



Monetary Policy Report

July 2014

Monetary Policy Report

The Riksbank's Monetary Policy Report is published three 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. Each report also contains a description of the new information received since the previous report and an assessment of how the Riksbank views the current economic situation.

The purpose of the Monetary Policy Report is to produce background material for monetary policy decisions, and to spread knowledge about the Riksbank's assessments. By publishing the reports, the Riksbank aims to make it easier for external parties to follow, understand and assess its monetary policy.

The Riksbank must submit a written report on monetary policy to the Riksdag (Swedish Parliament) Committee on Finance at least twice a year (see Chapter 6, Article 4 of the Sveriges Riksbank Act (1988:1385)). 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 2 June 2014. 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.

To subscribe to the Monetary Policy Report, please contact the Riksbank.

E-mail: kontorsservicecenter@riksbank.se

Address: Sveriges Riksbank, SE-103 37 Stockholm, Sweden

Telephone: +46 8 787 00 00

Further information on the Riksbank can be found at: www.riksbank.se

¹ See *Monetary policy in Sweden* on the following page for a review of monetary policy strategy and of what can be regarded as an appropriate monetary policy.

Monetary Policy in Sweden

MONETARY POLICY STRATEGY²

- 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 with a view to achieving sustainable growth and high employment. This is achieved through the Riksbank, in addition to stabilising inflation around the inflation target, also striving to stabilise production and employment around long-term sustainable paths. 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, among other things, its own assessment of the future path for the repo rate. The interest 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 for monetary policy to be well-balanced. A well-balanced monetary policy is normally a question of finding an appropriate balance between stabilising inflation around the inflation target and stabilising the real economy.
- There is no general answer to the question of how quickly the Riksbank aims to bring the inflation rate back to 2 per cent if it deviates from the target. A rapid return may in some situations have undesirable effects on production and employment, while a slow return may have a negative effect on confidence in the inflation target. The Riksbank's ambition has generally been to adjust the repo rate and the repo rate path 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 repo rate 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 during a year, at which it makes decisions regarding the repo rate. In connection with three of these meetings, a Monetary Policy Report is published and in connection with the other three meetings, a Monetary Policy Update 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 interest rate decision and to see the arguments made by the different Executive Board members.

PRESENTATION OF THE INTEREST RATE DECISION

The interest rate 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 of the Executive Board voted and provides the main motivation for any reservations entered. A press conference is held on the day following the monetary policy meeting.

² 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.

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CHAPTER 1 – The economic outlook and inflation prospects

A gradual improvement in international economic activity in general is expected over the coming years. At the same time, global inflationary pressures remain low and the forecast for international policy rates has been revised down. There are still major differences between different regions. In the euro area, the recovery is slowed down by several euro area countries having problems with large debt burdens in both the private and public sectors. The prospects for a recovery in the United States are good, on the other hand, following a temporary decline at the beginning of the year.

The ongoing recovery in the Swedish economy has so far been mainly visible in the strong household sector, while the export industry is showing weaker development. Housing investment and household consumption are expected to continue to increase at a good pace and when demand abroad picks up, growth in the more export-dependent parts of business sector will also increase. Following a slow start to the year, the labour market is expected to improve gradually, with rising employment and lower unemployment.

At the same time as economic activity in Sweden is strengthening, inflation is low and has continued to be surprisingly low. The assessment is that underlying inflationary pressures are significantly lower than assessed in April. The inflation forecast has therefore been revised downwards somewhat for this year and next year, despite the fact that it is now based on a much more expansionary monetary policy. As inflation has been low for some time, and as it is important that inflation expectations should remain anchored around the target of 2 per cent, it is particularly important that inflation should begin to rise towards the target level. The repo rate is therefore being cut to 0.25 per cent and the repo-rate path is being revised down. It is assessed as appropriate to slowly begin raising the repo rate towards the end of 2015. This very expansionary monetary policy will mean that CPI inflation rises gradually and attains 2 per cent at the beginning of 2016. At the same time, the risks linked to high household indebtedness will increase. A low repo rate makes it more urgent for other policy areas to contribute to reducing these risks.

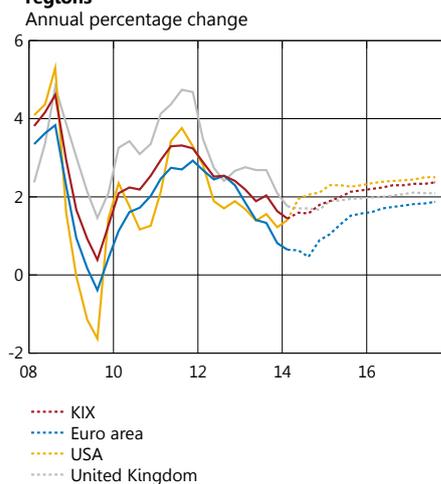
Summary

Slowly improving growth in global economy

The global economy is expected to grow by just over 3 per cent in 2014. This is somewhat lower than the assessment in the April Monetary Policy Update, and partly due to a poorer start to the year than expected, with cold weather in the United States and a temporary slowdown in growth in China. Growth is expected to increase slowly during the forecast period and to be around 4 per cent in 2016 (see Table 4). Inflationary pressures are currently low in many parts of the world. Over the past two years, inflation has continuously declined in both the euro area and the United States. However, it is expected to rise during the forecast period and in 2016 to amount to 1.7 per cent in the euro area and 2.4 per cent in the United States (see Figure 1:1). These forecasts assume, however, that energy prices will continue to develop in a stable manner despite the increased political unease regarding events in Iraq, and also Ukraine.

GDP growth aggregated on the basis of different countries' significance for Swedish trade, KIX, is expected to be lower than global growth as a whole. This is mainly because the euro area, which has a larger weighting in the KIX-weighted GDP measure than the global aggregate, is expected to continue growing slowly. The forecast for KIX-weighted GDP growth is 2 per cent this year, which is an improvement on last year. Over the coming years, growth will improve further and is assessed to be just under 3 per cent in 2016 (see Figure 1:2). The inflation rate in KIX-weighted terms is also expected to rise

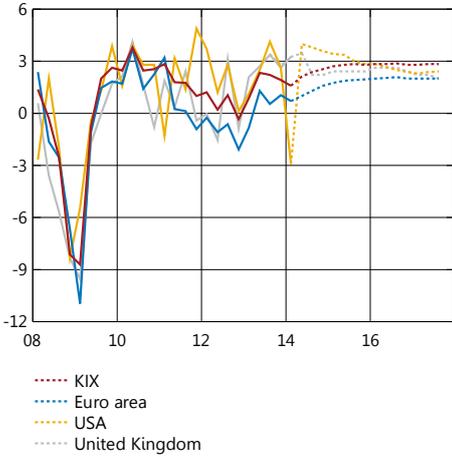
Figure 1:1. Inflation in various countries and regions



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.

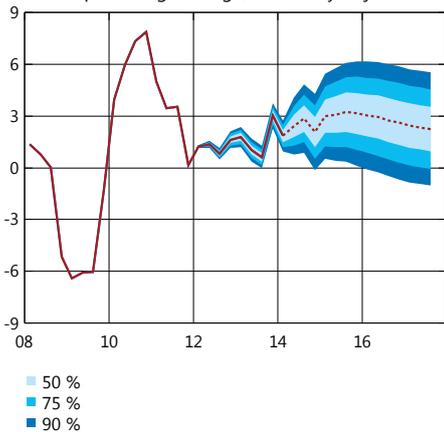
Sources: The Bureau of Labor Statistics, Eurostat, national sources, Office for National Statistics and the Riksbank

Figure 1.2. Growth in various countries and regions
 Quarterly change in per cent, calculated as an annual percentage change, seasonally-adjusted data



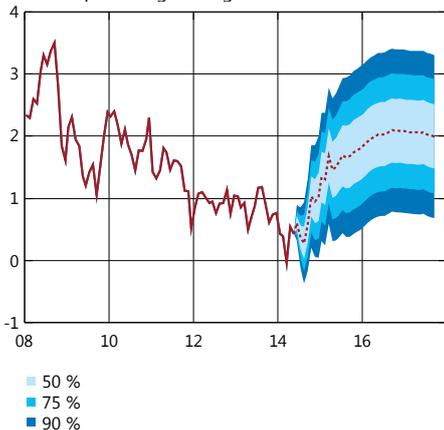
Note. KIX is an aggregate of the countries that are important to Sweden's international transactions.
 Sources: Bureau of Economic Analysis, Eurostat, national sources, Office for National Statistics and the Riksbank

Figure 1.3. GDP with uncertainty bands
 Annual percentage change, seasonally-adjusted data



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

Figure 1.4. CPIF with uncertainty bands
 Annual percentage change



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

during the forecast period, from around 1.5 per cent this year to just over 2 per cent at the end of the forecast period (see Figure 1:1).

Developments in the euro area are marked by the need for the private and public sectors in several countries to reduce their debt. Although the financial markets have stabilised, the banks' lending is continuing to fall, albeit at a less rapid pace. Companies in the countries with sovereign debt crises are still facing much higher interest rates than companies in other euro area countries. The economic recovery is thus still sluggish. In the United States, the recovery is continuing, following a temporary downswing at the start of 2014. Developments on the labour market remain favourable and corporate profits are currently high. This, together with a relatively high level of confidence among companies, creates the conditions for positive developments in the coming period.

Central banks abroad are continuing to conduct expansionary monetary policy, but are in different phases. In the United States, the Federal Reserve has continued to taper its asset purchases and market pricing indicates that the first policy rate increase will come during the second half of 2015. In the United Kingdom, strong economic growth and statements by the central bank have contributed to the market pricing a first increase in the policy rate as early as the end of 2014. The ECB, on the other hand, has recently taken measures in a more expansionary direction and, for instance, cut its policy rate to 0.15 per cent and signalled that the interest rate will be low for a long time.

■ **Economic activity in Sweden strengthening but inflation is low**

In Sweden, consumption and housing investment have shown relatively strong development and are expected to continue increasing at a good pace. The gradual increase in demand abroad will contribute to growth increasing gradually in other parts of the more export-dependent business sector, too. GDP is expected to grow at a rate of 2.2 per cent this year and 3.3 per cent next year. As the spare capacity in the economy is put to use, growth will gradually slow down (see Figure 1:3).

When economic activity strengthens, the labour market situation will also improve. Employment is expected to continue rising and unemployment to fall. Towards the end of the forecast period, unemployment is expected to amount to almost 6.5 per cent.

Most of the components of the CPI, such as food prices, prices of goods and services, have recently shown weaker development than normal. The broad downturn in inflation over the past year indicates that underlying inflationary pressures are very low. The forecast for inflation has therefore been revised down for this year and next year, despite now being based on a much lower repo-rate path. Measured as an annual percentage change, CPIF inflation will be very low in the coming months. Towards the end of 2014 and at the beginning of 2015, it will rise relatively rapidly when the tangibly low price increases in autumn 2013 and spring 2014 no longer affect the annual rate of increase. During the forecast period, rising resource utilisation is expected to lead to more rapid wage increases and provide greater scope for companies to raise their prices. This in turn will contribute to CPIF inflation

continuing to increase gradually to attain 2 per cent at the beginning of 2016 (see Figure 1:4).

CPI inflation, which is currently lower than CPIF inflation, will rise more quickly during the forecast period, as households' mortgage rates will begin to rise when the repo rate is eventually raised (see Figures 1.5 and 1.6). The rate of increase in the CPI is expected to be just over 3.0 per cent towards the end of the forecast period.

Very low repo rate so inflation can rise towards the target

As inflation has been low for some time, and as it is important that inflation expectations should remain anchored around the target of 2 per cent, inflation needs to rise towards the target level. The repo rate is therefore being cut to 0.25 per cent and the repo-rate path is being revised down. It is assessed as appropriate to slowly begin raising the repo rate towards the end of 2015. This very expansionary monetary policy will mean that CPIF inflation rises gradually and attains 2 per cent at the beginning of 2016. At the same time, the risks linked to high household indebtedness will increase. A low repo rate makes it more urgent for other policy areas to contribute to reducing these risks.

The recovery abroad is continuing

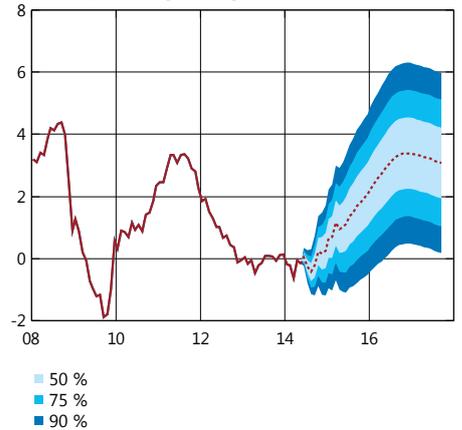
Economic activity improving slowly in the euro area

The recovery in the euro area is moving slowly, following a protracted period of low growth. Some progress has been made in reducing the fiscal policy imbalances and improving competitiveness in the countries with sovereign debt crises. But unemployment remains high and several euro area countries have problems with high indebtedness in both their private and public sectors, which is holding back demand.

Companies in the countries with sovereign debt crises are still facing much higher interest rates than companies in other euro area countries (see Figure 1:7). Stricter credit terms, particularly for small and medium-sized enterprises in the countries with sovereign debt crises, mean that the banks' lending is continuing to decline, albeit at a less rapid pace (see Figure 1:8). While an increased issuance of corporate bonds has compensated for the decline in bank lending to some extent, this applies mainly to the larger companies and the market is limited.

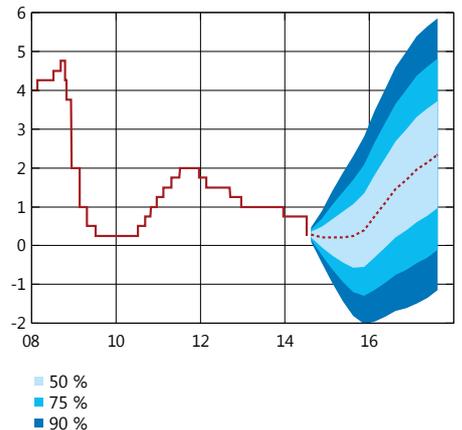
In the short run, credit granting has probably also been held back by the banks wishing to strengthen their balance sheets prior to the ECB's ongoing review of the quality of their assets and the stress test planned together with the European Banking Authority. The review and the stress test are important steps in rebuilding confidence in the banking system and ultimately correcting the falling credit granting and thus laying the foundations for sustainable economic recovery. In recent months, it has been possible to discern some stabilisation in bank lending. Surveys indicate that fewer banks are now tightening their credit terms, at the same time as it is clear that the demand for loans has begun to increase.

Figure 1:6. CPI with uncertainty bands
Annual percentage change



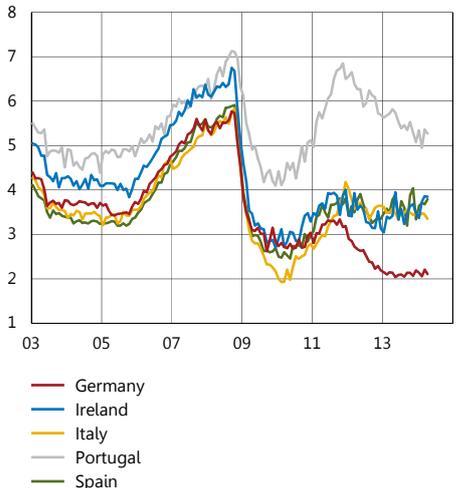
Note. The uncertainty bands are based on the Riksbank's historical forecasting errors.
Sources: Statistics Sweden and the Riksbank

Figure 1:5. Repo rate with uncertainty bands
Per cent



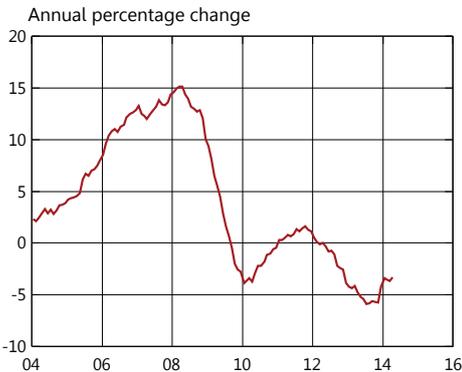
Note. The uncertainty bands for the repo rate are based on the Riksbank's historical forecasting errors and the ability of risk-premium adjusted forward rates to forecast the future repo rate for the period 1999 up to the point when the Riksbank started to publish forecasts for the repo rate during 2007.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

Figure 1:7. Lending rates for companies in the euro area
Per cent



Note. MFI's lending to non-financial companies, new contracts.
Source: ECB

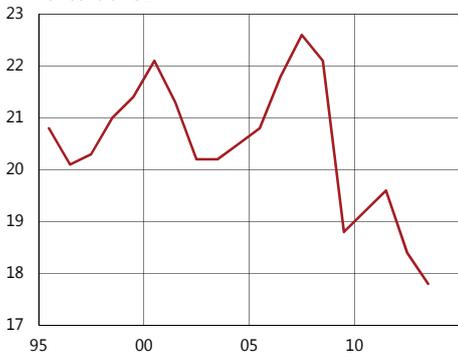
Figure 1.8. Bank lending to companies in the euro area



Note. MFI's lending to non-financial companies.

Source: ECB

Figure 1.9. Investments in the euro area



Source: Eurostat

The ECB has announced an extensive support package to facilitate access to bank loans for small and medium-sized enterprises. This support package includes targeted 4-year liquidity loans to banks. The ECB is also preparing to make future purchases of covered bonds. In addition, they have cut their policy rate to 0.15 per cent and introduced a negative interest rate on the banks' surplus reserves. The purpose of the support package is to increase the rate of inflation to around 2 per cent and to anchor inflation expectations.

After several years of falling investment in the euro area, investment is low from an historical perspective. At present, investment as a share of GDP is around 5 percentage points lower than prior to the financial crisis (see Figure 1:9). Investment is expected to return very slowly to a more normal level, as confidence improves and resource utilisation increases. A gradual improvement in the functioning of the credit market is also expected to contribute to normalisation.

The forecast for growth in the euro area in 2014 and 2015 has been revised down somewhat in relation to the assessment in the Monetary Policy Update in April as a result of the economy proving to be weaker than expected to start with (see Table 4). The forecast for 2016 has been revised up somewhat as a result of the ECB's support package. However, the effects of the support package are assumed to be limited in the forecast, as much of the contents of the package was already expected. At the same time, many of the details in the support package remain unclear, which makes it difficult to quantify potential effects. The continuing weak development in GDP over the coming years will mean that resource utilisation is lower than normal.

The forecast for inflation in 2014 has been revised down and inflation is expected to be just over 0.5 per cent, and then to slowly rise to just below 2 per cent towards the end of the forecast period as resource utilisation gradually increases and companies can increase their profit margins (see Figure 1:1). The falling inflationary pressures over the past two years are largely due to low demand in the euro area. In addition, inflationary pressures have also been dampened by lower energy and food prices, and by an appreciation of the euro. Monetary policy is expected to be very expansionary throughout the forecast period, in line with the ECB's communication.

■ Continued recovery in the USA following temporary setback

In the United States, GDP growth was surprisingly low at the start of 2014. However, this was partly due to the unusually cold weather and indicators point to some recovery being likely during the second quarter. Developments on the labour market remain favourable, with unemployment continuing to fall gradually. Corporate profits are currently high, and this, combined with relatively high confidence among companies, creates good conditions for a continued increase in employment and investment in the coming period. Consumption is also expected to continue to rise as the labour market strengthens and incomes increase. Developments on the housing market have been weaker than expected, but current statistics point to a recovery.

The forecast for GDP growth in the United States has been revised down substantially for 2014 in relation to the forecast in the April Monetary Policy Update, which is due to the unexpectedly weak start to the year. For 2015 and 2016, on the other hand, the forecast is largely unchanged and GDP is expected to grow by a good 3 per cent in 2015 and then to fall back slightly (see Figure 1:2). Inflation, which has slowed down over the past two years, is expected to rise gradually during the forecast period as the spare capacity in the economy is put to use (see Figure 1:1). The recovery is supported by the expectation that the Federal Reserve will conduct an expansionary monetary policy during the entire forecast period.

■ Good prospects on important export markets

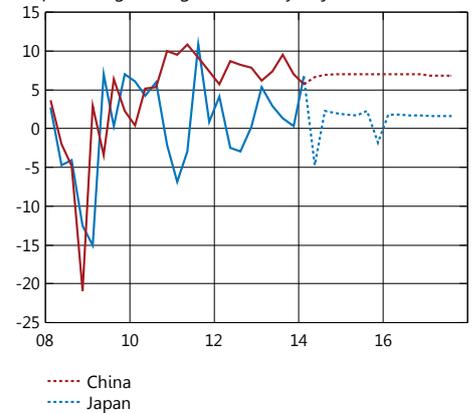
In the United Kingdom, GDP growth is expected to remain relatively high, with growth of around 2.5 per cent during the forecast period (see Figure 1:2). Higher real incomes, increased confidence among households and less tight fiscal policy mean that domestic demand will be relatively strong. The improvement in the economy, together with low mortgage rates and a low supply of housing has led to an increase in housing prices, which may constitute a risk in the long run. Inflation is assessed to be close to the Bank of England's inflation target of 2 per cent (see Figure 1:1). Monetary policy remains expansionary, as there is still spare capacity in the economy. But the strong economic growth and statements by the Bank of England have contributed to the market pricing a first increase in the policy rate at the end of 2014.

In Denmark, the situation on the housing market is continuing to improve. The number of forced sales has declined, at the same time as housing prices have stabilised over the past couple of years. GDP is expected to grow by around 2 per cent during the forecast period. Inflation is low now, as a result of the weak resource utilisation, but falling energy and import prices also contribute. During the forecast period, inflation is expected to rise to around 2 per cent.

The Norwegian economy slowed down somewhat in 2013. Consumption has been held back by households choosing to increase their saving. The economy is expected to grow at a moderate but gradually increasing pace when international growth picks up. Both resource utilisation and unemployment are assessed to be close to their normal levels. The forecast for inflation is just below the target of 2.5 per cent during the forecast period, while the policy rate, in line with Norges Bank's forecast, is expected to remain at the current level, 1.5 per cent, until 2016, when gradual increases will begin.

Figure 1:10. GDP in China and Japan

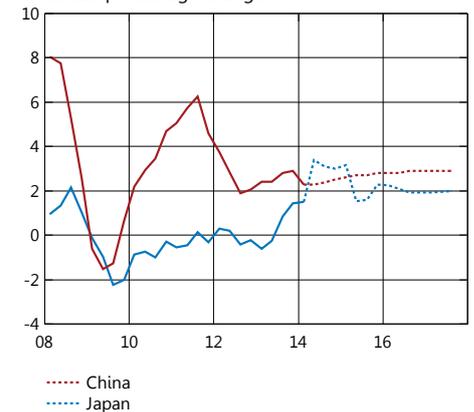
Quarterly change in per cent, calculated as an annual percentage change, seasonally-adjusted data



Sources: Japanese Cabinet Office, National Bureau of Statistics of China and the Riksbank

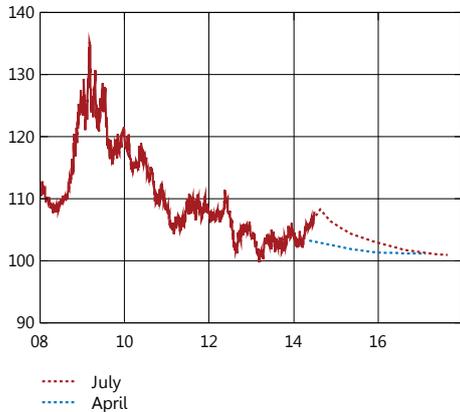
Figure 1:11. CPI in China and Japan

Annual percentage change



Sources: National Bureau of Statistics of China, Statistics Bureau of Japan and the Riksbank

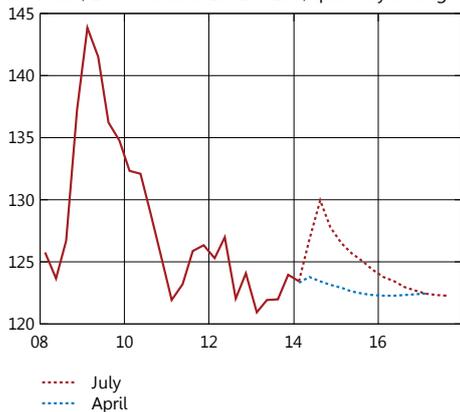
Figure 1:12. KIX-weighted nominal exchange rate Index, 18 November 1992 = 100



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

Source: The Riksbank

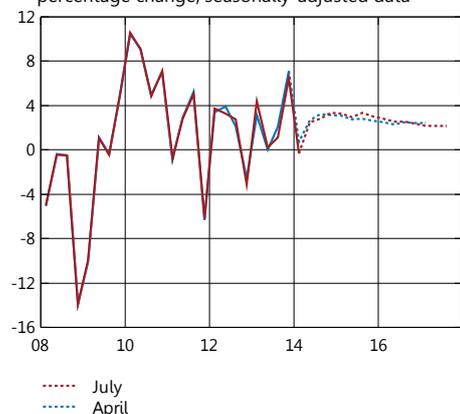
Figure 1:13. KIX-weighted real exchange rate Index, 18 November 1992 = 100, quarterly averages



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

Sources: National sources, Statistics Sweden and the Riksbank

Figure 1:14. GDP
Quarterly change in per cent, calculated as an annual percentage change, seasonally-adjusted data



Sources: Statistics Sweden and the Riksbank

■ Slowdown in China, but growth still high

In China, attempts are being made to rebalance the economy, so that growth is less dependent on investment and exports and more aimed at private consumption. Growth slowed down somewhat more than expected at the start of 2014, but is nevertheless expected to be around 7 per cent during the forecast period (see Figure 1:10). Inflation has also been somewhat lower than expected at the start of 2014, but is expected to rise gradually towards 3 per cent during the forecast period (see Figure 1:11).

Developments in Japan are marked by the increase in VAT implemented in April. During the months prior to this, retail trade sales rose substantially and then fell heavily again in April. The VAT increase has also had a major impact on inflation, which rose substantially. Regardless of these fluctuations, the prospects for the Japanese economy remain roughly unchanged since the Monetary Policy Update was published in April. GDP growth is expected to be just over 1 per cent during the forecast period and inflation is expected to be close to the target of 2 per cent (see Figures 1:10 and 1:11).

■ Krona weaker but will appreciate further ahead

The Swedish krona has weakened since the Monetary Policy Update in April, in both nominal and real terms. This weakening has mainly been against sterling and the US dollar, but the krona has also weakened against the euro. This can be largely explained by weaker outcomes than expected, which has led to expectations of more expansionary monetary policy from the Riksbank in relation to other countries.

The forecast for the nominal exchange rate in the longer run is based on an assessment of how the real exchange rate, that is, the nominal exchange rate adjusted for price levels in Sweden relative to the rest of the world, will develop. The real exchange rate is currently assessed to be somewhat weaker than its long-run level. Both the nominal and the real exchange rates are therefore expected to strengthen during the forecast period (see Figures 1:12 and 1:13).

In Sweden, economic activity is continuing to improve

■ Continued strong domestic demand

The ongoing recovery in the Swedish economy has so far been mainly visible in the strong household sector, while the export industry is showing weaker development. Housing investment and household consumption are expected to continue to increase at a good pace and when demand abroad picks up, growth in the more export-dependent parts of business sector will also increase.

GDP growth is expected to amount to 2.2 per cent this year and 3.3 per cent next year (see Table 5). Monetary policy will contribute to resource utilisation rising gradually during the forecast period. Compared with the assessment in the April Monetary Policy Update, GDP growth is expected to be somewhat lower this year, but higher in 2015 and 2016 (see Figure 1:14).

In Sweden, the expansionary monetary policy will also contribute to low market rates, which will mean good financing terms for the government, the banks and the banks' customers. This, together with low volatility on the international financial markets, contributes to favourable financial conditions in general. Strong demand for corporate bonds has also meant that more companies are replacing bank loans with more favourable market funding.

Higher international demand leads to stronger Swedish exports

Growth on Sweden's most important export markets has been subdued, which has contributed to exports increasing more slowly than normal. However, as international growth picks up, exports will also increase more rapidly (see Figure 1:15). Swedish exports of goods, which largely consist of intermediate and investment goods, are also expected to benefit from the faster increase in international investment in the coming years.

An increasingly strong demand on both the domestic and export markets will also lead to an increase in demand for imported goods and services. This year, imports will grow faster than exports, which means that net exports will provide a negative contribution to GDP growth. During the years 2015–2016, imports and exports are expected to grow at roughly the same pace and net exports are expected to provide a positive contribution.

