



Monetary Policy Report

October 2013

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 "Material for assessing 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 23 October 2013. The Report is available on the Riksbank's website, www.riksbank.se. From this address a printed version of the report can be ordered free of charge or the report can be downloaded as a PDF file.

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Further information on the Riksbank can be found at: 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

Economic developments in Sweden and abroad have been largely in line with the Riksbank's forecasts for some time now. There are signs that an improvement has begun in the euro area and the recovery in the United States is expected to continue. However, major challenges still remain. The political disagreement in the United States regarding fiscal policy remains a source of uncertainty. It is also difficult to know how the global financial markets will be affected by the return to a more traditional monetary policy.

Following the slowdown in recent years, the outlook for the Swedish economy is brightening. The sentiment of the Swedish households and companies has gradually improved and together with increasing international demand this means that growth in Sweden is expected to be higher in the period ahead. There has been some improvement in the labour market and this is expected to become clearer during 2014, when economic activity strengthens more tangibly.

Inflation is still low. As global economic activity improves, international goods prices are expected to increase, and thus import prices are expected to increase at a faster pace. Rising resource utilisation in the Swedish economy will also lead to rising wage increases and provide greater scope for the companies to increase their prices. All in all, this means that CPIF inflation is expected to increase to 2 per cent in 2015.

The repo rate needs to remain at the current low level of 1 per cent for around one year in order to support the upturn and to contribute to CPIF inflation rising towards 2 per cent. It is not until late 2014, when economic activity is stronger and inflation is rising, that the Riksbank will gradually begin to raise the repo rate. The monetary-policy assessment also takes into consideration the risks associated with the high level of household indebtedness.

Summary: Continued low repo rate will support the upturn and contribute to rising inflation

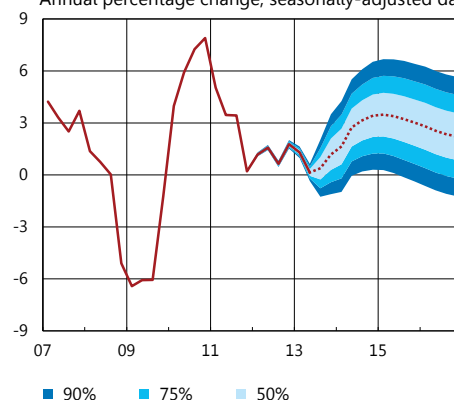
■ Recovery abroad – but major economic-policy challenges to be dealt with

In the euro area, the economy is showing positive growth figures again, although major challenges remain – not only with regard to the management of sovereign debt but also with regard to managing weak banks and structural reforms. However, there are signs that things are moving in the right direction and growth is expected to return to historically more normal levels in the years ahead.

The recovery in the United States is continuing. GDP growth is expected to accelerate again, despite the political disagreement over fiscal policy creating some uncertainty. How the fiscal policy problems are resolved in the coming period may have consequences for both the US and the global economies. The financial markets are also being affected by uncertainty about when the Federal Reserve, the US central bank, will begin to reduce its bond purchases and what the effects of this will be.

Rising interest rates and a strengthening of the economic prospects in the developed economies led to capital outflows from some of the emerging markets, where economic prospects had declined somewhat, during the summer. The Chinese economy has continued to grow at a

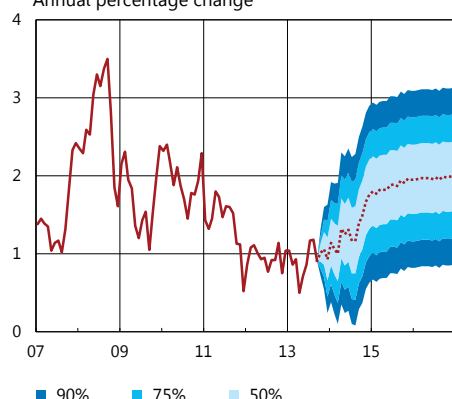
Figure 1:1. GDP with uncertainty bands
Annual percentage change, seasonally-adjusted data



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

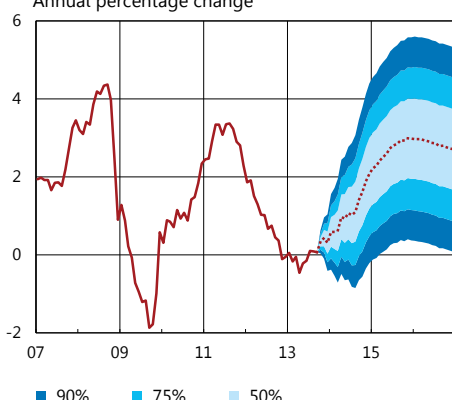
Figure 1.2. CPIF with uncertainty bands
Annual percentage change



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

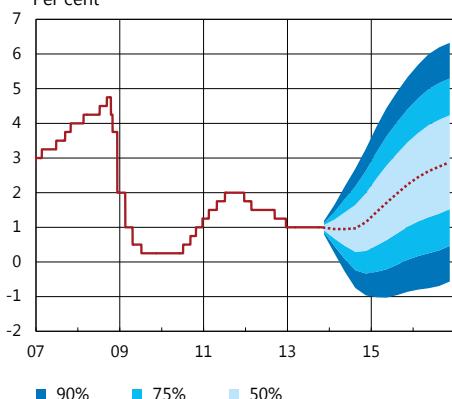
Figure 1.3. CPI with uncertainty bands
Annual percentage change



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

Sources: Statistics Sweden and the Riksbank

Figure 1.4. 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. Outcome data are daily rates and forecasts are quarterly averages.

Source: The Riksbank

good pace, following the slowdown at the beginning of the year. At the same time, the Japanese economy is showing signs of improvement.

All-in-all, growth in the world as a whole is expected to be relatively good in the years ahead.

■ Gradually higher growth in the Swedish economy

Growth in the Swedish economy is expected to pick up more speed next year (see Figure 1.1). As Sweden is a small open economy with a great deal of international trade, an improvement in international growth is a precondition for higher growth in Sweden. It is also assumed that higher international demand will help to strengthen domestic demand with, for example, higher investment. There is also good potential for an increase in household consumption, among other things because saving is currently high, interest rates are low and incomes are rising rapidly.

The labour market has developed relatively well in recent years. Employment and the labour force have increased. Although unemployment has declined somewhat in recent quarters, it is still relatively high, and not expected to fall tangibly until 2014.

Inflation has been low for some time. This is due to low rates of increase in international goods prices, the strengthening of the krona and weak demand, which means that the companies are finding it difficult to cover their costs by increasing consumer prices.³ However, the assessment is that the strengthening of the krona in recent years will have less of an impact on inflation in the period ahead. At the same time, the rate of increase in international goods prices is expected to rise when global economic activity improves. As economic activity strengthens, companies are also expected to find it easier to pass on their costs to consumers. All in all, these factors will contribute to CPIF inflation rising towards 2 per cent in 2015 (see Figure 1.2). CPI inflation, which is now lower than CPIF inflation, will rise somewhat faster, due to households' interest expenditure gradually beginning to rise. The rate of increase in the CPI is expected to reach almost 2.7 per cent at the end of 2016 (see Figure 1.3). In periods of significant changes in the repo rate, however, the CPIF provides a better picture of inflationary pressures. In the longer run, when the repo rate has stabilised, CPI inflation and CPIF inflation will coincide.

■ Continued low repo rate contributes to rising inflation

The repo rate has been at 1 per cent since the end of last year (see Figure 1.4). The real interest rate is currently negative, which is unusual from an historical perspective, and means that monetary policy is clearly expansionary (see Figure 1.5). The repo rate needs to remain low to support the economic upturn and contribute to CPIF inflation rising towards 2 per cent. It is expected that it is not until late 2014, when economic activity has strengthened and inflation is rising, that the Riksbank will begin to slowly raise the repo rate (see Figure 1.4).

³ International goods prices are the world market prices for Swedish import goods.

An even lower repo rate would have been able to bring inflation back to the target somewhat sooner and have helped to normalise resource utilisation more quickly. But at the same time, this type of monetary policy could lead to the risks linked to household debt increasing further. Household debt is already high in an international and historical perspective. Experience from other countries in recent years clearly illustrates the risks that this can entail. A particularly difficult situation could arise if households' mortgage rate expectations are unrealistically low, as this could contribute to a renewed upward trend in both housing prices and debt. Consideration has therefore been given to the risks linked to household indebtedness.

Recovery continuing abroad

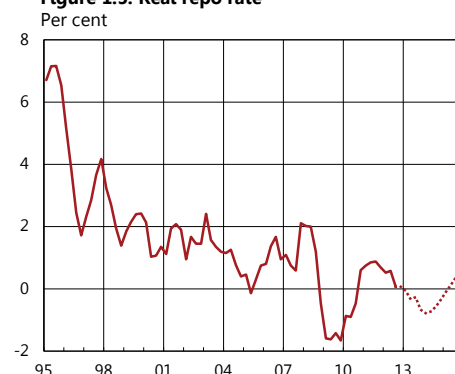
■ Future monetary and fiscal policy in focus

There has been considerable uncertainty about the political process surrounding fiscal policy in the United States recently. The US Congress decided on a temporary budget that extends to mid-January and a short-term increase in the public debt ceiling until the middle of February. This means that the government agencies that were closed for a while have been able to open again. Although a decision has now been reached, there is still no long-term solution, which the parties in Congress have until mid-December to achieve. The Riksbank's forecast is based on the assumption that some form of solution will be reached eventually, so that the debt ceiling is raised more long term and a decision is reached for the budget year 2014 as a whole.

The central banks' communication regarding the future course of monetary policy has been in focus during the summer and autumn. The European central bank (ECB) and the Bank of England have introduced elements of forward guidance in their communication, as the Federal Reserve had already done. The Federal Reserve has announced that its policy rate will remain at the current low level at least as long as unemployment is higher than 6.5 per cent, inflation is not expected to be higher than 2.5 per cent and inflation expectations are firmly anchored. The Federal Reserve also has a programme for the purchase of government bonds and mortgage bonds. As the outlook for the US economy has improved, a discussion has begun on when the Federal Reserve can begin to reduce these bond purchases. This has particularly affected the yields of government bonds at longer maturities, which rose substantially in the United States and other parts of the world during the summer (see Figure 1:6). Although they have fallen somewhat since September, the levels are still significantly higher than in the spring and pricing volatility has increased.⁴

The Riksbank's forecast of an international recovery means that monetary policy abroad is expected to become gradually less expansionary, which will lead to an increase in short-term and long-term interest rates. As the recovery in the US economy progresses, the Federal

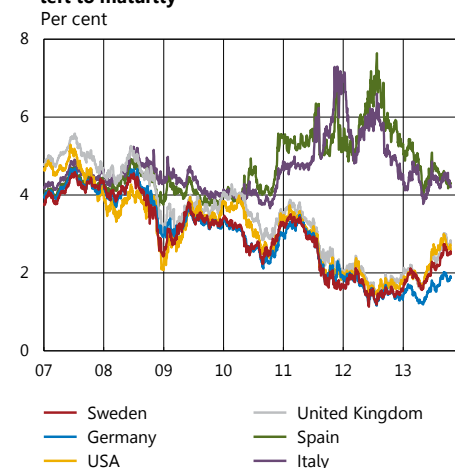
Figure 1:5. Real repo rate



Note. The real repo rate is calculated as a mean value of the repo-rate forecast for the year ahead minus inflation (CPIF) for the corresponding period. The Riksbank's forecasts are used for quarters where there are no outcomes.

Sources: Statistics Sweden and the Riksbank

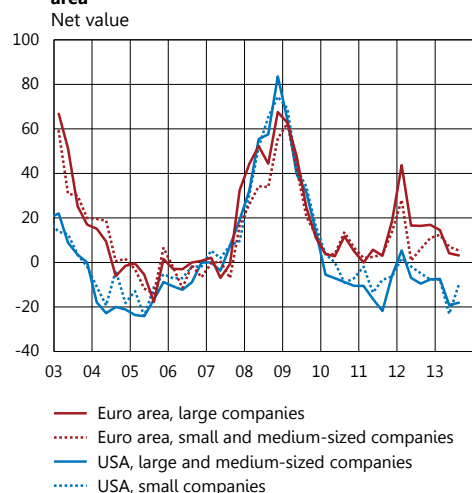
Figure 1:6. Government bond rates with 10 years left to maturity



Source: Reuters EcoWin

⁴ See also Chapter 3 and the article "Expected tapering of the Federal Reserve's asset purchases".

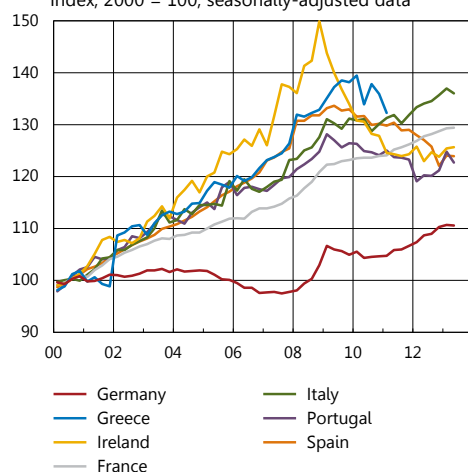
Figure 1:7. Credit terms in the USA and the euro area



Note. Net figures refer to the percentage stating that they have tightened, minus the percentage who state they have eased credit terms.

Sources: FED Senior Loan Officer Opinion Survey on Bank Lending Practices and ECB Bank Lending Survey

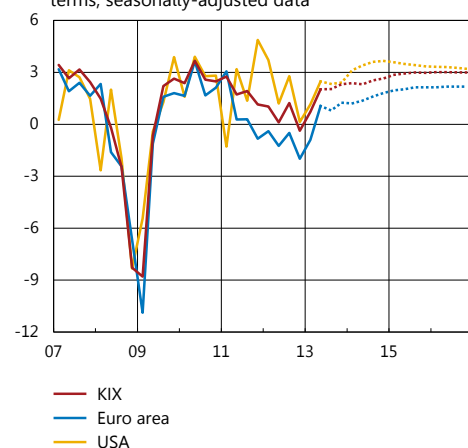
Figure 1:8. Unit labour cost
 Index, 2000 = 100, seasonally-adjusted data



Note. Only seasonally-adjusted data up to the end of Q1, 2011 is available for Greece.

Source: Eurostat

Figure 1:9. GDP in different regions and countries
 Quarterly changes in per cent calculated in annualised terms, seasonally-adjusted data



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

Sources: Bureau of Economic Analysis, Eurostat and the Riksbank

Reserve is expected to normalise its monetary policy, where the first step will be to gradually taper off its bond purchases. Exactly when this tapering begins will depend on how the US economy develops. One important factor in this context is how the uncertainty over fiscal policy affects the economy. As part of the effort to hold down market rates at longer maturities, central banks around the world have communicated that it will be some time before they begin raising their policy rates. The road ahead for the Federal Reserve towards a more traditional monetary policy is, as for other central banks, paved with uncertainty as it is difficult to know how the financial markets will be affected. The Riksbank's forecasts are based on the assumption that the coming adjustment will be made to ensure that changes in financial conditions do not prevent a gradual international recovery.

■ GDP increasing again in the euro area, but major challenges remain

After falling for 18 months, GDP in the euro area showed positive growth again during the second quarter. Confidence indicators have also improved recently and the assessment is that growth will gradually increase in the period ahead. However, major challenges remain for several euro-area countries that have high debt in both the private and public sectors. Several countries still have public-finance deficits, which means that it will take time before debts can fall as a percentage of GDP.

