taken into account, the model predicts that it will take several months before inflation will rise again. The Riksbank's assessment is that the low inflation outcome in November can be explained in part by temporarily low prices for foreign travel. The model forecast does not fully capture this effect, which is why the Riksbank's forecast is higher than the model forecast. The models are also not able to take into account future events, such as reductions in subsidies for RUT and ROT services, or that rental outcomes for 2016 indicate that the rate of rental increases will slow down. These factors together explain why the Riksbank's forecast will be somewhat higher than the model forecast in the coming period. The increased asylum immigration is not deemed to have any effect on inflation in the coming months.

Rising inflation expectations

As with the actual level of inflation, short-term inflation expectations have been low during the past few years, but they have shown a clear rising trend this year. According to Prospera's quarterly survey, inflation expectations among all participants have risen over both the short and long terms during the fourth quarter. Five-year expectations are now at 1.8 per cent (see Figure 1:12)

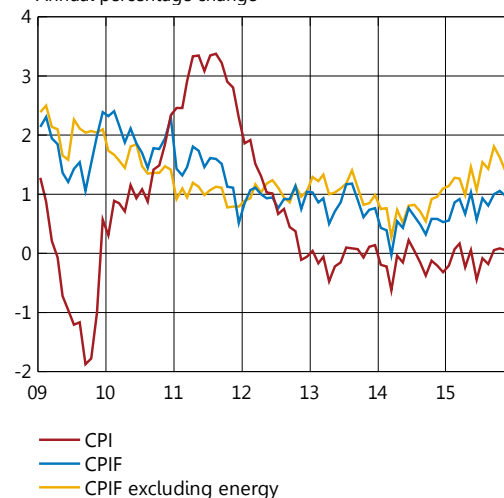
Global and Swedish economic activity

The recovery in developed countries is continuing in the third quarter

Growth in the third quarter in countries important for Swedish trade, measured by KIX-weighted GDP, was slightly subdued over the summer and the beginning of the autumn.

However, the slowdown in developed countries was generally moderate, and no greater or more negative contagion effects from China and other emerging market economies which could disturb the recovery have yet been observed. Dampened growth could definitely be noted in the sectors which are dependent upon global trade, and particularly trade with emerging market economies. But this

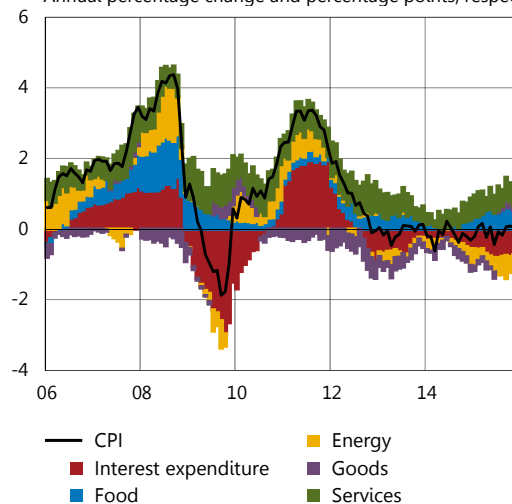
Figure 3:2. CPI, CPIF and CPIF excluding energy
Annual percentage change



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

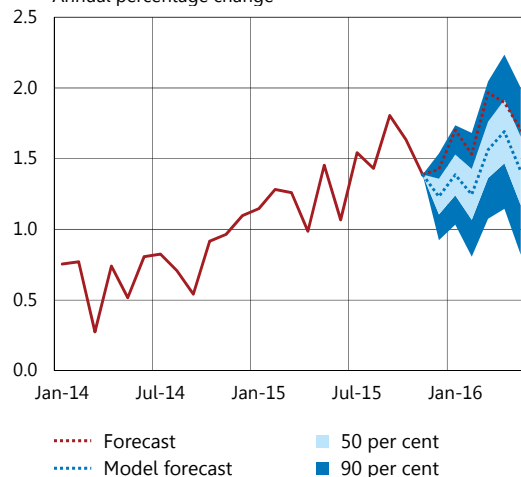
Source: Statistics Sweden

Figure 3:3. CPI and the contributions to CPI-inflation
Annual percentage change and percentage points, respectively



Sources: Statistics Sweden and the Riksbank

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



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

Sources: Statistics Sweden and the Riksbank

is outweighed in many countries by good levels of growth in domestic demand, which represents a larger share of the economy. High level of confidence among companies and households indicates that GDP growth in the euro area will be somewhat higher in the coming quarters.

In France, the November terror attacks in Paris are expected to lead to somewhat weaker GDP growth in the fourth quarter as a direct result of many shops closing directly after the terror attacks and a fall in tourism.

The slowdown in American GDP growth in the third quarter compared with previous quarters will be largely due to companies reducing their build-up of stocks. This trend is expected to continue during the fourth quarter, which will lead to a further slight reduction in growth, but the American economy is then expected to grow more strongly again.

Inflation in developed countries has risen from near-zero levels. The reason for this is that previous oil price decreases are no longer affecting developments in inflation as much. The oil price fell once again in November however, and this is expected to lead to a minor fall in inflation in the coming period.

Continued positive Swedish growth during the fourth quarter

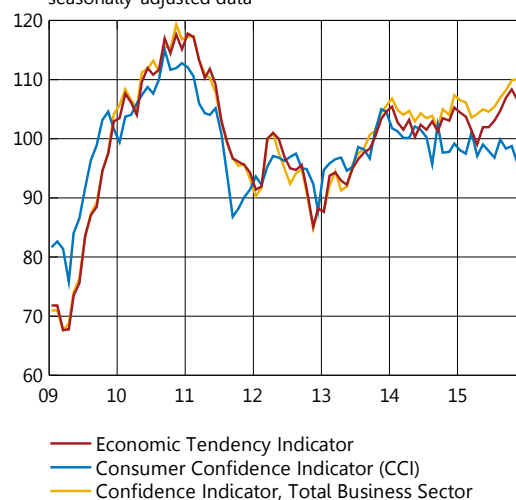
Swedish GDP grew by 3.4 per cent during the third quarter compared with the second quarter and when calculated at annual rate, which was more than expected. Demand broadened, and as well as household consumption and housing investments, exports also contributed to this growth. Investments in the business sector and thus GDP were simultaneously revised upwards for the first six months of this year.

According to the Economic Tendency Survey and purchasing managers' index, confidence among companies is higher than a historical average. The household confidence indicator has conversely been lower than its historical average for almost all of the past year (see Figure 3:5). Households' views of their own finances are still more optimistic than normal, however. On the other hand, the view of the Swedish economy is more negative than normal, as there are more people who feel that unemployment will rise in the coming year. This image of a somewhat more pessimistic household sector has also been visible in monthly statistics for household consumption and retail sales in the autumn.