Strong household sector

Households are relatively optimistic, which is reflected in the increase in consumption and house prices (see Figure 3:9). In recent years, households have also increased their saving. The low interest rates, combined with a rise in employment and tax cuts, will contribute to households' nominal disposable incomes growing by 4.5 per cent in 2014. During 2015–2016, incomes will be subdued when monetary and fiscal policy gradually become less expansionary, all in all. However, the stronger economic activity will mean that household consumption increases at a good pace and household saving declines (see Figure 1:16).

Households increasingly wealthy, while debts are increasing

Low interest rates, combined with a limited supply of housing in many regions, have contributed to a relatively rapid increase in housing prices recently. Prices are expected to continue to rise during the coming years, which will contribute to an increase in household wealth. However, it also means that household debt will increase, as house purchases are largely financed through loans. Household debts are expected to increase faster than incomes, which means that household debt as a percentage of disposable income will rise (see Figures 1:17 and 1:18). Compared with the assessment in April, the forecast for the debt ratio has been revised up, mainly due to lower interest rates meaning that debts increase at a faster pace. At the end of the forecast period, the debt ratio is now assessed to be around 185 per cent, which is high from both a historical and an international perspective.

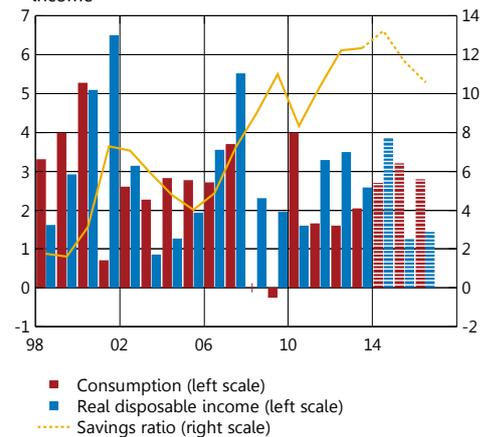
Figure 1:15. Exports and the Swedish export market
Annual percentage change, calendar-adjusted data



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

Sources: Statistics Sweden and the Riksbank

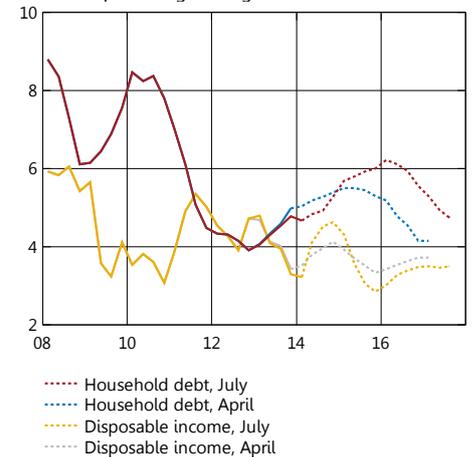
Figure 1:16. Households' real disposable incomes, consumption and saving ratio
Annual percentage change and per cent of disposable income



Note. The savings ratio includes collective insurance schemes. Disposable income has been deflated using the household consumption deflator.

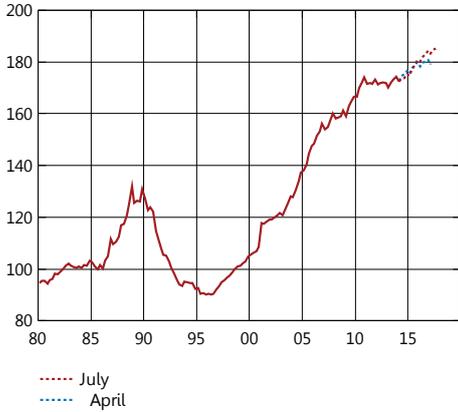
Sources: Statistics Sweden and the Riksbank

Figure 1:17. Household debts and disposable incomes
Annual percentage change



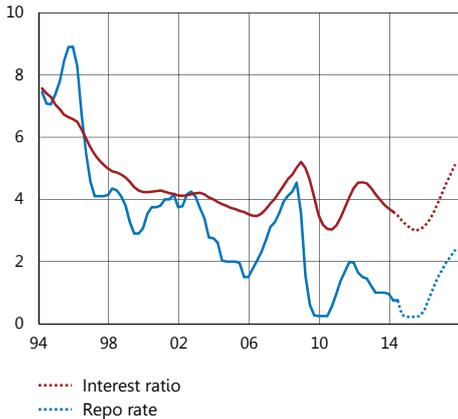
Sources: Statistics Sweden and the Riksbank

Figure 1:18. Household debt ratio
Per cent of disposable income



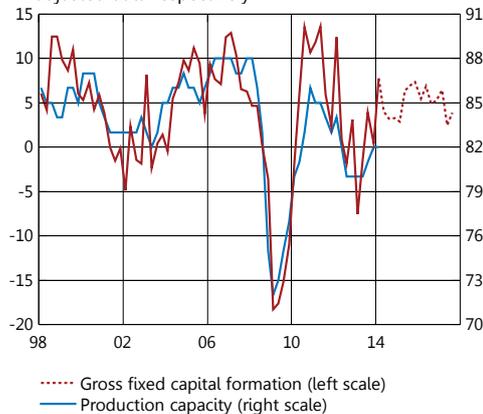
Note. Households' total debts as a share of their disposable incomes. Totalled over the past four quarters.
Sources: Statistics Sweden and the Riksbank

Figure 1:19. Households' interest ratio and the repo rate
Per cent



Note. Households' interest expenditure, not adjusted for FISIM, as a percentage of disposable income. Totalled over the past four quarters.
Sources: Statistics Sweden and the Riksbank

Figure 1:20. Gross fixed capital formation and capacity utilisation
Annual percentage change and per cent, seasonally-adjusted data respectively



Note. Production capacity in the manufacturing industry.
Sources: National Institute of Economic Research, Statistics Sweden and the Riksbank

The interest ratio, that is, household interest expenditure as a share of their disposable income, is just over 3 per cent. The low interest rates have counteracted the effects on interest expenditure of higher debts. However, in the coming years, rising mortgage rates and debts will mean that a larger share of household income goes on interest expenditure. The interest ratio will be almost 5 per cent at the end of 2017, despite mortgage rates then being low from an historical perspective (see Figure 1:19).

■ **Rising demand contributes to higher investment**

Total investment increased rapidly during the first quarter of this year and growth in housing investment has been high over the past year. Even if Statistics Sweden's investment survey indicates slower development in investment in the business sector over the coming quarters, companies' need for new investment is expected to increase in the coming period, as demand and capacity utilisation rise (see Figure 1:20).

The low interest rates and good financial conditions are also expected to contribute to the upturn in investment. According to the National Institute of Economic Research's Economic Tendency Survey in May 2014, companies' funding opportunities have improved in general over the past year. The Riksbank's Business Survey also indicates that companies' funding conditions are continuing to improve.

■ **Current account surplus expected to decline somewhat**

General government net lending is expected to show a deficit of 1.9 per cent of GDP in 2014. As fiscal policy becomes less expansionary and economic activity strengthens, general government net lending is expected to improve in 2015 and 2016 and the deficit to be 0.2 per cent of GDP in 2016. The forecast for net lending has been revised down somewhat in 2015 and 2016, compared with the forecast in April.

The surplus on the current account that Sweden has had for almost 20 years reflects the high total financial saving (see Figure 1:21). During the forecast period, the household sector is expected to reduce its saving. Saving in the corporate sector is also expected to decline as investment increases (see Table 5). These falls will to some extent be counteracted by the increase in public sector saving. All in all, however, the surplus on the current account will decline somewhat in the coming years, although it is expected to remain at a high level.

■ **Employment increasing faster following weak start to the year**

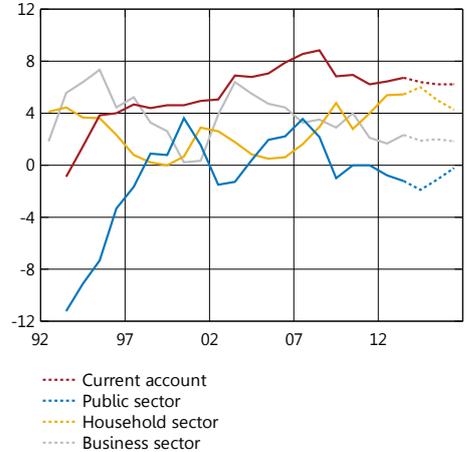
Developments on the Swedish labour market were subdued at the start of the year. Growth in employment was weak in the first quarter and unemployment rose somewhat, to 8.1 per cent. At the same time, the number of hours worked developed more strongly than expected, and in recent months employment has begun to increase more quickly. Indicators point to the labour market continuing to improve in the coming period.

Labour force participation has developed strongly in recent years, despite the fact that demographic developments have the opposite effect. The labour market reforms implemented over the past decade have probably contributed to the strong development. In the long run, an increased supply of labour provides the conditions for higher employment, but in the short run it can entail challenges with regard to matching job-seekers and job vacancies, for instance. The large supply of labour could then contribute to keeping unemployment at a high level. However, the Riksbank assesses that labour force participation will slow down during the forecast period (see Figure 1:22). This is mainly explained by the fact that the demographic contribution is weak, the population of working age (15–74 years) consists to a greater extent of groups with a relatively low average workforce participation. As economic activity strengthens, the demand for labour will also increase and employment is expected to continue to rise. This will mean that unemployment gradually falls. Towards the end of the forecast period the employment rate, that is, the number of employed as a percentage of the population aged 15–74, is expected to amount to almost 67 per cent, and unemployment is expected to have fallen to just below 6.5 per cent (see Figures 1:22 and 1:23). This is a slightly lower unemployment figure than was forecast in the April Monetary Policy Update.

■ **Resource utilisation will rise in the coming period**

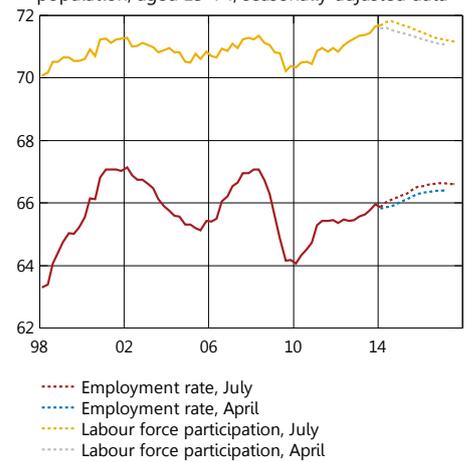
During the first quarter, GDP growth was somewhat weaker than expected and unemployment was somewhat higher. This could imply that resource utilisation is now lower than was previously assessed. At the same time, the number of hours worked increased unexpectedly rapidly. The Riksbank’s assessment is, all-in-all, the same as in the April Monetary Policy Update, when resource utilisation was assumed to be lower than normal (see Figure 1:24). Industrial capacity utilisation has risen according to both Statistics Sweden and the National Institute of Economic Research’s Business Tendency Survey, albeit from low levels. Other indicators also point to resource utilisation being lower than normal. Rising demand abroad and in the domestic economy, supported by expansionary monetary policy, mean that resource utilisation will rise during the forecast period. As in the assessment made in April, resource utilisation is expected to be normal towards the end of 2015.

Figure 1:21. Current account and net lending in different sectors
Per cent of GDP



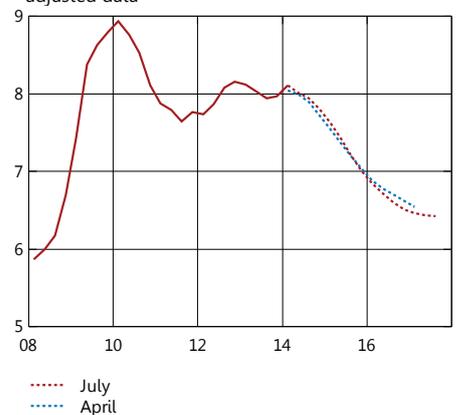
Sources: Statistics Sweden and the Riksbank

Figure 1:22. Employment rate and labour force participation
Employment and labour force as percentage of the population, aged 15–74, seasonally-adjusted data



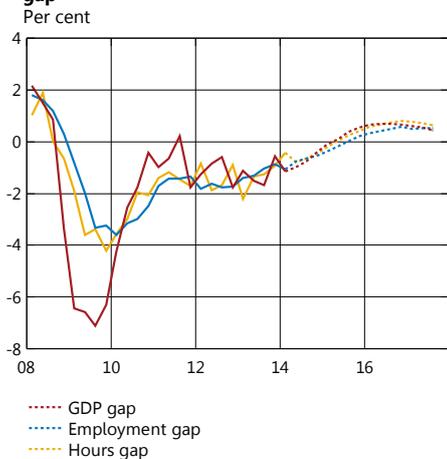
Sources: Statistics Sweden and the Riksbank

Figure 1:23. Unemployment
Per cent of the labour force, 15–74 years, seasonally-adjusted data



Sources: Statistics Sweden and the Riksbank

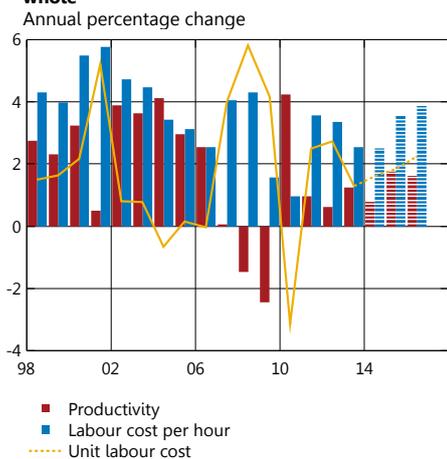
Figure 1:24. GDP gap, employment gap and hours gap



Note. The GDP gap refers to the GDP deviation from trend, calculated using a production function. The hours gap and the employment gap refer to the deviation of the number of hours worked and the number of those employed from the Riksbank's assessed trends.

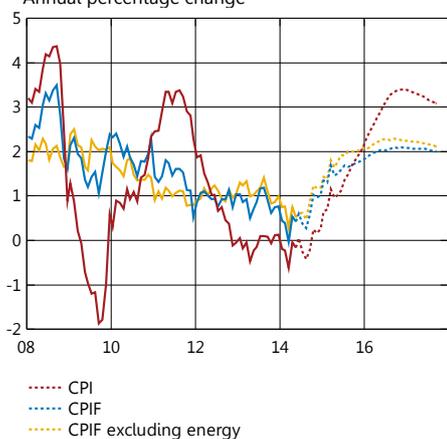
Sources: Statistics Sweden and the Riksbank

Figure 1:25. Cost pressures in the economy as a whole



Sources: Statistics Sweden and the Riksbank

Figure 1:26. CPI, CPIF and CPIF excluding energy



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

Sources: Statistics Sweden and the Riksbank

■ **Rate of wage increase rising gradually**

According to the compilation of the National Mediation Office, agreed wages will increase by 2.2 per cent this year and 2.3 per cent next year. During 2015, local and branch wage agreements for almost one million employees will be signed. The next large-scale wage bargaining rounds will be in 2016, when wage agreements covering a good 2.7 million employees expire.

Assessments of future wage agreements and of developments in the economy and the labour market are important factors in the Riksbank's estimate of wage developments in the coming period (see the article "The interplay between wage formation, monetary policy and inflation"). During the forecast period, the rate of wage increase in the economy as a whole is expected to rise gradually as economic activity and the labour market situation improve (see Figure 1:25). In the Riksbank's company interviews, which were held in May, companies in the service industries in particular were now stating that wage drift would be higher one year ahead. According to the short-term wage statistics, the rate of wage increases in the economy as a whole will rise from 3 per cent this year to 3.5 per cent in 2016.

The assessment in the Monetary Policy Update in April was that productivity was temporarily high at the end of 2013. However, there was a greater rebound than expected during the first quarter of this year, which means that the forecast for productivity growth in 2014 has now been revised down. During 2015–2016 productivity growth in the Swedish economy is expected to be close to the historical average, which is slightly higher than the forecast in the April Monetary Policy Update. Unit labour costs, which are explained by developments in both productivity and labour costs, will thus increase by 2 per cent on average during the period 2014–2016. This is a slightly higher rate of increase than was expected in the April Monetary Policy Update.

■ **Inflation forecast revised down, despite very low policy rate**

Inflation has been lower than the assessment in the April Monetary Policy Update and is expected to remain low in the coming period (see Figure 1:26). Most of the components of the CPI have increased more slowly than normal. There are several reasons for the low inflation. For instance, the weak demand in Sweden and abroad has contributed to moderate cost increases and low price mark-ups (see the article "Why is inflation low?").

The Swedish krona has strengthened gradually in recent years, but has recently weakened. Compared with the assessment made in April, it is now expected to be weaker for most of the forecast period. This indicates that inflation will be somewhat higher than was previously expected. Unit labour costs, which are the cost measure usually used to explain companies' pricing over time, have also been revised up for this year.

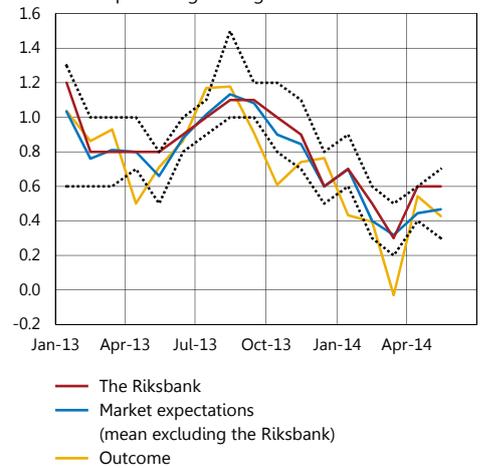
The Monetary Policy Update in April emphasised the uncertainty over when and how quickly inflation would rise, particularly given that inflation had been unexpectedly low over a period of time. Since January 2013, the monthly outcomes for CPIF inflation have on the whole been lower than both the Riksbank and other analysts had forecast (see Figure 1:27). The broad downturn in inflation and the gradual downward revisions to the inflation forecast imply that underlying inflationary pressures in Sweden and abroad are very low and lower than has previously been forecast. The forecast for inflation in 2014–2015 has therefore been revised down.

During the forecast period, demand will increase both in Sweden and abroad, and resource utilisation will gradually rise. An expansionary monetary policy will contribute to this development. This will in turn lead to more rapid wage increases and provide greater scope for companies to raise their prices. The rate of increase in international goods prices is also expected to rise as global economic activity improves. Inflationary pressures will thus gradually increase during the forecast period.

When measured as an annual percentage change, however, the rate of increase in the CPIF and the CPIF excluding energy is very low in the coming months. In line with the assessment in April, inflation will increase towards the end of 2014 and at the beginning of 2015, when the low outcomes in autumn 2013 and spring 2014 no longer affect the annual rate of increase. After that, CPIF inflation is expected to continue to rise gradually and to attain 2 per cent at the beginning of 2016 (see Figures 1:28 and 1:29). Compared with the forecast in April, inflation is expected to be lower both this year and next year, despite the assessment now being based on a much more expansionary monetary policy (see Figures 1:28–1:31).

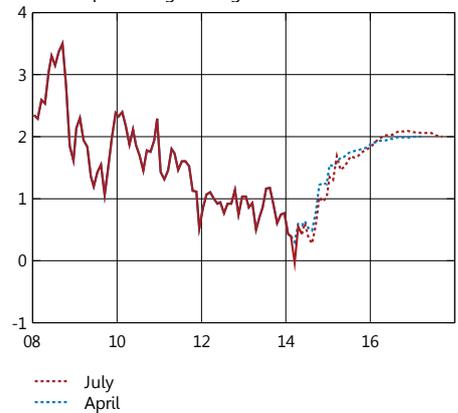
Households' mortgage interest expenditure will rise when the increases in the repo rate begin. This will in turn lead to CPI inflation increasing faster than CPIF inflation (see Figure 1:26). During periods with large interest rate adjustments, CPIF inflation, which does not include the direct effects of interest rate adjustments, provides a better picture of underlying inflationary pressures than the CPI. In the longer run CPI inflation and CPIF inflation will coincide, however.

Figure 1:27. The Riksbank's and markets' short-term forecasts for CPIF inflation
Annual percentage change



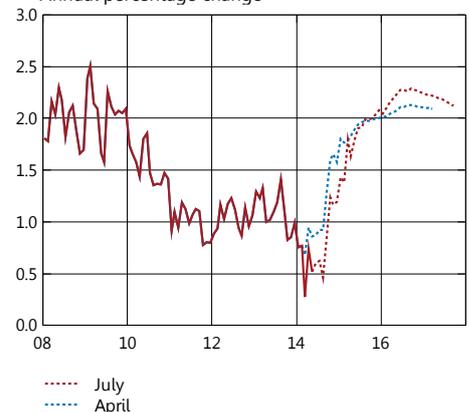
Note. The Riksbank's CPIF forecasts according to the most recently-published assessment and market expectations, compared with outcomes. The Riksbank's figures are not entirely comparable with market participants' expectations, as the Riksbank's forecasts are often older. Broken lines refer to the highest and lowest forecasts for all forecasters.
Sources: Bloomberg, Statistics Sweden and the Riksbank

Figure 1:28. CPIF
Annual percentage change



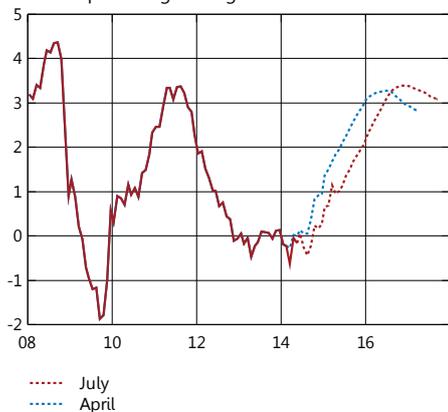
Note. The CPIF is the CPI with a fixed mortgage rate.
Sources: Statistics Sweden and the Riksbank

Figure 1:29. CPIF excluding energy
Annual percentage change



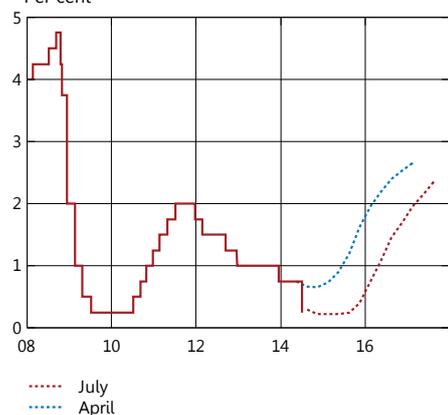
Note. The CPIF is the CPI with a fixed mortgage rate.
Sources: Statistics Sweden and the Riksbank

Figure 1:30. CPI
Annual percentage change



Sources: Statistics Sweden and the Riksbank

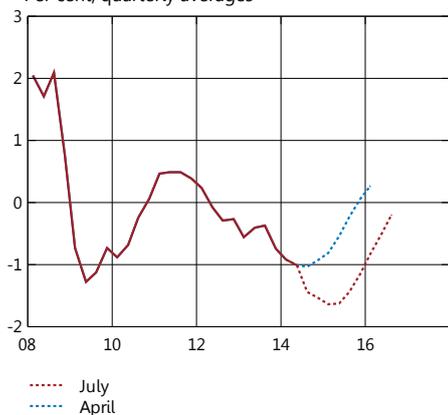
Figure 1:31. Repo rate
Per cent



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

Source: The Riksbank

Figure 1:32. Real repo rate
Per cent, quarterly averages



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

Sources: Statistics Sweden and the Riksbank

Monetary policy considerations

The Executive Board of the Riksbank has decided to cut the repo rate by 0.5 percentage points to 0.25 per cent. The repo-rate path is also much lower than was forecast in April. The repo-rate path reflects both some probability that the repo rate could be cut further and that a first increase could come later than was previously forecast. Increases in the repo rate will not begin until the end of 2015, and it is expected to be over 2 per cent during the latter part of 2017. Both the nominal and real interest rates are much lower than was forecast in the April Monetary Policy Update (see Figures 1:31 and 1:32).

The main reasons why the repo rate and the repo-rate path are being cut substantially are that inflation has been lower than expected, that inflationary pressures are expected to become much lower and that the forecast for international policy rates has been revised down (see Figure 1:33). However, economic activity is continuing to strengthen at the same time as the risks linked to the high level of household indebtedness are expected to increase.

■ Economic activity strengthening but inflation is low

A gradual improvement in international economic activity in general is expected over the coming years. At the same time, global inflationary pressures are still low and the forecast for international policy rates has been revised down substantially.

The ongoing recovery in the Swedish economy has so far been mainly visible in the strong household sector. When demand abroad picks up, growth in the more export-dependent parts of the business sector will also increase. Following a slow start to the year, the labour market is expected to improve gradually, with rising employment and lower unemployment.

At the same time as economic activity in Sweden is strengthening, inflation is low and has continued to be surprisingly low. The broad downswing in inflation also indicates that underlying inflationary pressures are very low. The inflation forecast has therefore been revised downwards somewhat for this year and next year, despite the fact that it is now based on a much more expansionary monetary policy than in April (see Figures 1:28–1:31). A more expansionary monetary policy and rising demand mean that CPIF inflation will rise gradually and reach 2 per cent in early 2016.

■ Very low repo rate so inflation can rise towards the target

As inflation has been low for some time, and as it is important that inflation expectations should remain anchored around the target of 2 per cent, it is particularly important that inflation should begin to rise towards the target level. The repo rate is therefore being cut to 0.25 per cent and the repo-rate path is being revised down substantially. Now that monetary policy in Sweden is becoming even more expansionary, demand in the whole economy will increase, which will contribute to higher inflationary pressures. A lower repo rate also contributes to counteracting the effects of a stronger krona and lower import prices, which could result from lower international policy rates. In addition to pushing up actual inflation, the expansionary monetary

policy can contribute to inflation expectations remaining anchored around 2 per cent by sending a clear signal that monetary policy will ensure that inflation approaches the inflation target within a reasonably near future.

It is assessed as appropriate to slowly begin raising the repo rate at the end of 2015. By that time, inflation will have picked up, GDP growth will have been increasing strongly for around one year and unemployment will have fallen somewhat. At the end of the forecast period, the repo rate is expected to be over 2 per cent. From an historical perspective, this is a low policy rate in a stage where economic activity is considered to be balanced and CPI inflation is close to 2 per cent. Similar conditions apply for many other central banks. For example, both the Federal Reserve and the Bank of England have communicated that their policy rates will be lower than normal even after inflation is in line with the target and resource utilisation is at a normal level.

■ Risks linked to household indebtedness will increase

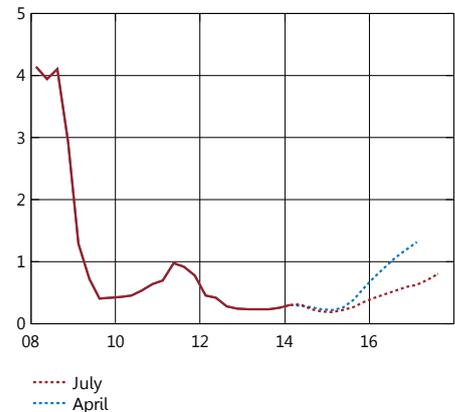
A lower repo rate and repo-rate path than in the assessment in April are thus needed for inflation to rise towards the target. The low interest rates are already contributing to a relatively rapid increase in household consumption, housing construction and housing prices. This development is now being reinforced, and household debt as a percentage of their income is expected to increase more than was previously forecast. This increases the risks that the economy will develop in a way that is not sustainable in the long run.

Higher interest rates would reduce the risk of financial balances building up. But they could also increase the risk that inflation will remain low, that inflation expectations will fall and that the role of the inflation target as nominal anchor will be weakened. The very low inflationary pressures at present mean that monetary policy is even more focused on bringing up the inflation rate.

A low repo rate makes it more urgent for other policy areas to manage the risks linked to household indebtedness and to developments on the housing market. Finansinspektionen (the Swedish financial supervisory authority) has recently presented stricter capital requirements for Swedish banks. The main elements in the stricter requirements are an increase in the risk weight floor for Swedish mortgages and a countercyclical capital buffer. All in all, the most important effect of these measures is expected to be the fact that the resilience of the Swedish banking system strengthens. However, the effects on household debt are expected to be minor.

To reduce the risks of a development that is not sustainable in the long run, it is not enough just to take measures to strengthen the resilience of the banking system; measures aimed directly at households' demand for credit are also required. The responsibility for this lies with the Government and other public authorities. Various types of measure should be considered, not least if indebtedness increases faster than expected. Examples of such measures include a stricter mortgage ceiling, an amortisation requirement and changes in the tax deductions for interest expenditure.³ The Riksbank has also previously recommended that Finansinspektionen should ensure that healthy minimum levels are introduced into the discretionary income

Figure 1:33. Policy rate abroad
Per cent



Note. Refers to an aggregate of the USA, the euro area, the United Kingdom, and Norway. The euro area refers to EONIA.