Credit granting in the debt-ridden euro-area countries is still weak. This is partly due to the low demand for loans from households and companies as a result of the poor state of the economy, but also to relatively strict credit conditions from the banks (see Figure 1:7). To correct the problems regarding the European banks' limited credit supply will probably require a thorough examination of the quality of the banks' assets. At the same time, one has to produce a credible measures programme at European level to manage the problems that may be revealed in such an examination. A transparent and credible management of the problems in the European banking sector will improve the conditions for a recovery in the European economy.

Underlying structural problems also need to be addressed. Several of the countries with public-finance problems have managed to reduce their costs and improve their competitiveness in recent years (see Figure 1:8). A further adjustment of the cost situation is necessary and will continue to restrict development in several countries in the period ahead. However, one sign that things are moving in the right direction is that the difference in long-term interest rates in Italy and Spain in relation to those in Germany has decreased (see Figure 1:6). Current account deficits have also fallen in several euro-area countries, partly due to lower imports but also thanks to an increase in exports. The Riksbank's forecast assumes that the reform and adjustment process in the euro area will continue.

The Riksbank's assessment is that as the confidence of the households and companies continues to increase, growth will return to historically more normal levels in the years ahead. However, the recovery is slow and growth in 2014-2016 is expected to average 2 per cent per year (see Figure 1:9).

The slow recovery means that resource utilisation in the euro area is expected to be low in the years ahead. HICP inflation has fallen in 2013, partly as a result of lower energy prices. Inflation is expected to rise slowly during the forecast period as resource utilisation gradually increases and profit margins normalise (see Figure 1:10). Monetary policy is expected to remain expansionary, in line with the ECB's communication.

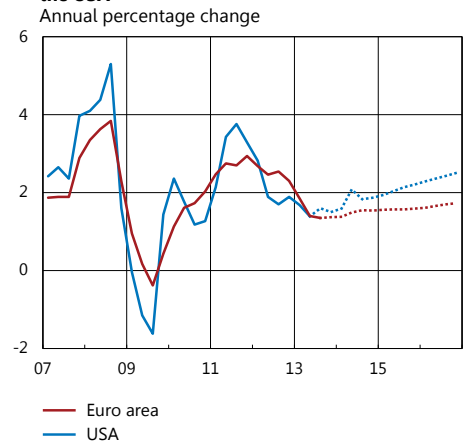
■ Recovery more stable in the United States – but increased uncertainty about fiscal policy

In the United States, the recovery has made some headway since the financial crisis. GDP growth is expected to pick up further speed going forward, and the labour market is expected to continue to improve (see Figure 1:9).

The uncertainty over the political process surrounding fiscal policy has declined as a result of the recent agreement for the coming months, but a more long-term solution still remains to be agreed. The fact that some public sector operations were closed down for almost three weeks is expected to have some negative effects on GDP, partly through effects on confidence. In general, fiscal policy is expected to be less tight in the coming period.

The potential for a continued recovery over the coming years is also good. Corporate profits as a percentage of GDP are now at one of the highest levels since the early 1950s. Business confidence is relatively high and is expected to continue to increase when the uncertainty about fiscal policy declines. The conditions for an ongoing increase in employment in the period ahead are therefore good. The households have substantially reduced their debt burden in recent years. As a percentage of disposable income, indebtedness has fallen by more than 20 percentage points (see Figure 1:11). The percentage of households with payment problems has almost halved since the acute phase of the financial crisis. The banks in the United States have eased their credit terms, which will contribute to better conditions for an increase in consumption and investment in the coming years (see Figure 1:7). When the labour market strengthens and incomes increase, there will be scope for the households to increase their consumption.

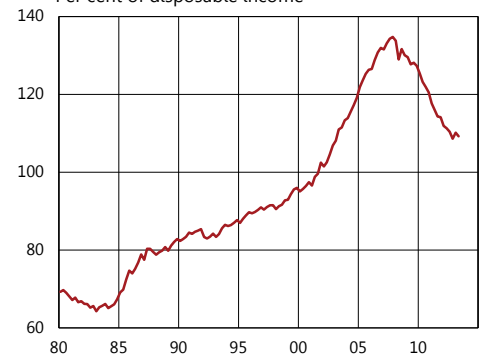
Figure 1:10. Consumer prices in the euro area and the USA



Note. This refers to the HICP for euro area and CPI for the United States.

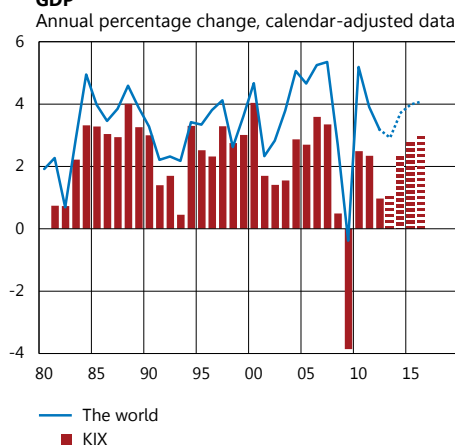
Sources: Bureau of Labor Statistics, Eurostat and the Riksbank

Figure 1:11. Household debt ratio in the USA



Sources: Bureau of Economic Analysis and Federal Reserve

Figure 1:12. GDP in the world and KIX-weighted GDP



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

Sources: The IMF, Statistics Sweden and the Riksbank

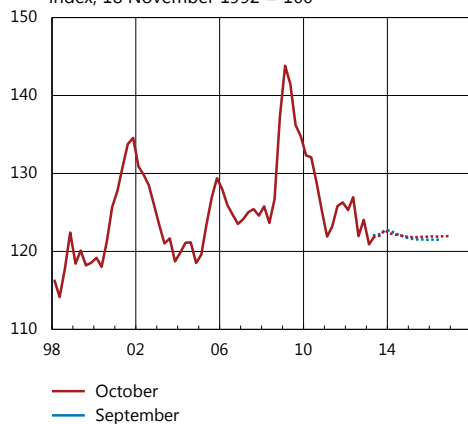
Figure 1:13. KIX-weighted nominal exchange rate Index, 18 November 1992 = 100



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

Source: The Riksbank

Figure 1:14. KIX-weighted real exchange rate Index, 18 November 1992 = 100



Note. The real exchange rate is deflated by the CPI for Sweden and the CPI for abroad. The CPI is the CPI with a fixed mortgage rate. KIX is an aggregate of Sweden's most important trading partners.

Sources: National sources, Statistics Sweden and the Riksbank

The forecast for GDP growth in 2014 has been revised down somewhat. All-in-all, GDP growth in the United States is expected to increase to just over 3 per cent per year in the period 2014-2016 (see Figure 1:9). The assessment is that unutilised resources in the economy will gradually decrease and that CPI inflation will rise to 2.5 per cent during the forecast period (see Figure 1:10).

■ Gradual recovery in the Nordic countries and the United Kingdom

The assessment is that GDP growth in the United Kingdom will gradually increase during the forecast period. Stronger global demand in combination with an expansionary monetary policy and improved credit conditions is expected to contribute to the recovery. Rising productivity is expected to lead to a slow fall in unemployment in the years ahead and also to a dampening of domestic cost pressures. Inflation will therefore fall towards the Bank of England's inflation target of 2 per cent at the end of the forecast period. Monetary policy is expected to remain expansionary throughout the forecast period.

The Danish economy is showing signs of recovery following a couple of years of weak growth. This is partly the result of an increase in exports thanks to the improvement in the euro area, but the fact that the housing market has stabilised has certainly contributed too. In order to boost the recovery following the domestic banking and property crisis, fiscal policy is expected to remain expansionary during the forecast period, which will help GDP to increase more rapidly going forward. Inflation has recently fallen to historically low levels, partly as a result of tax cuts. However, inflation is expected to rise to around 2 per cent in the years ahead.

In Norway the rate of growth has declined in the wake of a lower level of housing construction and a somewhat slower increase in household consumption. The rate of growth is expected to gradually improve during the forecast period in pace with the global recovery and is supported by a relatively expansionary monetary policy. Inflation in Norway has risen over the last 12 months (see Figure 3:16), although the latest outcome indicated a fall. The higher rate of inflation is partly due to temporary factors, but relatively high domestic costs and the effects of a weaker exchange rate may help to keep inflation high. The inflation forecast for Norway has therefore been revised upwards compared to the forecast in September.

■ Brighter outlook for the Japanese economy but subdued development in several emerging economies

GDP growth has been strong in Japan recently as a result of the highly expansionary economy policy conducted by the government and the central bank since the start of the year. Growth is expected to continue to be relatively high in the period immediately ahead. GDP is expected to grow by 1.5 per cent per year over the next few years, which is a relatively good rate, in an historical perspective. The assessment is that inflation

will rise to over 2 per cent in 2014 and 2015, partly as a result of announced VAT increases.

In China, it seems that the stimulation measures recently introduced by the government, for example those aimed at small and medium-sized companies, will contribute to GDP growth reaching 7.6 per cent this year. In the years ahead, growth is expected to fall somewhat to 7.0 per cent. Inflation is expected to be around 3 per cent per year.

Economic activity declined in some emerging economies during the first half of 2013. For some countries this has been due to lower global demand, while for others it has been a question of domestic limitations for production. Moreover, some emerging markets, such as India and Turkey, suffered outflows of capital when interest rates rose in developed economies. Countries with a large current account deficit, high inflation and a large share of short-term debt were affected most. Developments in recent months can have a dampening effect on growth prospects and GDP forecasts for some emerging markets have been revised down in relation to the forecasts in September. However, as economic activity improves in the developed economies activity is also expected to improve in the emerging economies.

■ Recovery and good growth in the economy as a whole

The global economy is expected to grow by around 4 per cent per year in the period 2014-2016, which is somewhat lower than forecast in the Monetary Policy Update published in September (see Figure 1:12). This is somewhat higher than the average for the last 30 years.

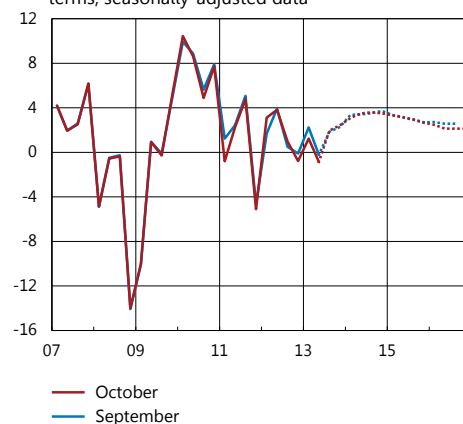
When international GDP growth is weighed in terms of the importance of various countries to the Swedish economy (KIX-weighted GDP), it appears that development is in line with an historical average viewed over the forecast period as a whole. KIX-weighted GDP growth is expected to be just over 1 per cent this year, but to improve to just under 3 per cent per year for the rest of the forecast period (see Figure 1:12). In KIX-weighted terms, inflation is expected to be just over 2 per cent per year (see Table 4).

■ Moderate krona appreciation going forward

The Swedish krona remains largely unchanged since the Monetary Policy Update was published in September. The krona is expected to strengthen marginally against a basket of currencies during the forecast period, in line with the assessment made in September (Figure 1:13). The forecast for the exchange rate in the longer term is based on assessment of the development of the real exchange rate.⁵ The Riksbank's assessment is that the real exchange rate is currently close to its long-term level (see Figure 1:14).

Figure 1:15. GDP

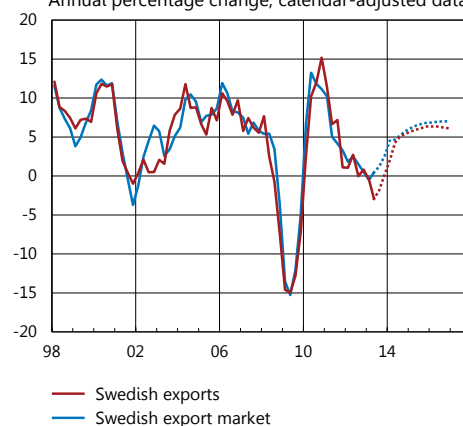
Quarterly changes in per cent calculated in annualised terms, seasonally-adjusted data



Sources: Statistics Sweden and the Riksbank

Figure 1:16. Swedish exports and the world market for Swedish exports

Annual percentage change, calendar-adjusted data

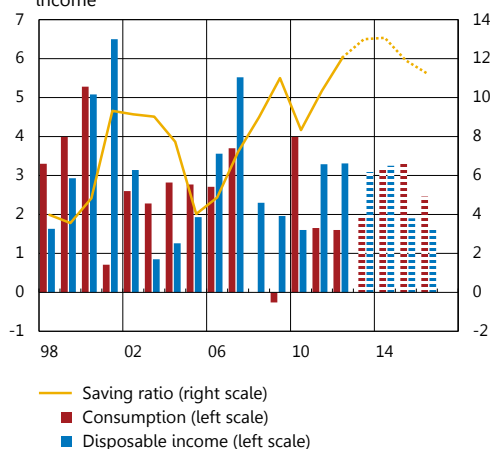


Note. The export market aims to measure demand for imports in the countries to which Sweden exports. This is calculated by aggregating the imports of 32 countries and covers around 85 per cent of the Swedish export market.

Sources: Statistics Sweden and the Riksbank

⁵ The real exchange rate compares price levels in the same currency and the real krona exchange rate is calculated as the nominal krona rate adjusted for the relative price level in Sweden compared with abroad. This exchange rate reflects competitiveness and purchasing power and is determined in the long term by real factors such as GDP growth relative to the rest of the world, terms of trade and the current account.

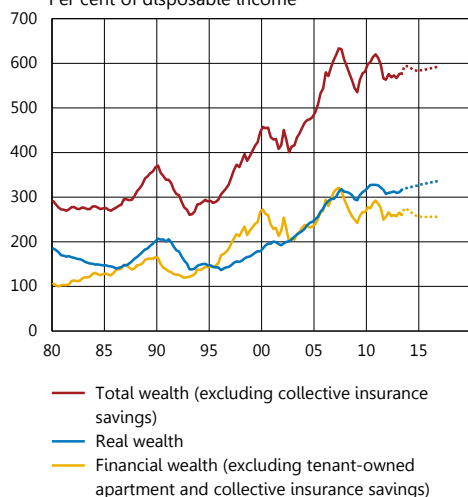
Figure 1:17. Households' disposable incomes, consumption and savings ratio
Annual percentage change and per cent of disposable income



Note. Saving ratio including saving in collective insurance schemes.

Sources: Statistics Sweden and the Riksbank

Figure 1:18. Household wealth
Per cent of disposable income



Note. There is no regular publication of official data for the households' total wealth. The series refers to the Riksbank's estimate of the households' total financial assets and housing assets.

Sources: Statistics Sweden and the Riksbank

Figure 1:19. Household debt and nominal disposable income
Annual percentage change



Note. Households' total debt according to the Financial Accounts.

Sources: Statistics Sweden and the Riksbank

Good prospects of an upturn in Sweden

■ Domestic demand plays an important role in the upturn

Following the slowdown in recent years, the outlook for the Swedish economy is brightening. The sentiment of the Swedish households and companies has steadily improved and, according to the Economic Tendency Survey, is now close to its historical average (see Figure 3:19). Financial conditions, such as access to credit, are good for Swedish households and companies. Expansionary fiscal and monetary policies are contributing to relatively high increases in household incomes and the preconditions for stable growth in consumption are in place. When international growth picks up, the demand for Swedish exports will increase. As economic activity improves, investment and domestic demand will also increase further.