Global trade has stabilised to a certain extent recently after a major fall at the beginning of the year, and the downturn in the global manufacturing sector appears to

Figure 3:5. Confidence indicators

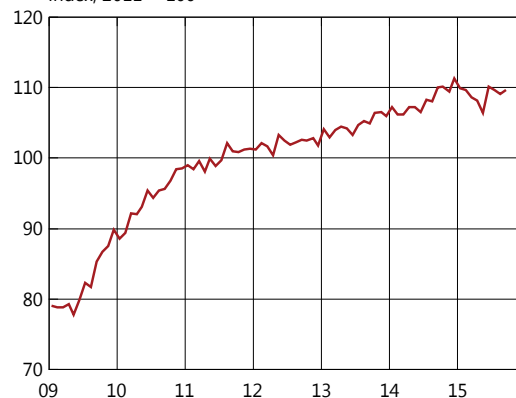
Index, average = 100, standard deviation = 10, seasonally-adjusted data



Source: National Institute of Economic Research

Figure 3:6. World trade volume

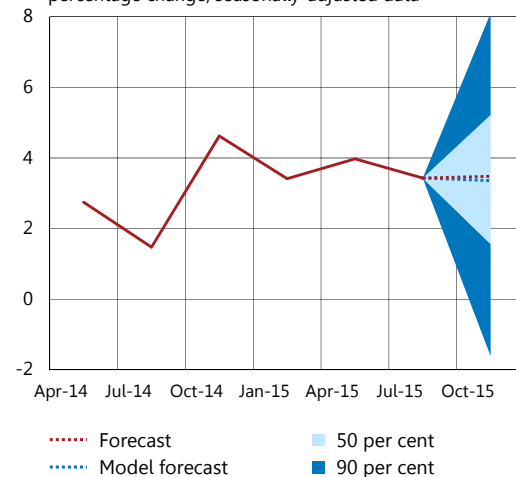
Index, 2011 = 100



Note. Refers to trade in goods.

Source: CPB Netherlands Bureau for Economic Policy Analysis

Figure 3:7. Model forecast GDP with uncertainty bands
Quarterly changes 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 uncertainty bands are based on the models' historical forecasting errors.

Sources: Statistical Sweden and the Riksbank

have come to a halt (see Figure 3:6). Monthly statistics for Swedish foreign trade and export orders according to the Economic Tendency Survey and purchasing managers' index together indicate that Swedish exports will grow at a normal rate towards the end of the year, historically speaking.

The Riksbank uses different statistical models to summarise the information in a large number of GDP growth indicators from the most recent quarters.¹⁰ The Riksbank's forecast is based both on these model-based forecasts and on assessments of factors included in the models. One such factor is what migration will mean for public consumption. The fact that public consumption is assessed to grow quickly during the fourth quarter has contributed to the forecast for GDP growth being somewhat higher than the model forecast (see Figure 3:7).

All in all, Swedish GDP is assessed to grow by 3.2 per cent on average in the final quarter of this year and the first quarter of 2016, compared with the most recent quarter and when calculated at an annual rate.

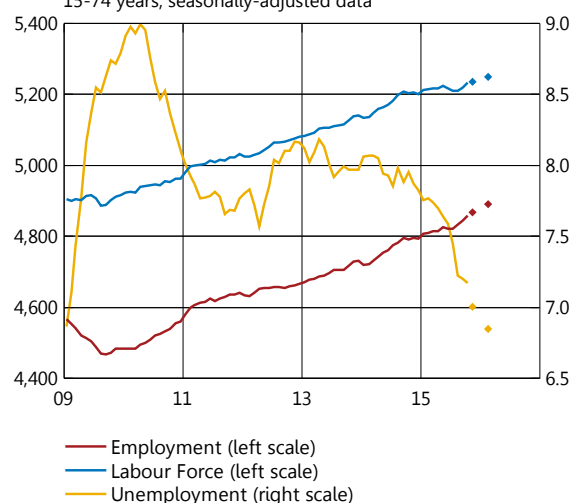
The labour market is strengthening - resource utilisation is increasing

The labour market has continued to develop strongly. Unemployment fell to 7.2 per cent in October (see Figure 3:8). Recruitment plans are still positive according to the Economic Tendency Survey, and the number of vacancies is continuing to rise according to Statistics Sweden (see Figure 3:9). This indicates a high demand for labour and that employment rates may continue to rise.

Both public and private consumption are expected to increase as a result of the increased refugee immigration in the coming period. This means that employment will increase somewhat faster than was previously assessed, and that unemployment will therefore be lower.

The Riksbank assesses that resource utilisation in the Swedish economy will rise, but that it is still somewhat lower than normal. GDP and hours worked will increase at a somewhat faster rate than is historically seen as normal, while the employment rate will rise and unemployment will fall. Indicators of a lack of labour are broadly rising in both the business and public sector, and the RU indicator, which is a comprehensive measure of a range of indicators of resource utilisation, rose in the third quarter (see Figure 3:10).

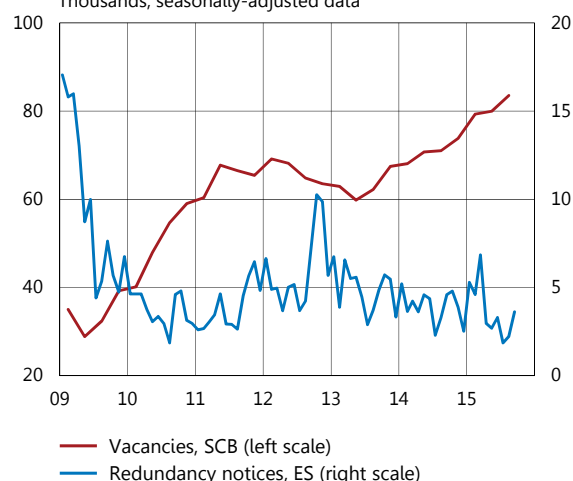
Figure 3:8. Employment, labour force and unemployment
Thousands of people and percentage of labour force, 15-74 years, seasonally-adjusted data



Note. Three-month moving average. The dots represent forecasts for the fourth quarter 2015 and the first quarter 2016.

Sources: Statistics Sweden and the Riksbank

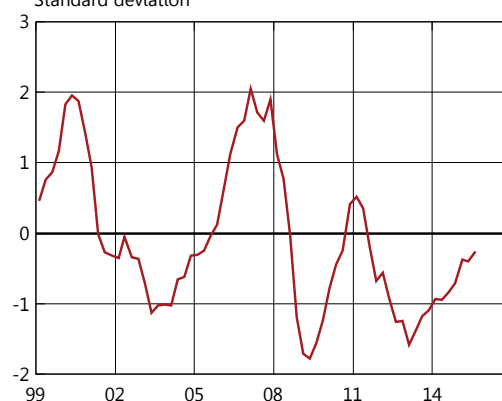
Figure 3:9. Labour force indicators
Thousands, seasonally-adjusted data



Note. Vacancies are quarterly data and redundancy notices are monthly data.