Sources: Bank of England, EURIBOR FBE, Federal Reserve Bank of New York, Norges Bank and the Riksbank

³ See also "Sweden—2014 Article IV Consultation Concluding Statement of the Mission", June 2014, IMF.

calculations included in the banks' credit assessments.⁴ If further measures are not taken, there is a greater risk of setbacks, which could damage the Swedish economy and also make things difficult for monetary policy further ahead.

The Riksbank will, as before, monitor and analyse risks and resilience in the financial system and ascertain how these affect general economic development and thereby monetary policy.

■ **Uncertainty over economic outlook and inflation prospects**

Various indicators and surveys now point to inflationary pressures rising in the coming period, although it is uncertain how quickly this will occur. The fact that companies' profit margins appear to have been strained as a result of weak demand may mean that inflation rises more rapidly than expected when demand strengthens. But at the same time, inflation has for a long time been surprisingly low and this in itself constitutes an uncertainty in the forecast. Moreover, the development of the krona is an important source of uncertainty. It is assumed in the forecast that the krona will weaken substantially in the near term as a consequence of the large cut in the repo rate and the repo-rate path. If this effect is greater than expected, it will mean that import prices become higher and that inflationary pressures increase. On the other hand, if this effect does not arise, or if the krona appreciates more than expected when the increases in the repo rate eventually begin, it could lead to lower inflationary pressures.

The forecast assumes that household debt will increase somewhat faster than was assumed in April, as a result of lower interest rates, in accordance with estimated historical correlations. However, one cannot rule out the possibility that lower interest rates over a long period of time will lead to both higher housing prices and higher indebtedness than these correlations imply. If the increase in credit is unexpectedly rapid, it could affect the conditions for monetary policy.

Developments abroad also comprise an uncertainty factor in the forecast. The recovery in the euro area is progressing slowly and inflationary pressures are low. There is a risk that it will take longer than expected until the economies of the euro area correct their structural problems and until growth picks up speed. On the other hand, the measures announced by the ECB could have greater effect than the Riksbank has assumed and the recovery could be more rapid.

If the conditions for monetary policy change, the policy conducted may need to be more or less expansionary. If monetary policy needed to become more expansionary, this would primarily entail cutting the repo rate further and delaying the first increase. And if a lower repo rate and repo-rate path are not sufficient, the Riksbank can take further measures to increase the expansiveness of its monetary policy.

⁴ For the Riksbank's views on the banks' discretionary income calculations, see Financial Stability Report 2014:1, pp. 20–22, Sveriges riksbank.

■ CHAPTER 2 – Alternative scenarios and risks

The forecast in the main scenario is for economic activity to improve in the coming period and thus for wage increases in the economy to rise in line with historical patterns. However, wage developments could quite easily be different from the assumption in the main scenario. This chapter begins with a description of two alternative scenarios, one in which wages rise more slowly and one in which wages rise more rapidly than in the main scenario. The scenarios aim to illustrate how the economy is affected and how monetary policy would be formulated if developments in wages were not in line with the main scenario assumption. After this, two alternative scenarios are presented, one in which the repo rate is higher than in the main scenario, and one in which it is lower.

Forecasts of future economic developments are always uncertain. There are a number of circumstances that could lead to a different course of development and thus justify a different direction for monetary policy than the one expected in the main scenario. This is reflected in the uncertainty bands around the forecasts in Figures 1:3–1:6. This chapter illustrates the uncertainty by describing alternative scenarios in which economic developments differ from the developments in the main scenario.

An important assumption in the main scenario is that wages will increase in pace with the improvement in economic activity in an historically normal way. The way that wage formation in the Swedish economy works and how it interacts with monetary policy in principle is described in the article "The interplay between wage formation, monetary policy and inflation". The alternative scenarios presented in this chapter aim to describe how monetary policy is affected and how it may be formulated if wage formation gives rise to rates of wage increases that deviate from those in the main scenario.

The monetary policy consequences of lower or higher wage increases largely depend on the factors that lie behind the change in wage developments. The Monetary Policy Report published in July 2011 described two scenarios with a higher rate of wage increase than in the main scenario. In one case the higher rate of wage increases is compatible with higher productivity growth and in the other case the higher rate is due to other factors. These scenarios from the 2011 report thus describe how inflation and unemployment may develop, depending on whether or not the rate of wage increase is linked to productivity growth. If wages increase in pace with productivity the companies' cost pressures remain unchanged and the impact on inflation is very limited. This means that real wages are higher and it becomes more profitable to work. The number of hours worked thus increases and unemployment falls. The effects on monetary policy are small, taken together. However, if the rate of wage increase is higher than productivity growth, both inflation and unemployment will be higher, because companies' costs will rise. In such a case, the repo rate may need to be raised to counteract the increased inflationary pressures.

In the alternative scenarios that follow in this chapter, we will highlight the latter case, that is when the rate of wage increase differs due to factors over and above the development of productivity. The chapter contains two alternative scenarios for the development of wages.⁵ In the first scenario it is assumed that slower wage increases lead to inflationary pressures and

⁵ The scenarios are based on the Riksbank's macroeconomic model, Ramses. For a description of the model, see M. Adolfson, S. Laséen, L. Christiano, M. Trabandt, and K. Walentin, (2013), Ramses II: Model description, *Occasional Paper no. 12*, Sveriges riksbank.

unemployment being lower than in the main scenario. In such a situation, monetary policy will need to be more expansionary to counteract the reduced inflationary pressures and bring inflation back towards the target of two per cent. The increases in the repo rate therefore begin at a later date than in the main scenario. In the second scenario, it is assumed that wage increases will instead be faster than in the main scenario. Compared with the scenario with lower wage increases, the effects on the economy thus become the opposite, that is, inflationary pressures become higher than in the main scenario. For inflation to stabilise around the target at the end of the forecast period, monetary policy must instead become less expansionary. The increases in the repo rate would therefore begin sooner than in the main scenario.

The chapter concludes with a description of two different monetary policy courses of action. The first scenario entails the repo rate being raised more than in the main scenario, whereas the second alternative entails the reverse.

Alternative scenario: Lower wages

Empirically, there is a strong negative correlation between the development of unemployment and nominal wages (see Figure A19). When unemployment increases, nominal hourly wages tend to rise more slowly, and vice versa when unemployment declines. Purely theoretically, however, it is real wages that determine companies' wage costs in relation to the prices they can charge for their goods and services, and are closely related to employment. Real wages affect companies' demand for labour and thereby employment. Although the agreements reached by the social partners refer to nominal wages, these take into account the parties' expectations of inflation and productivity growth, and thereby also determine expected real wages. The nominal wage that is negotiated thus reflects the importance the parties place on attaining a higher rate of employment, which can be affected by the prevailing labour market situation.

The wage increases in recent years are thus largely due to the developments on the labour market. The forecast in the main scenario assumes that the labour market will improve, with rising employment and falling unemployment in the coming years. This is expected to lead to the rate of wage increase rising in accordance with historical correlations. In the main scenario, wages increase by 3.1 per cent in 2015 and 3.5 in 2016, according to the short-term wage statistics. Wage increases in 2015 are about 0.8 percentage points higher than the average agreement level of 2.3 per cent (see Figure A17). However, it is not certain that wages will rise in line with the business cycle in the same way as before. For instance, wage drift could be lower than in the main scenario, so that actual wages come closer to the agreement levels than has previously been the historical norm. It is also possible that the next wage bargaining rounds, which will begin in autumn 2015, will result in agreements that are lower than is historically normal.

One reason why wage agreements could be lower than expected is that the social partners could place greater emphasis on increased employment than before. Another is that the weak demand for exports could lead to low wage agreements in industry. As the Industrial Agreement plays a normative role in wage bargaining, this could have a restraining effect on other areas. In addition, the outcome in terms of real wages has been higher than expected due to the unexpectedly low inflation of recent years, which could also have a restraining effect on both agreements and wage drift in the period ahead. Inflation expectations can also play a role in wage developments. Even if long-term inflation expectations are well-anchored around the inflation target, inflation expectations for the shorter run have fallen in recent years (see Figure 3:33), which could also indicate lower wage increases both in and over and above the agreements.

Changes in wage increases affect the economy through different channels

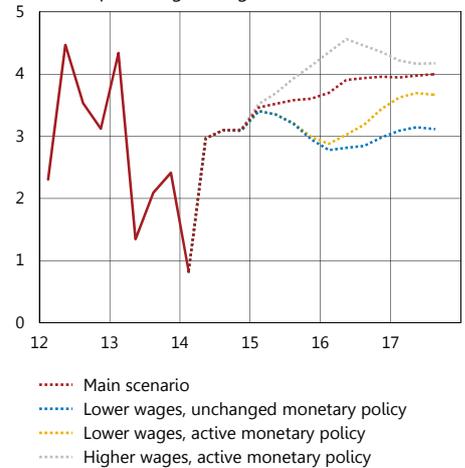
There is an interdependence between monetary policy and wage setting. To illustrate this, we analyse the effects of a lower rate of wage increase in two steps. First the effects are analysed when monetary policy is unchanged, so that the repo-rate path is the same as in the main scenario (see the blue lines in Figures 2:1–2:7 and Table 8). Then there is an analysis of the effects of monetary policy being formulated so that CPI inflation is stabilised around 2 per cent towards the end of the forecast period (see the yellow lines in Figures 2:1–2:8 and Table 9).

This scenario assumes that the nominal rate of wage increase will be slightly lower in 2015 and about one percentage point lower in 2016–2017 than is assumed in the main scenario (see Figure 2:1). Real wages will thus also be slightly lower than in the main scenario (see Figure 2:2). One effect of the slower rate of wage increase is that costs for labour will fall. Companies can then produce more at the same cost. This leads to increased demand for labour, which in turn leads to an increase in employment and lower unemployment. Moreover, companies have an opportunity to reduce their production costs further by using more labour and less capital to a certain extent. If monetary policy is held unchanged, unemployment therefore falls somewhat faster than in the main scenario (see Figure 2:3). This also leads to a more positive hours gap at the end of the forecast period (see Figure 2:4).

Another effect of companies' costs becoming lower is that it creates scope for lower prices. Inflationary pressures will thus be lower than in the main scenario (see Figures 2:5 and 2:6). If monetary policy is held unchanged, the real interest rate in the economy will rise, which subdues total demand. This leads to lower GDP growth in relation to the main scenario, despite the number of hours worked in production increasing (see Figure 2:7).

The effect on inflation and the real interest rate may be lower, however, if companies choose to improve their margins instead of reducing their prices. Recently, unit labour costs have increased faster than prices (see the article "Why is inflation low?"). If companies increase their margins, the rate of inflation could be roughly the same as in the main scenario. The effects on the real interest rate and thus also on demand and GDP growth would then be smaller.

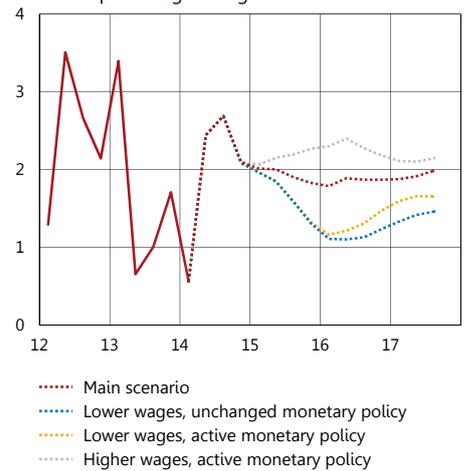
Figure 2.1. Nominal wages
Annual percentage change



Note. Nominal wages refer to labour costs per hour according to the National Accounts.

Sources: Statistics Sweden and the Riksbank

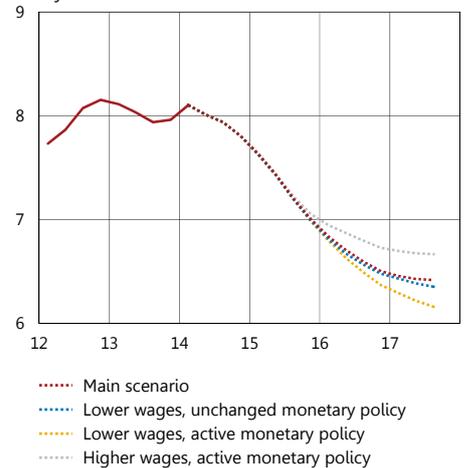
Figure 2.2. Real wages
Annual percentage change



Note. Real wages refer to labour costs per hour according to the National Accounts deflated by the CPIF.

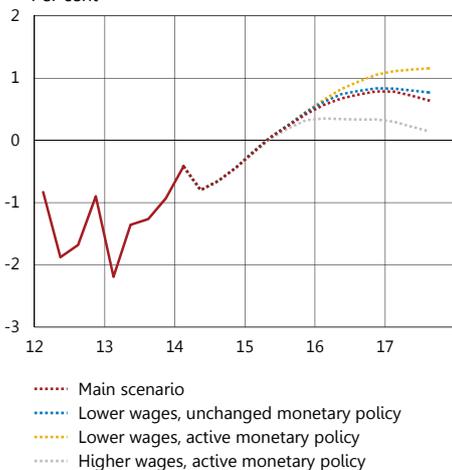
Sources: Statistics Sweden and the Riksbank

Figure 2.3. Unemployment
Per cent of the labour force, aged 15–74, seasonally-adjusted data



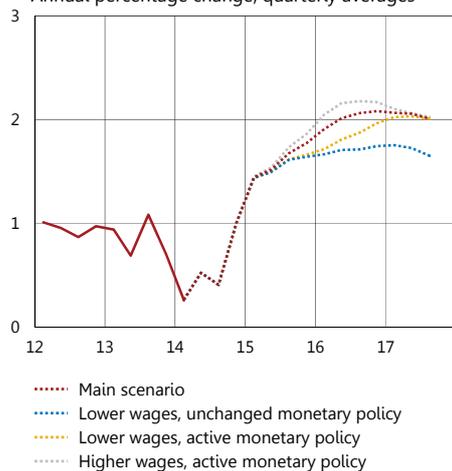
Sources: Statistics Sweden and the Riksbank

Figure 2.4. Hours gap
Per cent



Sources: Statistics Sweden and the Riksbank

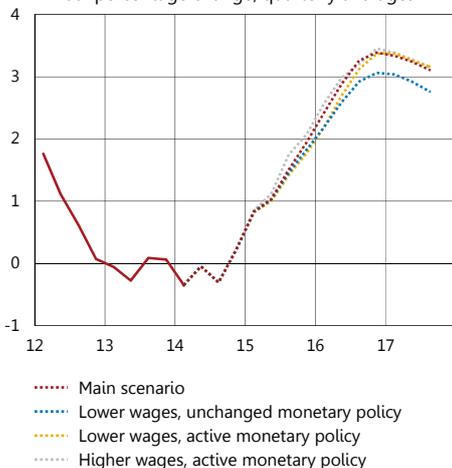
Figure 2.5. CPIF
Annual percentage change, quarterly averages



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

Sources: Statistics Sweden and the Riksbank

Figure 2.6. CPI
Annual percentage change, quarterly averages



Sources: Statistics Sweden and the Riksbank

There are thus two different driving forces behind developments on the labour market in the event of a lower rate of wage increase. The first driving force is that companies' increased demand for labour contributes to an increase in resource utilisation in the labour market. The second is that the higher real interest rate, which is the case when the repo-rate path is unchanged, contributes to a fall in demand, which has a counteracting effect on resource utilisation. All else being equal, the higher real interest rate leads to lower GDP growth. Depending on which of these two driving forces dominates, resource utilisation in the labour market could either become higher or lower. The way in which the scenario in Figures 2:1–2:8 is constructed will, if monetary policy is held unchanged, mean that employment rises slightly and unemployment falls, while GDP growth is lower.

■ **More expansionary monetary policy gives higher inflation and employment**

When the repo-rate path is held unchanged, the lower rate of wage increase means that inflation is lower than in the main scenario (see Figures 2:5 and 2:6). To stabilise CPIF inflation around 2 per cent, monetary policy needs to be more expansionary. Increases in the repo rate will then begin later than in the main scenario and it will then rise at a slower pace (see Figure 2:8). The lower repo rate will now mean that the real interest rate is lower, instead of higher, as in the case with unchanged monetary policy. This leads in turn to an increase in demand and contributes to GDP growth rising to a level higher than in the main scenario (see the yellow line in Figure 2:7). The increased demand now reinforces the positive effect on the labour market arising from companies' demand for labour increasing (compare the blue and yellow lines in Figures 2:3 and 2:4). Unemployment will thus be a little lower still than in the case with an unchanged repo rate. The interplay between monetary policy and wage formation is thus significant for developments on the labour market.

A lower repo rate also leads to household indebtedness increasing at a faster pace. This increases the risks that the economy will develop in a way that is not sustainable in the long run. The way the repo rate is ultimately set entails a balance between the development of inflation and the development of the risks linked to indebtedness.

Alternative scenario: Higher wages

Just as there are factors that suggest wage increases could be lower than in the main scenario, there are factors that suggest they could be higher. There have been structural changes on the Swedish labour market in recent years, which has resulted in a change in the composition of unemployment. The unemployed group now contains a larger share of people with a weaker connection to the labour market. This can affect the functioning of the labour market and could lead to higher wage increases at a given level of unemployment, if companies need to use higher wages to a greater extent to compete with one another for staff with the right competence. It is also conceivable that other agreement areas will sign wage agreements that are higher than the Industry Agreement's norm, which could in turn push up the rate of wage increase. This could be the case if, for example, developments on the labour market were to differ substantially between different agreement areas.

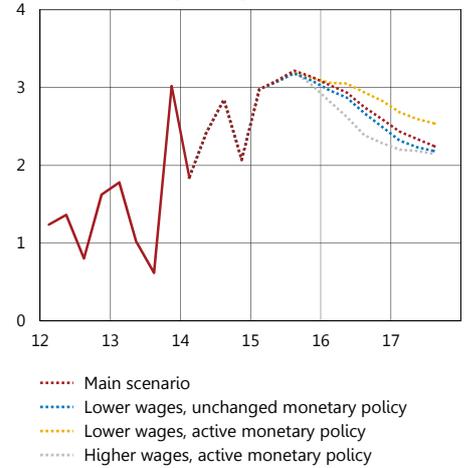
■ Higher wage increases mean higher inflation and lower resource utilisation

A higher rate of wage increase means that the effects on the economy are the opposite to the alternative scenario with lower wages (see the grey lines in Figures 2:1–2:8 and Table 10). The costs to companies now become higher than in the main scenario, which means that they demand less labour and that they may wish to raise their prices more rapidly than in the main scenario. This means that inflation will be higher than in the main scenario, while the number of hours worked and the hours gap will be lower and unemployment will be higher.

It is assumed in this scenario that monetary policy focuses on stabilising CPIF inflation around 2 per cent, so the increases in the repo rate begin somewhat earlier and are implemented at a somewhat faster pace than in the main scenario (see Figure 2:8). The tighter monetary policy leads to a decline in demand and to GDP growth being lower than in the main scenario (see Figure 2:7).

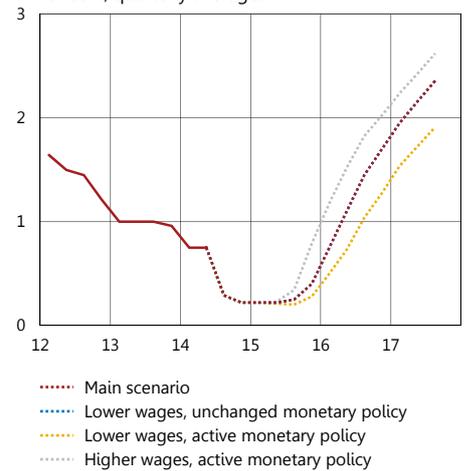
In this case, too, it is uncertain how companies would choose to change their prices in practice. Over the past few years, the rate of increase in unit labour costs has been higher than the rate of increase in prices. This implies that companies have found it difficult to pass on their cost increases to prices. It is therefore possible that the upturn in the rate of inflation will be more limited. If this were to happen, monetary policy would not need to be tightened in the same way.

Figure 2:7. GDP
Annual percentage change



Sources: Statistics Sweden and the Riksbank

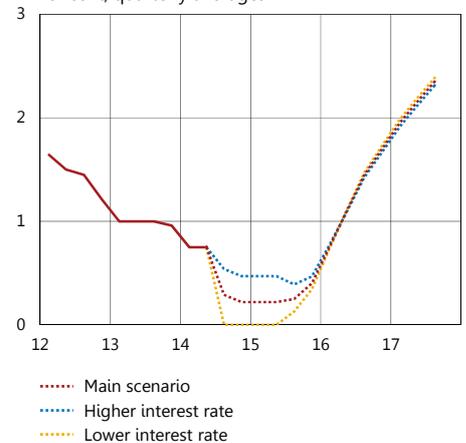
Figure 2:8. Repo rate
Per cent, quarterly averages



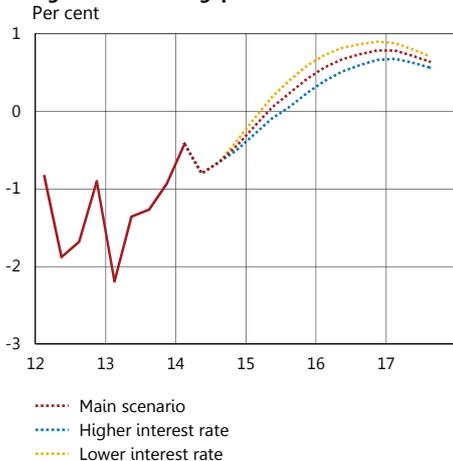
Note. Blue line hidden under the red line.

Source: The Riksbank

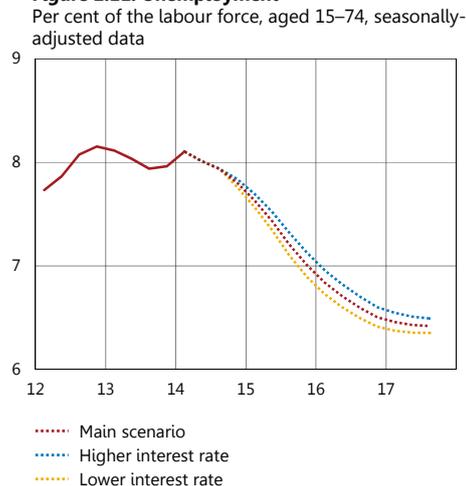
Figure 2:9. Alternative repo rate paths
Per cent, quarterly averages



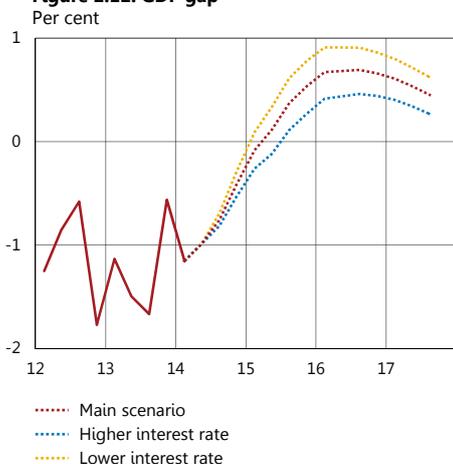
Source: The Riksbank

Figure 2:10. Hours gap

Sources: Statistics Sweden and the Riksbank

Figure 2:11. Unemployment

Sources: Statistics Sweden and the Riksbank

Figure 2:12. GDP gap

Sources: Statistics Sweden and the Riksbank

Alternative scenarios for the repo rate

As inflation has been low for some time, and as it is important that inflation expectations should remain anchored around the target of 2 per cent, it is particularly important that inflation should begin to rise towards the target level. The repo rate is therefore being cut by 0.5 percentage points, to 0.25 per cent, and the repo-rate path is being revised down substantially, compared with the April Monetary Policy Update. This section describes two alternative scenarios with minor variations around the repo-rate path in the main scenario. Its purpose is to illustrate the effects of a somewhat tighter monetary policy and a somewhat more expansionary monetary policy respectively on inflation, resource utilisation and household debt. In the first scenario, monetary policy is somewhat less expansionary in that the repo rate is set 0.25 percentage points higher than in the main scenario in four quarters. The second scenario describes the effects of a somewhat more expansionary monetary policy, where the repo rate is set at zero in four quarters (see Figure 2:9 and Tables 11 and 12).

■ Higher repo rate slows down demand

A higher repo rate causes the banks and other financial institutions to raise their saving and lending rates. When households face higher interest rates, they choose to increase their saving and reduce their consumption. The consequence of this is that Swedish companies will face slightly lower demand for their goods and services. When demand for labour falls and interest rates rise, companies will slow down their investment. Moreover, higher interest rates will lead to the yield on Swedish assets rising in relation to foreign assets, which will lead, in turn, to the exchange rate strengthening in relation to the main scenario. This will also contribute towards demand falling and imported goods becoming cheaper. All in all, a higher repo rate means that both growth and resource utilisation will be slightly lower than in the main scenario (see the blue lines in Figures 2:10–2:12). Lower demand, lower wage increases and cheaper imported goods lead to companies slowing down their rate of price increase, which results in somewhat lower inflation than in the main scenario (see Figures 2:13 and 2:14). As mortgage rates rise in relation to the main scenario, household indebtedness is also somewhat lower than in the main scenario (see Figure 2:15).

■ **Lower repo rate increases demand**

In the second scenario the Riksbank instead conducts a more expansionary monetary policy. In this case, the repo rate is cut to zero and remains at this level for a year. The effects on household saving and consumption will thus be the opposite of the scenario with a higher repo rate. The lower return on saving will lead households to increase their consumption, which has a positive effect on demand. The lower interest rates also stimulate investment and the exchange rate weakens. Consequently, GDP growth and resource utilisation are higher than in the main scenario (see the yellow lines in Figures 2:10–2:12), at the same time as inflation and the household debt ratio are somewhat higher (see Figures 2:13–2:15).

A complicating circumstance with this scenario is that it is difficult to know how economic agents will act and how financial markets will function when interest rates are very low.⁶ The very low repo rate in 2009–2010, which was 0.25 per cent at its lowest, does not appear to have caused any problems on the financial markets, however. The Riksbank therefore assesses that the repo rate can be cut further from the current level of 0.25 per cent.

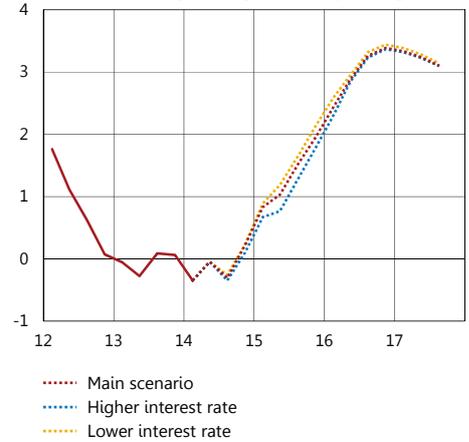
■ **Limited effects, compared with the revisions to the main scenario**

The two repo-rate paths, higher repo rate and lower repo rate, serve the purpose of illustrating how alternative paths for monetary policy affect inflation, resource utilisation and household debt. The two scenarios show that an even lower repo rate than in the main scenario would lead to CPIF inflation attaining 2 per cent somewhat faster than in the main scenario, but also overshooting the target more. Moreover, it would lead to household debt increasing somewhat faster, which is thought to further increase the risks that the economy would develop in a way that is not sustainable in the long run.

A slightly higher repo rate, on the other hand, would lead to CPIF inflation being somewhat lower than in the main scenario and attaining 2 per cent a quarter or so later than in the main scenario, while household debt was comparatively lower. A higher repo rate would therefore to some extent reduce the risk of financial imbalances building up, but would at the same increase the risk of inflation expectations falling.

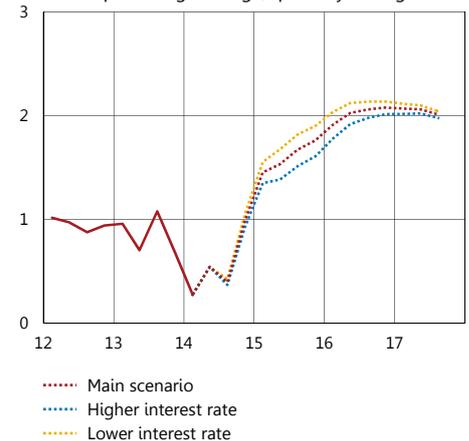
Compared with the major revisions to the repo-rate path made in the main scenario, however, the effects of the alternative repo-rate paths are limited. The most important purpose of the substantial changes in the repo-rate path in the main scenario is to contribute to that inflation expectations remain anchored around 2 per cent by sending a clear signal that monetary policy will ensure that inflation approaches the inflation target within the reasonably near future.