Swedish GDP growth is expected to be around 0.7 per cent this year. The forecast for this year is lower than the assessment in September, which stems from the fact that Statistics Sweden has revised previous GDP outcomes downwards. During 2014 and 2015, GDP will grow by 2.6 and 3.5 per cent respectively. In 2016, GDP growth is expected to reach 2.7 per cent (see Table 5 and Figure 1:15).

■ Recovery abroad is expected to boost Swedish exports

Weak development on several of Sweden's most important export markets and the low level of demand for investment goods has dampened the growth of Swedish exports. As the outlook for growth and industrial activity improves abroad the growth of the Swedish export market will also increase, that is imports in those countries that Sweden exports to will increase. This will lead to a more rapid increase in Swedish exports (see Figure 1:16).

Swedish imports have been subdued over the last 12 months. However, as exports and domestic demand rise during the forecast period, growth in imports will also increase.

■ Good potential for strong growth in consumption

Despite the slowdown in the Swedish economy in recent years the disposable incomes of the households have increased relatively rapidly. The household confidence indicator, which reflects households' views on their own finances and the Swedish economy, is now roughly in line with its historical average (see Figure 3:19). Household saving is high to start with (see Figure 1:17). There is thus potential for higher consumption growth in the period ahead and the rate of growth is expected to be highest next year. As mortgage rates subsequently increase and public sector saving approaches the surplus target, the rate of growth will slow down somewhat in 2016 (see Figure 1:17).

Household wealth also plays an important role for consumption. Increases in housing and share prices have boosted household wealth this year (see Figure 1:18). Housing prices are expected to continue rising in the years ahead, as is wealth. This means that household debt will increase, as house purchases are largely financed through loans. Debts will increase more rapidly than incomes during the forecast period (see Figure 1:19). Household debt as a percentage of disposable income, which currently amounts to around 172 per cent, is expected to increase to almost 178 per cent at the end of 2016 (see Figure 1:20). The household debt ratio is thus still high in both an historical and international perspective.

■ Housing construction boosts investment

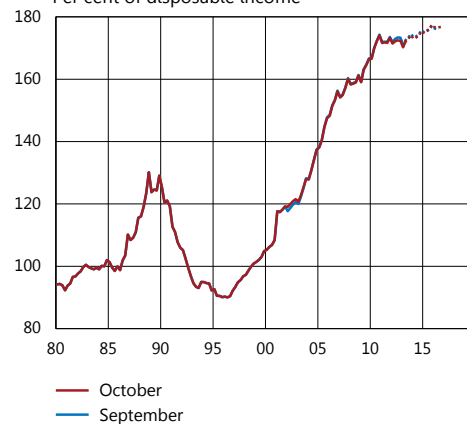
Investment as a whole has been weak over the past year. However, housing construction, which has been low in relation to population growth since the financial crisis, has begun to increase again. Generally speaking, however, the companies' investment needs are limited. This is reflected, for instance, in the fact that capacity utilisation in the manufacturing industry is lower than normal (see Figure 1:21). This year, companies are expected to be able to meet the increase in demand without needing to invest more. However, as exports and household consumption grow, the need for new investment will also increase. All-in-all, investment is expected to decline this year and then increase in 2014-2016. Housing investment, however, will increase already this year and contribute to the upturn in total investment in the years ahead.

■ Public sector net lending will improve going forward

This year, public sector net lending is expected to deteriorate and show a deficit of 1.3 per cent of GDP. The fiscal policy measures proposed for 2014 in the government's budget bill are equivalent to 0.6 percentage points of GDP. At the same time, the increasingly strong economic activity next year means that saving as a percentage of GDP will in principle remain unchanged.

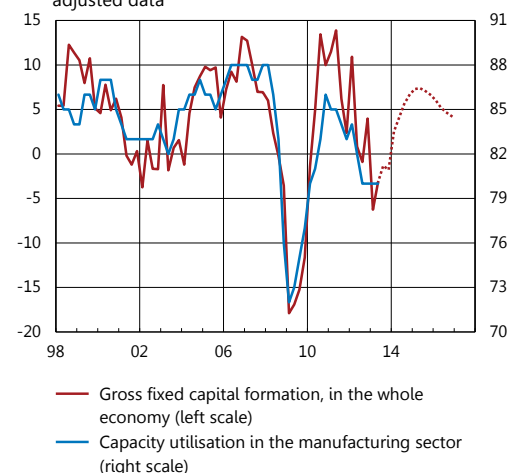
The Riksbank's assessment of public sector net lending is in turn based on announced measures and is complemented by an assessment of how fiscal policy is usually adjusted to the state of the economy and the policy objectives set by the fiscal-policy framework. As economic activity improves, net lending is expected to strengthen to -0.2 per cent in 2015 and 0.6 per cent in 2016 (see Table 3).

Figure 1:20. Household debt ratio
Per cent of disposable income



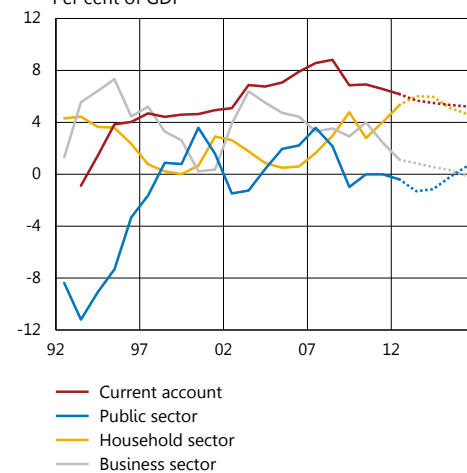
Sources: Statistics Sweden and the Riksbank

Figure 1:21. Gross fixed capital formation and capacity utilisation
Annual percentage change and per cent, seasonally-adjusted data



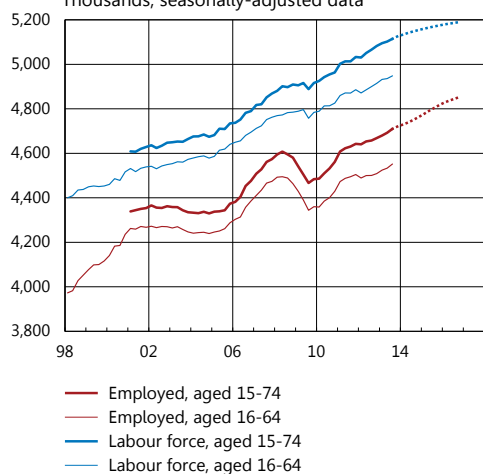
Sources: National Institute of Economic Research, Statistics Sweden and the Riksbank.

Figure 1:22. Current account and financial savings in different sectors
Per cent of GDP



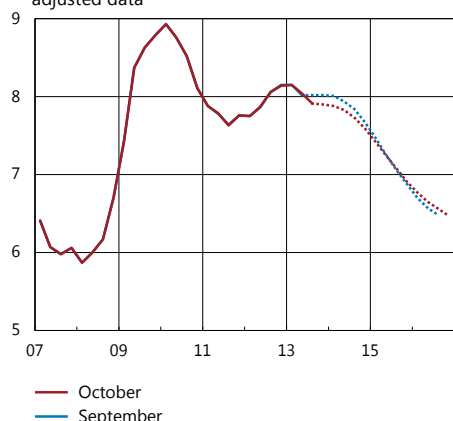
Sources: Statistics Sweden and the Riksbank

Figure 1:23. Labour force and number of employed
Thousands, seasonally-adjusted data



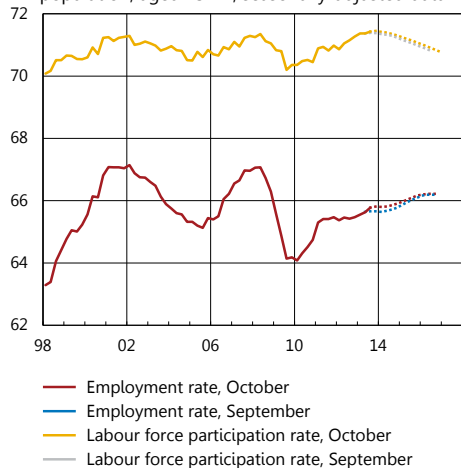
Sources: Statistics Sweden and the Riksbank

Figure 1:24. Unemployment
Per cent of the labour force, aged 15-74, seasonally-adjusted data



Sources: Statistics Sweden and the Riksbank

Figure 1:25. Employment and labour force participation rates
Employment and labour force as a percentage of the population, aged 15-74, seasonally-adjusted data



Sources: Statistics Sweden and the Riksbank

■ Substantial but falling surplus on the current account

Sweden has had substantial surpluses on its current account since the mid-1990s. The current account is equivalent to total financial saving, that is, total saving minus domestic investment (real saving)⁶. The surplus on the current account thus means that saving in the economy as a whole, that is, total financial saving among companies, households and the public sector, is high (see Figure 1:22). In the latest National Accounts, the current account surplus was revised downwards in 2011-2012.⁷ Although the current account surplus will continue to be relatively substantial it will fall by approximately 1 percentage point between 2012 and 2015 when households reduce their saving somewhat at the same time as the companies increase their investment and reduce their financial saving (see Table 5).

■ Labour market will pick up in 2014

During 2013 there has been some improvement on the Swedish labour market, with an increase in the labour force and employment (see Figure 1:23). In recent quarters unemployment has also declined somewhat. In the third quarter, unemployment amounted to 7.9 per cent, which is somewhat lower than in the Riksbank's assessment in September (see Figure 1:24). In the near term, therefore, unemployment is expected to be somewhat lower than was expected earlier. Indicators point to unemployment remaining at roughly the same level as today during the coming six months. In 2014, the improvement is expected to be clearer, as economic activity strengthens more tangibly.

The supply of labour has increased in recent years, and one reason for this is that the working age population has increased.⁸ However, the composition of the population has changed so that age groups with a lower average degree of labour force participation, for example older people, now make up a larger proportion of the population. This will hold back the increase in the labour force in the coming years.

The employment rate, that is, the number of those employed as a share of the population aged 15-74, is expected to remain at roughly the same level as at present during the coming year (see Figure 1:25). Normally, changes on the labour market take place with a certain time lag in relation to GDP growth. As economic activity improves in 2015 and 2016, the demand for labour will also improve, and the employment rate and the number of hours worked will rise faster. At the same time, labour force participation is expected to decline somewhat, which will contribute to a further fall in unemployment. The assessment is that unemployment will be around 6.5 per cent at the end of the forecast period (see Figure 1:24).

⁶ There is a small discrepancy between the series and the figure for net capital transfers must be added to the current account for it to add up to total financial saving.

⁷ The balance of payments statistics have been revised, going back to 2006. It has been announced that the National Accounts time series will be adjusted all the way back to 2006 in September 2014. See also "Nationalräkenskaperna och revideringen av bytesbalansen" (only in Swedish), Statistics Sweden, August 2013.

⁸ See the article "Perspectives on labour market developments in Sweden".

■ Resource utilisation will normalise going forward

The Riksbank's overall assessment is that resource utilisation is at present lower than normal. Unemployment is high in historical terms, but there are nevertheless signs that unutilised resources on the labour market are relatively limited.⁹ However, the assessment is that the employment rate is below its long-run sustainable rate. The GDP gap and the hours worked gap, that is how much GDP and the number of hours worked deviate from their long-term trends, are currently negative (see Figure 1:26).

The Riksbank's indicator for resource utilisation supports the picture that resource utilisation is lower than normal at present (see Figure 1:27). The narrower measure capacity utilisation in the manufacturing industry is also lower than normal. When economic growth increases in the period ahead, growth in employment and the number of hours worked will also increase. Towards the end of the forecast period, resource utilisation is expected to be roughly normal (see Figure 1:26).

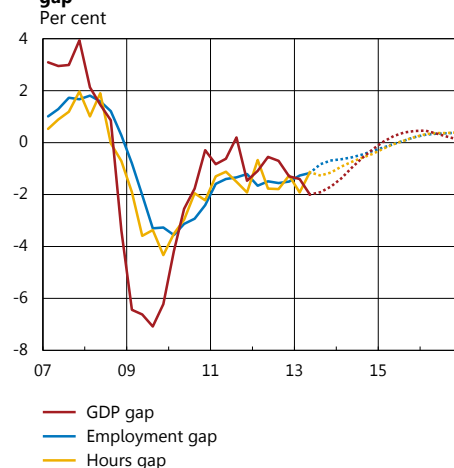
■ Rate of wage increases rising

The round of collective bargaining in 2013, which covers approximately 2.8 million employees, has now been largely completed following the signing of collective agreements in the state sector in early October. Most of the agreements are for three years (with the possibility to give notice of termination for the final year), which means that the next major round of collective bargaining will take place in 2016. Over 350 wage agreements for around 2.5 million employees will expire in 2016.

The assessment is that the level of the centrally-agreed wage increases in the economy as a whole will average approximately 2.3 per cent in the period 2014-2016. However, local wage formation and wage drift can lead to higher wage increases. The assessment is that the rate of wage increases will gradually rise during the forecast period due to the improvement of economic activity and the situation on the labour market. According to the short-term wage statistics, the rate of wage increases in the economy as a whole will rise from 2.6 per cent this year to 3.4 per cent in 2016 (see Table 7).

As is also the case abroad, productivity growth has declined in Sweden since the mid-2000s. This is due to both weaker demand and to a smaller contribution from technological development. Only a minor part is explained by the composition of the business sector, that is that the manufacturing sector has decreased while the service sector has increased. Productivity growth usually picks up speed in conjunction with upturns as the companies can increase production using existing resources. Average labour productivity is thus expected to increase somewhat more rapidly during the period 2014-2016 than it has done in the latest three-year period (see Figure 1:28). This also contributes to the rate of increase in unit labour costs slowing down correspondingly.

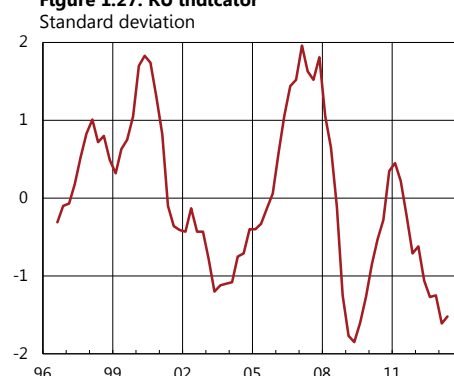
Figure 1:26. GDP-gap, employment gap and hours gap



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

Sources: Statistics Sweden and the Riksbank

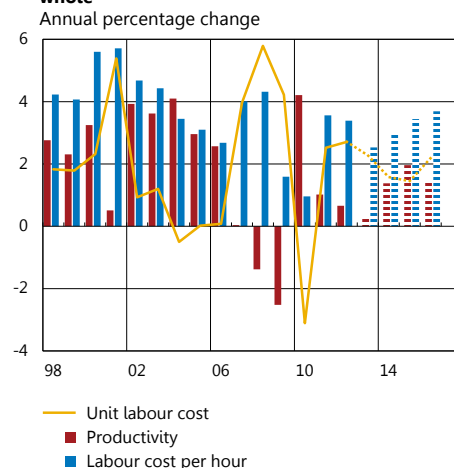
Figure 1:27. RU indicator



Note. The RU indicator is normalised so that the mean value is 0 and the standard deviation is 1.