Sources: Employment Service (ES) Statistics Sweden (SCB) and the Riksbank

Figure 3:10. RU indicator
Standard deviation



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

Source: The Riksbank

¹⁰ The Riksbank's model-based forecast is a mean value of forecasts conducted using different statistical models. The models use monthly data from different surveys of production and demand in order to generate forecasts for GDP growth compared to the most recent quarter.

CHAPTER 4 – The economic outlook and inflation prospects

The recovery abroad is continuing and global inflation is rising. The Swedish economy is currently characterised by broadly strengthening economic activity. Increasingly strong international economic activity and an expansionary monetary policy are contributing towards GDP growth also being high in the period ahead and a continuing improvement on the labour market. CPIF inflation will stabilise around 2 per cent in 2017. The increased asylum immigration is expected to lead to higher demand and employment in the years ahead. The long-term effects are less certain.

International developments

Developed countries are driving global growth

The recovery of the world economy is advancing in the major developed economies. Due to good domestic demand, the developed economies have been relatively resistant to the slowdown in the emerging market economies. The recovery is being supported by a continued expansionary monetary policy, favourable financial conditions and a low oil price.

GDP in the euro area is rising more due to increased migration

Apart from the third quarter, GDP outcome for the euro area has been surprisingly strong over the last year. This is a broad, consumer-led upturn across both the previous crisis countries and the core countries. In the euro area, the weaker exchange rate is also contributing towards stimulating exports.

The number of people fleeing and seeking protection in Europe has increased substantially. According to the UNHCR (the UN refugee agency), almost 900,000 refugees had arrived in Europe by the start of December. The European Commission assumes in its forecast produced in early November that both 2016 and 2017 will also see a large number of refugees arriving. The European Commission estimates that refugee immigration will raise the level of GDP in the EU by 0.2–0.3 per cent by 2018, depending on the different assumptions regarding the level of education among refugees. The largest part of the effect on GDP level will take place in 2016.

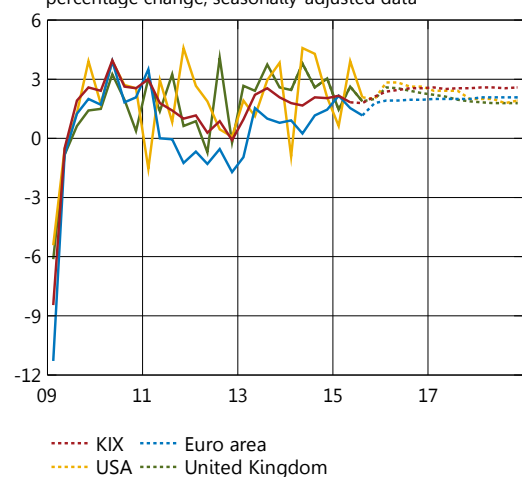
All in all, GDP growth in the euro area is expected to rise slowly from a low level and amount to 2.1 per cent in 2018 (see Figure 4:1). Compared with the previous forecast, growth will be somewhat stronger in the short term due to the increased refugee immigration.

Table 4:1

The forecast in brief
Global growth and resource utilisation rising and inflation increasing gradually.
GDP growth in Sweden has broadened and is expected to remain high in the coming years. The increased refugee immigration will lead to higher public consumption in particular.
Labour market strengthening in the short term due to increased refugee immigration. Employment will increase and unemployment will fall in the coming year. Unemployment is however expected to rise in 2018 as the labour force will increase faster than employment.
The upturn in inflation is volatile but the rising trend is continuing, and CPIF inflation will stabilise around 2 per cent during 2017.

Figure 4:1. Growth in various countries and regions

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



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

US economic activity to peak in 2016

The economic upturn in the United States is now in its sixth year. While this recovery has undoubtedly been significantly slower than in previous upturns, it has, in return, been more prolonged. GDP growth is expected to culminate at 2.6 per cent next year. Following this, it is expected to slowly fall back to just over 2 per cent by 2018 as resource utilisation becomes more strained and monetary policy gradually normalises. The forecast remains largely unchanged when compared to October.

The emerging market economies are no longer driving the global economy

Economic activity has slackened in many emerging market economies, due to the slowdown in China among other reasons. Among the emerging market economies that are important for Sweden's economy and that are included in KIX-weighted GDP, a cautious recovery or a stabilisation of GDP growth is expected in 2016. However, the growth rate is being held down by structural problems in many areas and the countries are not expected to drive the global economy in the same way as before. In China, the readjustment of the economy, with higher levels of private consumption and lower levels of investment relatively speaking, is expected to continue over the coming years and result in gradually lower GDP growth.

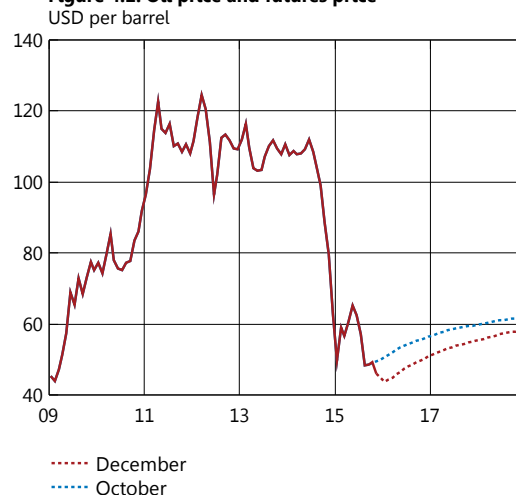
All in all, global growth is expected to rise from 3.1 per cent this year to 3.6 per cent in 2016 and then to just over 3.8 per cent over the following two years. KIX-weighted GDP is expected to grow by around 2.0 per cent this year and by about 2.5 per cent during the remainder of the forecast period. This is in line with the assessment made in October.

Gradually rising inflation abroad

Inflation has been low in most developed economies in recent years. The substantial fall in the price of oil that started a little over a year ago strengthened this trend. However, the effect of previous declines in the price of oil will ease off in the period ahead and, in addition, the price of oil will successively rise over the forecast period (see Figure 4:2). Nevertheless, the overcapacity within the manufacturing industry, above all in China, is expected to continue to have a dampening effect on prices for goods. At the same time, domestic price pressure in the developed economies remains generally low.