Figure 2:13. CPI
Annual percentage change, quarterly averages



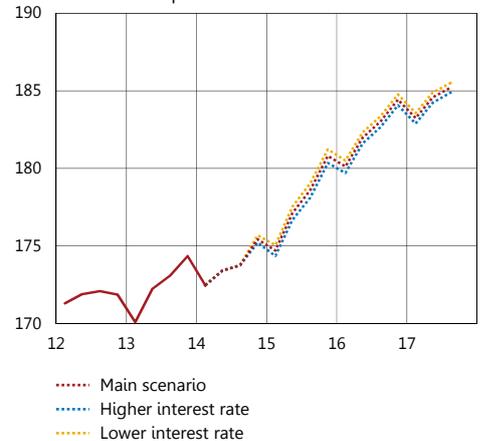
Sources: Statistics Sweden and the Riksbank

Figure 2:14. CPIF
Annual percentage change, quarterly averages



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

Figure 2:15. Household debt
Per cent of disposable income



Sources: Statistics Sweden and the Riksbank

⁶See M. Beechey and H. Elmér “The lower limit of the Riksbank’s repo rate”, Economic Commentary no 11 2009, Sveriges riksbank.

■ CHAPTER 3 – The current state of the economy

This chapter presents new information received since the Monetary Policy Update was published in April and an assessment of economic prospects in the coming quarters.

The recovery of the global economy continues to be slow. Growth in both the euro area and the United States was weaker than expected in the first quarter of this year. However, the assessment is that there will be more rapid growth in the economies in the second and third quarters than during the early part of the year. Prices of high-risk assets have continued to rise on the financial markets.

The central banks are conducting an expansionary monetary policy, but are in different phases. The US central bank, the Federal Reserve, has continued to reduce the pace of its asset purchases. The European Central Bank (ECB) cut its policy rate in early June and also announced several other measures.

GDP growth in Sweden was somewhat weaker than expected during the first quarter. However, growth in household consumption and, above all, in housing investment was good, which indicates that domestic demand is strong. The assessment is that GDP will grow at a roughly normal historical rate in both the second and third quarters. On the labour market, the strong development of the labour force has continued to keep unemployment up. However, unemployment is expected to fall gradually in the quarters ahead.

Inflation is still low. CPIF inflation was 0.4 per cent as an annual percentage change in May and the Riksbank's assessment is that it will rise to close to one percent by the end of the year. The outcome in May was lower than expected and the forecast for inflation has been adjusted downwards compared to the assessment in April.

Financial markets

■ Prices of high-risk assets are rising

Demand for high-risk assets has been strong on the financial markets since the Monetary Policy Update was published. Despite occasionally weak macroeconomic news and geopolitical unrest in Russia and Ukraine, share prices have risen in both Sweden and abroad. In the United States, the broad stock exchange index S&P 500 has recorded its highest ever level (see Figure 3:1). At the same time as the stock exchanges are rising, volatility measured using the VIX index is at its lowest level since 2007.

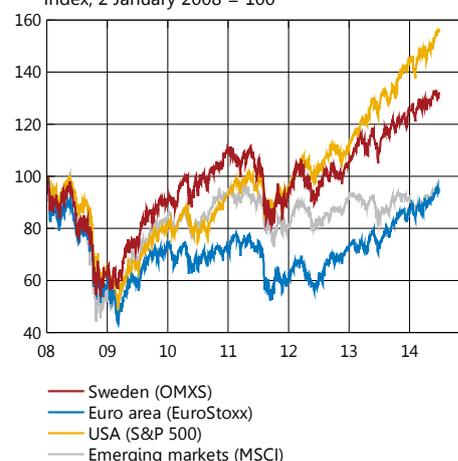
There is also strong demand for other types of high-risk asset. For example, prices for corporate bonds have risen rapidly, and in the United States the risk premium for purchasing high-yield corporate bonds is now almost as low as for the purchase of low-risk corporate bonds with a higher credit rating. Similar patterns can be seen in Sweden where several companies are having to pay only marginally higher yields than the Swedish government for bonds at corresponding maturities.

■ Lower long-term government bond yields

Long-term government bond yields have fallen since the turn of the year, particularly in Sweden and the euro area (see Figure 3:2). The downturns are linked to the weakening of growth and inflation prospects and to expectations that policy rates will continue to be low for some time to come.

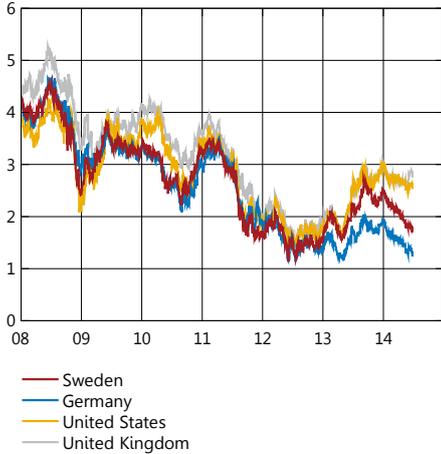
Government bond yields have continued to fall in Europe's more indebted countries, and in several of the countries they are lower than they have been for many years (see Figure 3:3). The fall in government bond yields can partly be explained in terms of the reduced risk of a dissolution of the

Figure 3:1. Stock market movements
Index, 2 January 2008 = 100



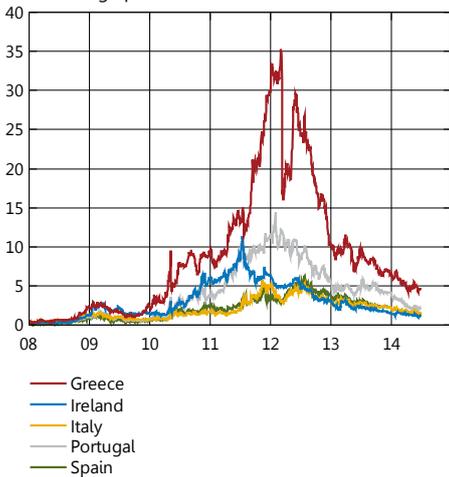
Sources: Macrobond, Morgan Stanley Capital International, Standard & Poor's and STOXX Limited

Figure 3:3. Government bond rates with 10 years left to maturity
Per cent



Source: Macrobond

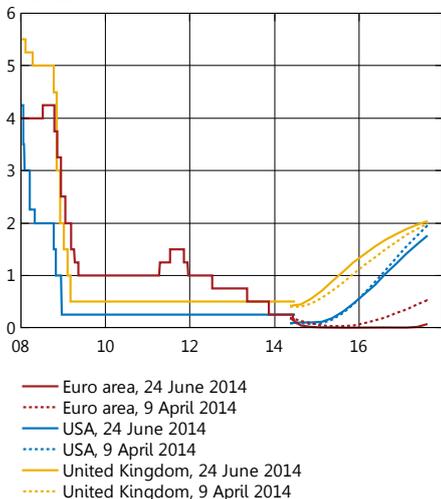
Figure 3:2. Differences in government bond yields compared to Germany
Percentage points



Note. Government bonds with approximately 10 years left to maturity.

Source: Macrobond

Figure 3:4. Policy rates and rate expectations according to forward rates
Per cent



Note. Forward rates have been adjusted for risk premiums and thus describe the expected overnight rate, which does not always correspond to the official policy rate.

Sources: Macrobond and the Riksbank

euro and the fact that several credit institutions have opened the door to future upgrades of the countries' low credit ratings. The fall is also related to the increased demand for assets that carry a higher risk, which has arisen as investors try to improve their returns in the low interest-rate environment that now prevails. This does not necessarily mean that investors have changed their view of the economies of these countries.

■ **Expectations of future policy rates have fallen**

The central banks in the major currency areas are conducting expansionary monetary policies, but are in different phases.

In the United States, the central bank, the Federal Reserve, has continued to reduce the pace of its asset purchases. However, at the same time, the Federal Reserve has signalled that its policy rate will be held at a low level for some time to come. Market pricing indicates that the US policy rate will not be raised until the second quarter of 2015 (see Figure 3:4).

The ECB, on the other hand, has taken several expansionary measures. In line with market expectations, the ECB cut its policy rate to 0.15 per cent in early June. The ECB also cut its deposit rate to -0.10 per cent, which means that it will now entail costs for the banks when they deposit liquidity with the central bank. The ECB also announced several other measures to improve the monetary policy transmission mechanism and to increase the supply of liquidity to the euro area. The bank will, for example, offer Targeted Longer-Term Refinancing Operations (TLTRO) on two occasions during the autumn which, via the banks, will be aimed at non-financial companies. The bank has also announced that it will withdraw reserves relating to the bond-purchasing programme overnight rather than over the course of week as previously. The ECB has also begun to prepare for other types of asset purchase in the future. However, no decision has been taken on these as yet. The ECB will also stick to the principle of full allotment and fixed interest rates for its main refinancing operations (MRO) until further notice. At the monetary policy meeting in June, the Governor of the ECB, Mario Draghi, declared that the policy rates will be low for an extended period, which is also reflected in the priced expectations of the market participants (see Figure 3:4).

Economic development has been better than expected in the United Kingdom and the Bank of England has changed its communication concerning when a first policy-rate may be made. Statements by the Governor of the Bank of England, Mark Carney, and the latest minutes have led the market to adjust its expectations (see Figure 3:4). Market pricing now indicates a first policy-rate increase during the latter part of 2014.

■ **Expectations of a lower repo-rate in Sweden**

Swedish forward rates fell following the monetary policy decision in April when the Riksbank's published forecast for the repo rate was lower than expected by market participants. The weak inflation outcome in March further increased market expectations of a repo-rate cut in July. Implied forward rates are lowest at just under 0.4 per cent in late 2014 and early 2015 (see Figure 3:5). According to forward pricing, the expected level of the repo rate is just over 0.5 per cent at the end of 2015. In comparison with the Riksbank's assessment of the future development of the repo rate, market expectations are higher in the near term but lower for late 2015. According to the Prospera survey, expectations of the future level of the repo rate are somewhat higher than market pricing.

■ **Weaker krona**

The Swedish krona has weakened against most major currencies in the KIX index since the Monetary Policy Update was published in April, above all against the pound sterling and the US dollar, but also against the euro. In trade-weighted terms, that is measured using the KIX index, the Swedish krona has weakened by just over 3 per cent (see Figure 3:6). This weakening may largely be due to expectations of a lower repo-rate as the published economic statistics for Sweden have for the most part been weaker than expected.

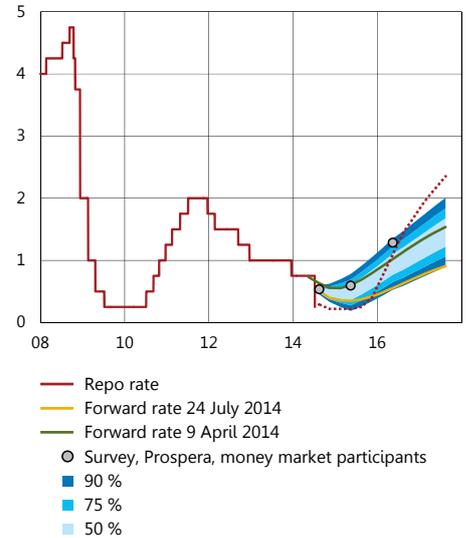
■ **Lower interest rates for households and better funding conditions for companies**

The downturn in mortgage bond yields in recent months has only to a certain extent been reflected in lower interest rates for households. It is mainly mortgage rates at long maturities that have been lowered, while the mortgage institutions' variable rates have been largely unchanged. The differential between mortgage rates and government bond and mortgage bond yields at a maturity of five years has thus increased since the turn of the year (see Figure 3:7).

For companies, too, it is mainly bank interest rates on loans with longer maturities that have become lower. However, market funding is still an alternative. The companies now borrow less expensively on the market than via bank loans, almost irrespective of their credit ratings. The possibility to get inexpensive market funding has led the companies to continue to increase the proportion of securities loans rather than borrowing from the banks. In May, the annual rate of growth in bank lending to non-financial companies was 2.8 per cent.

At the same time, there are signs that the companies' borrowing needs are relatively limited. The growth in securities loans has declined in recent months, despite the fact that the Riksbank's risk survey indicates high demand for corporate bonds among investors. However, according to the Almi indicator, a majority of bank managers report that the companies' borrowing requirements were unchanged during the first half of the year.

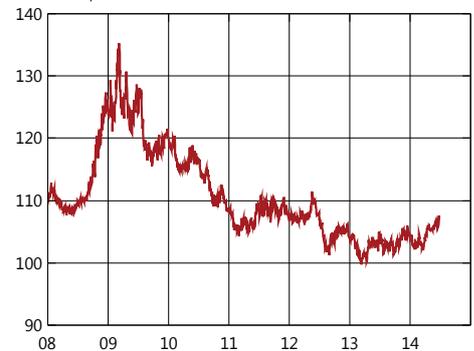
Figure 3:5. Repo-rate expectations in Sweden measured in terms of forward rates and surveys
Per cent



Note. Forward rates have been adjusted for risk premiums and describe the expected overnight rate. Surveys and forward rates are different measures of monetary policy expectations. The interval illustrates the historical difference between the Prospera survey and the adjusted forward-rate curve.

Sources: Macrobond, TNS SIFO Prospera and the Riksbank

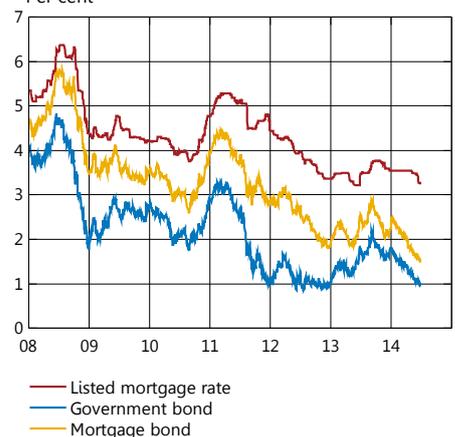
Figure 3:6. KIX-weighted nominal exchange rate Index, 18 November 1992 = 100



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

Source: The Riksbank

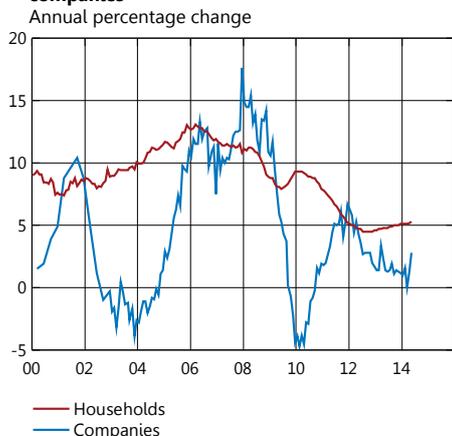
Figure 3:7. Swedish mortgage rate and government and housing bond yields, 5-year maturity
Per cent



Note. The listed mortgage rate is an average of the rates published by Nordea, SBAB, SEB, Swedbank Hypotek and Stadshypotek, for example in the daily press.

Sources: Macrobond and the Riksbank

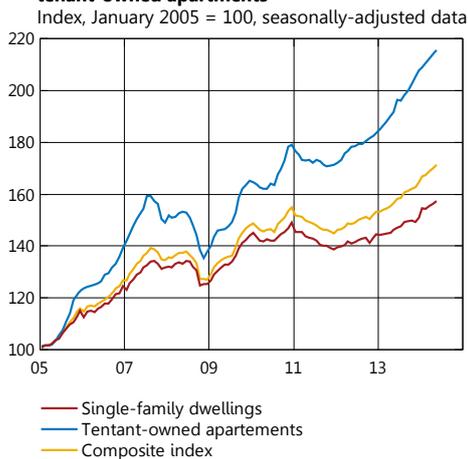
Figure 3:8. Bank lending to households and companies



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

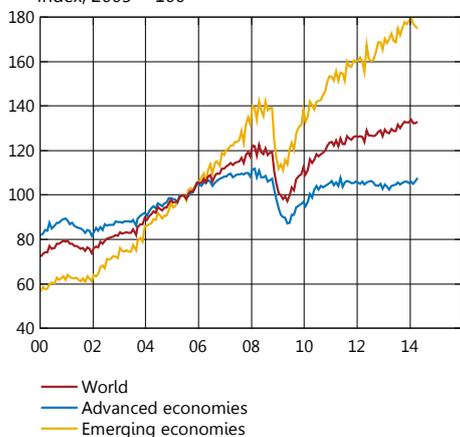
Source: Statistics Sweden

Figure 3:9. Prices for single-family dwellings and tenant-owned apartments



Sources: Valueguard and the Riksbank

Figure 3:10. Import volumes abroad



Source: CPB Netherlands Bureau for Economic Policy Analysis

■ Household borrowing is rising in pace with housing prices

Household demand for credit continues to be strong and in May the annual rate of growth increased to 5.3 per cent (see Figure 3:8). Mortgage loans with tenant-owned apartments as collateral continued to increase April, by almost 9 per cent as an annual rate, while loans with collateral in the form of single-family dwellings, which account for over three-quarters of the mortgage market, also continued to increase, by over 4 per cent as an annual rate.

According to statistics from Valueguard, the rate of price increases for tenant-owned apartments has continued to rise and in May the annual rate was 12.6 per cent (see Figure 3:9). Since the turn of the year, prices for detached houses have also risen at a gradually faster rate and in May they increased by 7.7 per cent as an annual rate. According to Statistics Sweden's property price index, prices of single-family dwellings increased by 4.5 per cent as an annual rate during the first quarter of this year. The high level of demand on the housing market is reflected, for example, in shorter times to sale. According to SEB's indicator of housing prices, a broad majority of the households continue to expect rising housing prices in the period ahead, although in June the indicator fell somewhat after reaching a high level in May.

International outlook

■ Weaker growth in global economy at the start of the year

Growth in the world economy as a whole was somewhat weaker during the first quarter of 2014 than forecast in April. However, the slowdown was partly a consequence of temporary effects, such as the unusually cold weather in the United States. World trade also slowed down somewhat during the first quarter (see Figure 3:10). Indicators such as new export orders in the purchasing managers' index suggest that development may also be weak in the months ahead. The global purchasing managers' indexes for both the manufacturing and service sectors indicate that growth will continue to be moderate going forward.

■ The euro area – weak and uneven growth during the first quarter of 2014

GDP in the euro area increased by a modest 0.7 per cent calculated as an annual rate during the first quarter of 2014 (see Figure 3:11). This outcome was marginally weaker than expected and there were significant differences between the rates of growth in different member states. GDP growth in Germany was unexpectedly strong, partly because the mild winter entailed a higher level of activity in the construction sector. On the other hand, the French economy stagnated and the economies of Finland, Italy, Portugal and the Netherlands shrank. An examination of the components of GDP reveals that household consumption increased slightly during the first quarter while growth in investment and exports slowed down compared with the preceding quarter.

Published statistics indicate that the recovery in the euro area is continuing, but at an even slightly slower rate than was previously assumed. Retail-sector statistics for April, together with rising consumer confidence, suggest that household consumption will increase during the second quarter. Manufacturing-sector confidence slumped on a broad front in June according to the purchasing managers' index (PMI), which fell to its lowest level for seven months (see Figure 3:12). However, industrial production in the euro area showed an upturn in April following a weak beginning to the year. The upturn was broad and production increased in Germany and France as well as in Spain and Italy. Together with strong retail-sector figures in April, this indicates stronger GDP growth during the second quarter. The labour market in the euro area is improving only very slowly and unemployment amounted to 11.7 per cent in April (see Figure 3:13). All in all, incoming statistics confirm that the recovery in the euro area is continuing, but at a slow rate.

Surveys indicate that fewer banks tightened credit conditions for corporate loans during the first quarter of 2014. At the same time, an increasing number of banks report that the demand for loans is increasing. However, this has not yet been reflected in increased lending to companies. The aggregate figures also conceal major variations between countries and between different types of company. Credit conditions for small and medium-sized companies in highly-indebted countries are still tight, which is illustrated, for example, by the fact that they have to pay higher lending rates than companies in less-indebted countries.

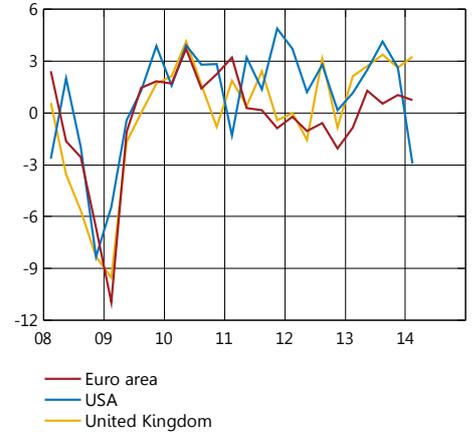
■ **Temporary slowdown in the US economy**

In the United States, GDP growth was -2.9 per cent, calculated as an annual rate, during the first quarter of 2014 compared to the fourth quarter last year (see Figure 3:11). The unexpectedly weak outcome was partly a consequence of the effects of the unusually cold weather at the start of the year being greater than expected. A large fall in investment in stocks and declining exports, other investment and public consumption contributed to the negative growth. However, household consumption helped to dampen the fall in GDP somewhat.

According to the purchasing managers' index, there was a significant improvement in corporate confidence in the manufacturing and service sectors in April and May. Household confidence also improved. There was a clear increase in retail sales and industrial production compared with the weak beginning of the year. All in all, the available statistics indicate that GDP growth will be around 4 per cent in the second quarter.

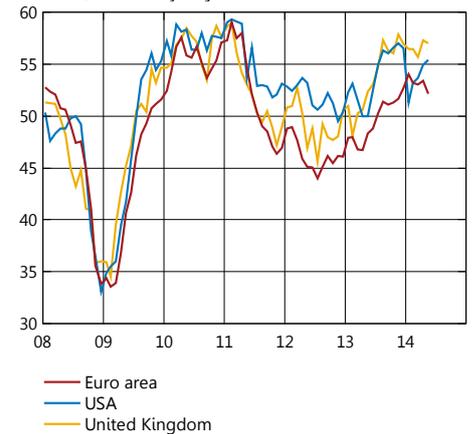
The recovery on the housing market following the financial crisis has been slackening for some time. However, current statistics on new starts and house sales indicate that the recovery is still continuing at a moderate rate. At the same time, the labour market is continuing to improve. This year, employment growth has been higher than during the last two years. Unemployment has fallen and amounted to 6.3 per cent in May (see Figure 3:13). However, this is not only because employment has increased but also because labour-force participation has decreased.

Figure 3:11. GDP abroad
Quarterly change in per cent, calculated as an annual percentage change, seasonally-adjusted data



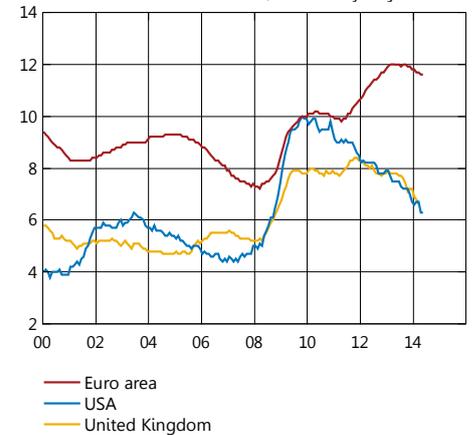
Sources: Bureau of Economic Analysis, Eurostat and Office for National Statistics

Figure 3:12. Purchasing Managers' Index, manufacturing sector
Index, seasonally-adjusted data



Note. Values above 50 indicate growth.
Sources: Institute for Supply Management and Markit Economics

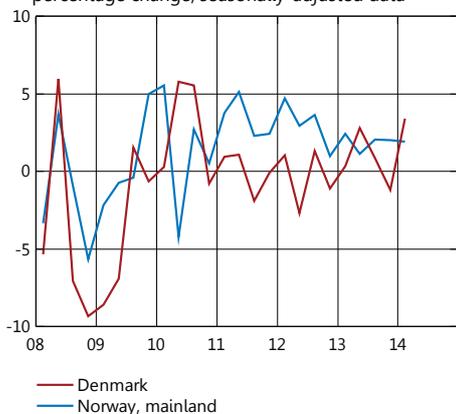
Figure 3:13. Unemployment
Per cent of the labour force, seasonally-adjusted data



Sources: Bureau of Labor Statistics, Eurostat and Office for National Statistics

Figure 3:14. GDP in Denmark and Norway

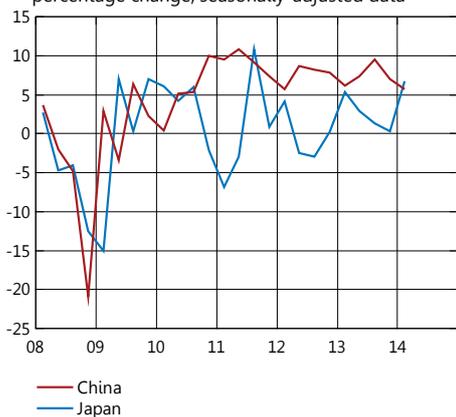
Quarterly change in per cent, calculated as an annual percentage change, seasonally-adjusted data



Sources: Statistics Denmark and Statistics Norway

Figure 3:15. GDP in China and Japan

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



Sources: State National Bureau of Statistics China, Statistics Bureau of Japan and the Riksbank

■ Stable development at other important trading partners

In the United Kingdom, the economic recovery has continued at a good rate. GDP increased by 3.3 per cent calculated as an annual rate during the first quarter (see Figure 3:11). This was the fourth consecutive quarter with a quarterly growth rate of around three per cent, calculated as an annual rate. The recovery is mainly being driven by rising domestic demand, partly thanks to an expansionary monetary policy. Employment is increasing and unemployment has gradually fallen in recent years (see figure 3:13). The assessment is that growth will remain high in the short term. Both households and companies have become increasingly optimistic and in May their confidence levels were well above the historical averages.

In Norway, growth was 1.9 per cent in the first quarter compared to the preceding quarter and calculated as an annual rate (see Figure 3:14). The situation on the housing market appears to have stabilised, while the purchasing managers' index for the manufacturing sector fell to just below 50 in May.

In Denmark, growth increased by 3.6 per cent in the first quarter, calculated as an annual rate, but this was partly a recovery following a weak fourth quarter last year. The situation on the housing market continues to improve with a lower number of enforced sales and stabilised prices.

■ China's high growth has slowed down somewhat

In China, GDP growth slowed down in the first quarter, when quarterly growth was 5.7 per cent calculated as an annual rate (see Figure 3:15). This was the weakest quarterly growth for over three years.

Indicators point to higher growth in the second quarter. Exports increased again in April and May, after falling during the first few months of the year. The growth rate in industrial production and the retail trade rose in April and May. Corporate confidence, which weakened at the start of the year, has recovered in recent months. The government has presented fiscal policy stimulation measures, such as infrastructure investments and tax cuts for small companies.

The development of the housing market is weak. Housing sales fell by 10 per cent as an annual rate in May, and housing construction fell even more.

■ Temporary high growth in Japan

In recent months, the Japanese economy has been affected by the increase in VAT from 5 to 8 per cent from 1 April. During the first quarter, GDP increased by as much as 6.7 per cent compared to the preceding quarter and calculated as an annual rate (see Figure 3:15). Household consumption increased by 9.4 per cent in the first quarter, calculated as an annual rate, while investment increased by almost 20 per cent.

However, indicators for the second quarter signal weak economic development. The retail trade recovered in May, after falling by almost 14 per cent in April, which is in line with the effects of the VAT increase in 1997.

■ **Low inflation abroad with certain exceptions**

Inflationary pressures are low in large parts of the world as a result of the high level of unutilised resources. Commodity prices increased during the first quarter of this year (see Figure 3:16). However, food prices and the prices of traded goods have fallen somewhat in recent months. The oil price has risen somewhat since the Monetary Policy Update was published in April, mainly as a result of the unrest in Iraq. If the situation there deteriorates, further price increases may follow as Iraq is one of the world's largest oil producers.

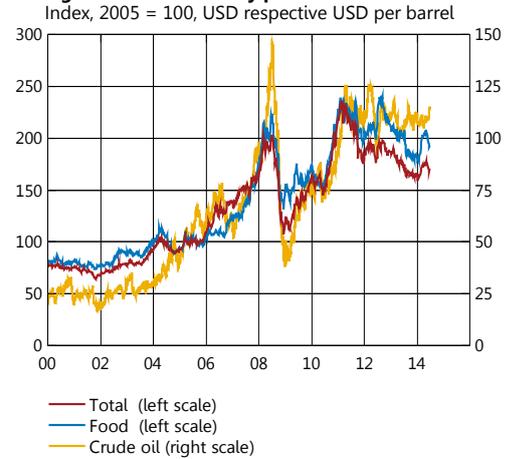
Inflation in the euro area was 0.5 per cent in June (see Figure 3:17). At the same time, underlying inflation has fallen to 0.8 per cent. The low rate of inflation over the last 12 months is somewhat due to the low energy and food prices, which have also had an unusually great impact on inflation due to the strengthening of the euro. In addition, inflationary pressures have been subdued by lower demand and the ongoing adjustment to a lower cost level in the indebted countries. The annual percentage change in unit labour costs fell from just below 2 per cent at the start of 2013 to just over 0.5 per cent at the end of the year. The fall in inflation in the euro area has been somewhat larger recently than assessed by the Riksbank in April.