Sources: Statistics Sweden and the Riksbank

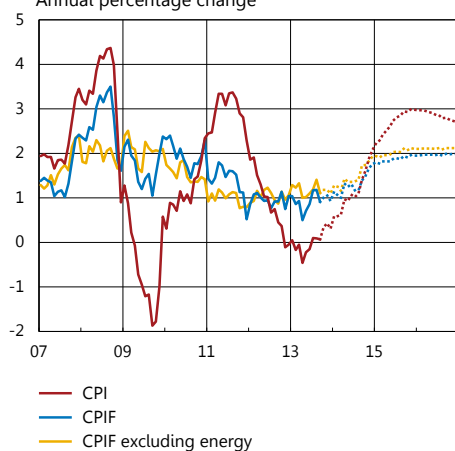
Figure 1:28. Cost pressures in the economy as a whole



Sources: Statistics Sweden and the Riksbank

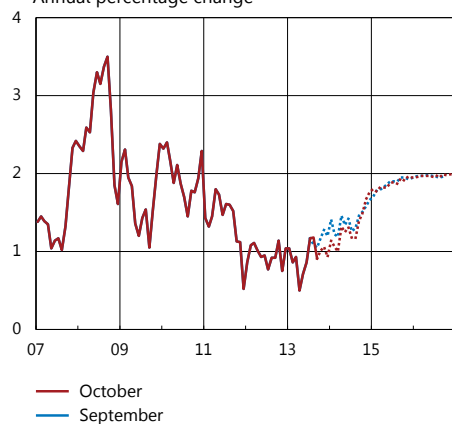
⁹ See the article "Perspectives on labour market developments in Sweden".

Figure 1:29. CPI, CPIF and CPIF excluding energy
Annual percentage change



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

Figure 1:30. CPIF
Annual percentage change



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

■ Gradually rising inflation

Inflation has been low for some time (see Figure 1:29). One explanation for this is that import prices have fallen, which in turn can be explained by the krona strengthening in recent years and by a slower increase in international prices.¹⁰ Inflation has also been unexpectedly low in relation to the development of corporate costs. Unit labour costs have increased at a roughly normal rate in recent years, but the companies have not raised prices to the same extent. The so-called price mark-up has therefore decreased.¹¹ Factors that may explain this include the relatively low level of demand and uncertainty about developments abroad. However, the assessment is that the restraining effect of these factors on inflation will gradually weaken in the period ahead.

A lower rate of increase in energy prices will subdue the rate of inflation in the year ahead. However, inflation will begin to gradually increase during the course of 2014 (see Figure 1:29). The assessment is that the exchange rate will strengthen only marginally against a basket of currencies during the forecast period (see Figure 1:13). In addition, international goods prices are expected to rise as global economic activity improves. Import prices, measured in Swedish krona, will thus increase more rapidly. Unit labour costs will increase more slowly in the years immediately ahead following several years with high rates of growth. The impact of previous cost increases is expected to come with a certain time lag and to contribute to price mark-ups as demand strengthens and uncertainty over international developments declines.

All-in-all, the assessment is that CPIF inflation will reach approximately 1.5 per cent in one year's time and then rise further. CPI inflation, which is now at a much lower level, will rise somewhat more quickly and also reach just over 1.5 per cent in one year's time. Mortgage rates are held constant in the CPIF. CPI inflation will increase more rapidly than CPIF inflation because the households' interest costs will gradually begin to rise. The rate of increase in the CPI is expected to reach almost 2.7 per cent at the end of 2016 (see Figure 1:29).

During periods with large interest rate changes, measures of inflation that do not include the direct effects of interest-rate adjustments, such as the CPIF, provide a better picture of underlying inflationary pressures. In the longer run, when the repo rate has stabilised, CPI inflation and CPIF inflation will coincide. Compared with the forecast in September, CPIF inflation has been revised somewhat downwards in the short run as a result of temporarily lower prices for services and food. From and including the second half of 2014, the forecast is in principle the same as in September (see Figure 1:30).

¹⁰ See the article "The development of costs and inflation" in the *Monetary Policy Report* of July 2013.

¹¹ See *Account of Monetary Policy* 2012, Sveriges Riksbank.

Monetary policy considerations

The Executive Board of the Riksbank has decided to hold the repo rate unchanged at 1 per cent. As in the assessment published in the September Monetary Policy Update, the Riksbank does not expect to begin raising the repo rate again until the end of 2014.

■ More tangible improvement next year

Since the Monetary Policy Update was published in September, economic developments in Sweden and abroad have been largely in line with the Riksbank's assessment. However, there is considerable uncertainty, for instance regarding the fiscal policy stance in the United States and the forecast for international growth has been revised down somewhat.

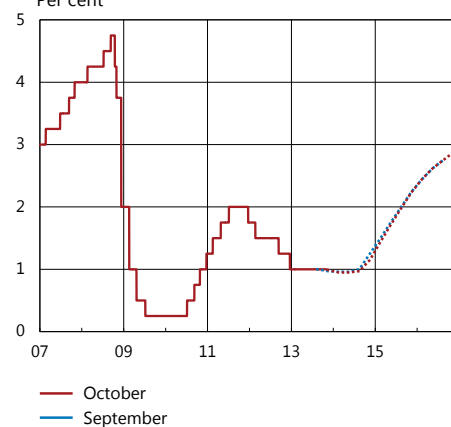
GDP growth in Sweden was weaker than expected in the first half of the year, but is expected to pick up more speed next year as a result of improved economic activity abroad and stronger domestic demand. This is expected to lead to a clearer improvement on the Swedish labour market in the second half of 2014, with rising employment and falling unemployment. Inflation has been low for some time. Resource utilisation will increase in the period ahead, which will lead to a rise in the rate of wage increase and greater scope for companies to raise their prices. At the same time, the recovery abroad will entail faster price increases on imported goods. This means that CPIF inflation is expected to increase to 2 per cent in 2015 (see Figure 1:30).

■ Continued low repo rate will support the recovery

Monetary policy needs to remain expansionary to support economic activity and contribute to CPIF inflation rising towards 2 per cent. The repo rate is expected to remain at the current low level of 1 per cent for around a year. As in the Monetary Policy Update in September, the Riksbank does not expect to begin raising the repo rate until late 2014 when economic activity is stronger and inflation is rising. To achieve balanced economic development, the repo rate will then need to be gradually raised to just under 3 per cent at the end of the forecast period. The forecast for the repo rate, both nominal and real, is only marginally changed since the Monetary Policy Update in September (see Figures 1:31 and 1:32). Somewhat weaker global prospects in the coming period have caused a small downward revision to the repo-rate path.

In the forecast, CPIF inflation reaches 2 per cent in 2015 (see Figure 1:30). An even more expansionary monetary policy could lead to inflation attaining the target somewhat sooner. However, a cut in the repo rate now could lead to a further increase in the risks related to high household debt. International experience shows that high debts make the economy more sensitive to various types of shock, for example a fall in housing prices. A particularly difficult situation would arise if the households' expectations of future mortgage rates were influenced to too great an extent by the current low level of interest rates. Surveys show that the households' expectations of mortgage rates five years ahead are lower than is compatible with the Riksbank's assumptions regarding the

Figure 1:31. Repo rate
Per cent



Note. Outcome data are daily rates and forecasts are quarterly averages

Source: The Riksbank

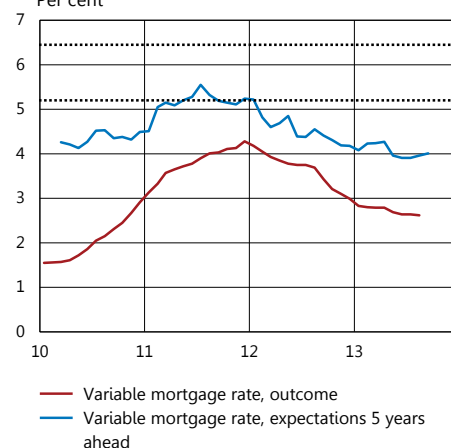
Figure 1:32. Real repo rate
Per cent, quarterly averages



Note. The real repo rate is calculated as an average of the Riksbank's repo-rate forecasts for the coming year minus the inflation forecast (CPIF) for the corresponding period.

Source: The Riksbank

Figure 1:33. Interest rate expectations among households regarding variable mortgage rates 5 years ahead
Per cent



Note. The broken lines show an interval for the long-term level of the variable mortgage rate. The interval is based partly on an interval for the long-term repo rate of 3.5-4.5 per cent and partly on an interval for the difference between a three-month mortgage rate and the repo rate of 1.7-2 percentage points.

Sources: National Institute of Economic Research and Statistics Sweden

repo rate in the long term (see Figure 1:33). Unrealistic mortgage rate expectations could lead to a renewed upward trend in both housing prices and debts. If households were to be forced, for one reason or another, to rapidly reduce their debts, there is a risk that unemployment would rise sharply and that long-term difficulties in stabilising inflation around the inflation target might arise.¹² The current repo-rate path is expected to stimulate economic developments and contribute to inflation rising towards 2 per cent, at the same time as taking into account the risks linked to household indebtedness.

At the end of August, the government proposed that Finansinspektionen (the Swedish financial supervisory authority) should be given main responsibility for the macroprudential-policy instruments in Sweden and that a formal stability council should be set up with the Riksbank as one of the members. The long-term risks associated with household debt should be reduced once macroprudential policy measures have been taken. This will affect the conditions for monetary policy.¹³ But how much and how quickly is difficult to ascertain at present. As different macroprudential policy instruments are introduced and knowledge increases over how they function in practice, the consequences for monetary policy will gradually become clearer. As previously, the Riksbank will need to analyse risks and resilience in the financial system and ascertain how these affect general economic development and thereby monetary policy.

Uncertain economic outlook and inflation prospects

Developments abroad are a source of uncertainty in the forecasts. The signs of a recovery in the US economy have led to speculation as to when and how the Federal Reserve will reduce and eventually phase out its asset-purchase programme. The Riksbank's forecast is based on the assumption that the tapering of monetary policy stimulation measures abroad will be adjusted so that tighter financial conditions do not prevent a gradual recovery.

However, the recovery in debt-ridden countries in Europe, in particular, may be negatively impacted. For example, continued interest rate increases in the United States can lead to higher interest rates in Europe. If the long-term interest rates in the debt-ridden countries in the euro area were to rise significantly, their work on attaining positive budget balances and reducing their sovereign debts would be hampered. Chapter 2 discusses the possible consequences of such a scenario for Sweden.

A further source of uncertainty is the fiscal-policy situation in the United States. Although a temporary solution is now in place, the political disagreement regarding the federal budget and the debt ceiling create uncertainty over future fiscal policy. This may lead to increased volatility on the financial markets and have consequences for the global economy.

¹² See the article "Financial imbalances in the monetary policy assessment" in *Monetary Policy Report*, July 2013.

¹³ See also the article "Macroprudential policy and monetary policy".

Developments abroad may also be better than in the main scenario. Confidence indicators in many parts of the world have risen recently. It is possible that these signs of growing optimism mark the start of a stronger development of demand. The effects of a more rapid recovery abroad on the Swedish economy and Swedish monetary policy are also illustrated in an alternative scenario in Chapter 2.

Finally, there are also domestic sources of uncertainty. Inflation has been low for some time and outcomes in recent months have been lower than the Riksbank's forecast in the Monetary Policy Update in September. It cannot be ruled out that inflation will remain low for a longer period of time than is now being assumed, but inflation may also increase more rapidly. This would have consequences for monetary policy in the period ahead.

CHAPTER 2 – Alternative scenarios and risks

If economic prospects in the United States continue to improve, the Federal Reserve is expected to begin normalising its monetary policy. A preliminary step is to reduce the monthly bond purchases, which means that long-term interest rates are expected to rise both in the United States and the rest of the world. If the upturn in long rates were to cause problems for countries with sovereign debt problems, the recovery in the euro area could be dampened. This could also mean that resource utilisation and inflation in Sweden would be lower than in the main scenario. In this case, it might be necessary to cut the repo rate.

Developments abroad could also be better than in the main scenario. Confidence indicators in many parts of the world have risen recently. If these signs of growing optimism were to be the start of a stronger development in demand abroad, resource utilisation and inflation in Sweden would also be higher. In this case, it might instead be necessary to raise the repo rate sooner than in the main scenario.

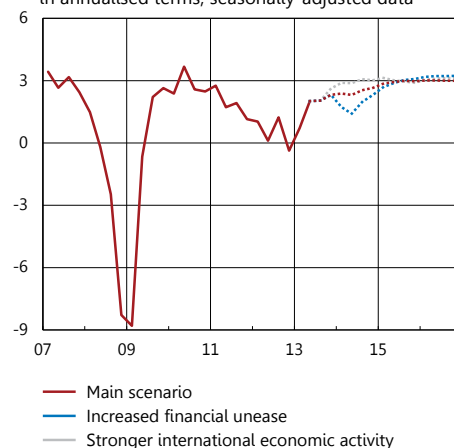
Future developments in the economy are always uncertain. This is illustrated in a general way by the uncertainty bands around the forecasts in Figures 1:1–1:4. The bands are based on the Riksbank's historical forecasting errors. This chapter describes two alternative scenarios for economic developments, and how monetary policy might need to be adapted if they were to become a reality. The scenarios have been constructed using the Riksbank's macroeconomic model, Ramses.¹⁴ However, the repo-rate paths shown in the scenarios differ from what Ramses proposes. This is because the repo rate in the model does not capture all of the factors that are important in the monetary policy deliberations; it only covers CPIF inflation and resource utilisation. For instance, Ramses does not capture the more long-term risks of a rapid build-up of debt in the household sector, as the model does not explicitly include a housing sector. In an attempt to determine how such risks affect the monetary policy deliberations, Ramses' monetary policy response has been adjusted to include assessments of what can be regarded as a reasonable monetary policy in the respective scenarios. However, it is difficult to make these assessments and it is not certain that all of the considerations relevant to each scenario are fully captured.

In the main scenario, the Federal Reserve begins to normalise monetary policy, which includes tapering the monthly bond purchases. This leads to long-term interest rates rising, not just in the United States, but also in other countries. However, the upturn in long-term interest rates does not cause any major problems for vulnerable countries, such as those in the euro area. One condition for the forecast in the main scenario, however, is that the process of reform and adjustment begun in the euro area continues.

An alternative scenario illustrates the effects of the upturn in long-term rates causing concern for countries with sovereign debt problems in the euro area. Investors make demands for compensation in the form of higher risk premiums, which makes it more expensive and more difficult for households and companies to borrow. At the same time, these

Figure 2:1. GDP abroad

KIX-weighted, quarterly changes in per cent calculated in annualised terms, seasonally-adjusted data

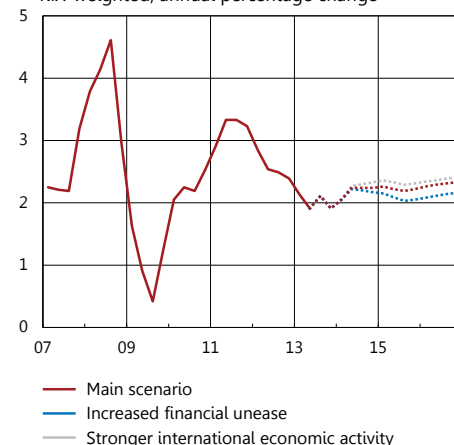


Note. KIX refers to an aggregate of countries that are important for Sweden's international transactions.