The upturn that took place in the underlying inflation of the euro area is largely due to the weakening of the exchange rate. The slow recovery of the euro area and the

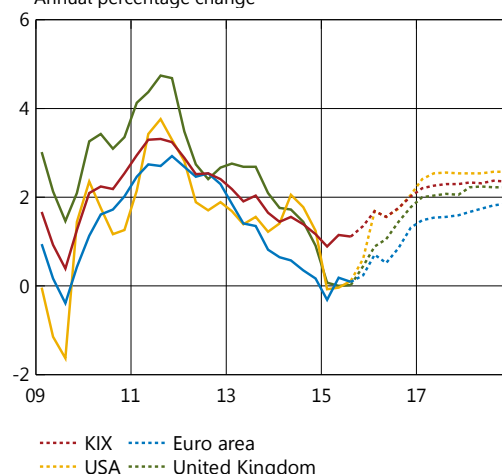
Figure 4:2. Oil price and futures price



Note. Brent oil, futures are calculated as a 15-day average. Outcomes represent monthly averages of spot prices.

Sources: Macrobond and the Riksbank

Figure 4:3. Inflation in various countries and regions

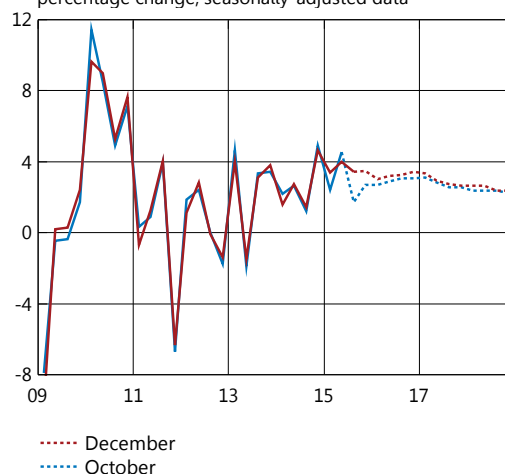


Note. KIX is an aggregate of the countries that are important to Sweden's international transactions. When calculating KIX-weighted inflation, the HICP is used for the euro area and the CPI for other countries. Inflation for the euro area is shown measured using the HICP and for the United States and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

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

Figure 4:4. GDP in Sweden

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



Sources: Statistics Sweden and the Riksbank

high unemployment mean there will be a delay before we see higher wages and thus higher domestically-generated inflation. Inflation is not expected to reach 1.8 per cent until 2018. In the United States, signs of a rising wage rate are already visible and are expected to continue in the period ahead.

The KIX-weighted inflation rate is expected to rise from 1.1 per cent this year to 1.8 per cent in 2016. It will reach 2.3 per cent towards the end of the forecast period (see Figure 4.3). This is a slightly lower short-term increase than in the forecast from October. This is primarily due to inflation in the euro area being revised downwards as oil prices are expected to become lower.

Sweden

Broad strengthening of economic activity

The development of Swedish GDP has been stronger than expected. All components of demand have contributed to a high level of growth in 2015. Over the last two years, GDP has increased faster than its historical average. Among the components of GDP, it is primarily investment in housing that has grown faster than its historical average. Household consumption, exports and business sector investment excluding housing have increased at a more normal rate.

Household saving is historically high and recent years' stock exchange and house price increases have contributed towards household wealth increasing. Household incomes will grow rapidly in 2016, but this growth will then become subdued when economic policy becomes less expansionary. All in all, this will lay the foundations for strong growth in consumption in the years ahead.

World trade slowed down in 2015. The growth in Swedish exports has been higher than the growth in world trade and growth on Swedish export markets, among other reasons due to the rapid growth in exports of services. Growth in demand on Swedish export markets is expected to increase in the years ahead. This is contributing towards Swedish exports continuing to grow, albeit slightly more slowly than the historical average.

At the same time, rising resource utilisation both in Sweden and abroad means that the need for new investment is rising. Housing investment is already at a high level and will gradually contribute less to growth in the coming years.

In the period 2015–2017, the increased refugee immigration is expected to contribute towards stronger demand, primarily due to increased public consumption

Short-term macroeconomic effects of the increased refugee immigration

In October, the Swedish Migration Board (Migrationsverket) revised its forecast from July upwards in terms of how many people are expected to seek asylum in Sweden between 2015–2018 by around 190,000 people (from around 270,000 people to 460,000 people). In the short term, this increased immigration is deemed to lead to higher growth as more people means higher demand for food, housing, education and care.

In order to manage this increase in refugees, the Swedish Migration Board assesses that it will need an extra SEK 30–40 billion per year between 2016–2018. The Riksbank's forecast is based on this assessment. In addition, the number of cases at the Swedish Public Employment Service and Swedish Social Insurance Agency will gradually increase as the new arrivals participate in the authorities' establishment activities. Adding this to the Swedish Migration Board's funding forecast, the Riksbank therefore estimates further SEK 5 billion in expenditure for 2018. A large part of the increased expenditure during the forecast period is assumed to be financed by loans, and will therefore lead to negative government net lending. Around a quarter of the financing is expected to come from deductions in the aid budget and via savings within the public sector. No changes to municipal taxes are anticipated in the forecast.

The higher expenditure is mainly linked to increased public consumption. However, when public consumption increases, employment will also increase and generate tax revenues which will contribute to the financing. The expenditure is linked to a lesser extent to increased migration and integration-related transfers as economic support for the new arrivals. As the refugees typically lack economic resources when they arrive in the recipient country, it is assumed that the economic support they receive will likely be largely spent on the consumption of food, clothes and housing. Private consumption therefore also increases, which in turn leads to higher tax revenues that contribute to financing the increase in expenditure. All in all, government net lending is deemed to decline by around 0.5 per cent of GDP by 2018.

Even though the macroeconomic effects are difficult to estimate, the increased immigration is assessed to lead to higher demand in the Swedish economy. The Riksbank's assessment is that the GDP level in 2018 will be 0.7 per cent higher as a result of the increased immigration. The higher demand will generate higher employment both in the public and private sectors, and thereby lower unemployment in the coming two years. The assessment also indicates that this will mean slightly higher wage increases and inflation.

(for example housing, education, personnel costs and integration).

All in all, strong domestic demand and a continuing international recovery will lead to Swedish GDP growing faster in 2015–2017 than the historical average. GDP is expected to grow by more than 3 per cent on average during the forecast period (see Figure 4:4). The rapid rate of population growth means that GDP per capita will grow more slowly than its historical average (see Figure 4:5). Domestic demand and thus GDP growth will become slightly subdued in 2018 when the repo rate starts to rise.

Rising housing prices and increased debt

The low interest rates, combined with the favourable development of incomes, have contributed towards high demand for housing among households. But the supply of housing continues to be insufficient, which has contributed to the rapid rise of property prices and household indebtedness. Housing prices are also expected to continue increasing in the years ahead, albeit at a slower pace. Debt as a percentage of households' disposable incomes, the so-called debt ratio, is expected to increase to just over 190 per cent by the end of 2018 (see Figure 1:14).