In the United States, inflation has risen somewhat in recent months and was 1.8 per cent in May measured with the deflator for private consumption (see Figure 3:17). Inflation has varied substantially over the last 12 months, mainly as a result of fluctuations in energy prices. Inflation adjusted for energy and food prices has been more stable at around just over one percent, but has also risen since the start of the year and in May was at 1.5 per cent. Unit labour costs, measured in terms of the annual percentage change, are still low, as are most of the measures of wage costs. However, some measures show a rising tendency.

In the United Kingdom, inflation has gradually fallen in recent years and in May was at 1.5 per cent (see Figure 3:18). In Denmark, where inflation has been low over the last 12 months, inflation fell somewhat in May to 0.5 per cent (see Figure 3:18). In Norway, inflation has continued to fall and was at 1.8 per cent in May (see Figure 3:18). Core inflation also fell somewhat to 2.3 per cent.

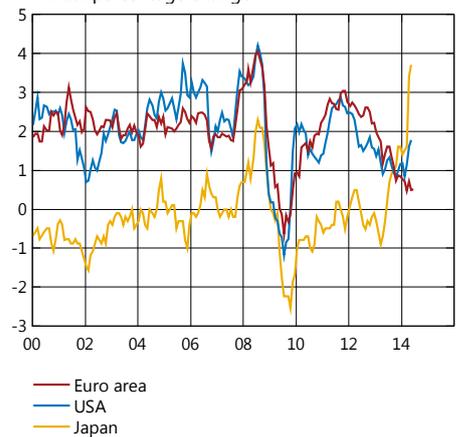
In Japan, inflation has increased following a long period with deflation problems. CPI inflation rose from 1.6 per cent in March to 3.7 per cent in May (see Figure 3:17). A more expansionary monetary policy has contributed to the increase in inflation and inflation expectations over the past year, but the substantial increase in inflation in April stems entirely from the VAT increase.

Figure 3:16. Commodity prices



Sources: The Economist and Macrobond

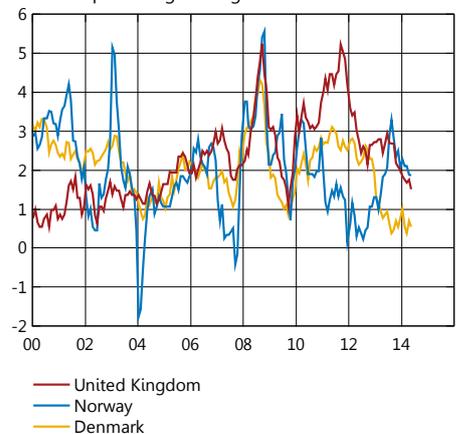
Figure 3:17. Consumer prices abroad
Annual percentage change



Note. Euro Area refers to HICP, USA refers to the PCE deflator and Japan refers to the CPI.

Sources: Bureau of Labor Statistics, Eurostat and Statistics Bureau of Japan

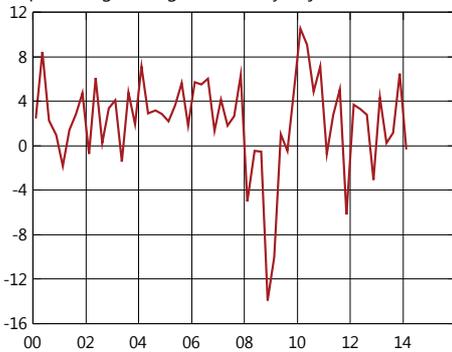
Figure 3:18. Consumer prices measured as CPI
Annual percentage change



Sources: Danmarks Nationalbank, Office for National Statistics and Statistics Norway

Figure 3:19. GDP in Sweden

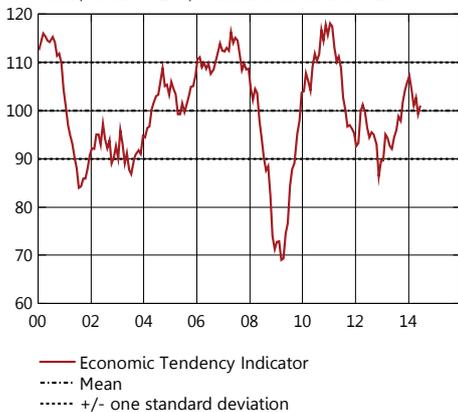
Quarterly change in per cent, calculated as an annual percentage change, seasonally-adjusted data



Source: Statistics Sweden

Figure 3:20. The Economic Tendency Indicator

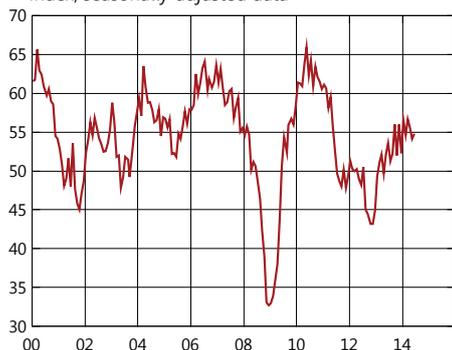
Index, mean = 100, standard deviation = 10



Source: National Institute of Economic Research

Figure 3:21. Purchasing managers' index, manufacturing sector

Index, seasonally-adjusted data



Note. Values above 50 indicates growth.

Source: Swedbank/Silf

The Swedish economy

■ High growth in domestic demand

GDP fell by 0.3 per cent from the fourth quarter of 2013 to the first quarter of 2014, calculated as an annual rate (see Figure 3:19). The outcome nevertheless paints a positive picture of domestic demand with households that continue to increase their consumption and substantial increases in housing investment. The fact that the growth rate is low is due to negative contributions from investments in stocks and the low level of public consumption. In addition, imports increased more rapidly than exports, which also dampened GDP growth.

Household consumption and housing investment are expected to drive GDP growth in the quarters immediately ahead. Exports are also expected to grow more rapidly and at an even pace with imports. The contribution from investment in stocks is also expected to turnaround from negative to slightly positive. On the other hand, investment surveys suggest that the companies will wait another few quarters before increasing their investments.

The economic tendency survey, which summarises sentiment among both households and companies, was close to a normal level in the second quarter, which indicates that growth in the Swedish economy is roughly as average (see Figure 3:20). The indicator of household confidence was slightly above a normal level in June, while the indicator of corporate confidence was a little higher still. In the business sector it can be noted that the sub-index for the manufacturing industry is more or less normal, while the sub-indexes for the construction industry and the retail sector are higher than normal. The purchasing managers' index (PMI) for the manufacturing industry is also close to its historical average (see Figure 3:21). Production in the business sector increased by 0.9 per cent in April compared with March in seasonally adjusted terms.

All in all, GDP is expected to grow by 2.5 per cent in the second quarter and by 2.8 per cent in the third quarter compared to the preceding quarters and calculated as an annual rate.

■ High growth in household consumption

During the first quarter of 2014, household consumption increased by 2.5 per cent, compared with the fourth quarter of 2012 and calculated as an annual rate. This corresponds to the average growth in household consumption since 1993. Household confidence, which is measured using the indicator of the National Institute of Economic Research, is also close to its historical mean value (see Figure 3:22).

Household consumption increased by 2.1 per cent between the first quarter of 2013 and the first quarter of 2014. Household incomes increased by 3.1 per cent in the same period. This means that there was a further increase in the household saving ratio in this period.

Indicators point to a rapid increase in household consumption in the quarters immediately ahead. In June, the household-confidence indicator increased to a level slightly above its historical average. Turnover in the retail trade declined in May, after several months of strong development. Household consumption is expected to grow by 3.2 per cent in the second

and third quarters compared with previous quarters, calculated as an annual rate.

■ **Gradually higher growth in exports**

Demand on the Swedish export markets showed an upturn in 2013. During the first quarter of 2014, exports increased by 2.5 per cent compared with the fourth quarter of 2013, calculated as an annual rate. This was the fourth consecutive quarter with growing exports, although growth is still lower than normal. The upturns in goods and services exports were similar in size.

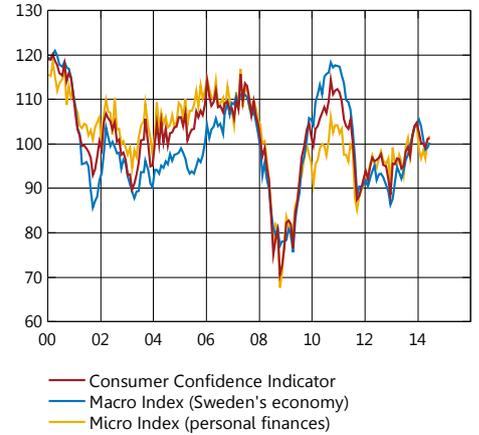
According to the foreign-trade statistics, goods exports, which account for approximately two-thirds of Swedish exports, fell in May, seasonally adjusted, compared to April. New export orders in the manufacturing industry are at somewhat higher levels than normal according to both the purchasing managers' index, and the Economic Tendency Survey (see Figure 3:23). However, according to Statistics Sweden, new orders for the manufacturing industry from export markets fell by 3.8 per cent in April, calendar adjusted and compared to the same month last year. However, during the period February–April new orders increased by 3.1 per cent compared to the previous three months. All in all, the assessment is that growth in exports will rise to an historically-normal growth rate of approximately 6 per cent in the quarters immediately ahead, calculated as an annual rate.

■ **Housing investment increasing rapidly**

Total fixed gross investment has increased by almost 8 per cent over the last four quarters (see Figure 3.24). Housing investment rose by almost 22 per cent and thereby accounted for more than half of the increase despite the fact that it constitutes a small proportion of total investment. Investment growth in the other business sectors amounted to just under 4 per cent in the same period. On the other hand, investment in mining and manufacturing declined. Public sector investment increased by almost 8 per cent.

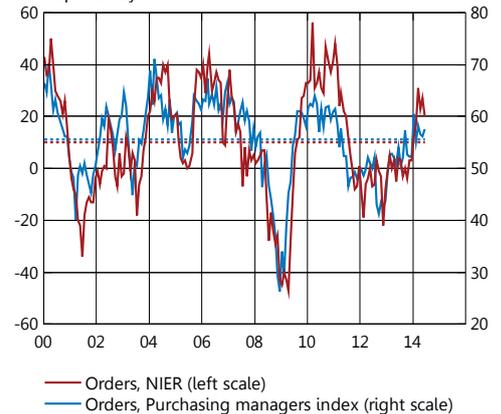
The number of new housing starts has continued to increase, which means that housing investment will also continue to increase rapidly in the quarters immediately ahead. Statistics Sweden's investment survey suggests that the business sector (excluding housing) will wait another few quarters before increasing investment. It is above all in the manufacturing sector that investment volumes continue to decline. Planned investment is particularly low in the mining industry, but other manufacturing segments are also planning to reduce their investment. This is despite the fact that capacity utilisation is at an historically normal level. The Riksbank's Business Survey, which was conducted in May, suggests that investment will increase somewhat over the next six months. All in all, the development of total investment is expected to be weak in the period immediately ahead and to pick up towards the end of the year.

Figure 3:22. Confidence indicators for households
Index, mean = 100, standard deviation = 10



Source: National Institute of Economic Research

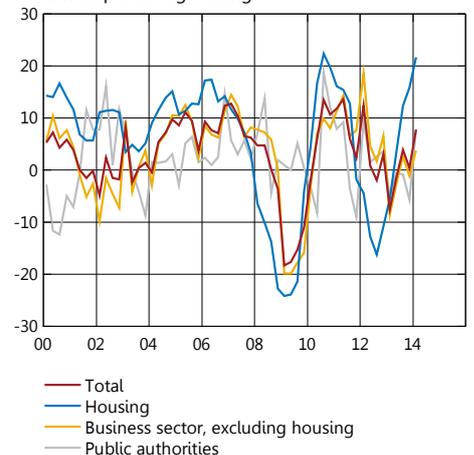
Figure 3:23. New export orders in the manufacturing sector respectively
Net figures and index, seasonally-adjusted data respectively



Note. Net figures are defined as the difference between the percentage of companies reporting an increase in export orders and the percentage of companies reporting a decrease. Broken lines represent the average for the period 2000 to the last outcome.

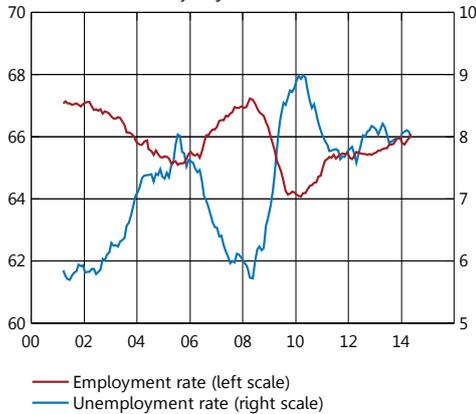
Sources: National Institute of Economic Research and Swedbank/Silf

Figure 3:24. Gross fixed capital formation
Annual percentage change



Source: Statistics Sweden

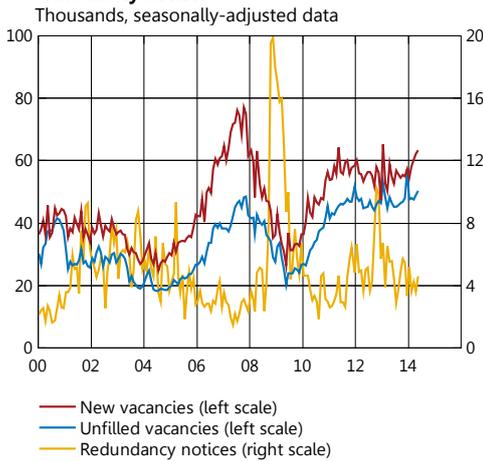
Figure 3:25. Employment rate and unemployment
Per cent, seasonally-adjusted data



Note. Three-month moving average. The employment rate is measured as a percentage of the population, while unemployment is measured as a percentage of the labour force. Refers to 15–74 age group.

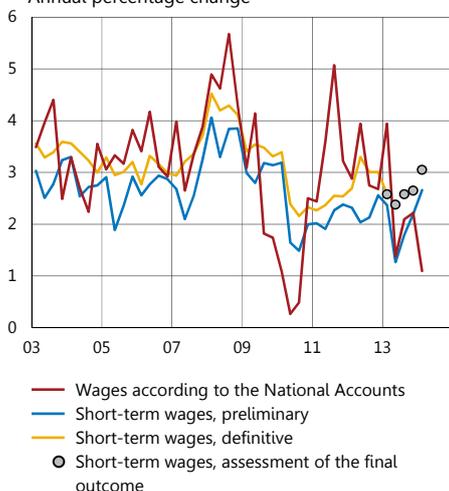
Sources: Statistics Sweden and the Riksbank

Figure 3:26. New and unfilled vacant jobs and redundancy notices
Thousands, seasonally-adjusted data



Sources: Employment Service and the Riksbank

Figure 3:27. Wages according to the National Accounts and to the short-term wage statistics
Annual percentage change



Note. The short-term wage statistics for the last 12 months are preliminary and are usually revised upwards. The grey dots in the figure show the Riksbank's assessment of the final outcome according to the statistics.

Sources: National Mediation Office, Statistics Sweden and the Riksbank

The increase in the companies' stocks was small, adjusted for seasonal effects, during the first quarter of this year. According to the Business Tendency Survey, more companies than normal believe that they need to increase their stocks. The forecast assumes a normal build-up of stocks in the business sector as a whole in the quarters ahead. This means that the development of stocks will make a positive contribution to GDP growth in the second quarter of this year.

■ Increased demand will lead to higher growth in imports

Swedish imports have increased rapidly recently. During the first quarter of 2014, imports increased by 8.2 per cent compared with the fourth quarter of 2013, calculated as an annual rate. Compared with the corresponding quarter last year, imports have increased by over 5 per cent. This upturn partly reflects the growth in household consumption. For example, Swedes' consumption abroad and motor-vehicle imports increased significantly. The assessment is that household consumption and production in the export industry will contribute to continued growth in imports in the quarters ahead, while the weaker development of investment will temporarily have the opposite effect during the second quarter.

■ Unemployment falling slowly

In recent months, the development of employment and the labour force as a whole has been somewhat stronger than was expected in the Monetary Policy Update published in April. In May, employment grew more than the labour force, which meant that unemployment fell to 7.8 per cent (see Figure 3:25). According to the National Accounts, the number of hours worked increased more during the first quarter than assessed by the Riksbank in April.

Indicators of the demand for labour point to continued stable development in the period ahead. The number of newly-registered job vacancies increases and the number of redundancy notices are still lower than in the corresponding period last year (see Figure 3:26). According to the Business Tendency Survey, employment plans in the business sector have declined in recent months but are well over the historical average. The percentage of companies reporting a shortage of labour is still low, although the percentage has increased somewhat in the business sector in recent quarters. According to the Riksbank's most recent Business Survey, the companies do not feel that there is any general shortage of labour, but they do still experience difficulties in finding personnel with special skills.

The assessment is that employment will continue to increase over the next six months but the labour force is expected to grow almost as quickly, which means that it will be some time before there is a further fall in unemployment. Compared with the forecast in the Monetary Policy Update in April, employment and, in particular, the labour force are expected to grow more rapidly in the short term. The forecast for unemployment has therefore been revised upwards somewhat.

■ **Significant differences in wage statistics during the first quarter**

According to the short-term wage statistics from the National Mediation Office, wages in the economy as a whole increased by a preliminary figure of 2.7 per cent in the first three months of this year, measured as the annual percentage change. The Riksbank's estimate is that the final rate of wage increases may be over 3 per cent during the first quarter (see Figure 3:27).

The rate of wage increases has risen since the turn of the year and part of this upturn is probably due to the fact that the sample in the survey of short-term wage statistics in the business sector has been changed. According to the National Mediation Office, the effect of rotating the sample is unusually large this year.⁷ According to the National Accounts, hourly wages increased throughout the economy by just over 1.0 per cent as an annual percentage change during the first quarter of this year (see Figure 3:27). The assessment is that the growth of hourly wages in the National Accounts in the remaining quarters will be more in line with short-term wages, so that the difference in the rate of increase between the two measures will be less for the year as a whole than for the first quarter.⁸

Productivity growth, which was surprisingly strong during the fourth quarter of last year, fell significantly during the first quarter of this year and was around -0.5 per cent measured as an annual percentage change. Although productivity growth is expected to be stronger during the remaining quarters of this year, the development of productivity will be weaker in 2014 than assessed by the Riksbank in April. This also means that the growth in unit labour costs is now expected to be higher this year than assessed in April.

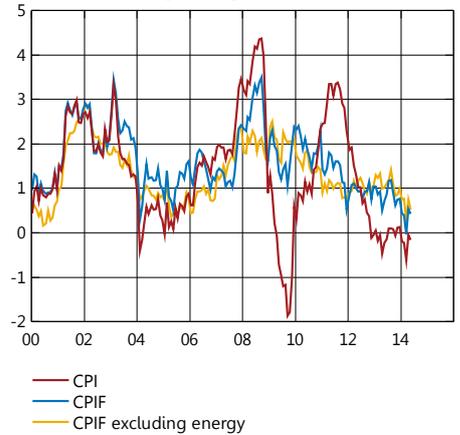
■ **Inflation is low at present**

In May, the CPI fell by 0.2 per cent measured as an annual percentage change (see Figure 3:28). The very low rate of inflation is partly linked to the fact that the households' mortgage interest expenditure has fallen, primarily as a result of the gradual cuts in the repo rate (see Figure 3:29). However, even if we exclude the effect of falling interest expenditure, the rate of price increases is very low at present. Various measures of underlying inflation have also fallen recently (see Figure 3:30). The article "Why is inflation low?" in this report highlights several other factors that may conceivably explain the low rate of inflation in recent years.

Since the assessment in the Monetary Policy Update was published in April, the outcomes for inflation in March, April and May have been published. In these months, the rate of increase in the CPIF, that is the CPI with a fixed mortgage rate, was lower than forecast by the Riksbank. This is despite the fact that energy prices did not fall as much as expected. In May, CPIF inflation increased by 0.4 per cent as an annual percentage change, compared to 0.6 per cent in the forecast in April. The fact that inflation has

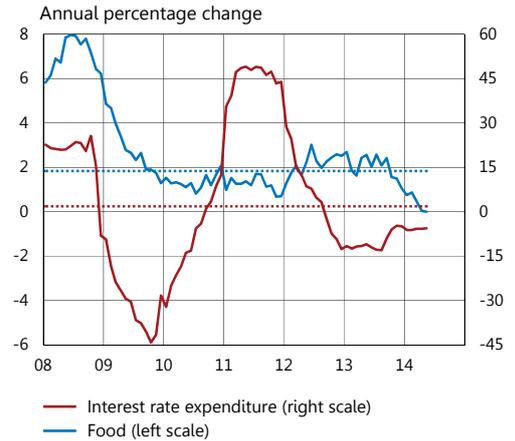
⁷ The sample, which is changed in January each year, consists of 5,854 companies in the survey of short-term wage statistics for the business sector in 2014. According to calculations made by the National Mediation Office, the rate of wage increases for identical companies in the survey was 2.4 per cent during the first three months of this year, while it was 2.8 per cent for all companies.
⁸ There are several reasons why the development of wages may differ in the two measures of wages. Hourly wages according to the National Accounts is a broader measure and contains, for example, bonuses. The hourly wages in the National Accounts are the wages that are actually paid out, while the preliminary outcomes in the short-term wage statistics are adjusted on an ongoing basis for retroactive wage payments. This also means that the hourly wages in the National Accounts may vary significantly from one quarter to another.

Figure 3:28. Consumer prices
Annual percentage change



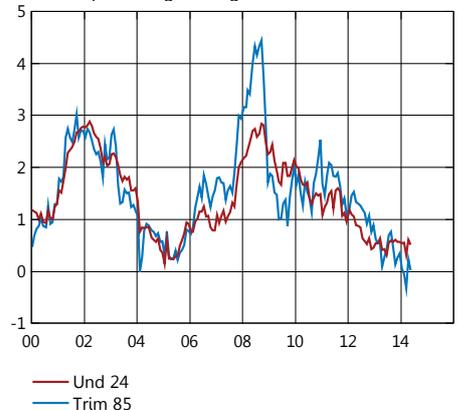
Note. The CPIF is the CPI with a fixed mortgage rate.
Source: Statistics Sweden

Figure 3:29. Food and interest rate expenditure in the CPI
Annual percentage change



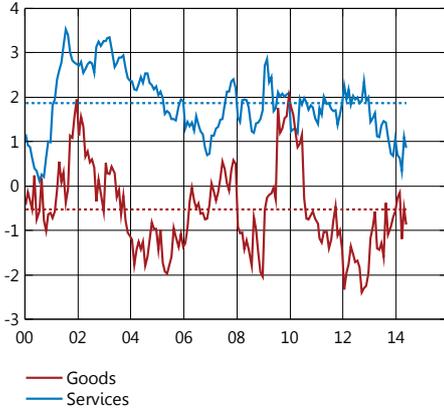
Note. The broken lines represent the average for the period 2000 to the last outcome.
Source: Statistics Sweden

Figure 3:30. Measures of underlying inflation
Annual percentage change



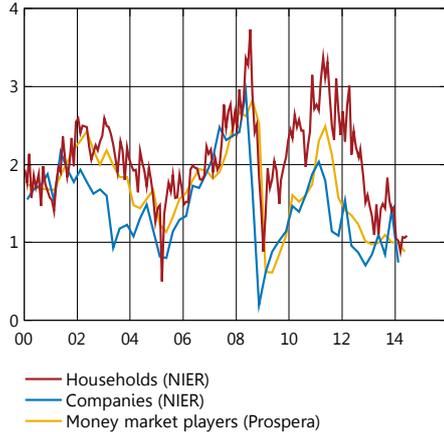
Note. Und 24 and Trim 85 are statistical measures calculated on the basis of the CPI divided into approximately 70 subgroups. Und 24 is weighted and adjusted for the historical standard deviation. In Trim 85, the 7.5 per cent highest and the 7.5 lowest yearly price changes have been excluded.
Sources: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

Figure 3:31. Goods and services prices
Annual percentage change



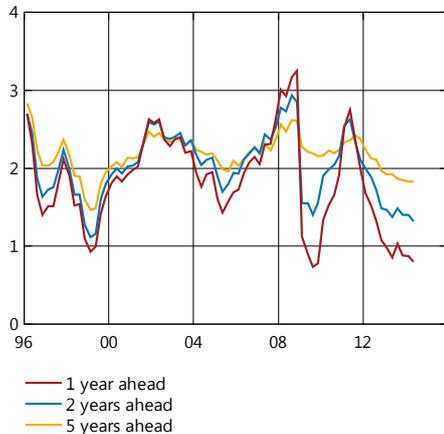
Note. The broken lines represent the average for the period 2000 to the last outcome.
Sources: Statistics Sweden and the Riksbank

Figure 3:32. Expectations of inflation one year ahead
Per cent



Note. Households are stated monthly others quarterly.
Sources: National Institute of Economic Research and TNS SIFO Prospera

Figure 3:33. All respondents' expectations of inflation
Per cent



Source: TNS SIFO Prospera

been lower than expected is an indication that inflationary pressures are lower than previously assessed by the Riksbank. The forecast for inflation in the quarters ahead (and thereafter) has thus been revised downwards.

The rates of increase in food prices and service prices are low compared with the respective mean values since 2000 (see Figures 3:29 and 3:31). The rate of price increases for goods tended to become gradually less negative in 2013 and was close to zero in early 2014. However, goods prices have once again fallen significantly in recent months. The annual rate in May was – 0.8 per cent, that is somewhat lower than the average since 2000 (see Figure 3:31). The recent weakening of the krona will help to dampen the downturn in goods prices in the period immediately ahead.

Prices for services have increased by almost 2 per cent a year on average since 2000, but in 2013 the rate of increase began to decline (see Figure 3:31). In recent years, the rate of increase in service prices has been volatile due to widely fluctuating prices for foreign travel. Between March and April this year, prices for such travel varied substantially. In May, the rate of increase in service prices was 0.8 per cent, while in April it was 1.1 per cent.

According to the Riksbank's latest Business Survey, the number of companies that are planning to raise their prices has increased. The development of producer prices for consumer goods has been subdued since 2013, but the rate of price increases has become less negative or even positive in recent months. The same applies to world-market prices for food. The Business Tendency Survey has indicated for more than a year that a majority of the companies in the private service sector and the retail sector expect to raise their prices. However, these expectations have not been realised as yet.

All in all, the assessment is that the annual rate of increase in the CPIF, adjusted for changes in energy prices, will continue to be lower than one percent in the third quarter too. It is expected that there will be a further slight fall in CPIF- and CPI inflation as both energy prices and interest expenditure are expected to fall in the period immediately ahead.

■ **Well-anchored inflation expectations in the long term**

According to surveys conducted by the National Institute of Economic Research and Prospera, inflation expectations one year ahead have fallen over the last recent years (see Figures 3:32 and 3:33). These expectations covary with actual inflation and the prevailing expectations are not lower than is justified by the actual rate of inflation. Inflation expectations five years ahead also covary with actual inflation, although to a lesser extent than expectations in the shorter term. According to the latest Prospera survey, expectations five years ahead are currently at 1.8 per cent, which is close to the inflation target and not a particularly significant deviation in a historical perspective. The assessment is that inflation expectations in the long run are well anchored around the inflation target.

■ Why is inflation low?

Inflation has been low in Sweden in recent years and fell further in the latter part of 2013, mainly because the rate of price increase for services slowed down. This article points to the existence of several different factors that have contributed to this low inflation at different points in time. Demand has been weak for many years, which has contributed to cost increases being moderate and price mark-ups low. Energy prices have also developed weakly over the past few years. A stronger exchange rate contributed to lower inflation in 2011–2012, but probably to a lesser degree since 2013. Food prices have increased more slowly since the end of last year.

Inflation has been low for a long time

Inflation has been low for a long time and fell to even lower levels in 2013 (see Figure A1 and Table A1). Over the last 15 years, prices for services in the CPI have increased by an average of about 2 per cent per year, but they have increased more slowly since 2013. Energy prices, which were previously increasing at a rapid rate, have developed weakly since 2011 and have fallen since 2013. The rate of price increases for food has also fallen recently, due to lower prices on the world market. On the other hand, the rate of price increase for goods has not been abnormally low recently.