Sources: National sources and the Riksbank

Figure 2:2. Inflation abroad

KIX-weighted, annual percentage change

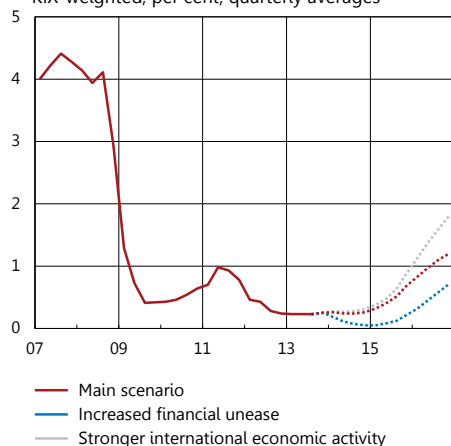


Note. KIX is an aggregate of countries that are important for Sweden's international transactions.

Sources: National sources, OECD and the Riksbank

¹⁴ For a description of the model, see Adolfson, Malin., Laséen, Stefan., Christiano, Lawrence., Trabandt, Mattias, and Walentin, Karl, "Ramses II: Model description", *Occasional Paper* no. 12, 2013, Sveriges Riksbank.

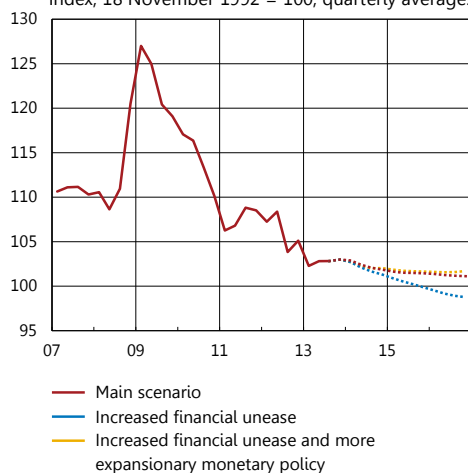
Figure 2.3. Policy rate abroad
KIX-weighted, per cent, quarterly averages



Note. KIX-4 is used when weighting together policy rates abroad. This includes the euro area, Norway, the United Kingdom and the United States.

Sources: Bank of England, ECB, Federal Reserve, Norges Bank and the Riksbank

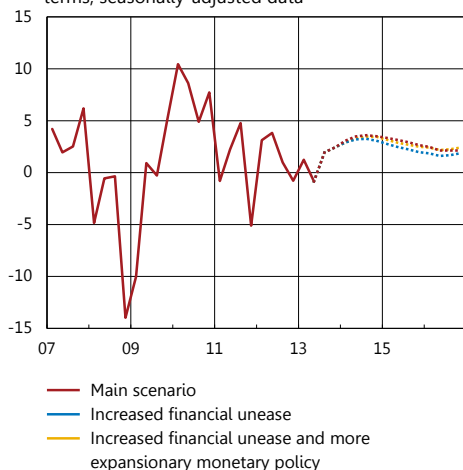
Figure 2.4. KIX-weighted nominal exchange rate
Index, 18 November 1992 = 100, quarterly averages



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

Source: The Riksbank

Figure 2.5. GDP
Quarterly changes in per cent calculated in annualised terms, seasonally-adjusted data



Sources: Statistics Sweden and the Riksbank

countries are forced to make further savings to manage their public finances and growth in the euro area is dampened in relation to the main scenario. The scenario describes how weaker international demand, which leads to lower inflation than in the main scenario, could lead to the Riksbank needing to cut the repo rate.

The second alternative scenario illustrates the effects of confidence abroad rising sooner. If this occurs, international demand for Swedish goods will rise, leading to higher GDP growth, consumption and inflation. The higher consumer confidence also contributes to a faster build-up of household debt. If the Riksbank, despite the more favourable development in economic activity, were to follow the repo-rate path in the main scenario, inflation would substantially overshoot the target towards the end of the forecast period. The repo rate would therefore be raised faster than in the main scenario, to obtain an inflation rate in line with the target. This also contributes to dampening the rate of increase in household debt.

Scenario: Increased financial unease

In the main scenario, the recovery in the United States continues, resulting for instance in lower unemployment there. The US central bank, the Federal Reserve, is then expected to begin normalising monetary policy.¹⁵ The first step is to reduce the quantitative easing, by beginning to taper off the monthly bond purchases. This is expected to lead to long-term interest rates rising in both the United States and the rest of the world. However, the normalisation of monetary policy will be gradual, so that the rise in interest rates does not tighten the overall financial conditions too quickly.

Several of the euro-area countries with sovereign debt problems have managed to reduce their costs and improve their competitiveness in recent years. One condition in the main scenario is that this reform and adjustment process continues. The increase in long-term rates foreseen in the main scenario thus does not entail major problems for vulnerable countries. Growth in the euro area will rise during the forecast period as confidence indicators continue to improve.

It is assumed in the alternative scenario that the Federal Reserve will follow its plan to normalise monetary policy, resulting in roughly the same economic development in the United States as in the main scenario. But in the euro area, the upturn in long-term rates causes problems for countries with sovereign debt problems. Investors make demands for compensation in the form of higher risk premiums, which makes it more expensive and more difficult for households and companies to borrow. At the same time, these countries are forced to make further savings to manage their public finances and growth in the euro area is dampened in relation to the main scenario.

Inflation in the euro area as a whole is then somewhat lower. The already low policy rate and the fact that the problem is not as great for

¹⁵ See the article "Expected tapering of the Federal Reserve's asset purchases" for a description of the various stages in the normalisation process.

all countries in the euro area means that monetary policy is not able to parry the fluctuations in full. For a period of time, investment and consumption will thus be held back by higher interest rates, particularly in the countries with problems, and by negative effects on confidence as a result of the risk of a renewed debt crisis being perceived as higher.

The higher interest rates in the United States also affect many emerging markets, which have already shown a weaker economic development. When long-term rates rise, investors sell off high-risk assets in these economies, which results in capital outflows and currency depreciation. Although a weaker currency makes it easier for their export industries, it creates problems when repaying loans in foreign currencies and makes it more difficult to finance productive investments.

The overall effect is that average GDP growth abroad will be almost 1 percentage point lower than in the main scenario in 2014 (see Figure 2:1). Inflation abroad is also slightly lower than in the main scenario (see Figure 2:2). This is mainly due to lower inflation in the euro area. The ECB then holds the low policy rate for a further period of time, which means that the KIX-weighted policy rates are also somewhat lower than in the main scenario (see Figure 2:3).

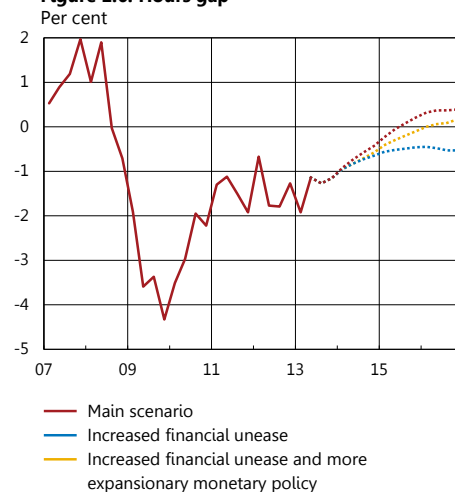
■ Krona strengthens further if the Riksbank holds to the repo-rate path in the main scenario

The main scenario is based on the trade-weighted nominal exchange rate strengthening marginally during the forecast period and the policy rate in Sweden being higher than those abroad. What happens to the krona in the alternative scenario depends on a number of factors, including how the Riksbank sets the repo rate. To illustrate this, we first show the consequences under the assumption that the repo rate follows the same path as in the main scenario. In the alternative scenario, the krona strengthens a little further as a result of the policy-rate difference between Sweden and the rest of the world (see the blue line in Figure 2:4).

However, exchange rate forecasts are very uncertain, particularly in times of financial market turbulence, and the krona can be either stronger or weaker than is assumed in the main scenario. On the one hand, the krona could weaken, which it often has done in times of unrest, when market agents choose to move their investments to more liquid currencies. For instance, the krona weakened by 20 per cent in connection with the financial crisis in 2008.

However, on the other hand, the krona could strengthen more than is assumed in the alternative scenario. Seen in an international perspective, Sweden has both relatively strong public finances and a well-capitalised bank sector, and moreover it has had many years of a large current account surplus. This can be regarded by investors as a sign that the credit risk is low. Sweden can therefore become a safe haven for financial investors selling high-risk assets in emerging markets. This could lead to increased demand for Swedish assets and an even stronger Swedish krona. A further appreciation of the krona would be more

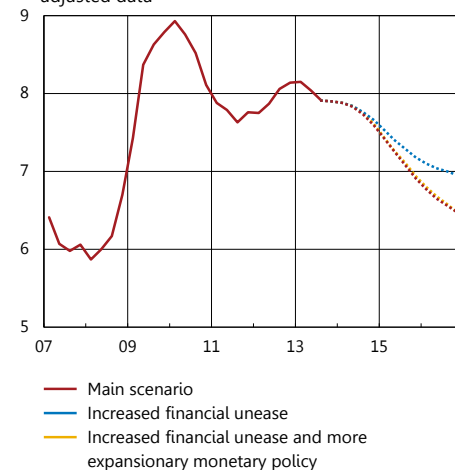
Figure 2:6. Hours gap



Sources: Statistics Sweden and the Riksbank

Figure 2:7. Unemployment

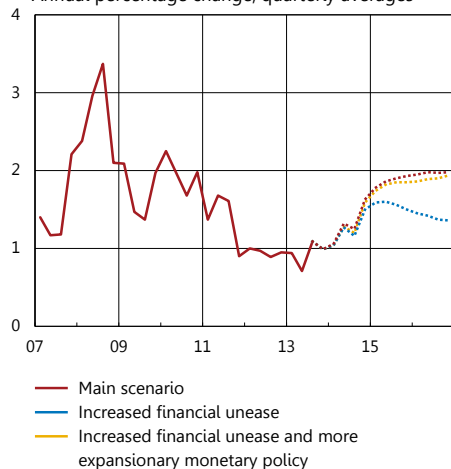
Per cent of the labour force, aged 15-74, seasonally-adjusted data



Sources: Statistics Sweden and the Riksbank

Figure 2:8. CPIF

Annual percentage change, quarterly averages

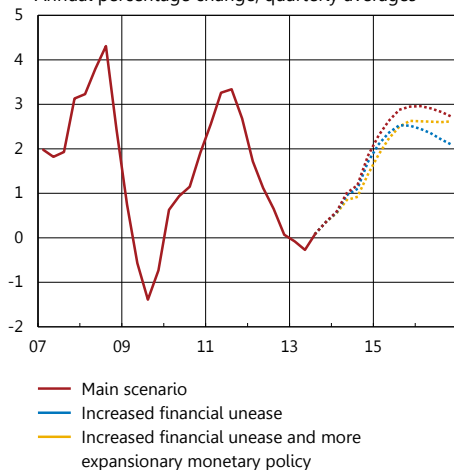


Note. The CPIF is the CPI with a fixed mortgage rate.

Sources: Statistics Sweden and the Riksbank

Figure 2:9. CPI

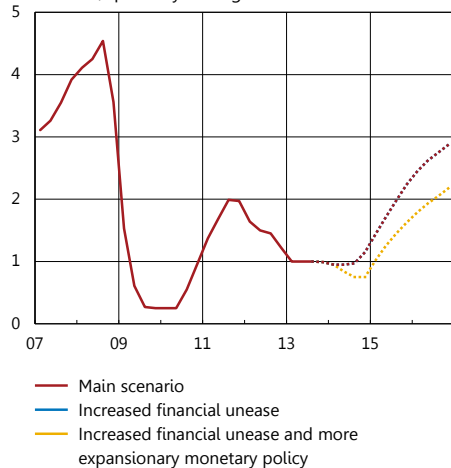
Annual percentage change, quarterly averages



Sources: Statistics Sweden and the Riksbank

Figure 2:10. Repo rate

Per cent, quarterly averages



Source: The Riksbank

worrying for monetary policy than if the krona were to depreciate, as it could lead to even lower inflation than in the alternative scenario.

■ Swedish GDP growing more slowly

The krona appreciation makes Swedish export goods more expensive, which together with lower international demand for Swedish goods, means that growth in exports declines. The upturn in long-term interest rates also spills over to Sweden so that market rates for companies rise, resulting in weaker investment. The poorer developments abroad mean that consumer confidence also falls, which dampens consumption.

All in all, the upturn in long-term interest rates means that growth in GDP is almost 1 percentage point lower than in the main scenario during the forecast period (see the blue line in Figure 2:5). Resource utilisation measured in terms of the GDP gap, the hours worked gap and unemployment also deteriorates (see the blue lines in Figures 2:6 and 2:7).

■ Lower resource utilisation and inflation motivate more expansionary monetary policy

When resource utilisation falls, companies' demand for labour declines, whereby wages rise at a slower pace. This reduces companies' costs. Another reason for costs declining is that inflation abroad falls, and this together with a stronger krona means that imported intermediate goods become cheaper. Companies therefore raise their prices at a more moderate pace and both CPI and CPIF inflation are lower than in the main scenario (see the blue lines in Figures 2:8 and 2:9).

If the Riksbank, despite the poorer prospects abroad, were to continue to follow the repo-rate path in the main scenario, resource utilisation would remain low throughout the entire forecast period. Inflation would then be clearly lower than the target for the entire forecast period. The repo rate would then be cut and follow a lower path throughout the forecast period, to counteract the slowdown in economic activity and bring inflation in line with the target (see the yellow line in Figure 2:10). The yellow lines in Figures 2:4–2:9 show the effects on the Swedish economy of the lower repo-rate path. By conducting a more expansionary monetary policy, the Riksbank counteracts the krona appreciation, so that the krona instead becomes somewhat weaker than in the main scenario. (see the yellow line in Figure 2:4). The effects on resource utilisation and inflation are also almost entirely neutralised by the lower repo-rate path (see the yellow lines in Figures 2:6 and 2:8). One condition for being able to cut the repo rate in this scenario is that the risks linked to household debt do not increase.

A trade-off between short-term stabilisation requirements and more long-term risks has been made in the monetary policy assessment in the alternative scenario.¹⁶ Nevertheless, it is not entirely clear how monetary policy should be formulated in this type of scenario. For example, mortgage rates in Sweden could rise, which together with rising unemployment could lead to a fall in housing prices. In that households' wealth declines, the real economic effects are reinforced in a way that is not captured in the scenario. This could call for an even more expansionary monetary policy. In addition, there is considerable uncertainty over what could happen to the krona in the scenario. If Sweden were to become a safe haven for financial investors, the krona could moreover appreciate more than is assumed in the scenario. This could justify a lower repo-rate path. However, the krona can also weaken in times of financial unease. Then inflation would be higher and monetary policy would need to be less expansionary. Exactly how monetary policy were conducted would thus depend on a number of different factors.

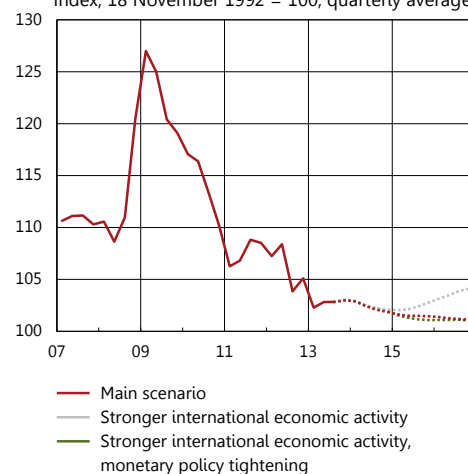
Scenario: Stronger international economic activity

Confidence indicators in many parts of the world have risen recently. This applies to Japan, the United States and the euro area, for instance. In Japan, the upturn in confidence can mean that the recent major changeover in economic policy is having an even more positive impact than expected. In the United States, it may be the case that the restoration of households' balance sheets will no longer dampen developments so that the rest of the recovery can proceed as quickly as has been the case following earlier economic downturns. This applies in particular if the questions regarding fiscal policy at present are straightened out.