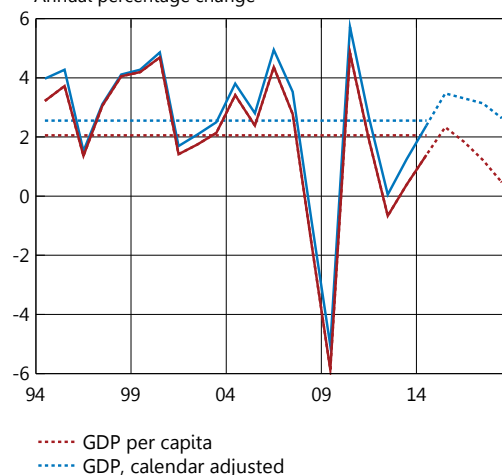
Certain increase in government net lending

As economic development has been stronger than expected, tax revenues have increased at a rapid rate this year and are expected to continue to do so next year too. At the same time, public expenditure is expected to increase, among other reasons due to rising costs for migration and integration. The deficit in government net lending is expected to decrease from 1.0 per cent of GDP this year to 0.6 per cent of GDP in 2018. Compared with October, the deficit is thereby expected to be larger. There is great uncertainty in the forecast for net lending, and it is influenced by the number of refugees, among other factors.

The labour market will continue to strengthen in the short term; development in the longer term is highly uncertain

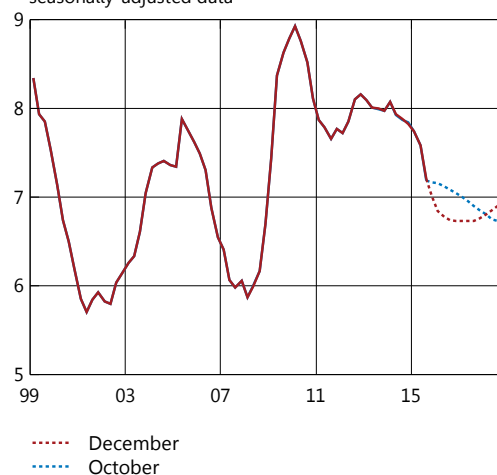
The situation on the labour market is continuing to improve as demand grows stronger. However, the increased refugee immigration means that the forecast for the development of the labour market has changed since the Monetary Policy Report was published in October. Over the next year, increased public consumption is expected to contribute to both employment and the number of hours worked rising faster than previously expected. Unemployment will thereby initially be lower and the employment rate, that is the

Figure 4:5. GDP and GDP per capita
Annual percentage change



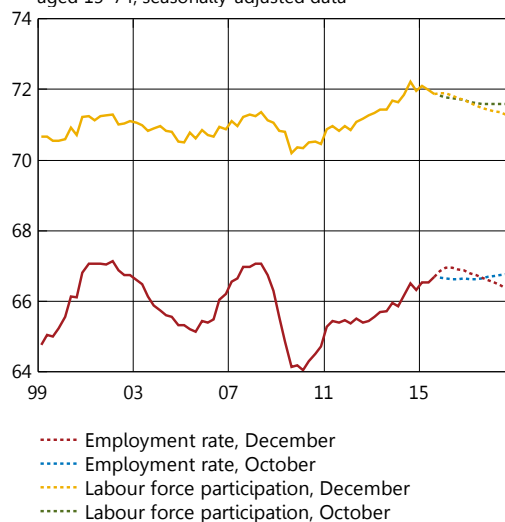
Note. Broken lines refer to averages between 1994 and 2014.
 Sources: Statistics Sweden and the Riksbank

Figure 4:6. Unemployment
Per cent of the labour force, 15–74 years, seasonally-adjusted data



Sources: Statistics Sweden and the Riksbank

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



Sources: Statistics Sweden and the Riksbank

number of people in employment as a proportion of the working age population (age 15–74), is expected to rise (see Figure 4:6 and 4:7).

Statistics Sweden's new population forecast, which takes into account the Swedish Migration Board's raised forecast for refugee immigration, means that the working-age population is now expected to reach around 95,000 more people towards the end of the forecast period. However, it will take time before the new arrivals start to become established on the labour market. Relatively few new arrivals are expected to enter the labour force and find employment in the coming years. This means that the labour force participation rate and employment rate will decrease a couple of years ahead (see Figure 4:7). However, the total number of persons employed will be just over 40,000 persons more in 2018 than in the forecast from October. Unemployment will fall to around 6.7 per cent in 2017, before rising towards the end of the forecast period (see Figure 4:6). Developments on the labour market are very uncertain. Unemployment may be either higher or lower depending on how successfully the new arrivals become established on the labour market (see the article "Uncertain effects of increased immigration on the labour market").

Unit labour costs will rise throughout the forecast period

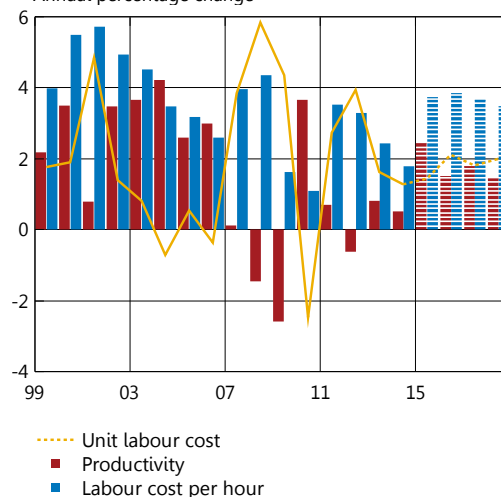
The Riksbank assesses that higher resource utilisation and higher inflation will contribute to wage increases rising over the next few years. Unemployment has fallen and, according to the business tendency survey and the Riksbank's business surveys, there is presently a clear shortage of labour with specific skills in several industries. This could contribute towards wage increases on the local level becoming greater in the period ahead. The recent refugee immigration is expected to lead in the short term to increased demand for labour principally in the public sector, meaning that wages are expected to rise slightly faster. In the slightly longer term, the population increase will lead to an increase in the supply of labour, which, in turn, will restrain wage development slightly. The wage rate has thus been revised upwards slightly for 2016 and 2017 and downwards for the end of the forecast period. According to the National Mediation Office's short-term wage statistics, nominal wage increases in the economy as a whole are expected to rise from close to 2.6 per cent this year to around 3.4 per cent in 2018.