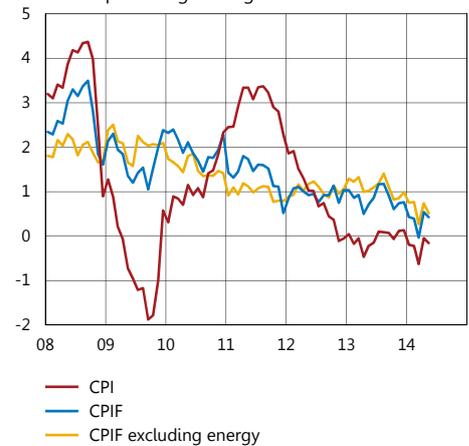
Table A1. Average development of various measures
Annual percentage change

	1995 –2010	2011 –2014	2013 –2014	2014 Jan–May
CPI	1.2	1.1	–0.1	–0.2
CPIF	1.7	1.0	0.7	0.4
CPIF excluding energy	1.5	1.0	1.0	0.6
Import prices, consumer goods	–0.1	–1.2	–0.9	–0.6
– goods excluding food and energy	2.2	1.5	1.1	0.7
– services	1.5	1.6	1.6	0.4
– travel and transport	4.6	0.8	–2.0	–2.4
Food	1.3	0.2	–0.5	1.8

Note. Import prices, consumer goods refer to the producer prices.
Sources: Statistics Sweden and Riksbanken

The Riksbank has previously pointed out that part of the explanation for the low rate of inflation in recent years is that weak demand has meant that the companies have been unable to raise their prices in line with cost increases.⁹ Another explanation is that import prices have developed weakly as a result of subdued international economic activity and the appreciation of the Swedish krona that took place after it had depreciated during the financial crisis. The aim of this article is to shed further light on the question of why inflation has been so low in recent years. This is carried out by conducting a review of a series of factors influencing the development of inflation through

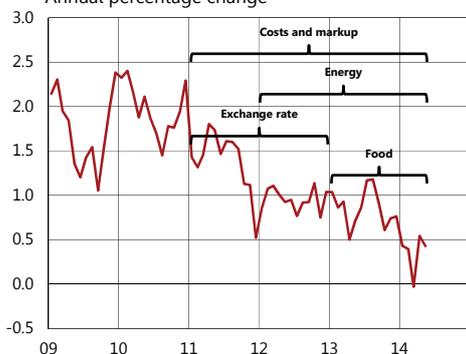
Figure A1. CPI, CPIF and CPIF excluding energy
Annual percentage change



Note. The CPIF is the CPI with a fixed mortgage rate.
Source: Statistics Sweden

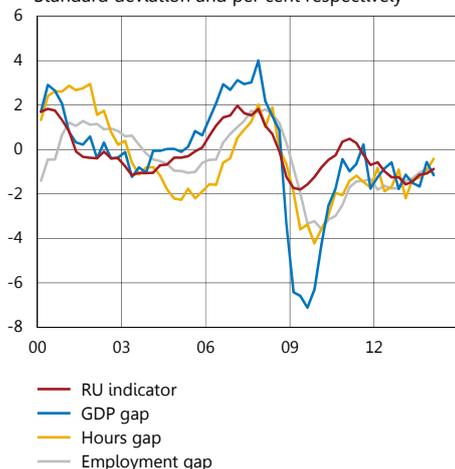
⁹ See the article "Perspectives on the low rate of inflation" in Monetary Policy Report, February 2014, Sveriges Riksbank.

Figure A2. The CPIF and the most important explanatory factors behind low inflation
Annual percentage change



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

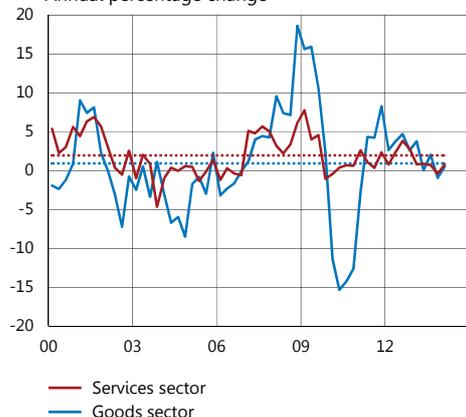
Figure A3. Different measures of resource utilisation
Standard deviation and per cent respectively



Note. The GDP gap refers to the GDP deviation from trend, calculated using a production function. The hours gap and the employment gap refer to the deviation of the number of hours worked and the number of those employed from the Riksbank's assessed trends. The RU indicator is a measure of resource utilisation. It is normalised so that the mean value is 0 and the standard deviation is 1.

Sources: Statistics Sweden and the Riksbank

Figure A4. Unit labour cost in the business sector
Annual percentage change



Note. The broken lines represent the average for the period 2000 Q1–2014 Q1.

Sources: Statistics Sweden and the Riksbank

companies' costs and margins.¹⁰ Several of these factors have contributed to the low inflation, but during different periods (see Figure A2). Weak demand in Sweden and abroad has contributed to a fall in companies' margins and to a lower rate of increase in their costs. A lower rate of increase in global energy prices, like lower Swedish electricity prices, has also affected inflation. A stronger exchange rate contributed to low inflation during 2011–2012, but not in 2013, and a low rate of increase in food prices could partly explain the low inflation since 2013.

Which factors affect inflation?

The price a company sets for a product or service is divided up into marginal costs and mark-ups. These costs are determined by the prices of companies' production factors and are therefore affected by wages, capital costs, prices for imported intermediate goods and other factors. The normal level of mark-ups depends on the level of competition in the sector in which the company is active. Companies' costs and mark-ups, and thereby inflation, vary according to demand in the economy. For example, the development of prices for internationally-traded goods is closely linked to the global economic situation.

The development of inflation is also affected by the exchange rate and inflation expectations. The stronger the krona is, the less Swedish companies and consumers need to pay in Swedish krona for imported goods. Inflation expectations among companies and households can also affect companies' prices in the present.

Weak demand has led to low inflation

In conjunction with the crisis of 2008–2009, GDP in Sweden and many other countries fell substantially and resource utilisation remains lower than normal to this day (see Figure A3). The low level of resource utilisation can be seen as an overall explanation for the low level of inflation, even if the connection between inflation and resource utilisation is often weak. With this as a starting point, it is possible to study how the underlying factors that determine companies' costs and mark-ups have developed.

The development of inflation in recent years can partly be explained by a slower development of costs

A lower than normal level of resource utilisation usually means that the development of costs will be slower than normal. Studying how costs have developed requires a measure of companies' marginal costs. Unit labour costs are one such measure of costs. In both the goods and services sectors, the rate of increase in these costs has slowed down over the last 12 months (see Figure A4). Estimated relationships between inflation and unit labour costs say that the rate of price increase in the economy as a whole and in the services sector should have been lower than normal during the period 2013–2014. But inflation has been even lower than these relationships predict.¹¹

¹⁰ A supplementary description of the factors affecting companies' costs and margins, and thus prices, can be found in the article "The development of costs and inflation", Monetary Policy Report, July 2013, Sveriges Riksbank.

¹¹ See also the article "Perspectives on the low rate of inflation" in Monetary Policy Report, February 2014, Sveriges Riksbank. The models explain the annual change in the CPIF excluding energy and services prices in the CPI respectively. The explanatory variables are unemployment and the 12 quarter moving averages of the annual change in unit labour costs in the business sector and the services sector respectively, and also the exchange rate.

One interpretation of this is that the weak demand situation and the low level of resource utilisation have also affected companies' mark-ups, and that companies have passed on their cost increases to consumers to a lesser extent than previously. This is also supported by the fact that the growth trend in unit labour costs has been higher than the inflation rate (see Figure A5).

The development of companies' capital costs was weaker in 2013

Companies' marginal costs are also affected by the costs for capital. Weak resource utilisation means that companies do not need capital to the same extent as they would otherwise. This means that companies' demand for loans to fund various investments declines. Financing costs thus show weaker development.

Companies' capital costs are difficult to measure. However, one can use a model to estimate the capital costs and the total marginal costs. According to one such measure, companies' capital costs have fallen since 2012, as general interest rates have fallen (see Figure A6).¹² Companies' total marginal costs have therefore shown a weaker development than unit labour costs, but the difference is relatively small (see Figure A7).

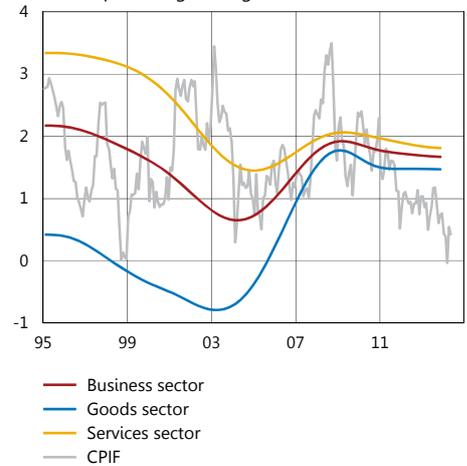
Companies' margins have declined

To a certain extent - but not completely - the low level of inflation can thus be explained by a weaker development of costs for companies. This indicates that companies' margins have also shrunk in recent years. Another indication of this is that what is known as the profit share is presently low in both the goods and services sectors (see Figure A8).

Various surveys also support the view that the companies' profitability is weak. Companies in both the retail sector and the private services sector have reported that profitability has been low (see Figure A9 for several examples). The weak profitability of these consumer-related sectors can be linked to demand having been weak recently (see Figure A10). The Confederation of Swedish Enterprise's entrepreneurs' panel also supports the view that the companies' profit margins are under pressure. According to this, profit margins decreased in the second six months of 2013, mainly for small and medium-sized enterprises.¹³

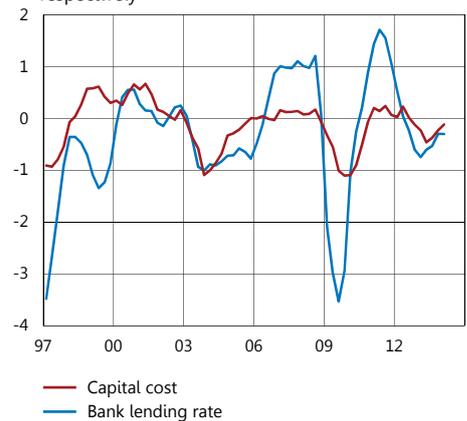
During the spring, the Riksbank commissioned the National Institute of Economic Research to carry out a questionnaire survey of the companies' pricing behaviour.¹⁴ In this survey, approximately 40 per cent of the companies state that the rate of price increase for their goods and services has been lower than normal over the last 12 months. At the same time, about 15 per cent of the companies state that cost development has been weaker than normal, while about 40 per cent respond that margins have been smaller than usual. Among those companies stating that margins have been smaller than normal, two main reasons for this are given: that demand has been

Figure A5. CPIF and trend in unit labour cost
Annual percentage change



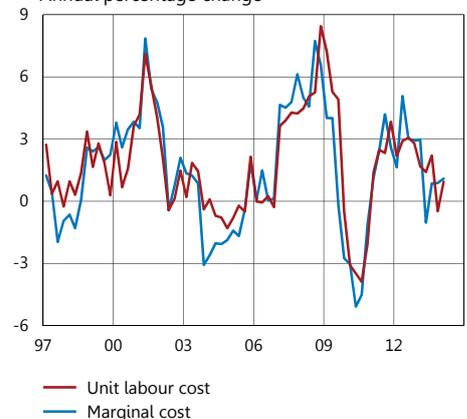
Note. The trends for unit labour costs are calculated using a Hodrick-Prescott filter with a smoothing parameter of 6400.
Sources: Statistics Sweden and the Riksbank

Figure A6. Capital cost and bank lending rate
Annual percentage change and annual change respectively



Note. The capital cost has been estimated using the Riksbank's macroeconomic model, Ramses.
Sources: Statistics Sweden and the Riksbank

Figure A7. Unit labour cost and marginal cost
Annual percentage change



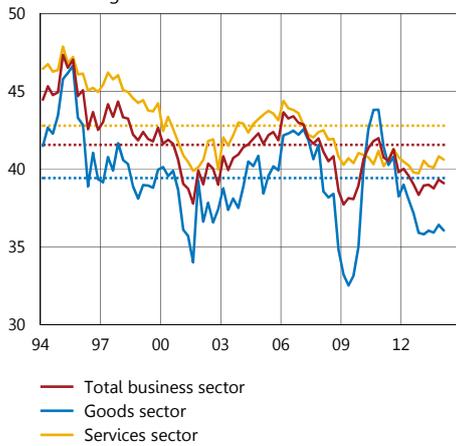
Note. The marginal cost has been estimated using the Riksbank's macroeconomic model, Ramses.
Sources: Statistics Sweden and the Riksbank

¹² The model-based measure of marginal costs for the production of domestic goods and services has been estimated using the Riksbank's macroeconomic model Ramses. See M. Adolfson, S. Laséen, L. Christiano, M. Trabandt and K. Walentin, "Ramses II: Model description", Occasional Paper no. 12, Sveriges Riksbank, 2013, for a description of the model.

¹³ The Confederation of Swedish Enterprise's entrepreneurs' panel for the fourth quarter of 2013 consists of responses from 4,436 companies.

¹⁴ The survey conducted by the National Institute of Economic Research covered 1,500 companies and was carried out in early May 2014. The results are still preliminary. Definitive results from the survey will be published in the early autumn.

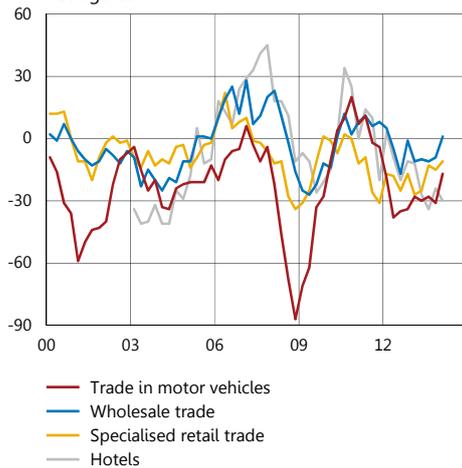
Figure A8. Profit share in the business sector
Percentage of value added



Note. The broken lines represent the average for the period 1994 Q1–2014 Q1.

Sources: Statistics Sweden and the Riksbank

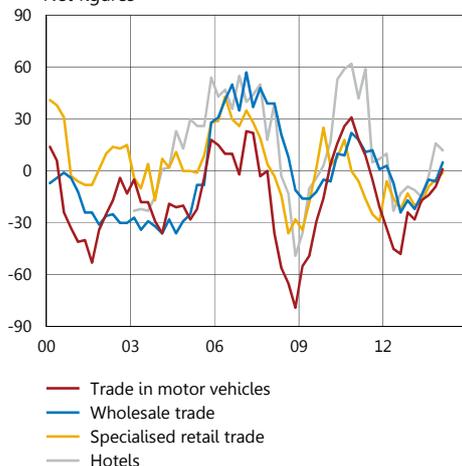
Figure A9. Profitability assessment
Net figures



Note. Net figures are defined as the difference between the proportion of firms that have reported an increase in profitability and the proportion that have reported a reduction.

Source: National Institute of Economic Research

Figure A10. Current sales
Net figures



Note. Net figures show the difference between the proportion of companies that have reported an improvement in sales and the proportion that have reported a deterioration.

Source: National Institute of Economic Research

lower than normal and that competition from Swedish companies has been stronger than normal. The survey responses thus support the perception that companies' margins have been under pressure due to weak demand. However, the Riksbank's most recent Business Survey paints a partly different picture. It indicates instead that low cost increases have been an important explanation behind the weak rate of price increase. This survey covers a small number of large companies, however, many of which do not produce consumer goods.¹⁵

The significance of competition for inflation is unclear

Lower mark-ups can also be seen as an expression of increased competition. For example, the turnover of e-commerce as a proportion of the retail sector's total turnover has increased from 1.2 per cent to 6.2 per cent since 2003. Industry representatives have also emphasised increased international competition as an important explanation for the weak development of prices in the business sector's service industries in 2013.¹⁶

However, it is difficult to make a direct connection between such changes, which are of a more long-term nature, and the recent development of inflation. For example, opportunities have increased for making price comparisons. Any effects on prices should thus mostly concern products that are relatively easy to compare, which is to say various goods (for example home electronics and domestic appliances). But recently the rate of price increase for such goods has not been lower than before. It is also worth noting that increased competition can lead to lower prices over a transitional period but that the rate of inflation should not be affected in the longer run.

Prices for internationally-traded goods developed weakly in 2013

The development of costs and prices in Sweden is also affected by international price developments. World market prices for the goods imported by Sweden match the international economic outlook quite well (see Figure A11). Since the economic situation started to deteriorate again in 2011, the rate of price increase for internationally-traded goods has decreased and prices were largely unchanged in 2013. Above all, commodity prices have developed weakly in recent years.

The development of the krona is not an important explanation for the low inflation since 2013

Import prices are also influenced by the exchange rate. The krona weakened substantially in 2009–2010 and contributed towards holding inflation up at this time. Since then, the krona has appreciated. Prices for imported consumer goods have developed weakly since 2011, which depends, to a certain extent, on the lower rate of growth in global prices and, to a certain extent (particularly in 2011–2012) on the stronger krona (see Figure A12). Another way of illuminating the role of the exchange rate is to compare the difference in inflation in Sweden and the euro area with fluctuations in the exchange rate (see Figure A13). The rate of price increase in most components has been lower in Sweden than in the euro area since 2011 (see Table A2). The view that the exchange rate was an important factor in the low

¹⁵ The Riksbank's Business Survey in May 2014. This entailed interviewing representatives of 46 companies in the construction, retail, manufacturing and service sectors.

¹⁶ Service indicator, Q1 2014, Almega.

inflation in Sweden in 2011–2012 is verified by the fact that the difference in inflation between Sweden and the euro area was greatest for goods and food, product groups that are often imported.

However, over the last year, the trade-weighted exchange rate has instead weakened, and the significance of the krona for the low inflation rate since 2013 has therefore been smaller. The Riksbank's forecast for the exchange rate means that the krona is expected to appreciate somewhat over the year ahead. However, the effects of this on inflation are expected to be significantly smaller than in 2011–2012, when the exchange rate had strengthened significantly.

Table A2. Inflation in Sweden and the euro area
HICP, annual percentage change. The euro area is shown in brackets.

	1997–2010	2011–2014	2013–2014	2014 Jan–May
HICP	1.7 (1.9)	0.8 (2.0)	0.3 (1.2)	0.1 (0.7)
– of which energy	4.3 (4.0)	0.9 (5.9)	–1.5 (0.1)	–2.4 (–1.7)
– of which electricity prices	5.5 (2.1)	–1.7 (5.8)	–1.6 (5.0)	–4.6 (2.8)
HICP excluding energy	1.4 (1.7)	0.8 (1.6)	0.6 (1.3)	0.4 (1.0)
– goods	0.0 (0.7)	–0.7 (0.8)	–0.6 (0.5)	–0.3 (0.2)
– services	2.1 (2.2)	1.4 (1.6)	1.0 (1.4)	0.7 (1.3)
– food	2.0 (2.2)	1.7 (2.7)	1.6 (2.2)	0.6 (1.2)

Sources: Eurostat and Statistics Sweden

Energy prices, particularly electricity prices, have contributed to low inflation

During the period 1995–2010, the rate of increase for energy prices in the CPI averaged 4.6 per cent. Since 2011, energy prices have instead risen by only 0.8 per cent on average (see Table A1) and, over the last year, both electricity and oil prices have fallen. The fall in oil prices is primarily due to the weak international economic situation (see Figure A11),¹⁷ while the weak development of electricity prices is also due to various weather factors. In addition, the development of electricity prices has been significantly weaker in Sweden than in the euro area (see Table A2).

Figure A14 illustrates how CPI inflation would have developed if energy prices since 2011 had risen by an average of 2 per cent per year, instead of by 0.8 per cent. This calculation has been divided up into the direct and delayed effects of higher energy prices. The direct effect is a consequence of energy prices forming a certain proportion of the CPI. Delayed effects arise when the higher energy prices affect other costs and prices, such as transportation prices.¹⁸ The rate of price increase for travel and transport has also been very weak in recent years, which indicates that the delayed effects could be significant. The calculations show that low energy prices seem to form an important part of the explanation for why inflation has been so low.

¹⁷ According to the ECB, about 80 per cent of the decline in inflation in the euro area since 2011 can be attributed to the weak development of commodity prices (energy and food). See M. Draghi "Monetary policy in a prolonged period of low inflation", speech at ECB forum, 26 May 2014.
¹⁸ See M. Bjellerup and M. Löf, "The effects of the oil price on inflation in Sweden", *Economic Commentary* no. 4, 2008, Sveriges Riksbank.

Figure A12. International prices and GDP abroad
Annual percentage change



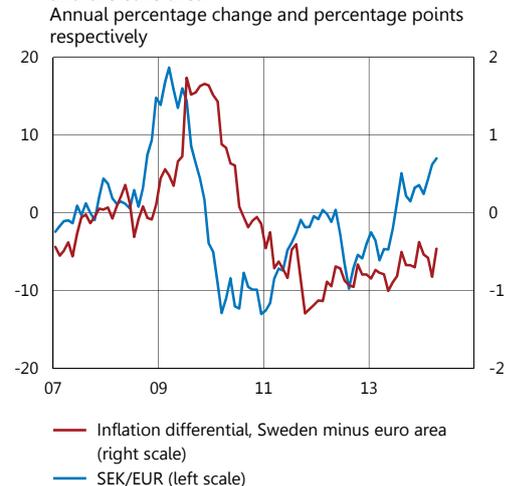
Note. Global export prices are an aggregate of export deflators (in local currencies), where Sweden's import shares are used as a weight. KIX is an aggregate of the countries that are important to Sweden's international transactions.
Sources: IMF, national sources and the Riksbank

Figure A11. Nominal exchange rate (KIX) and prices of imported consumer goods
Annual percentage change



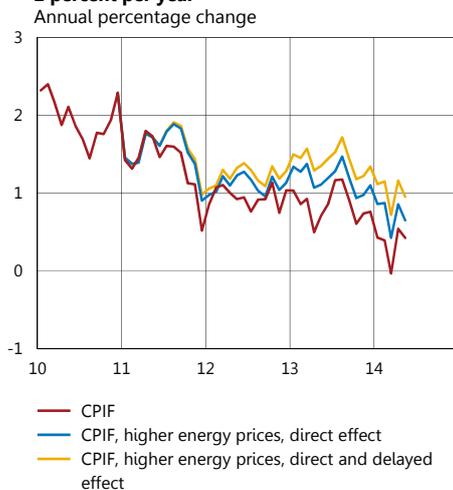
Note. Import prices refer to prices of consumer goods in accordance with the producer price index (PPI). KIX is an aggregate of the countries that are important to Sweden's international transactions.
Sources: Statistics Sweden and the Riksbank

Figure A13. Nominal exchange rate against the euro and difference in inflation rate between Sweden and the euro area
Annual percentage change and percentage points respectively



Note. The difference in the rate of inflation calculated on basis of the HICP, a harmonized index of consumer prices for the EU.
Sources: Statistics Sweden and Macrobond

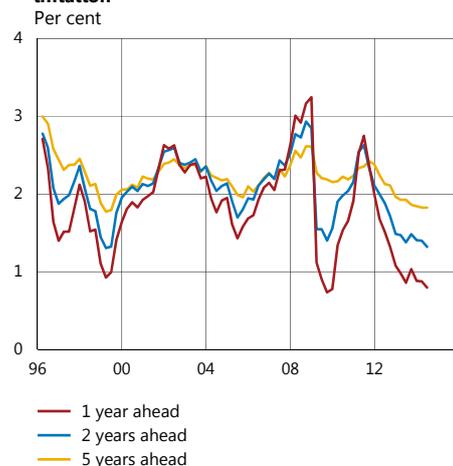
Figure A14. CPIF if energy prices had increased by 2 percent per year



Note. In the example, the energy component in the CPIF is assumed to increase by an average of 2 per cent over the period 2011–14, instead of by the observed 0.8 per cent. The CPIF is the CPI with a fixed mortgage rate.

Sources: Statistics Sweden and the Riksbank

Figure A15. All respondents' expectations of inflation



Source: TNS SIFO Prospera

Inflation expectations may have contributed towards the low level of inflation

There is a clear relationship between short-term inflation expectations and recent inflation. At the same rate as inflation has fallen since 2011, so too have inflation expectations. However, long-term inflation expectations are still firmly anchored at the target of 2 per cent (see Figure A15).

The fact that short-term inflation expectations have fallen may have contributed to lower inflation. For example, it can be difficult for companies to raise prices if their customers expect inflation to be low in the period ahead. However, it is difficult to quantify what effect lower short-term inflation expectations have had on inflation.

Several factors have contributed to the low rate of inflation

A series of different factors are thus responsible for inflation being low for a longer period and for it falling further since 2013. The lower than normal demand and resource utilisation in Sweden and abroad have affected inflation via the following factors:

- companies' costs and margins have developed weakly since 2011
- global energy prices have risen slowly since 2012
- food prices have developed weakly, particularly since 2013

In addition, the following factors have contributed to the low inflation:

- electricity prices have developed weakly in Sweden since 2011
- a strong exchange rate contributed towards lower inflation in 2011–2012, but probably to a lesser extent since 2013

Many of the factors that can explain the low inflation are affected by monetary policy. For example, monetary policy can affect demand in Sweden and the exchange rate, and thereby both domestic cost pressures and import prices. Although the effects of monetary policy are very uncertain and difficult to quantify, the low repo rate is expected to contribute to inflation rising during the coming years.

■ The interplay between wage formation, monetary policy and inflation

There is an interdependence between monetary policy and wage setting. The development of wages is a factor that affects inflation and is thereby important to monetary policy. At the same time, monetary policy plays a central role in wage setting in that it anchors inflation expectations around two per cent and thus facilitates wage negotiations. It is also important that inflation expectations remain anchored to the target for monetary policy to work as effectively as possible. One of the reasons behind the Riksbank's more expansionary monetary policy recently is precisely to ensure that long-term inflation expectations remain anchored at 2 per cent. The aim of this article is to explain how the Riksbank views the interplay between the labour market, wage development, inflation and monetary policy and to explain the Riksbank's wage forecast in more detail. The analysis shows that nominal wage development in 2013 was more or less normal in relation to unemployment, productivity and expected inflation. Inflation is expected to increase and unemployment to fall in the years immediately ahead, which will contribute to a gradual increase in the rate of wage increases in the economy. The very low repo rate will also contribute to this. The profit share is expected to increase somewhat when productivity increases faster than real wages.

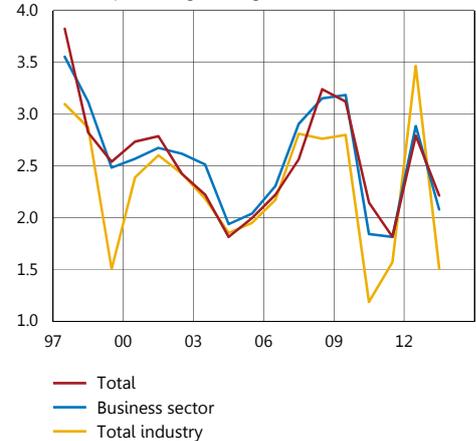
Wage formation in Sweden

Expected inflation, expected productivity growth and ambitions regarding employment are important factors that govern wage formation in an economy with a floating exchange rate. Employers and employees reach agreement on the nominal wages that should apply in the period ahead on the basis of their perceptions of these conditions.¹⁹ In practice, international competitiveness is also taken into account in the decisions on wages as wage formation, even in a small open economy with a floating exchange rate, cannot be seen in isolation from the development of costs abroad.

Since the Industrial Agreement was first signed in 1997, wage formation in Sweden has been marked by a high degree of compliance between different contractual areas. Trade unions and employers in large segments of the manufacturing sector set the norm by reaching agreement on a level for the percentage increases in the wage agreements. Other contractual areas then sign agreements with largely the same percentage wage increases (see Figure A16).

The difference between the agreed and final wage increases is usually referred to as wage drift. Among other things, wage drift captures the fact that local negotiations may result in wages that increase more rapidly than in the central agreements. The extent of wage drift also varies over time (see Figure A17).²⁰

Figure A16. Negotiated nominal wage rates
Annual percentage change

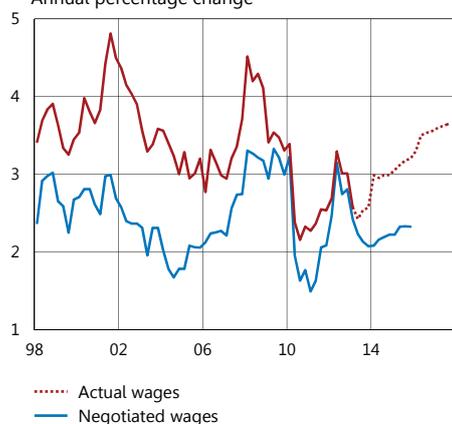


Source: National Mediation Office

¹⁹ See for example N. Gottfries, *Fungerar den svenska lönebildningen? (Does Swedish wage formation work?)*, Appendix 5 to *The Long-Term Survey of the Swedish Economy 2011* and *The Wage Formation Report, 2013*, the National Institute of Economic Research.