The largest effect on Sweden would be if the rise in confidence in the important euro area entails the start of a more rapid recovery than is forecast in the main scenario. The on-going debt consolidation in both the public and private sectors and the management of structural problems in several countries mean that it is primarily exports that are growing. However, there have been recent signs that domestic demand is strengthening. During the second quarter, both domestic consumption and investment rose for the first time in a long while. At the same time, the labour market has stabilised and the retail trade has risen. Despite these small signs, the main scenario is that it will take time before the increase in confidence has lasting effects on consumption and investment.

Nevertheless, the signs of growing optimism could be the start of a stronger growth in demand. The alternative scenario illustrates the effects of confidence abroad returning sooner, which would lead to

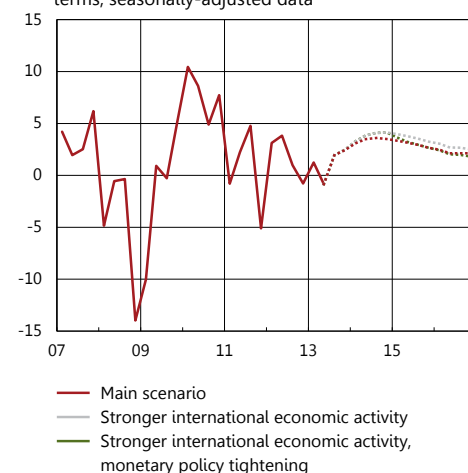
Figure 2.11. KIX-weighted nominal exchange rate Index, 18 November 1992 = 100, quarterly averages



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

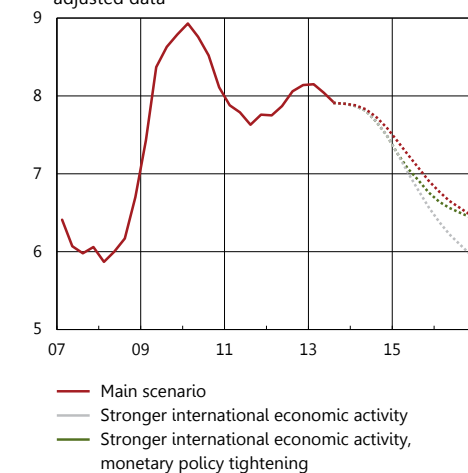
Source: The Riksbank

Figure 2.12. GDP
Quarterly changes in per cent calculated in annualised terms, seasonally-adjusted data



Sources: Statistics Sweden and the Riksbank

Figure 2.13. Unemployment
Per cent of the labour force, aged 15-74, seasonally-adjusted data

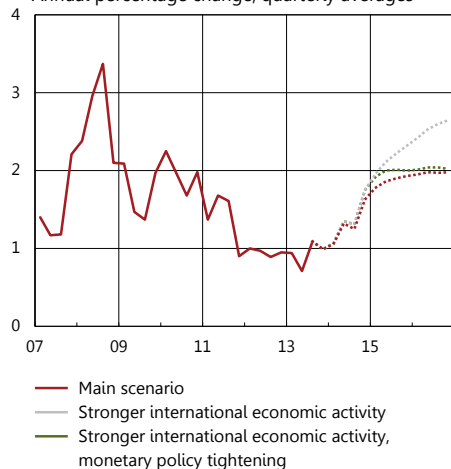


Sources: Statistics Sweden and the Riksbank

¹⁶ See the article "Financial imbalances in the monetary policy assessment" in *Monetary Policy Report*, July 2013.

Figure 2:14. CPIF

Annual percentage change, quarterly averages

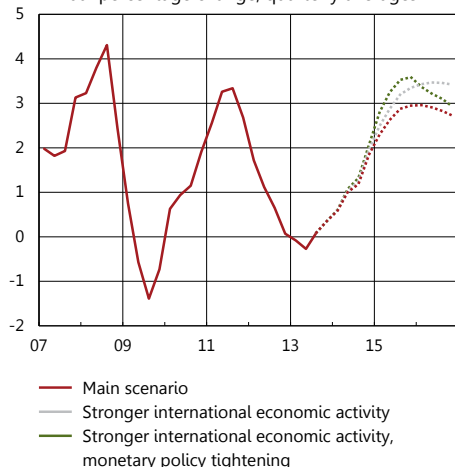


Note. The CPIF is the CPI with a fixed mortgage rate.

Sources: Statistics Sweden and the Riksbank

Figure 2:15. CPI

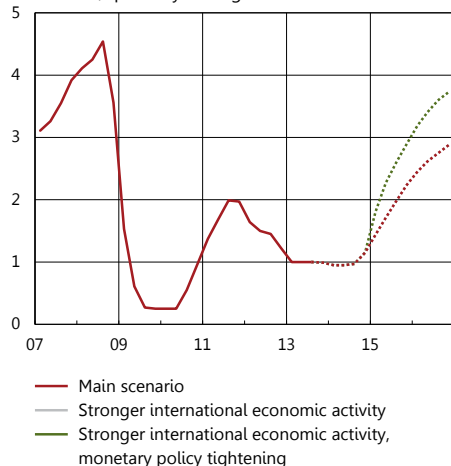
Annual percentage change, quarterly averages



Sources: Statistics Sweden and the Riksbank

Figure 2:16. Repo rate

Per cent, quarterly averages



Source: The Riksbank

stronger domestic demand in the euro area, for instance. Resource utilisation would increase and inflation would be slightly higher.

Production abroad would rise faster than in the main scenario in trade-weighted terms and inflation would be higher (see Figures 2:1 and 2:2). The higher inflation and a higher resource utilisation would mean that policy rates abroad were raised earlier than in the main scenario (see Figure 2:3).

■ A faster recovery abroad leads to lower unemployment and higher inflation in Sweden

The effects on the Swedish economy in this scenario are the reverse of those in the previous scenario. If the Riksbank, despite the more favourable development in economic activity, were to follow the repo-rate path in the main scenario, the interest rate differential between Sweden and other countries would decline, which means that the exchange rate would weaken (see the grey line in Figure 2:11). Together with a higher GDP growth abroad, this results in increasing demand for Swedish export goods.

The Swedish economy is currently marked by good competitiveness, sound public finances and resilient banks. This means that there are good conditions for a rapid recovery when confidence in the euro area returns and optimism increases. The demand for consumer and investment goods also increases, thanks to increased optimism regarding the future and more liberal credit granting. Together with the increase in demand for exports, this means that GDP growth in Sweden will be higher (see the grey line in Figure 2:12).

When aggregate demand increases, the labour market improves and unemployment declines at a faster pace than in the main scenario (see the grey line in Figure 2:13). This also means that wage increases will be higher. The faster developments in wages and the higher employment give households the scope to further increase their consumption.

The weaker exchange rate means that prices of imported intermediate goods are higher than in the main scenario. Together with the higher wages, this means that companies' costs rise faster, which pushes up inflation (see the grey line in Figure 2:14).

■ Household debts rise further

In this scenario, international economic activity improves gradually and it is not until the beginning of 2015 that inflation and resource utilisation clearly exceed the forecasts in the main scenario. If the Riksbank holds to the repo-rate path in the main scenario, inflation will overshoot the target substantially towards the end of the forecast period. The increase in consumer confidence also means that household debt continues to build up in a way that could ultimately have major negative consequences for the real economy when the imbalances are later corrected.

The Riksbank therefore raises the repo rate somewhat earlier than in the main scenario to attain inflation in line with the target and a stable development in the real economy (see Figure 2:16). The effects on other variables are illustrated by the green lines in Figures 2:11–2:15. The increase in the repo rate also means that the build-up of household debt is slowed down.

In this scenario, inflationary pressures increase in a situation where inflation is already expected to be close to the target, according to the forecast in the main scenario. The repo rate therefore needs to be raised to avoid inflation being too high. The monetary policy consequences could be quite different if we instead had an upturn in inflation in the near term. As inflation is low to begin with, such a development would actually be beneficial, given that inflation in the long run does not deviate too far from the target.

Alternative scenarios for the repo rate

This section shows how inflation and resource utilisation could be affected if the Riksbank were to follow a different repo-rate path than the one in the main scenario.¹⁷ Two alternative repo-rate paths are shown. In the first alternative, the repo rate is set 0.25 percentage points higher for four quarters. In the second alternative, the repo rate is set 0.25 percentage points lower for four quarters (see Figure 2:17).

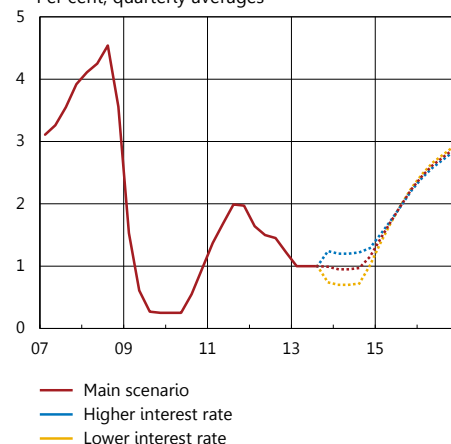
■ A higher repo rate leads to lower inflation and lower resource utilisation

A higher repo rate leads to higher market rates, for instance, higher interest on savings accounts. It becomes more favourable for households to save, compared with borrowing, and at the same time it becomes more expensive for companies to fund investments. This means that consumption and investment slow down. This in turn leads, with some time lag, to the demand for labour slowing down, which means that unemployment is higher than in the main scenario (see the blue curve in Figure 2:22).

Higher interest rates also mean that prices of Swedish assets, for instance bonds, fall. When the demand for these assets increases, the krona strengthens. This in turn means that the prices of imported goods will be lower, at the same time as the demand for Swedish export goods declines. All in all, GDP growth will thus be lower than in the main scenario.

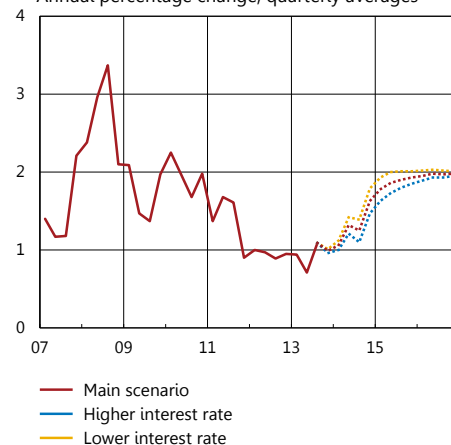
When resource utilisation falls, wage developments will be more restrained. This, together with lower prices for imported intermediate goods, means that companies' costs decline. This in turn means that companies raise their prices at a slower pace and this results in lower CPIF inflation (see the blue curve in Figure 2:18). However, higher interest rates mean that households' mortgage costs rise, which means that the

Figure 2:17. Alternative repo-rate paths
Per cent, quarterly averages



Source: The Riksbank

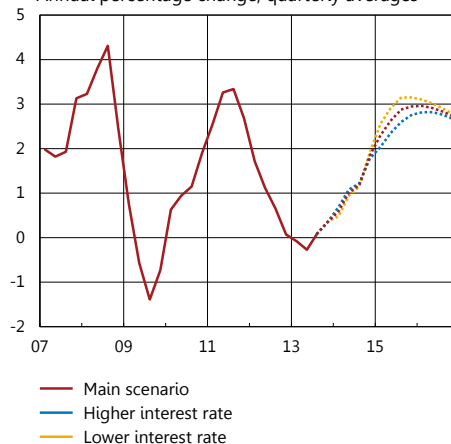
Figure 2:18. CPIF
Annual percentage change, quarterly averages



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

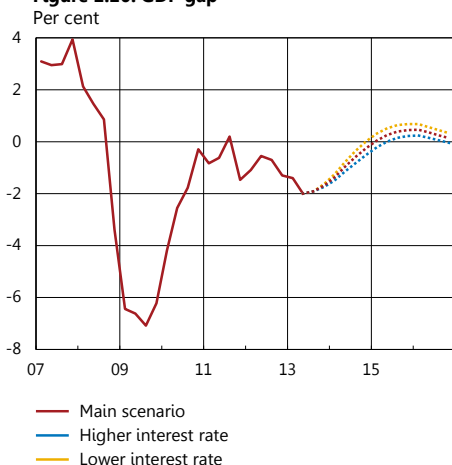
Sources: Statistics Sweden and the Riksbank

Figure 2:19. CPI
Annual percentage change, quarterly averages

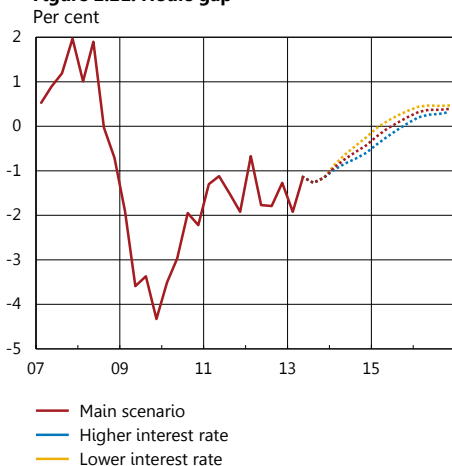


Sources: Statistics Sweden and the Riksbank

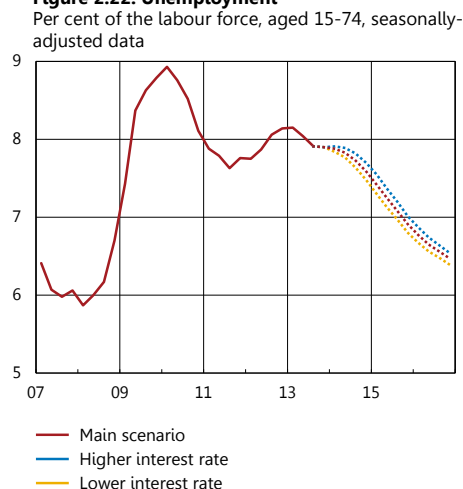
¹⁷ The effects of these alternative scenarios for the repo rate are also based on the Riksbank's macro model, Ramses. Other empirical approaches could lead to other estimates of the effects of a change in the repo rate.

Figure 2:20. GDP gap

Sources: Statistics Sweden and the Riksbank

Figure 2:21. Hours gap

Sources: Statistics Sweden and the Riksbank

Figure 2:22. Unemployment

Sources: Statistics Sweden and the Riksbank

effects on CPI inflation will be smaller initially (see the blue curve in Figure 2:19).

■ A lower repo rate gives higher inflation and higher resource utilisation

A lower repo rate, on the other hand, will mean that it becomes less attractive to save, and consumption will rise. Lower interest rates will also mean that more potential investments become profitable. When the return on Swedish assets fall, the demand for the krona will decline, so the krona depreciates. This means that exports increase. All in all, this leads to higher GDP growth and higher resource utilisation than in the main scenario.