Labour costs in the period ahead are expected to develop in line with wages. Increases in social security

Collective bargaining in 2016 - so far

The Riksbank's wage forecasts refer to total wages, including wages above the agreed increases. The forecast assumes that wages will follow the economic activity in the normal way. However, because both the level of the agreements and the way they are constructed are significant in terms of how wages develop, the Riksbank follows the collective bargaining discussions carefully. The collective agreements for around 3 million employees expire in 2016. The trade unions within the industrial sector presented their demands in November. The demand was 2.8 per cent, which is the same level as before the collective bargaining in 2013. Employers within the industrial sector rejected this demand in a debate article and stated that a long period of low wage increases is needed to improve the industrial sector's competitiveness. It is uncertain how powerful the industrial sector's normative role in terms of wages will be in this collective bargaining round. The situation on the labour market is different for different fields, and several trade unions have expressed the opinion that they should have higher wage increases than the industrial sector. This applies to several female-dominated unions within the public sector, for example. The Swedish Trade Union Confederation has not agreed upon joint demands this time. On 21 December, the industrial sector's social partners plan to exchange sector-specific demands and negotiations can then begin after this. The negotiations are expected to be completed by the end of March 2016 at the latest, when the industrial sector's current agreement expires.

Figure 4:8. Cost pressures in the economy as a whole
Annual percentage change



Sources: Statistics Sweden and the Riksbank

contributions for persons under 26 are contributing towards the growth rate of labour costs being slightly higher over the coming year. The stronger GDP growth seen in 2015 has been mainly driven by higher productivity growth. Labour productivity has risen more than expected, increasing by about 3.5 per cent expressed as an annual percentage change during the third quarter of this year. Cost pressures measured as unit labour costs are thereby lower in the short term but are expected to be largely unchanged in the longer term. Unit labour costs will grow by an average of 2 per cent over the period 2016–2018 (see Figure 4:8). This is largely the same forecast as in October.

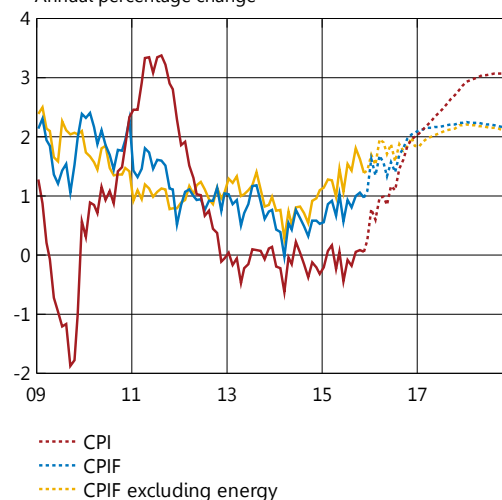
Inflation to continue to increase in 2016

The inflation upturn in Sweden is volatile, as has been illustrated well by developments in November, but the assessment is that underlying inflation will continue to rise. One important explanation for the rising inflation is that the weakening of the krona in recent years, which has led to prices for many imported foodstuffs and goods rising more rapidly. The krona is expected to appreciate slowly, in line with the forecast in October (see Figure 1.5). The positive contributions made to inflation from the exchange rate will then slowly subside.

Over the next few years, a gradually strengthening global economy will contribute to both higher international prices and higher demand for Swedish goods and services. Together with the continued strong domestic demand, this will lead to resource utilisation increasing in the Swedish economy and cost pressures rising. Companies will therefore have more scope to increase their prices. Inflation, measured as the CPIF excluding energy, is expected to be 1.8 per cent in 2016 and to then stabilise around 2 per cent in 2017 (see Figure 4:9). A relatively rapid rise in CPI and CPIF inflation can be expected over the next months. This is because previous falls in energy prices and interest expenses no longer have an effect on the inflation figures to the same extent.

The inflation forecast is somewhat lower for the coming period, when compared to the forecast in October. Inflation was lower than expected in November, which will have an impact on the rate of inflation to a certain extent in the coming period. For example, in 2016, rents and energy prices are also expected to develop slightly less strongly than in the October forecast. This will be partially counteracted by stronger growth in demand as a result of increased refugee immigration, which will contribute to higher inflation in 2016 and 2017. Additionally, there will be a greater positive contribution from energy prices in 2017.

Figure 4:9. CPI, CPIF and CPIF excluding energy
Annual percentage change



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

Sources: Statistics Sweden and the Riksbank

The difference between the CPI and the CPIF

The CPI includes mortgage interest expenditure. This means that inflation, measured in terms of the CPI, is directly affected by changes in interest rates. If monetary policy becomes more expansionary by cutting the policy rate, the CPI also falls despite the purpose of the cut being to raise inflationary pressure in the economy. To correct the rate of inflation for the direct effects of changes in mortgage rates, Statistics Sweden publishes, at the request of the Riksbank, the CPIF measure. In this measure, the mortgage-rate index is kept constant while changes in the capital stock, or developments in the average acquisition price for single-family houses, have the same effect on the CPIF as the CPI. Over the past 20 years, interest rates have shown a falling trend. This means that the CPI has on average been lower than the CPIF. In the long run, when the interest rate has stabilised, the rate of increase in the CPI and the CPIF will be the same.

The forecast for inflation in 2017 has therefore been revised upwards. The higher labour supply will have a slightly restraining effect on both wages and prices until 2018, when the new arrivals will have become established on the labour market to a greater degree.

Article: Uncertain effects of increased immigration on the labour market

The effects that immigration will have on macroeconomic developments will depend on how many of the new arrivals establish themselves on the Swedish labour market and how quickly this can be achieved. Although refugee immigration is estimated to be high both this year and next year, it will take time before the effects on the labour market begin to show. This is partially because processing times are expected to be lengthy, but also because the employment rate and labour force participation are as a rule lower the shorter time a person has been in the country. How well the establishment on the labour market works in the future will depend to a large extent on the ability of institutions, regulations, labour market policy and labour costs to adapt to the rising supply of labour.

Establishment of the new arrivals on the labour market is important for economic development

The effects immigration will have on macroeconomic developments depend on several factors. In the end, however, it is crucial to know, both in terms of the public finances and the economy as a whole, what proportion of the new arrivals will find work. If the employment rate among new arrivals is high then the public finances may be influenced in a positive way, but studies indicate that a much greater proportion would need to be employed than is currently the case.¹¹ On the other hand, the public finances will be impacted negatively in the longer term if this establishment on the labour market does not work.

The path to employment is affected by a range of factors

The population increase over the coming year means that the supply of labour will rise. How easy or difficult it will be for the labour market to adapt to this will depend on both cyclical and structural circumstances. The initial situation on the labour market will be significant, for example. If demand in the economy is high, it will be easier for new arrivals to enter the labour market as employment in this group is generally more sensitive to economic cycles.¹²

Establishment on the labour market is also affected by the reason for migration, the region the person comes from and the level of education among new arrivals. Those who immigrate for labour market reasons very often already have a job upon arrival, while entry onto the labour market generally takes longer for those immigrating as refugees. The proportion migrating to Sweden as refugees has risen in recent years, from around a third in 2010 to two-thirds in 2014. This proportion is expected to increase further in the

coming years.¹³ Most of the people currently coming to Sweden come from the Middle East and Africa. Seen in terms of historical patterns, individuals originally from these regions find it harder to establish themselves on the Swedish labour market in relation to other groups.