²⁰ The Riksbank uses the compilation of agreed wage increases drawn up by the National Mediation Office. Last year, the National Mediation Office changed the calculation method so that agreements that do not specify a percentage for wage increases are no longer included in the compilation. These were previously included as zero agreements. The new method means in general that the rate of agreed wage increases has

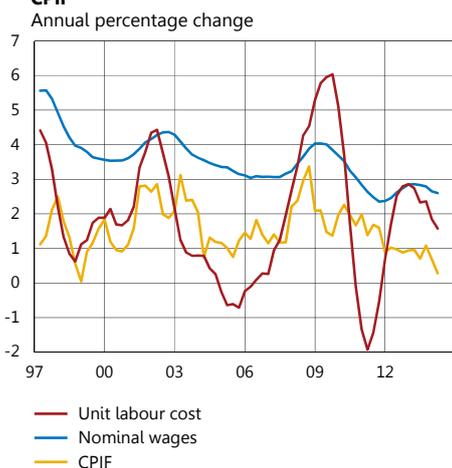
Figure A17. Actual and negotiated wages
Annual percentage change



Note. Wages according to short-term wage statistics. Preliminary outcomes for the last 12 months. Agreements that do not specify a percentage have not been included in the series for agreed wage increases since January 2009.

Sources: National Mediation Office and the Riksbank

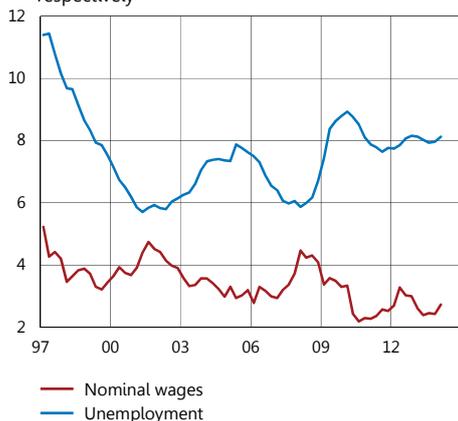
Figure A18. Unit labour cost, nominal wages and CPIF
Annual percentage change



Note. Seasonally-adjusted data is shown for the CPIF and wages, while seasonally-adjusted and calendar-adjusted data is shown for unit labour costs. Unit labour costs and nominal wages are expressed as six-quarter moving averages.

Sources: National Mediation Office, Statistics Sweden and the Riksbank

Figure A19. Unemployment and nominal wages
Annual percentage change and per cent of the labour force, aged 15–74, seasonally-adjusted data respectively



Sources: National Mediation Office and Statistics Sweden

A simple conceptual framework for wage formation can be described as follows. The social partners negotiate on nominal wages. Expected real wages are determined on the basis of the inflation rate expected by the wage negotiators. The development of employment is then determined by the relation between real wages and productivity. Given the negotiators' expectations regarding productivity, the negotiated level of nominal wages thereby reflects the prevailing ambitions regarding employment. If, for example, the social partners attach great importance to employment, collective bargaining results in nominal wage agreements that are lower than the expected rate of inflation and expected productivity growth. However, events may of course occur that result in inflation and productivity growth developing differently to what the social partners expected. In such cases, real wages and employment will also be different than expected. In the longer term, when unemployment is stable at a long-run sustainable rate, it can be assumed that real wages will increase in pace with productivity.

Wage formation is important to inflation and monetary policy

There is an interdependence between monetary policy and wage setting. Historically, inflation in Sweden has covaried with the development of unit labour costs. Periods in which nominal wages have increased relatively quickly in relation to productivity have gone hand in hand with rising inflation (see Figure A18). As nominal wage increases are important to unit labour costs, which in turn affect inflation, they are also an important factor in the formulation of monetary policy. If a lower rate of wage increases than expected leads to lower cost pressures and lower inflation, monetary policy, all else being equal, will need to be more expansionary (see Chapter 2).

And monetary policy is important to wage formation

Monetary policy is also important to wage formation as the wage formation process is facilitated when there is a certain degree of consensus about the future rate of inflation. Consensus about the future development of inflation makes things easier for the social partners and facilitates negotiations by forming a shared starting point. For this reason, it is also important that monetary policy is conducted in such a way that the inflation target is perceived as the nominal anchor for the development of prices. Although it is certainly the case that monetary policy cannot steer inflation with any high degree of precision, which may mean that inflation deviates from the target for relatively long periods of time, monetary policy is formulated so that inflation will return to the target in the long term.

Wages covary with the situation on the labour market

The Riksbank continually monitors the development of wages and the discussions concerning collective bargaining. The wage forecasts are based on historical links between nominal wages, the labour market, productivity and inflation, but the results of collective bargaining, both in the case of the agreed wage increases and the structure of the agreements, are also of central importance.

been raised. The National Mediation Office's agreement series has been calculated back to 2009 using the new method. Calculations of wage drift are therefore not completely comparable for the periods before and after 2009.

There is a clear empirical link between nominal wage increases and the development of the labour market. When unemployment rises and spare capacity on the labour market increases, nominal hourly wages normally increase more slowly, and vice versa when unemployment falls (see Figure A19). This is partly due to the agreed wage increases, which have tended to be more restrained in periods of high unemployment.

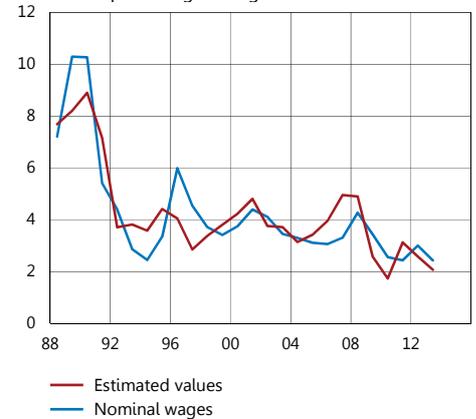
One way of illustrating how wage formation is affected by the labour market is to estimate so-called wage equations. In such estimates, the development of wages is explained in terms of the unemployment rate, expected inflation and productivity growth. The current assessment is that nominal wage development is more or less normal given the development of the explanatory variables (see Figure A20). The relatively low rate of increase in hourly wages in 2013 can thus largely be explained in terms of the unemployment rate, inflation expectations and productivity growth in the economy.²¹

As mentioned previously, nominal wages are set, given the expected inflation rate, with the aim of achieving a certain development of real wages. If productivity and real wages increase at the same rate, the so-called profit share will be constant.²² However, the historical relation between real wages and productivity is relatively weak in the data (see Figure A21). The fact that productivity normally varies more than real wages means that the profit share also varies over an economic cycle (see Figure A22).²³

In 2012 and 2013, real wages increased faster than productivity, which led to a fall in the profit share. One factor that has contributed to this is that the development of prices was weaker than expected (see the article "Why is inflation low?"). According to surveys, inflation has been lower than the social partners expected one or two years ago, which means that realised real wages have been higher than expected.

All in all, the development of nominal wages in recent years has been approximately in line with the development of the labour market. The fact that inflation has been lower than expected has contributed to real wages being unexpectedly high, which has had a restraining effect on the profit share.

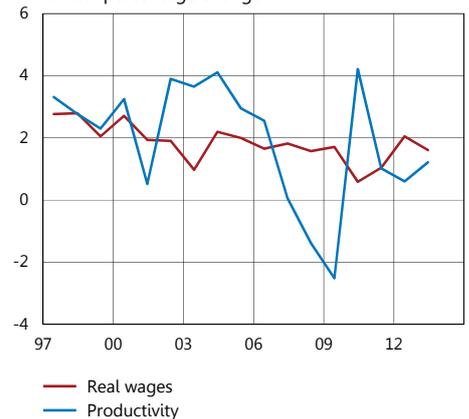
Figure A20. Actual and estimated nominal wages
Annual percentage change



Note. In the equation, the development of wages is explained in terms of the unemployment rate, expected inflation and productivity growth.

Sources: National Mediation Office and the Riksbank

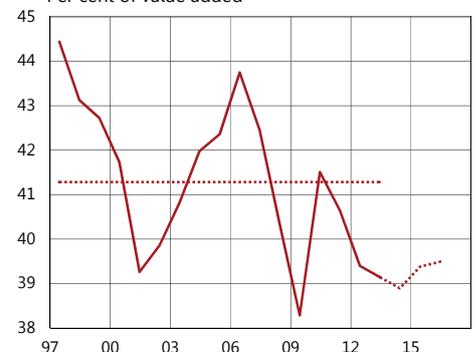
Figure A21. Real wages and productivity
Annual percentage change



Note. Real wages are nominal wages deflated by the CPIF.

Sources: National Mediation Office and the Riksbank

Figure A22. Profit share
Per cent of value added



Note. The broken line represents the average for the period 1997–2013.

Sources: Statistics Sweden and the Riksbank

²¹ These results are in line with a similar specification in the National Institute of Economic Research's wage formation report 2013. Inflation expectations are measured in the equation using the CPIF inflation rate in the preceding year.

²² The profit share comprises the gross operating surplus as a proportion of total value added, that is that part of value added that does not consist of labour costs.

²³ For a further discussion of profit shares, see the scenario "The development of costs and inflation" in *Monetary Policy Report*, February 2014, Sveriges Riksbank. This describes two scenarios which both entail an initially low profit share rising. However, the development of wages and inflation, as well as monetary policy, are different in the two scenarios.

Wages will increase faster going forward as economic activity strengthens

The round of collective bargaining in 2013 resulted for the most part in three-year nominal wage agreements that will be valid until early 2016. According to the compilation of the National Mediation Office, agreed wages will increase by 2.2 per cent in 2014 and 2.3 per cent in 2015. However, an increasing proportion of the wage agreements are agreements in which no percentage for wage increases is specified. For 2015, almost 20 per cent of employees are covered by agreements that do not specify any percentage for nominal wage increases.

The agreed wage increases form a basis for the Riksbank's wage forecast. In addition, the Riksbank makes an assessment that is primarily based on how wages usually develop over an economic cycle. The very low repo rate is a factor in the assessment that unemployment will fall in the years ahead. Wages are therefore expected to increase somewhat more rapidly in relation to the agreements this year and next year than they did in 2013. Wages are expected to increase by 3.5 per cent in 2016, which is approximately in line with the historical average. The higher rate of wage increases is one explanation of why inflation will increase in the years ahead.

The forecast is that real wages will increase more rapidly than productivity this year too. There will thus be a further slight fall in the profit share. It is expected that the possibility of companies to pass on costs to prices will gradually increase as demand in the economy increases. This will contribute to higher inflation, which in combination with somewhat higher growth in productivity means that the profit share will increase in 2015 and 2016. However, the profit share will still be low in these years in relation to the historical norm, which may contribute to wage increases being more restrained. The development of wages in the period ahead is also uncertain for other reasons. Chapter 2 illustrates how alternative scenarios for the development of wages may affect inflation and monetary policy.

This article has highlighted the interplay between wage formation and monetary policy. The development of wages is a factor that affects inflation and is thereby important to monetary policy. At the same time, monetary policy plays a central role in wage setting in that it anchors inflation expectations around two per cent and thus facilitates wage negotiations. The Riksbank will continue to closely monitor wage formation and the negotiations on new wage agreements.

■ Stricter capital requirements for Swedish banks – effects on the macroeconomy

Finansinspektionen (the Swedish financial supervisory authority) has recently presented stricter capital requirements for Swedish banks. The main elements in the stricter requirements are an increase in the risk weight floor for Swedish mortgages and a countercyclical capital buffer. This article analyses on a general level the macroeconomic effects of the stricter capital requirements. The primary reason for the measures taken by Finansinspektionen is to increase resilience in the Swedish banking system. The measures are assessed as affecting lending rates, credit volumes and growth to a limited extent.

On 8 May this year Finansinspektionen (FI) announced it would introduce stricter capital requirements for Swedish banks. In addition to the previously announced requirement of 12 per cent CET 1 capital in the major banks from January 2015²⁴, FI's announcement contains two main components:

- the risk weight floor for Swedish mortgages will be raised from 15 to 25 per cent
- a countercyclical capital buffer will be introduced, and the buffer value will be set at 1 per cent²⁵

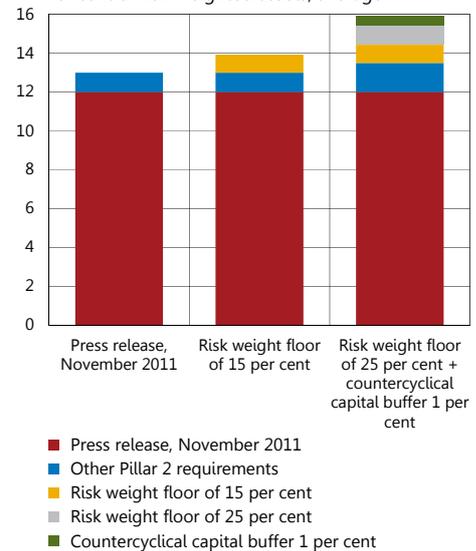
The increase in the risk weight floor to 25 per cent was announced by FI in November 2013, and the effects of this measure were thus taken into consideration prior to the monetary policy decision in December. The countercyclical capital buffer is a new macroprudential policy tool that FI can use in connection with the new capital adequacy regulations coming into force in August, and has therefore not been fully taken into consideration in previous monetary policy decisions. The components in the new capital adequacy requirements are illustrated in Figure A23. As an average for the major Swedish banks, the increase in the risk weight floor for mortgages from 15 to 25 per cent corresponds to an additional CET 1 capital requirement of around 1 percentage point, while the countercyclical capital buffer accounts for a further approximately 0.5 of a percentage point.²⁶

The main purpose is to strengthen the banks' resilience

Both the increase in the risk weight floor and the countercyclical capital buffer are examples of macroprudential policy measures, that is, measures

Figure A23. Requirement for core Tier 1 capital for major Swedish banks

Per cent of risk-weighted assets, average



Note. Other Pillar 2 requirements refer to Finansinspektionen's standard values. The new capital adequacy requirements mean that these other Pillar 2 requirements are to be covered by core Tier 1 capital to a greater degree than previously; this explains the larger blue square in the bar on the far right of the figure. For the risk-weight floors and the countercyclical buffer, the calculations refer to the weighted average for the four major banks. See footnote 24 regarding the press release from November 2011.

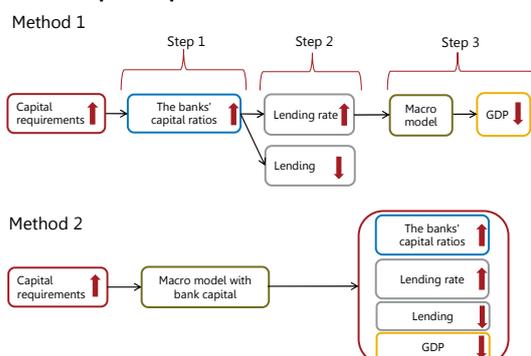
Source: The Riksbank

²⁴ A press release in November 2011 by Finansinspektionen (FI), the Ministry of Finance and the Riksbank presented a proposal that the major Swedish banks should have a CET 1 capital ratio of at least 10 per cent with effect from January 2013 and at least 12 per cent with effect from January 2015.

²⁵ The announcement on 8 May did not provide any proposal for the buffer value, but FI later notified that they advocate 1 per cent. However, the Riksbank considers that the buffer should be set at 2.5 per cent. See the recommendation and article "The countercyclical capital buffer" in Financial Stability Report 2014:1, Sveriges riksbank. However, this article is based on FI's proposed level of 1 per cent. FI has notified that they will announce their final decision in September.

²⁶ The risk-weight floor for Swedish mortgages is being introduced as part of FI's total capital assessment under what is known as Pillar 2 of the capital adequacy regulations. The banks are subjected to an extra CET 1 capital requirement in SEK that corresponds to an increase in the risk-weight floor for mortgages from 15 to 25 per cent. However, the banks' reported risk-weighted assets are not affected by the risk-weight floor, as they are calculated within the framework of the regulations in Pillar 1. The risk-weight floor for Swedish mortgages thus entails an increase in the capital requirement in relation to the banks' risk-weighted assets. For a more detailed description of how the risk-weight floor for mortgages affects the capital requirements for the banks, see the article "Minimum requirement for the banks' capital if risk weights for Swedish mortgage are raised" in Financial Stability Report 2013:2, Sveriges riksbank and "Capital requirements for Swedish banks", memorandum dated 8 May 2014, Finansinspektionen. The countercyclical buffer value of 1 per cent refers to risk-weighted assets in Sweden. On average, the major banks have around 35 per cent of their total risk-weighted assets in Sweden, which means a CET 1 capital requirement from the buffer of around 0.35 per cent. The figure 0.5 per cent includes an additional CET 1 capital requirement arising as a result of the risk weight floor for mortgages being taken into account when calculating the capital requirement ensuing from the buffer. See also the note to Figure A28.

Figure A24. Different methods for analysing effects of capital requirements



Source: The Riksbank

aimed at reducing the systemic risks in the economy.²⁷ This can be done by increasing the resilience in the financial system and by dampening an overly strong growth in credit.

The primary purpose of the new measures from FI is to increase the resilience of the Swedish banking system given the large build-up of debt among households over a long period of time. Higher capital requirements lead to an increase in the financial system's resilience to shocks, which reduces the probability of a financial crisis.²⁸ For example, they reduce the risk of a sharp fall in Swedish housing prices developing into a banking crisis if the banks have more capital to absorb loan losses.

Higher capital requirements can also lead to higher lending rates, reduced loan volumes and lower GDP

The higher capital requirements can also have other effects on the macroeconomy in the form of higher lending rates, reduced lending volumes and lower GDP. The effects on lending to households can be regarded as a positive side-effect, as they can contribute to dampening household indebtedness, while the effects on GDP can be regarded as a negative side-effect or cost. An analysis of the macroeconomic effects of the capital requirements includes several components.

The first question concerns to what extent the banks' actual capital ratios are affected by the stricter requirements.²⁹ *The second question* concerns the effects on the banks' lending and rate-setting assuming that they increase their capital ratios.³⁰ *The third question* concerns how the macroeconomy is affected by the banks' changed behaviour.

The three questions above can either be analysed in stages or together, using a macroeconomic model that contains capital ratios in the banks (see Figure A24).

The Riksbank's earlier analyses of effects of capital requirements on the macroeconomy

In 2010 and 2011 the Riksbank presented analyses of the effects of higher capital and liquidity requirements in connection with the introduction of Basel III.³¹ A preliminary analysis using data on the banks' balance sheets indicated that an increase of one percentage point in the capital ratios in the major banks would entail at most a 0.1 percentage point higher lending rate and a 2 per cent lower lending volume (see stages 1 and 2 in the upper half of Figure A24).³² The effects are based on the assumption that the banks will

²⁷ FI says that the risk weight floor of 15 per cent was aimed at managing the fact that the banks' internal risk weights did not reflect the risk of loan losses, while the increase in the risk weight floor to 25 per cent is intended to manage the systemic risks arising from mortgages. See "Capital requirements for Swedish banks", memorandum dated 8 May 2014, and "Stability in the financial system" (summary only in English), report dated 12 June 2014, Finansinspektionen.

²⁸ For an international study of the relationship between capital levels in banks and the probability of financial crises, see R. Barrell, E. P. Davis, D. Karim, and I. Liadze, "Bank regulation, property prices and early warning systems for banking crises in OECD countries", Discussion Paper no. 330, National Institute of Economic and Social Research, 2010.

²⁹ For details on this, see for instance the article "Minimum requirement for the banks' capital if risk weights for Swedish mortgage are raised" in Financial Stability Report 2013:2, Sveriges riksbank.

³⁰ In principle, this can be done in three ways: Firstly, one can directly increase the level of own capital through, for instance, accrued profits; secondly, one can reduce one's assets through cutting lending, for instance, and thirdly one can reduce risk-weighted assets by redistributing one's lending in favour of lending with relatively low risk-weights or alternatively increasing the use of so-called internal models when setting risk weights for lending.

³¹ These analyses focused on the cyclical effects of higher capital requirements. An analysis of the long-run effects is described in "Appropriate capital ratio in major Swedish banks – an economic analysis", Riksbank study published on 6 December 2011, Sveriges riksbank.

³² See the article "Basel III – Effects on the Swedish banks and Sweden" in Financial Stability Report 2010:2, Sveriges riksbank.

increase their actual capital ratios as much as the requirements increase³³ (by 1 percentage point) and on the banks attaining the higher capital ratio by amending their balance sheets in accordance with a historically-normal pattern. The effect on lending rates is calculated with the aid of the historical correlation between the interest rate margin and the volume of capital in the banks.

Using these results as a base, an analysis of the effects on GDP of an increase in the banks' lending rates was made (see stage 3 in the upper half of Figure A24).³⁴ This experiment was carried out with the aid of the Riksbank's macro model, Ramses, and indicated that the level of GDP declined by 0.2 and 0.5 per cent at most, with the differences reflecting different assumptions for monetary policy.³⁵

The Riksbank has also produced a macro model where the time-varied capital requirements and monetary policy can be analysed together (see lower half of Figure A24).³⁶ The experiment in the model indicates that an increase in the capital requirement of 1 percentage point leads at most to lending that is around 0.7 per cent lower and to GDP that is around 0.5 per cent lower, when monetary policy is allowed to react according to normal patterns.³⁷

The above results give a rough indication of the macroeconomic effects of FI's announcement. The increase in the risk weight floor corresponds to an increase in the capital requirement of around 1 percentage point. This indicates that lending rates for the economy as a whole will rise by 0.1 percentage points, that lending will decline by between 0.7 and 2 per cent and that GDP will decline by between 0.2 and 0.5 per cent, depending on whether monetary policy is expected to react.

The countercyclical capital buffer entails an extra capital requirement of around 0.5 percentage points and compared with the increase in the risk-weight floor, the effects are thus roughly half as great.

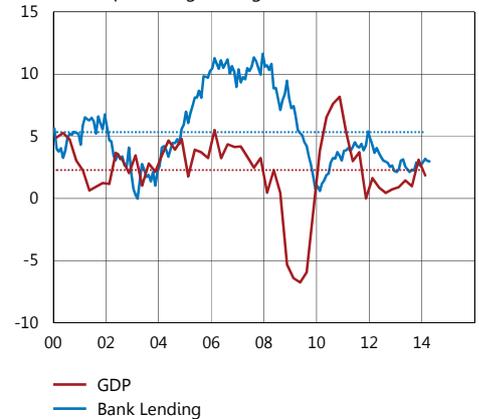
Given that lending has increased by a good 5 per cent a year on average over the past 15 years, the effects on lending must be regarded as small (see Figure A25). Correspondingly, the effects on GDP can be said to be limited, in relation to the average GDP growth of just over 2 per cent a year (see Figure A25).³⁸

The effects on the macroeconomy of FI's measures are generally minor, but it is positive that households are affected more than companies

An overall assessment of what FI's measures entail *at present*, can be made on the basis of the three questions described above.

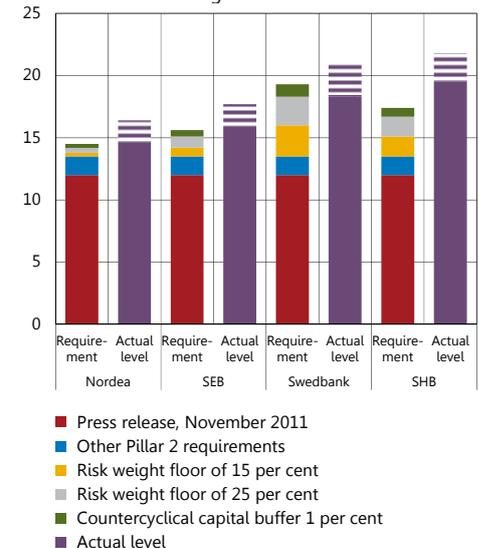
The first question concerns how the banks' capital ratios are affected by FI's measures. Figure A26 shows the four major banks' actual capital ratios

Figure A25. GDP and bank lending
Annual percentage change



Note. Bank lending relates to MFIs' lending to non-financial companies and to households according to financial market statistics adjusted for reclassifications and purchased and sold loans from 2006. The series relate to real terms where lending is deflated by the CPIF. The broken lines represent the average for the period 2000 to the last outcome.
Source: Statistics Sweden

Figure A26. Total requirements and actual levels of the major Swedish banks' core Tier 1 capital ratios
Per cent of risk-weighted assets



Note. In the figure, standard values from the Swedish Financial Supervisory Authority have been used for so-called other Pillar 2 requirements. The striped part of the bar representing the actual level is a forecast based on profit forecasts from SME Direkt for the remaining part of the present accounting year and an assumption of unchanged risk-weighted assets. It thereby gives an indication of the banks' capacity to further strengthen their core Tier 1 capital ratios. The actual capital ratios have been taken from the banks' quarterly reports from Q1 2014. Since this, Swedbank has received permission from FI to use a new method for calculating its risk-weighted assets, which have thereby decreased. This means that Swedbank's actual core Tier 1 capital ratio has increased from 18.3 to 21.7 per cent. See footnote 24 regarding the press release from November 2011.

Sources: The Swedish Financial Supervisory Authority, SME Direkt and the Riksbank

³³ If the banks do not increase their capital ratios as much as the requirements increase – for instance, because they have already made allowances for expected increases in the requirements or they wish to hold a smaller buffer than before in relation to the requirements – the effects on interest rates and lending could be smaller.

³⁴ See the article "The effects of Basel III on macroeconomic development" in the Monetary Policy Report, February 2011, Sveriges riksbank.

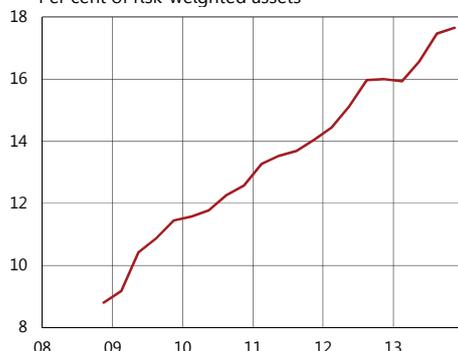
³⁵ It was assumed in the experiment that the capital level in the banks increased by 1 percentage point over a four-year period. However, the maximum effect was only achieved after 32 quarters.

³⁶ See M. Jonsson, and K. Moran, "Links between monetary policy and macroprudential policy", Economic Review 2014:1, Sveriges riksbank.

³⁷ However, only lending to companies is included in the model.

³⁸ In the long run, the effects on lending and GDP can moreover be assumed to be even smaller, as higher capital levels in the banks make them safer, which probably leads to lower financing costs and thereby less need for higher lending rates and reduced lending.

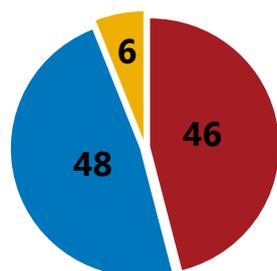
Figure A27. Development of the major Swedish banks' core Tier 1 capital ratios
Per cent of risk-weighted assets



Note. Core Tier 1 capital ratios in accordance with Basel II without transitional regulations, unweighted average.

Sources: SNL Financial and the Riksbank

Figure A28. Breakdown of lending in Sweden given extra capital requirements by a countercyclical capital buffer
Per cent

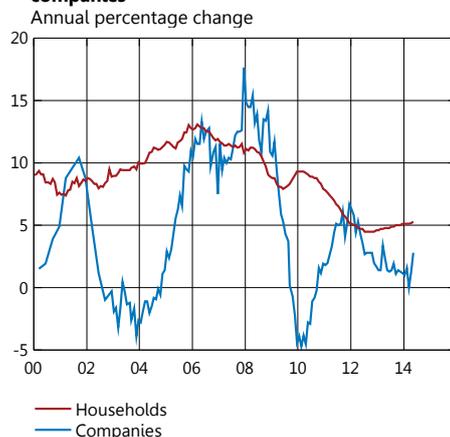


■ Households ■ Companies ■ Others

Note. The Swedish Financial Supervisory Authority assumes a risk-weight floor for mortgages of 25 per cent when calculating capital requirements from the capital buffer. The breakdown in the figure therefore includes a 25 per cent risk-weight floor for mortgages. Without this risk-weight floor, the breakdown would be: companies 68 per cent, households 24 per cent, and others 9 per cent.

Source: The Swedish Financial Supervisory Authority

Figure A29. Bank lending to households and companies
Annual percentage change



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

Source: Statistics Sweden

and the new capital requirements that FI's announcement entails.³⁹ It is clear that the banks have increased their CET 1 capital ratios in recent years as the requirements have become stricter (see Figure A27).⁴⁰ This supports the theory that the banks' actual CET 1 capital ratios are affected by the requirements and that the banks will probably increase their CET 1 capital ratios in the coming period.⁴¹ Given the banks' good development in profits, however, they are assessed as having very good conditions for doing so (see Figure A26).