Higher demand leads, with some time lag, to higher employment and a higher rate of wage increase. At the same time, the krona depreciation contributes to imported intermediate goods becoming more expensive. This means that companies' costs will increase, which in turn will lead to a higher rate of price increase. CPI inflation thus rises (see the yellow curve in Figure 2:18). CPI inflation rises somewhat less, as households' interest expenditure falls initially when the repo rate is cut (see the yellow curve in Figure 2:19).

■ Several factors influence the monetary policy deliberations

A lower repo rate could thus bring CPI inflation back to 2 per cent somewhat faster than in the main scenario (see the yellow curve in Figure 2:18). At the same time, a lower repo rate could contribute to resource utilisation normalising somewhat faster (see the yellow curves in Figures 2:20–2:22). On this basis, one could justify a more expansionary monetary policy.

However, a lower repo rate would also lead to a faster increase in household indebtedness. This is already high in an international and historical perspective. Experience from other countries in recent years clearly illustrates the risks that this can entail. A rapid increase in debt, even if it is not considered to threaten financial stability, could make the economy more sensitive to shocks. By not cutting the repo rate, the Riksbank could then contribute to holding back the rate of increase in debt and thereby reduce the risk of major fluctuations in inflation and resource utilisation in the future.¹⁸

The Swedish Government has recently presented a proposal that includes giving Finansinspektionen the main responsibility for macroprudential policy tools in Sweden. This improves the conditions for reducing risks linked to household indebtedness. However, it is still too early to say how it will affect monetary policy.¹⁹

¹⁸ See the article "Financial imbalances in the monetary policy assessment" in *Monetary Policy Report*, July 2013.

¹⁹ See the article "Macroprudential policy and monetary policy".

■ CHAPTER 3 – The current state of the economy

This chapter presents new information received since the Monetary Policy Update was published in September and an assessment of the development of the economy in the quarters immediately ahead.

The focus of the financial markets has for some time been on central bank communication. Government bond yields fell around the globe in September in the light of the Federal Reserve unexpectedly choosing to wait before tapering off its asset purchases. There are signs of a slow improvement in the euro area. There are also signs of a gradual recovery on other important export markets. The US economy is continuing to improve, despite the tight fiscal policy and the lack of political unity on the direction for fiscal policy creating uncertainty. The Chinese economy is showing rapid growth again and growth in Japan has been surprisingly positive.

In Sweden, GDP growth in the first half of the year was weaker than expected. The indications are that growth in Sweden will increase during the second half of the year. There has been some improvement in the labour market so far this year, but indicators point to unemployment remaining at roughly the current level for the remainder of the year. Inflation is still low. CPI inflation is expected to be around 1 per cent during the coming six months.

Financial markets

■ Central bank communication and budget problems have affected the markets

The financial markets have been strongly affected by expectations of the Federal Reserve's future actions, now that the signs of an increase in activity in the US economy are becoming clearer. The Federal Reserve is expected to begin normalising monetary policy by beginning to taper off its monthly purchases of government bonds and housing-related securities.²⁰ The expectations have primarily affected the markets for government bonds and equity. For instance, US and European government bond yields have risen substantially since May (see Figure 3:1).

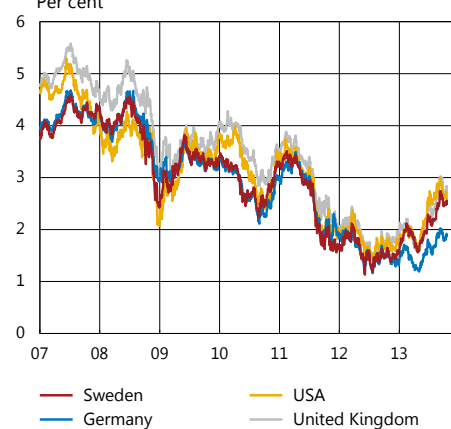
The Federal Reserve decided in September not to change the size of its monthly asset purchases. This decision came as a surprise to market agents, and led to government bond yields falling in September. Market agents are now expecting the Federal Reserve to begin to taper off its asset purchases during the first half of 2014.

The political problems surrounding the US budget process and raising the public debt ceiling have had some impact on the financial markets. Interest rates on US treasury bills and some interest rates on repo transactions have risen. The problems have also dampened the stock market and contributed to lower government bond yields.

■ Credit risk premiums have fallen despite higher volatility

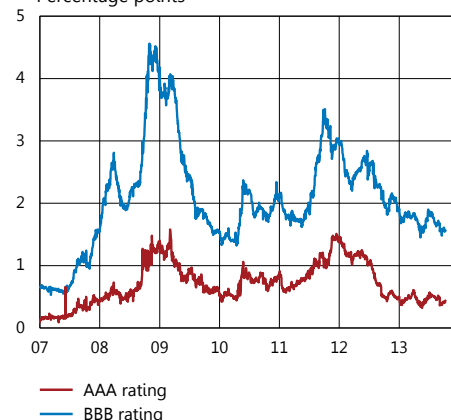
It is primarily expectations that the Federal Reserve will begin normalising monetary policy after the very expansionary policy conducted in recent years that has caused an increase in volatility on several markets, particularly the bond and foreign exchange markets.

Figure 3:1. Government bond rates with 10 years left to maturity
Per cent



Source: Reuters EcoWin

Figure 3:2. Credit risk premiums for companies and the euro area
Percentage points

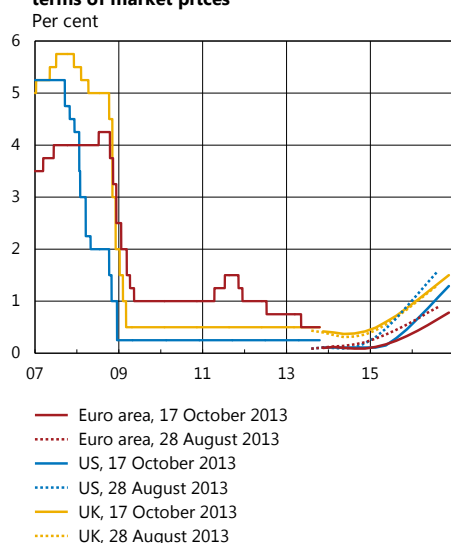


Note. The difference between the average yield for companies in the euro area and on German government bonds

Sources: Reuters EcoWin and the Riksbank

²⁰ See the article "Expected tapering of the Federal Reserve's asset purchases" in this Report.

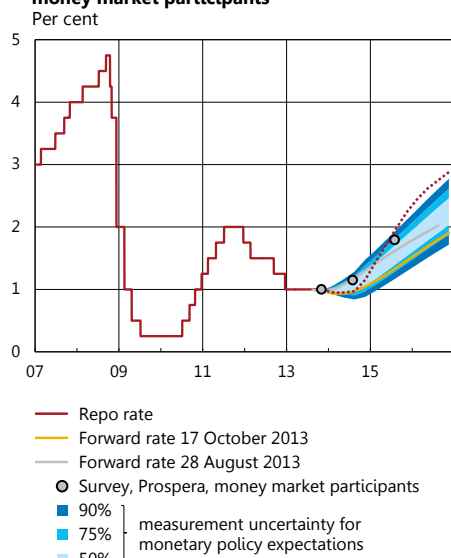
Figure 3:3. Policy rate expectations measured in terms of market prices



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: Reuters EcoWin and the Riksbank

Figure 3:4. Repo-rate expectations in Sweden measured in terms of forward rates and surveys, money market participants



Note. Forward rates have been adjusted for risk premiums and describe the expected overnight rate. As neither surveys nor forward rates are exact measures of monetary policy expectations, the uncertainty of the measurement is illustrated by an interval.

Sources: Reuters EcoWin, TNS SIFO Prospera and the Riksbank

Figure 3:5. The value of the Swedish krona in terms of EUR and USD



Source: Reuters EcoWin

However, the increased volatility has not contributed to higher credit risk premiums for banks and companies in the euro area (see Figure 3:2). Nor has it led to higher funding costs for the countries with sovereign debt problems.

■ Low global monetary policy expectations

The ECB, the Federal Reserve and the Bank of England have all held their policy rates unchanged at the monetary policy meetings held in September and October. Investor surveys do not indicate any clear shift in expectations of monetary policy; market agents are expecting policy rates to be kept low for a long period of time. However, forward rates in the longer run have shifted downwards, which largely took place in connection with the Federal Reserve's unexpected decision in September to wait before beginning to taper off its large-scale asset purchases. According to the most recent surveys and forward rates, the central banks are expected to hold their policy rates at low levels at least until 2015 (see Figure 3:3).

■ Expectations that the repo rate will remain low

Swedish government bond rates have followed the international trend. Market agents are still expecting a more expansionary monetary policy in the euro area than in Sweden over a long period of time to come.

The Riksbank's monetary policy decision in September was largely expected. Market agents are expecting an increase in the repo rate at the end of 2014. The pace of the ensuing increases is then expected to be relatively slow. The latest Prospera survey indicates that money-market participants are expecting the repo rate, on average, to be 1.8 per cent in two years' time (see Figure 3:4).

■ Krona largely unchanged since September

A greater propensity among investors to invest in the euro area during the summer and autumn has probably contributed to some weakening of the krona against the euro (see Figure 3:5). However, the krona has strengthened against a generally weaker dollar. The US currency has weakened on a broad base against several currencies as expectations that the Federal Reserve would taper off its asset purchases have been postponed. In nominal KIX terms the krona remains largely unchanged since the Monetary Policy Update was published in September. The Swedish krona is still somewhat weaker than last spring, particularly against the euro.

■ Higher mortgage rates on loans fixed for long periods

The funding terms for Swedish banks and mortgage institutions are continuing to be good, although the costs for the mortgage institutions' funding have risen apace with the higher government bond yields (see Figure 3:6). The mortgage institutions have thus raised their interest rates on mortgages with longer fixed periods. But at the same time, mortgage

rates on loans with short fixed periods have fallen somewhat, which means the average mortgage rate has not changed significantly.

In the euro area, too, the funding costs for companies and households have not changed significantly over the past month, although developments differ in the different countries. The demand for credit from European companies is continuing to fall, while demand from European households is increasing slightly.

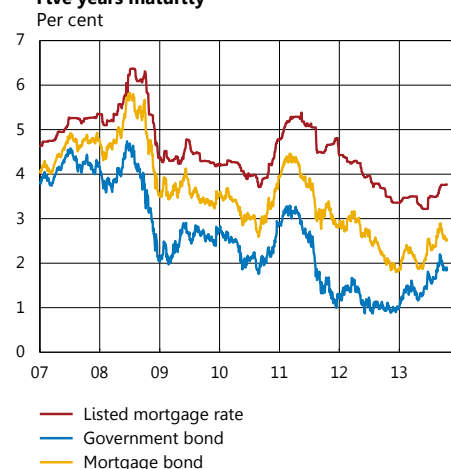
■ Stable borrowing rate among households

The borrowing rate among Swedish households was unchanged at 4.8 per cent as an annual percentage change in July and August (see Figure 3:7). The household debt ratio is still at a high level, both in historical terms and compared with other countries.

Housing prices have continued to increase (see Figure 3:8). According to Valueguard's composite index, prices of privately-owned housing in Sweden rose by 6.6 per cent as an annual percentage change in September. A low supply of housing and high demand for these could explain some of the upturn. According to SEB's housing-price indicator, households are expecting housing prices to continue to rise. In September, the indicator noted its highest level since 2007, but fell somewhat in October. Household expectations of housing prices can be regarded in the light of not expecting any major rises in mortgage rates in the coming years, at the same time as the development of their disposable income has been good. According to the most recent Economic Tendency Survey, households' expectations of variable mortgage rates were 3.2 per cent for one year ahead, 3.6 per cent two years ahead and 4.0 per cent five years ahead. Expectations for five years ahead are lower than is compatible with the Riksbank's assumptions regarding the repo rate in the long term (see Figure 1:33).

The lending ceiling to companies, which has shown a decreasing trend since the beginning of 2012, rose slightly between July and August this year. In September, four out of five companies stated that their possibilities to fund their operations were largely normal, according to the Economic Tendency Survey.

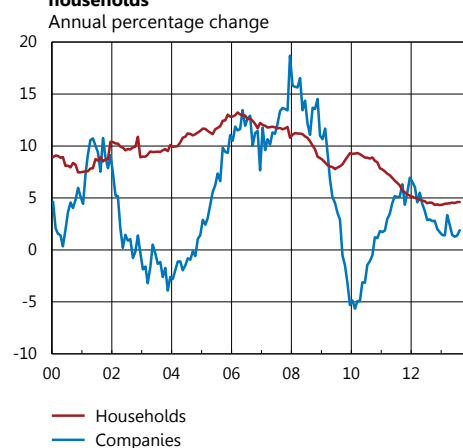
Figure 3:6. Swedish government mortgage bond yields and the average of listed mortgage rates. Five years maturity



Note. Listed mortgage rates are the interest rates published by Nordea, SBAB, SEB, Swedbank Hypotek and Stadshypotek in the daily press and elsewhere.

Sources: Reuters EcoWin and the Riksbank

Figure 3:7. Bank lending to companies and households

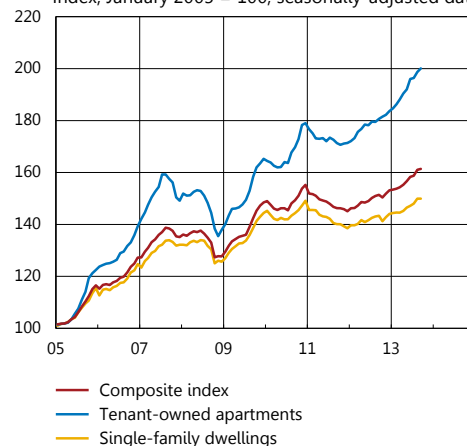


Note. Lending to households and companies according to financial market statistics.

Source: Statistics Sweden

Figure 3:8. Prices for single-family dwellings and tenant-owned apartments

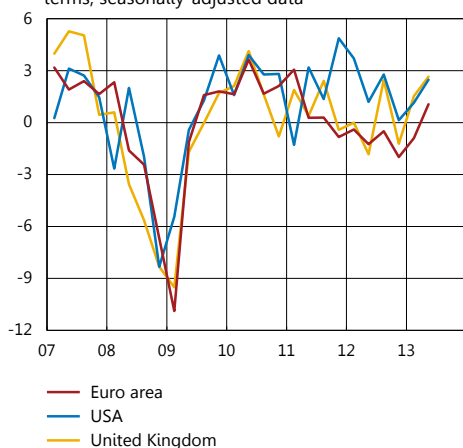
Index, January 2005 = 100, seasonally-adjusted data



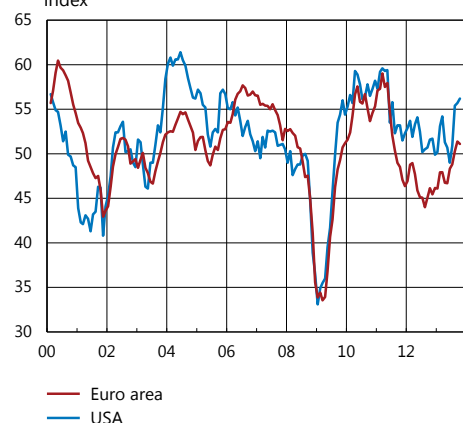
Sources: Valueguard and the Riksbank

Figure 3:9. GDP

Quarterly changes in per cent calculated in annualised terms, seasonally-adjusted data



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

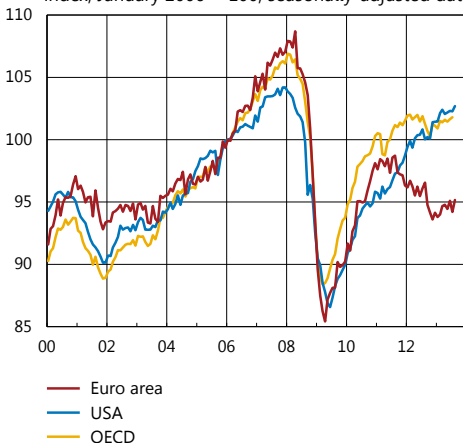
Figure 3:10. Purchasing managers' index, manufacturing sector

Note. Values above 50 indicate growth.