Relatively minor effects of increased immigration on the labour market over the coming years

The working-age population (15–74) is now estimated to increase by 95,000 more people in 2018 compared with Statistics Sweden's population forecast from May this year.¹⁴ Despite the rapid population increase, it will take time before the effects on the labour market can begin to be noticed. The Riksbank assumes in its main scenario that around half of these people will be included in the labour force in 2018. The employment rate is assessed to be low initially, between 15–20 per cent. The labour force will thus increase more quickly than employment, which means that unemployment will rise towards the end of the forecast period. The estimates of the boost in the labour force and employment are based in part on the Riksbank's overall view of the economic outlook, as well as on calculations which take into account the fact that the labour force participation rate and employment rate are lower for new arrivals than for those who have been in the country a number of years.¹⁵ However, there is a considerable amount of uncertainty. There are many different factors which affect developments, and these factors also change over time.

Level of education important for establishment on the labour market

The employment rate is generally lower among those born abroad than among those born in Sweden. Studies also indicate that the differences between those born in Sweden

¹¹ See for example Ekberg 2011, "Will future immigration to Sweden make it easier to finance the welfare system?", *European J Population*, 27 (2011) and Flood and Ruist (2015), "Migration, en åldrande befolkning och offentliga finanser" (Migration, an ageing population and public finances), (In Swedish), Appendix 6 to *Långtidsutredningen* (Long-Term Survey of the Swedish Economy) 2015.

¹² See Erikson et al. 2007, "Ungdomars och invandrades inträde på arbetsmarknaden 1985–2003", (Entry of young people and immigrants into the labour market) (In Swedish) IFAU Rapport 2007:18

¹³ See IMF Selected issues Sweden (2015).

¹⁴ The fact that the population will clearly grow faster later in the forecast period is in line with the expectation of lengthy processing times at Migrationsverket, which delay decisions on residence permits and therefore population registration.

¹⁵ See for example "Development of the population affects the labour market" in *The Swedish Economy* June 2015, National Institute of Economic Research, for a description of how the employment rate and labour force participation rate varies depending on period of residence.

and those born abroad reduce the longer someone has been in the country, but that they do not disappear totally.¹⁶

The employment rate increases in line with the level of education regardless of origin. The employment rate among those born outside Sweden with post-secondary education is around 72 per cent, which is more than twice as high as those with only pre-secondary education.¹⁷ An important factor for how well the new arrivals establish themselves on the labour market is therefore the skills they have, both in terms of education and work experience.

Over the past few years, the level of education among refugees coming to Sweden has risen. In the Swedish Public Employment Service's statistics for the establishment programme for example, the proportion with some post-secondary education has nearly doubled since 2011 and now represents just under a third of new arrivals in the establishment programme.¹⁸ At the same time, the proportion with only pre-secondary education has fallen by 14 percentage points and now represents barely half of those registered.¹⁹ The proportion with some post-secondary education is lower compared to the population as a whole, however, and the proportion with only pre-secondary education is considerably higher.²⁰ This increase in the newly arrived refugees' level of education over the past few years means that their establishment on the labour market can occur more quickly than is shown by historical patterns.

So far, however, there is very limited information regarding the level of education of those who have come to Sweden most recently. If this mapping process could start earlier during the asylum process, the process for validating people's education could be made more effective and efforts to supplement education could be started earlier, then entry onto the labour market could be facilitated and could contribute to more people in employment. This also increases new arrivals' options of finding work which corresponds to their education and reduces the risk of their skills becoming outdated.

Establishment can happen more quickly or slowly

It is uncertain how quickly the new arrivals will enter the labour market. If the establishment happens more quickly than the Riksbank's main scenario, it could be deemed conceivable that more people are both entering the labour force and finding jobs. How unemployment will develop will depend on which effects dominate. It is essentially positive that more people are entering the labour force, and are therefore available to the labour market. It also increases the likelihood that they will find work, but contributes in the short term to higher unemployment.

How well the establishment on the labour market works in the future will depend to a large extent on the ability of institutions, regulations, labour market policy and labour costs to adapt to the rising supply of labour. This could mean, for example, broadening the scope of targeted labour market policy programmes, work experience placements and subsidised posts. Studies indicate that countries with low levels of flexibility in terms of wage setting see greater increases in unemployment as a result of increased migration compared to countries with more flexible wage setting.²¹ Targeted measures in the form of labour market policy programmes and different kinds of subsidised work may therefore play an important role in influencing companies' labour costs, and thus their inclination to recruit. In the long term, it could also be a question of structural changes whereby the business sector eventually adjusts to the new composition of the labour force.

If the path into the labour market becomes too long, there is a risk that many people will be shut out of the labour force altogether. In this kind of situation, unemployment may paradoxically be lower, but for the "wrong" reason. How inflation, and hence monetary policy, will be affected by the increased refugee immigration will depend to a large extent on developments on the labour market in the longer term. The consequences for monetary policy are currently deemed to be limited throughout the forecast period. See more in Chapter 1 "Scenario: Refugee immigration is deemed to have only minor effects on monetary policy in the near future".

¹⁶See Nekby, L. (2003), "Empirical Studies on Health Insurance, Employment of Immigrants and the Gender Wage Gap", doctoral thesis, Institute of Economics, Stockholm University.

¹⁷Source: Statistics Sweden, Labour Force Surveys.

¹⁸Since 2010 the Swedish Public Employment Service has been responsible for coordinating establishment activities for certain newly arrived immigrants. The target group for the establishment programme is principally people who have been issues residence permits as refugees, those in need of protection and their relatives.

¹⁹Statistics concerning the level of education of new arrivals are uncertain. They are based initially on a self-assessment in which new arrivals can state what education they have. At a later stage the authorities attempt to verify and validate this education.

²⁰In the population as a whole, 35 per cent had some form of post-secondary education and around 19 per cent had only pre-secondary education in 2014. Source: Statistics Sweden's Register for the population's education.

²¹See Brücker et al. "Migration and Imperfect Labor Markets: Theory and Cross-country Evidence from Denmark, Germany and the UK", IZA Discussion paper No. 6713 (2012).