The second question concerns how the banks' lending and lending rates are affected by the banks increasing their capital ratios.⁴² The increase in the risk weight floor entails an extra capital requirement for mortgages and is therefore assessed as only affecting mortgage rates charged to households. The Riksbank's assessment is that the banks' mortgage rates will rise by around 0.2 percentage points. This is the same assessment as in the Monetary Policy Update in December 2013, in connection with FI's announcement of the measures.⁴³

The countercyclical capital buffer entails an additional capital requirements on all lending in Sweden (see Figure A28). The buffer is therefore assessed as affecting interest rates charged to both households and companies. However, the effect on these interest rates is very limited, around 0.05 of a percentage point each.⁴⁴

The third question concerns how the macroeconomy is affected by the two measures. For the economy as a whole, the effects in terms of GDP are expected to be very limited. In recent years, lending to companies has developed relatively weakly, while lending to households is continuing to grow at a relatively rapid rate, at the same time as household debt is increasing (see Figure A29). It is therefore positive that the two measures together are expected to primarily have an impact on the banks' mortgage rates. In this way, they can contribute to slowing down household debt without having any tangible effect on corporate lending. However, the effects on household debt are expected to be minor.

³⁹ The fact that the effects of the higher risk weight floor are different for the different banks is probably mainly due to differences in the share of mortgages in their lending. The effects are also different with regard to the countercyclical capital buffer, as the major banks' shares of exposures in Sweden differ.

⁴⁰ See also Chapter 4, "Developments in the Swedish banking groups", Financial Stability Report 2014:1, Sveriges riksbank.

⁴¹ Empirical studies from other countries also indicate that banks adapt their capital ratios relatively substantially when capital requirements are altered. See, for example, W. B. Francis & M. Osborne, "On the Behavior and Determinants of Risk-Based Capital Ratios: Revisiting the Evidence from UK Banking Institutions," *International Review of Finance*, 10(4), pp. 485–518, 2010 and J. Bridges, D. Gregory, M. Nielsen, S. Pezzini, A. Radia and M. Spaltro, "The impact of capital requirements on bank lending", Bank of England Working Paper 486, 2014.

⁴² For international studies on the relationship between bank lending and capital requirements, see for instance M. Drehmann and L. Gambacorta, "The effects of countercyclical capital buffers on bank lending," *Applied Economics Letters*, 19(7), pp. 603–608, 2012, W. B. Francis, and M. Osborne, "Capital requirements and bank behavior in the UK: Are there lessons for international capital standards?", *Journal of Banking & Finance* 36(3), pp. 803–816, 2012 and J. Bridges, D. Gregory, M. Nielsen, S. Pezzini, A. Radia and M. Spaltro, "The impact of capital requirements on bank lending", Bank of England Working Paper 486, 2014, as well as J. Noss and P. Toffano, "Estimating the impact of changes in aggregate bank capital requirements during an upswing", Bank of England Working Paper 494, 2014.

⁴³ This is in line with the calculation of the effects of Basel III as reported above, as lending to households comprises approximately half of the banks' lending in Sweden, which means that the total volume-weighted lending rate to both households and companies rises by around 0.1 percentage point.

⁴⁴ This is also in line with the calculations of effects of Basel III, as an increase in the capital requirement of 1 percentage point is there expected to give a 0.1 percentage point higher lending rate in the economy as a whole, and the countercyclical buffer corresponds to an increase of around 0.5 of a percentage point in the capital requirement.

Increased resilience in the banking system is the main effect of FI's measures

All in all, the main effect of FI's measures is expected to be that the resilience of the Swedish banking system strengthens. In this way, the risk of household debt ultimately leading to problems in the Swedish banks that might have serious consequences for the macroeconomy is reduced. The direct effects on growth in household indebtedness are assessed as small.

■ APPENDIX

- Tables
- Articles 2011–2014
- Interest rate decisions 2009–2014
- Glossary

Tables

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

Table 1. Repo rate forecast

Per cent, quarterly averages

	Q2 2014	Q3 2014	Q4 2014	Q3 2015	Q3 2016	Q3 2017
Repo rate	0.8	0.3 (0.7)	0.2 (0.7)	0.3 (1.2)	1.5 (2.4)	2.4

Source: The Riksbank

Table 2. Inflation

Annual percentage change, annual averages

	2013	2014	2015	2016
CPI	0.0	-0.1 (0.2)	1.3 (2.2)	3.0 (3.2)
CPIF	0.9	0.6 (0.7)	1.6 (1.7)	2.0 (2.0)
CPIF excl. energy	1.1	0.8 (1.1)	1.8 (1.9)	2.2 (2.1)
HICP	0.4	0.3 (0.5)	1.6 (1.7)	2.0 (2.0)

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 averages

	2013	2014	2015	2016
Repo rate	1.0	0.5 (0.7)	0.3 (1.1)	1.3 (2.3)
10-year rate	2.1	2.0 (2.4)	2.2 (3.2)	3.1 (3.9)
Exchange rate, KIX, 18 November 1992 = 100	103.0	105.9 (103.0)	104.1 (101.8)	102.1 (101.2)
General government net lending*	-1.2	-1.9 (-1.9)	-1.1 (-0.9)	-0.2 (-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	2013	2014	2015	2016
Euro area	0.14	0.47	-0.4	1.0 (1.2)	1.7 (1.8)	2.0 (1.9)
USA	0.19	0.08	1.9	1.8 (3.1)	3.4 (3.4)	2.8 (2.7)
Japan	0.06	0.03	1.5	1.5 (1.2)	1.3 (1.1)	1.2 (1.2)
China	0.15	0.07	7.6	6.9 (7.3)	7.0 (7.0)	7.0 (7.0)
KIX-weighted	0.79	1.00	1.1	2.0 (2.3)	2.6 (2.7)	2.8 (2.8)
World (PPP-weighted)	1.00	—	3.0	3.2 (3.6)	4.0 (3.9)	4.0 (3.8)

Note. Calendar-adjusted growth rates. The PPP-weights refer to the global purchasing-power adjusted GDP-weights, according to the IMF. The National Institute of Economic Research updates the weights for the KIX krona index at the start of every year with a time lag of three years. The figures in the table are based on the new KIX weights for 2011 that are used for 2014, and on an assumption that the weights will develop according to the trend of the past five years in the coming forecast years.

CPI	2013	2014	2015	2016
Euro area (HICP)	1.4	0.7 (0.9)	1.4 (1.5)	1.7 (1.7)
USA	1.5	1.9 (1.6)	2.3 (2.1)	2.4 (2.5)
Japan	0.4	2.8 (2.8)	2.1 (2.0)	2.1 (1.7)
KIX-weighted	1.9	1.6 (1.7)	2.1 (2.2)	2.3 (2.3)

	2013	2014	2015	2016
Policy rates in the rest of the world, per cent	0.2	0.3 (0.3)	0.3 (0.4)	0.5 (1.0)
Crude oil price, USD/barrel Brent	108.8	109.9 (106.1)	106.7 (101.7)	102.1 (97.9)
Swedish export market	1.6	3.1 (4.5)	5.7 (5.9)	6.1 (6.1)

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

	2013	2014	2015	2016
Private consumption	2.0	2.7 (2.9)	3.2 (2.9)	2.8 (2.5)
Public consumption	2.0	1.0 (0.9)	1.6 (1.6)	1.2 (1.2)
Gross fixed capital formation	-1.1	4.4 (4.2)	6.0 (6.9)	5.6 (5.3)
Inventory investment*	0.2	0.2 (0.2)	0.1 (0.0)	0.0 (0.0)
Exports	-0.4	3.8 (4.2)	6.2 (6.2)	6.5 (6.3)
Imports	-0.8	5.3 (4.5)	6.6 (6.8)	6.6 (6.6)
GDP	1.6	2.2 (2.7)	3.3 (3.2)	3.1 (2.8)
GDP, calendar-adjusted	1.6	2.3 (2.8)	3.1 (3.0)	2.8 (2.5)
Final figure for domestic demand*	1.3	2.4 (2.4)	3.1 (3.2)	2.8 (2.6)
Net exports*	0.2	-0.4 (0.1)	0.1 (0.1)	0.3 (0.2)
Current account (NA), per cent of GDP	6.8	6.4 (6.6)	6.2 (6.3)	6.2 (6.2)

*Contribution to GDP growth, percentage points

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

Sources: Statistics Sweden and the Riksbank

Table 6. Production and employment

Annual percentage change, unless otherwise stated

	2013	2014	2015	2016
Population, aged 15–74	0.6	0.7 (0.7)	0.8 (0.7)	0.8 (0.7)
Potential hours worked	0.5	0.6 (0.6)	0.6 (0.6)	0.6 (0.6)
GDP, calendar-adjusted	1.6	2.3 (2.8)	3.1 (3.0)	2.8 (2.5)
Number of hours worked, calendar-adjusted	0.4	1.5 (1.0)	1.3 (1.6)	1.2 (1.2)
Employed, aged 15–74	1.0	1.2 (1.0)	1.3 (1.2)	1.1 (1.0)
Labour force, aged 15–74	1.1	1.1 (0.9)	0.6 (0.5)	0.4 (0.4)
Unemployment, aged 15–74 *	8.0	8.0 (7.9)	7.3 (7.3)	6.7 (6.7)

* Per cent of the labour force

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

Sources: Statistics Sweden and the Riksbank

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

Annual percentage change, calendar-adjusted data unless otherwise stated

	2013	2014	2015	2016
Hourly wage, NMO	2.5	3.0 (2.8)	3.1 (3.1)	3.5 (3.4)
Hourly wage, NA	2.4	2.6 (2.9)	3.5 (3.3)	3.9 (3.7)
Employers' contribution*	0.1	-0.1 (0.0)	0.0 (0.0)	0.0 (0.0)
Hourly labour cost, NA	2.5	2.5 (2.9)	3.5 (3.3)	3.9 (3.7)
Productivity	1.2	0.8 (1.9)	1.8 (1.4)	1.6 (1.3)
Unit labour cost	1.3	1.7 (1.0)	1.8 (1.9)	2.2 (2.3)

* 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

Table 8. Alternative scenario: lower wages, unchanged monetary policy

Annual percentage change, unless otherwise stated

	2014	2015	2016
Nominal wages	2.5 (2.5)	3.2 (3.5)	2.9 (3.9)
Real wages	1.9 (1.9)	1.7 (1.9)	1.1 (1.9)
Unemployment, aged 15–74	8.0 (8.0)	7.3 (7.3)	6.6 (6.7)
Hours gap, per cent	–0.6 (–0.6)	0.1 (0.1)	0.7 (0.7)
CPIF	0.6 (0.6)	1.6 (1.6)	1.7 (2.0)
CPI	–0.1 (–0.1)	1.3 (1.3)	2.7 (3.0)
GDP, calendar adjusted	2.3 (2.3)	3.1 (3.1)	2.8 (2.8)

Note. Nominal wages refers to labour costs per hour according to the National Accounts, see also table 7. Real wages refer to labour costs per hour according to the National Accounts deflated by the CPIF. Unemployment refers to per cent of the labour force.

Sources: Statistics Sweden and the Riksbank

Table 9. Alternative scenario: lower wages, active monetary policy

Annual percentage change, unless otherwise stated

	2014	2015	2016
Nominal wages	2.5 (2.5)	3.2 (3.5)	3.1 (3.9)
Real wages	1.9 (1.9)	1.7 (1.9)	1.3 (1.9)
Unemployment, aged 15–74	8.0 (8.0)	7.3 (7.3)	6.6 (6.7)
Hours gap, per cent	–0.6 (–0.6)	0.1 (0.1)	0.9 (0.7)
CPIF	0.6 (0.6)	1.6 (1.6)	1.8 (2.0)
CPI	–0.1 (–0.1)	1.3 (1.3)	2.8 (3.0)
GDP, calendar adjusted	2.3 (2.3)	3.1 (3.1)	3.0 (2.8)
Repo rate, per cent	0.5 (0.5)	0.2 (0.3)	0.9 (1.3)

Note. Nominal wages refers to labour costs per hour according to the National Accounts, see also table 7. Real wages refer to labour costs per hour according to the National Accounts deflated by the CPIF. Unemployment refers to per cent of the labour force.

Sources: Statistics Sweden and the Riksbank

Table 10. Alternative scenario: higher wages, active monetary policy

Annual percentage change, unless otherwise stated

	2014	2015	2016
Nominal wages	2.5 (2.5)	3.8 (3.5)	4.4 (3.9)
Real wages	1.9 (1.9)	2.2 (1.9)	2.3 (1.9)
Unemployment, aged 15–74	8.0 (8.0)	7.3 (7.3)	6.8 (6.7)
Hours gap, per cent	–0.6 (–0.6)	0.1 (0.1)	0.3 (0.7)
CPIF	0.6 (0.6)	1.7 (1.6)	2.1 (2.0)
CPI	–0.1 (–0.1)	1.5 (1.3)	3.1 (3.0)
GDP, calendar adjusted	2.3 (2.3)	3.1 (3.1)	2.5 (2.8)
Repo rate, per cent	0.5 (0.5)	0.4 (0.3)	1.6 (1.3)

Note. Nominal wages refers to labour costs per hour according to the National Accounts, see also table 7. Real wages refer to labour costs per hour according to the National Accounts deflated by the CPIF. Unemployment refers to per cent of the labour force.

Sources: Statistics Sweden and the Riksbank

Table 11. Alternative scenario: higher interest rate

Annual percentage change, unless otherwise stated

	2014	2015	2016
Repo rate, per cent	0.6 (0.5)	0.4 (0.3)	1.2 (1.3)
Hours gap, per cent	-0.6 (-0.6)	0.0 (0.1)	0.5 (0.7)
Unemployment, aged 15–74	8.0 (8.0)	7.4 (7.3)	6.8 (6.7)
GDP gap, per cent	-0.9 (-0.8)	0.0 (0.2)	0.4 (0.7)
CPI	-0.2 (-0.1)	1.1 (1.3)	2.9 (3.0)
CPIF	0.5 (0.6)	1.5 (1.6)	1.9 (2.0)
Household debt	173.7 (173.8)	177.4 (177.8)	182.0 (182.4)

Note. Unemployment refers to per cent of the labour force. Household debt refers to per cent of disposable income.

Sources: Statistics Sweden and the Riksbank

Table 12. Alternative scenario: lower interest rate

Annual percentage change, unless otherwise stated

	2014	2015	2016
Repo rate, per cent	0.4 (0.5)	0.1 (0.3)	1.3 (1.3)
Hours gap, per cent	-0.6 (-0.6)	0.3 (0.1)	0.8 (0.7)
Unemployment, aged 15–74	8.0 (8.0)	7.2 (7.3)	6.6 (6.7)
GDP gap, per cent	-0.8 (-0.8)	0.5 (0.2)	0.9 (0.7)
CPI	-0.1 (-0.1)	1.5 (1.3)	3.1 (3.0)
CPIF	0.6 (0.6)	1.7 (1.6)	2.1 (2.0)
Household debt	173.8 (173.8)	178.2 (177.8)	182.7 (182.4)

Note. Unemployment refers to per cent of the labour force. Household debt refers to per cent of disposable income.

Sources: Statistics Sweden and the Riksbank

Articles 2011–2014⁴⁵

2011

- 2011 February** The effects of the financial crisis on the labour market – a comparison of Sweden, the euro area and the United States
- 2011 February** Lower policy rates in Sweden and abroad
- 2011 February** How does the Riksbank make forecasts for long-term market rates?
- 2011 February** The effects of Basel III on macroeconomic development
- 2011 July** The sustainable development of public debt?
- 2011 July** Low unemployment – a challenge
- 2011 July** Recent developments in inflation expectations
- 2011 October** Similarities and differences between the current situation and 2008–2009
- 2011 October** The debt crisis in Europe
- 2011 October** New round of collective bargaining in an uncertain economic climate

2012

- 2012 February** The EMU and the debt crisis
- 2012 February** The emerging economies and Sweden's exports
- 2012 February** The relationship between the repo rate and interest rates for households and companies
- 2012 July** The debt crisis in Europe – developments during the spring
- 2012 July:** Long-run developments in the Swedish labour market
- 2012 July:** Why has inflation been lower in Sweden than in the euro area?
- 2012 October** KIX index better reflects Sweden's international dependence
- 2012 October** New measures to manage the crisis in the euro area
- 2012 October** The economic situation remains uncertain ahead of collective bargaining in 2013
- 2012 October** Has the functioning of the labour market changed?

2013

- 2013 February** Severe fiscal tightening avoided in the United States
- 2013 February** The household balance sheet and the macroeconomic assessment
- 2013 February** Perspectives on monetary policy expectations and forward rates
- 2013 July** Financial imbalances on the monetary policy assessment
- 2013 July** Cost developments and inflation
- 2013 July** A long-term perspective on the krona
- 2013 October** Expected tapering of the Federal Reserve's asset purchases
- 2013 October** Perspectives on labour market developments in Sweden
- 2013 October** Macroprudential policy and monetary policy

2014

- 2014 February** Perspectives on the low rate of inflation
- 2014 February** The effects of monetary policy on household debt
- 2014 February** Adjustments in the euro area: an update

⁴⁵ A list of the articles published since 1993 can be found on the Riksbank's website www.riksbank.se.

Interest rate decisions 2009–2014⁴⁶

Date of meeting	Decision (percentage points)	Repo rate (per cent)	Monetary Policy Report
2009			
10 February	-1.00	1.00	February 2009
20 April	-0.50	0.50	Monetary Policy Update
1 July	-0.25	0.25	July 2009
2 September	0	0.25	Monetary Policy Update
21 October	0	0.25	October 2009
15 December	0	0.25	Monetary Policy Update
2010			
10 February	0	0.25	February 2010
19 April	0	0.25	Monetary Policy Update
30 June	+0.25	0.50	July 2010
1 September	+0.25	0.75	Monetary Policy Update
25 October	+0.25	1.00	October 2010
14 December	+0.25	1.25	Monetary Policy Update
2011			
14 February	+0.25	1.50	February 2011
19 April	+0.25	1.75	Monetary Policy Update
4 July	+0.25	2.00	July 2011
6 September	0	2.00	Monetary Policy Update
26 October	0	2.00	October 2011
19 December	-0.25	1.75	Monetary Policy Update
2012			
15 February	-0.25	1.50	February 2012
17 April	0	1.50	Monetary Policy Update
3 July	0	1.50	July 2012
5 September	-0.25	1.25	Monetary Policy Update
24 October	0	1.25	October 2012
17 December	-0.25	1.00	Monetary Policy Update
2013			
12 February	0	1.00	February 2013
16 April	0	1.00	Monetary Policy Update
2 July	0	1.00	July 2013
4 September	0	1.00	Monetary Policy Update
23 October	0	1.00	October 2013
16 December	-0.25	0.75	Monetary Policy Update
2014			
12 February	0	0.75	February 2014
8 April	0	0.75	Monetary Policy Update

⁴⁶ A list of the historical interest rate decisions with effect from 1999 onwards can be found on the Riksbank's website www.riksbank.se.

Glossary

Annual rate: The annual rate means that the change between two periods following on from one another is converted into the same unit, the corresponding annual change. Recalculation to annual rate makes it easier to compare changes with different frequencies. Assume, for example, that GDP increases by 0.5 per cent between the first and second quarters, when calculated as an annual rate this is around 2 per cent and provides an indication of what the quarterly change may entail in terms of a full year change.

Asset prices: Refers mainly to prices of shares and properties.

Basis spread: Shows the difference between the interbank rate and the expected policy rate with the same maturity.

Bond market: See Fixed-income market.

Business tendency survey: A survey in which firms respond to questions about their sales, output, hiring plans, etc.

Calendar adjustment: Adjustment for variations in the number of working days from one year to the next. Calendar adjustment is usually used to compare developments in production, turnover and employment (number of hours worked) between quarters or months.

Capacity utilisation: The degree to which production capacity is utilised, that is, the maximum output that can be achieved with the existing workforce, machinery and premises.

Confidence indicators: Total measure of the situation within a sector or among households. Confidence indicators are based on an average of the responses to several different questions in a survey.

CPI: The consumer price index is a measure of the price level and is calculated on a monthly basis by Statistics Sweden. The Riksbank's inflation target is expressed in the annual percentage change of the CPI.

CPIF: The CPI with a fixed mortgage interest rate. The CPIF is not directly affected by a change in mortgage interest rates. The entire change in the sub-index for interest rate expenditures comes from the change in the value of the housing stock.

Credit spread: Refers to the difference between a security with credit risk and a risk-free security with the same maturity.

Current prices: The current price expresses the nominal value and is not adjusted for changes in value caused by inflation. See also Fixed prices.

Econometric estimates: Usually a statistical calculation made on the basis of historical data.

ECB: The European Central Bank.

ESM: European Stability Mechanism. A permanent international financial institution founded by the euro-area countries to safeguard stability in the euro area. The ESM replaces the former financing mechanism.

ESRB: European Systemic Risk Board. The European Systemic Risk Board is responsible for the macroprudential supervision of the financial system within the EU.

Executive Board of the Riksbank: The Executive Board governs the Riksbank and takes decisions concerning areas such as monetary policy.

Export market: Intended as a measure of the demand for imports in the countries to which Sweden exports. This is calculated by weighing together imports in 32 countries and covers approximately 85 per cent of Swedish export market. The weights are determined by the respective country's share of Swedish exports of goods.

Federal funds rate: The US Federal Reserve's policy rate.

Federal Reserve: The central bank of the United States.

Financial markets: A generic term for the markets in which financial instruments are traded. The four main financial markets are the foreign exchange market, the fixed-income or bond market, the share or equity market and the derivatives market.

Fixed-income market: The fixed income market is used for trading instruments that yields a specific predetermined return, an interest rate. The fixed income market is often divided into a bond market and a money market. The bond market comprises trade in securities – bonds – generally with maturities of one year and longer. Trading in the money market comprises treasury bills and certificates, usually with maturities of up to one year.

Fixed prices: Valuation at fixed prices means that the flows and stocks during an accounting period are valued at prices from an earlier period. The purpose of valuation at fixed prices is to break down changes in value into both changes in price and changes in volume.

Forward prices: The price for buying or selling an asset for future delivery.

Forward rate: A forward rate agreement entails a liability for the contracting parties to complete the purchase or sale of an interest rate asset at a predetermined rate, the forward rate, and at a predetermined point in time. The forward rate in a contract reflects the market participants' expected interest rates during the time until the contract matures.

FRA: A Forward Rate Agreement, where two parties agree to borrow and lend money respectively within the scope of a three-month interbank loan with effect from a particular date in the future at an interest rate agreed by the parties now. The market rates for these FRAs thus give an indication of market participants' expectations of future interest rates. See also the explanations of Forward rate and Interbank rate.

HICP: Harmonised index for consumer prices developed as a comparable measure of inflation within the EU. The HICP differs from the CPI both with regard to the measure of calculation and what it covers, for instance mortgage rates are not included in HICP.

Hodrick-Prescott filter (HP filter): A statistical method for breaking down the movements of a variable into trend and cyclical components. The method can be described as a weighted double-sided moving average where greater weight is placed on observations close at hand and gradually decreasing weight on observations further ahead.

Implied forward rates: For instance, the rate on two bonds with different maturities can be used to calculate future rates, that is, implied forward rates, during the time to maturity of the bonds. This method is used when there are no market-listed forward rates. See also Forward rate.

Inflation: General price rises that cause a reduction in the value of money. The opposite is known as deflation.

Interbank rate: The interest rate that applies when banks and large financial institutions borrow from one another on the interbank market for terms of up to one year.

KIX: Krona Index. An index for the Swedish krona exchange rate.

KIX-weighted: An aggregate of, for instance, GDP, CPI or the exchange rate in the euro area and 20 countries that are important to Sweden's international transactions. The KIX weights are updated regularly.

Labour costs: The total cost of labour according to the National Accounts, that is, the sum of wages, including for instance bonuses, employers' contributions, agreed collective charges and payroll-based taxes on output.

LFS: Labour Force Surveys. Monthly surveys conducted by Statistics Sweden to measure the size of the labour force, employment and unemployment.

Listed mortgage rates: The rates that are published by Nordea, SBAB, Swedbank Hypotek and Stadshypotek, for example in the daily press.

MFI: Monetary Financial Institutions. Include banks, mortgage institutions, financial companies, municipal and corporate-financed institutions, monetary securities companies and monetary investment funds (money market funds).

Monetary base: Defined in Sweden as banknotes and coins in circulation, monetary policy counterparties' deposits in the Riksbank and claims on the Riksbank as a result of Riksbank Certificates that have been issued.

Monetary policy: The measures taken by the Riksbank in order to maintain the value of money.

Money market: See Fixed-income market.

Money supply: The general public's holdings of banknotes, coins and their demand deposit. There are different measures of the money supply which include different definitions of the demand deposit.

Money market instruments: See Fixed-income market.

MPR: Monetary Policy Report.

MPU: Monetary Policy Update.

MRO: Main refinancing operation. The ECB's weekly market operations where the central bank manages the supply of liquidity and steers the short-term interest rates. This normally involves the ECB specifying an amount and a lowest interest rate, and the banks then being allocated liquidity via auction proceedings. However, since October 2008, the ECB has applied full allocation at a fixed interest rate, that is, the ECB determines an interest rate and the banks may loan an unlimited amount at this interest rate, given that they have sufficient collateral.

Net figures: The percentage of companies or households in a survey that state a positive development minus the percentage stating a negative development.

Net lending (general government): General government income minus expenditure.

Overnight rate: The interest rate for interbank loans overnight.

Policy rates: The interest rates set by central banks for conducting monetary policy. In Sweden these are the repo rate and the deposit and lending rates.

Productivity: The amount of goods and services produced in relation to the resources utilised in the form of labour and capital. The most common measure is labour productivity, which measures the output per hours worked.

Purchase price coefficient: The purchase price of a property divided by its rateable value.

Real interest rate: In reality the risk free real (that is expressed in purchasing power units) return on a real bond. As liquid real bonds are often not available for relevant maturities, the real interest rate is in practice usually calculated according to the Fisher equation as the nominal interest rate minus expected inflation.

Refi rate: The European Central Bank's policy rate.

Repo rate: The Riksbank's most important policy rate. The interest rate that the banks pay when they borrow money from the Riksbank.

Resource utilisation: The utilisation of the production resources labour and capital.

Risk premium: An extra return that an investor requires as a compensation for the risk.

RU indicator: A summarising measure of resource utilisation from survey data and labour market data. The indicator information is weighed together into an index with the aid of principal component analysis. The index, which is the actual RU indicator, can be regarded as a weighted average of the variables included.

Seasonal adjustment: Adjustment of data to even out regularly occurring variations over the year.

Spot price: The price of a commodity for its immediate delivery.

Statistics Sweden: The Swedish office of national statistics. The central government authority for official statistics.

STIBOR: Stockholm Interbank Offered rate. STIBOR is a reference rate used in many loan contracts.

STINA: Stockholm Tomorrow/next Interbank Average is an interest rate derivative contract where two parties exchange a fixed interest rate flow and a variable interest rate flow respectively with one another. The interest-rate flows are based on the STIBOR rate for the term tomorrow-to-next which is closely-related to the Riksbank's repo rate. The market-listed fixed interest rate in the STINA contracts reflects the average expected overnight rate during the term of the contract.

Sveriges Riksbank Act: The Act stipulating the tasks of the Riksbank.

TCW index: Total competitiveness weights index. An index for the Swedish krona's exchange rate.

TED spread: Originally the treasury/euro-dollar spread. Shows the difference between the interbank rate and the rate on a treasury bill with the same maturity.

TLTRO: Targeted longer-term refinancing operations. The ECB is offering loans to the banks linked to how much they lend to non-financial corporations and households, disregarding mortgages. The total amount may not exceed 7 per cent of the banks' current loans to the private sector, excluding mortgages. The loans are to be offered on two occasions during autumn 2014 and then quarterly from March 2015 to June 2016. All of the loans will mature in 2018 and are at a fixed interest rate (the refi rate plus 0.1 percentage point).

Underlying inflation: Measures of inflation that in different ways exclude or attribute a different weighting to the prices of those goods and services included in the CPI. Underlying inflation can be calculated by excluding changes in the prices of certain goods and services for which the price tends to fluctuate sharply. Underlying inflation can also be calculated with the aid of econometric methods.

Yield curve: The yield curve shows the relationship between yield and maturity dates.

Sveriges Riksbank
SE-103 37 Stockholm

Tel +46 8 787 00 00
Fax +46 8 21 05 31
registratorn@riksbank.se
www.riksbank.se



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