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

	Q3 2015	Q4 2015	Q1 2016	Q4 2016	Q4 2017	Q4 2018
Repo rate	−0.3	−0.4 (−0.4)	−0.4 (−0.4)	−0.4 (−0.4)	0.1 (0.1)	0.7 (0.7)

Source: The Riksbank

Table 2. Inflation

Annual percentage change, annual average

	2014	2015	2016	2017	2018
CPI	−0.2	0.0 (0.0)	1.3 (1.4)	2.5 (2.4)	3.0 (3.1)
CPIF	0.5	0.9 (0.9)	1.7 (1.8)	2.2 (2.1)	2.2 (2.2)
CPIF excl. energy	0.7	1.4 (1.4)	1.8 (1.8)	2.1 (2.0)	2.2 (2.1)
HICP	0.2	0.7 (0.8)	1.6 (1.7)	2.1 (2.1)	2.1 (2.2)

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

	2014	2015	2016	2017	2018
Repo rate	0.5	−0.3 (−0.3)	−0.4 (−0.4)	−0.1 (−0.1)	0.5 (0.5)
10-year rate	1.8	0.8 (0.8)	1.4 (1.3)	2.3 (2.3)	3.1 (3.0)
Exchange rate, KIX, 18 November 1992 = 100	106.7	112.6 (112.7)	109.4 (110.4)	107.3 (107.3)	105.7 (105.6)
General government net lending*	−1.7	−1.0 (−1.1)	−0.9 (−0.6)	−0.7 (−0.3)	−0.6 (−0.1)

* 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	2014	2015	2016	2017	2018
Euro area	0.14	0.46	0.9	1.5 (1.5)	1.8 (1.7)	2.0 (2.0)	2.1 (2.1)
USA	0.16	0.09	2.4	2.5 (2.5)	2.6 (2.7)	2.5 (2.5)	2.1 (2.1)
Japan	0.05	0.03	−0.1	0.8 (0.7)	1.1 (0.7)	0.4 (0.4)	0.7 (0.5)
China	0.15	0.08	7.5	6.8 (6.8)	6.4 (6.4)	6.1 (6.1)	6.0 (6.0)
KIX-weighted	0.75	1.00	2.0	2.0 (2.0)	2.3 (2.2)	2.5 (2.5)	2.6 (2.5)
World (PPP-weighted)	1.00	—	3.4	3.1 (3.1)	3.6 (3.6)	3.8 (3.8)	3.9 (3.8)

Note. Calendar-adjusted growth rates. The PPP-weights refer to the global purchasing-power adjusted GDP-weights, according to the IMF. The weights for the KIX krona index are updated 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 2012 that are used for 2015, and on an assumption that the weights will develop according to the trend of the past five years in the coming forecast years.

CPI	2014	2015	2016	2017	2018
Euro area (HICP)	0.4	0.1 (0.1)	0.8 (1.0)	1.5 (1.6)	1.8 (1.8)
USA	1.6	0.2 (0.2)	1.8 (1.9)	2.5 (2.5)	2.6 (2.5)
Japan	2.7	0.8 (0.9)	1.4 (1.4)	2.1 (2.1)	2.1 (2.1)
KIX-weighted	1.4	1.1 (1.2)	1.8 (1.8)	2.3 (2.3)	2.3 (2.3)

	2014	2015	2016	2017	2018
Policy rates in the rest of the world, per cent	0.2	0.1 (0.1)	0.0 (0.1)	0.2 (0.3)	0.5 (0.6)
Crude oil price, USD/barrel Brent	99.6	54.0 (54.7)	47.5 (53.9)	53.5 (58.5)	57.1 (61.0)
Swedish export market	3.1	1.9 (1.8)	4.0 (4.2)	5.1 (5.0)	5.1 (5.1)

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

	2014	2015	2016	2017	2018
Private consumption	2.2	2.4 (2.2)	2.8 (2.6)	3.0 (2.9)	2.7 (2.6)
Public consumption	1.3	2.2 (1.9)	4.0 (2.7)	2.5 (1.9)	1.8 (1.8)
Gross fixed capital formation	7.5	7.3 (5.6)	5.1 (5.6)	4.7 (4.6)	4.8 (4.4)
Inventory investment*	0.1	-0.1 (-0.1)	0.1 (0.2)	0.0 (0.0)	0.0 (0.0)
Exports	3.5	4.8 (4.0)	5.5 (4.8)	4.4 (4.4)	4.7 (4.7)
Imports	6.3	4.4 (2.9)	6.3 (6.2)	5.4 (5.4)	5.9 (5.9)
GDP	2.3	3.7 (3.3)	3.6 (3.0)	2.9 (2.7)	2.5 (2.3)
GDP, calendar-adjusted	2.4	3.5 (3.1)	3.3 (2.8)	3.2 (2.9)	2.6 (2.5)
Final figure for domestic demand*	3.1	3.4 (2.8)	3.5 (3.2)	3.2 (2.9)	2.9 (2.7)
Net exports*	-0.9	0.4 (0.6)	-0.1 (-0.4)	-0.3 (-0.3)	-0.4 (-0.4)
Current account (NA), per cent of GDP	4.9	5.5 (6.3)	5.2 (5.7)	4.6 (5.2)	4.0 (4.6)

*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

	2014	2015	2016	2017	2018
Population, aged 15–74	0.7	0.7 (0.7)	1.1 (1.1)	1.6 (1.2)	1.8 (0.9)
Potential hours worked	0.7	0.7 (0.7)	0.7 (0.7)	0.9 (0.7)	1.1 (0.7)
GDP, calendar-adjusted	2.4	3.5 (3.1)	3.3 (2.8)	3.2 (2.9)	2.6 (2.5)
Number of hours worked, calendar-adjusted	1.8	1.0 (1.1)	1.8 (1.3)	1.3 (1.3)	1.2 (1.0)
Employed, aged 15–74	1.4	1.4 (1.3)	1.6 (1.1)	1.3 (1.2)	1.4 (1.1)
Labour force, aged 15–74	1.3	0.8 (0.8)	0.9 (0.8)	1.2 (1.0)	1.5 (0.9)
Unemployment, aged 15–74 *	7.9	7.4 (7.4)	6.8 (7.1)	6.7 (6.9)	6.9 (6.8)

* 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

	2014	2015	2016	2017	2018
Hourly wage, NMO	2.8	2.6 (2.6)	3.2 (3.1)	3.5 (3.4)	3.4 (3.5)
Hourly wage, NA	1.8	3.3 (3.2)	3.3 (3.2)	3.7 (3.6)	3.6 (3.7)
Employers' contribution*	0.0	0.5 (0.3)	0.5 (0.5)	0.0 (0.0)	-0.1 (0.0)
Hourly labour cost, NA	1.8	3.7 (3.5)	3.8 (3.8)	3.7 (3.6)	3.5 (3.7)
Productivity	0.5	2.4 (2.0)	1.5 (1.5)	1.8 (1.6)	1.4 (1.4)
Unit labour cost	1.3	1.3 (1.5)	2.3 (2.2)	1.8 (1.9)	2.0 (2.2)

* 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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PRODUCTION: SVERIGES RIKSBANK. PRINTING: TMG STHLM AB
ISSN 1654-1030 (print)
ISSN 2000-2076 (online)