Sources: Institute for Supply Management and Markit Economics

Figure 3:11. Industrial production

Index, January 2006 = 100, seasonally-adjusted data



Sources: Eurostat, Federal Reserve and OECD

International developments

■ The euro area - weak start to Q3

Revised data confirmed that GDP in the euro area increased by 1.1 per cent from the first to the second quarter of this year, when calculated as an annual rate (see Figure 3:9). GDP rose in Germany, France and Portugal, for instance, while production fell in Italy, Spain and the Netherlands. However, the fall in these countries was subdued compared with the first quarter. It was primarily exports and household consumption that contributed to growth in the euro area. Household consumption rose for the first time since autumn 2011.

The fact that GDP increased for the second quarter in a row after six quarters of falling production indicates that economic activity in the euro area has bottomed out. A further sign of this is that the purchasing managers' index is above the level of 50, which indicates an increase in activity in the manufacturing industry (see Figure 3:10). Following a downturn in July, industrial production rose again in August (see Figure 3:11). Retail trade turnover increased in July and August. However, both the level of industrial production and the retail trade turnover are still lower than in 2011, which underlines the fact that the recovery in the euro area is moving slowly. Unemployment was 12 per cent in both July and August, which is somewhat lower than during the first half of the year (see Figure 3:12).

■ USA - continued improvement despite tight fiscal policy

GDP in the United States increased by 2.5 per cent from the first to the second quarter of this year, when calculated as an annual rate (see Figure 3:9). GDP is expected to grow at a relatively good pace also during the second half of this year, despite the restraining effect of fiscal policy and the lack of political unity on the direction for fiscal policy creating uncertainty. The political parties have now reached an agreement on temporarily raising the ceiling for public debt so that public expenditure payment can be met in the coming months. However, the lack of agreement regarding the next budget year meant that some public sector operations were closed down for almost three weeks in October. This, together with effects on public confidence, is expected to have some negative effects GDP in the short run, which is also taken into account in the assessment of the current situation.

Household consumption continued to rise in July and August. Although households have faced higher mortgage rates since the month of May, at the same time equity and housing prices have risen and credit conditions have continued to improve.

The housing market has also continued to improve in general, which is positive for households, banks and the construction industry. Demand is stimulated by the very expansionary monetary policy. Sales of existing housing rose in August to the highest level since 2009 and housing prices have continued to rise. On the labour market, employment has continued to increase and unemployment to fall. In September,

unemployment amounted to 7.2 per cent (see Figure 3:12). A decline in participation in the work force contributed to the fall in unemployment.

■ Gradual improvement on other important export markets

Developments on other important export markets also point to a gradual improvement, albeit from different levels. GDP in the United Kingdom rose by 2.5 per cent from the first to the second quarter of this year, when calculated as an annual rate. Both turnover in the retail trade and industrial production have risen in recent months. The purchasing managers' index for industry has risen markedly and indicates an increase in activity in the manufacturing industry. British households have also become much more optimistic and confidence in the household sector is above the historical average. There are also signs that the labour market is improving. In July, unemployment remained unchanged at 7.7 per cent, but the number of unemployed continued to decline (see Figure 3:12).

Growth in Denmark has picked up again after the subdued development in the economy in recent years. According to revised statistics, GDP rose by 2.4 per cent from the first to the second quarter, when calculated as an annual rate (see Figure 3:13). The recovery in the euro area and the stabilisation of the domestic housing market could partly explain this. Unemployment fell to 6.6 per cent in August.

In Norway, the rate of growth has slowed down in 2012 and 2013 (see Figure 3:13). A slower increase in household consumption, subdued activity in the construction industry and a manufacturing industry (excluding the oil sector) that is hampered by relatively high costs, can all provide some explanation for the low growth in recent years. Industrial production fell somewhat in August after remaining largely unchanged in the previous month. Unemployment rose slightly to 3.6 per cent in July.

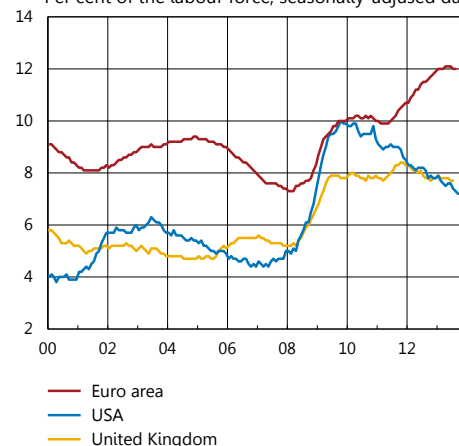
■ Higher growth in large Asian economies

Revised GDP statistics for Japan showed faster growth during the first half of 2013 than indicated by earlier-published data. GDP growth increased by 3.8 per cent from the first to the second quarter, when calculated as an annual rate. The indicators point to continued strength in manufacturing activity. However, industrial production fell back somewhat in August, after an upturn in July. According to the Tankan report, confidence in the manufacturing sector has continued to rise.

With regard to Japanese households, on the other hand, new statistics have given mixed signals. Both turnover in the retail trade and household consumption increased in August after falling in July. Household confidence is still higher than the historical average, but has fallen every month since June. Unemployment has fallen gradually since 2009 and amounted to 4.1 per cent in August.

Figure 3:12. Unemployment

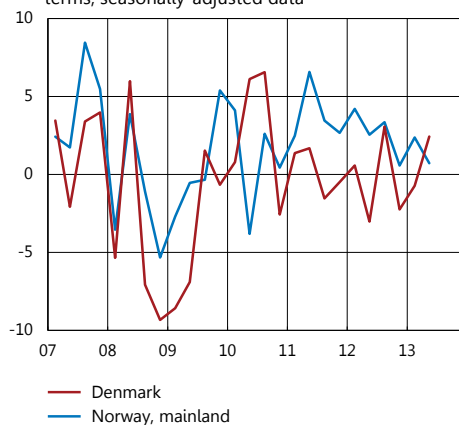
Per cent of the labour force, seasonally-adjusted data



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

Figure 3:13. GDP in Denmark and Norway

Quarterly changes in per cent calculated in annualised terms, seasonally-adjusted data



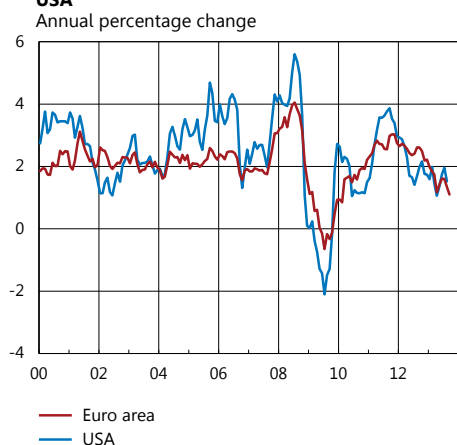
Sources: Statistics Denmark and Statistics Norway

Figure 3:14. Purchasing managers' index, manufacturing sector

Index

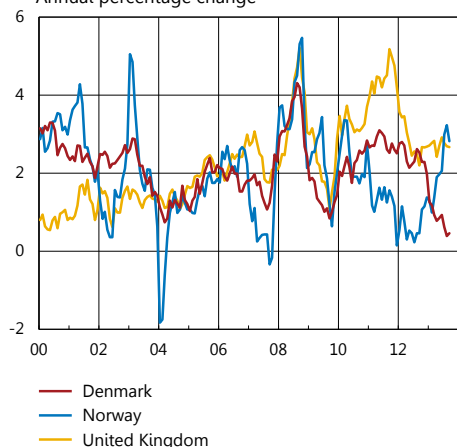


Note. Values above 50 indicate growth.
Source: Markit Economics

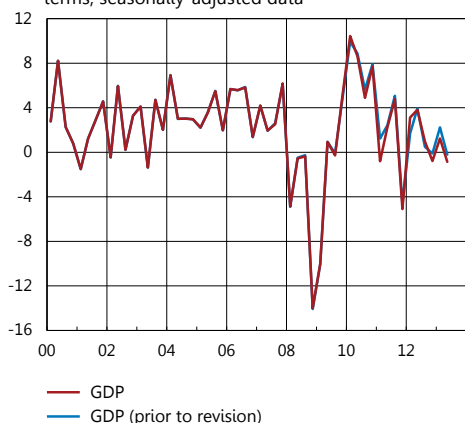
Figure 3:15. Consumer prices in the euro area and USA

Note. Data refers to HICP for the euro area and CPI for United States.

Sources: Bureau of Labor Statistics and Eurostat

Figure 3:16. Consumer prices in Denmark, Norway and United Kingdom

Sources: Office for National Statistics, Statistics Denmark and Statistics Norway

Figure 3:17. GDP
Quarterly changes in per cent calculated in annualised terms, seasonally-adjusted data

Source: Statistics Sweden

In China, GDP rose in the third quarter by 7.8 per cent as an annual percentage change. Industrial production was high during all months of the third quarter, following a period with somewhat weaker development. The purchasing managers' index for industry, which has risen several months in a row, continued to rise in September, although only marginally (see Figure 3:14). Exports fell in September, after picking up in July and August. In the retail trade, the positive trend for turnover that began at the start of the year is continuing, although consumer confidence is still low, from an historical perspective.

■ Clear differences in inflation rates

In recent months, inflation abroad has been affected by the downturn in energy prices that occurred during the first half of the year. There are also clear differences between the inflation rates in different countries.

Inflation in the euro area, measured in terms of the HICP, fell according to a flash estimate to 1.1 per cent in September (see Figure 3:15). The HICP excluding energy, food, alcohol and tobacco fell marginally to 1.0 per cent in September. However, there are large differences in the development of prices in different euro area countries. While prices are falling in Greece, inflation is around 3 per cent in Estonia and the Netherlands. In the United States, too, inflation fell as a result of lower energy prices. Inflation measured in terms of the CPI fell to 1.5 per cent in August, while underlying inflation, adjusted for energy and food prices, rose to 1.8 per cent (see Figure 3:15).²¹

The United Kingdom has had a faster growth in prices than many other countries and inflation has been above the target level since the end of 2009. CPI inflation was unchanged at 2.7 per cent in September (see Figure 3:16). In Denmark, inflation is historically low. CPI inflation amounted to 0.5 per cent in September (see Figure 3:16). Lower taxes on food have contributed to the low rate of inflation. In Norway, on the other hand, the rate of inflation has remained at a much higher level. Rents have risen at a faster pace over the past year and food prices have increased substantially as a result of increased regulation and higher tariffs on agricultural products. In September, however, CPI inflation fell to 2.8 per cent (see Figure 3:16). When adjusted for energy and tax changes, inflation was 1.7 per cent.

Consumer prices in Japan rose to 0.9 per cent in August. The rate of increase in the CPI excluding food and energy, which has been negative since 2008, was zero per cent in August. The Japanese government has decided to increase VAT from 5 to 8 per cent in April 2014, which is expected to lead to a temporary rise in inflation next year. In China, CPI inflation fell to 2.6 per cent in August. The inflation rate was 1.5 per cent, excluding the volatile food prices.

²¹ The outcome for the CPI in September, which should have been published on 16 October, will be published on 30 October, as a result of the closure of federal agencies in the United States.

Swedish economy

■ Signs of higher GDP growth second half of this year

GDP in Sweden declined by 0.9 per cent from the first to the second quarter of 2013, when calculated as an annual rate (see Figure 3:17). Compared with the corresponding quarters in the previous year, Swedish GDP, when adjusted for calendar effects, remained in principle unchanged, as the outcome for GDP growth from the National Accounts was revised down from a preliminary 0.6 per cent to 0.1 per cent. The main cause of the revision was that imports were higher than previously calculated, as the same time as the build-up of stocks was lower. Final domestic demand and exports were actually somewhat higher in the revised data. During the second quarter, demand from households contributed to holding up total demand when exports and investment fell.

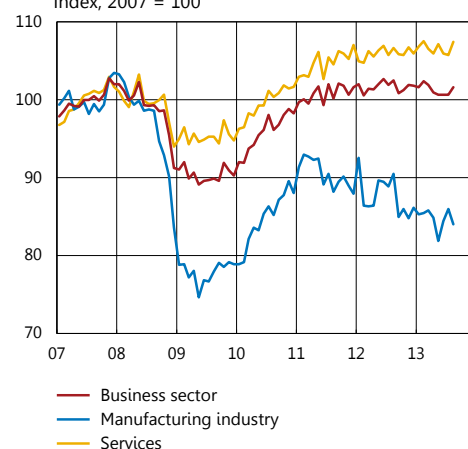
During the second half of this year, GDP is expected to increase at a faster rate. Household incomes are increasing at a good pace and their consumption is expected to continue to contribute to demand. A gradual recovery in the euro area will at the same time contribute to Swedish exports beginning to grow again. Housing investment is also expected to continue to grow.

The monthly indicators for growth do not show a unanimous picture. Statistics Sweden's weighted production index for the business sector continued to develop weakly up to the end of August (see Figure 3:18). However, the National Institute of Economic Research's Economic Tendency Survey supports stronger GDP growth, as do the Riksbank's business survey and the purchasing managers' index. The Economic Tendency Survey, which covers both households and companies, has risen recently, but fell somewhat in September, amounting to 98.1. This is somewhat lower than the historical average (see Figure 3:19): According to the Riksbank's business survey, which was carried out in September, more companies now see an improvement in economic activity in the near term, although the picture is divided between sector and companies. The purchasing managers' index for the manufacturing industry amounted to 56.0 in September (see Figure 3:20). The purchasing managers' index for service industries fell somewhat in August and September, but is still above 50, which indicates growth.

■ Households are important for demand

During the second quarter, household consumption increased by 0.8 per cent, compared with the first quarter and calculated as an annual rate. Compared with the corresponding quarter in the previous year, it increased by 1.9 per cent. Household incomes have increased at roughly the same rate as their consumption and the savings ratio has thus remained at a high level. Households' financial wealth, as measured by Statistics Sweden, is larger than the Riksbank had earlier assumed, following a changeover in statistical reporting. According to the most recent statistics from the Financial Accounts, households' financial wealth

Figure 3:18. Production in the business sector
Index, 2007 = 100



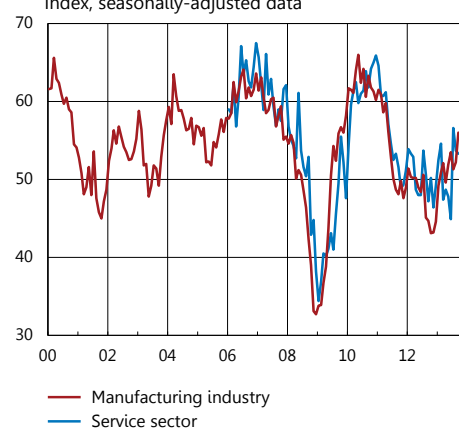
Source: Statistics Sweden

Figure 3:19. The Economic Tendency Indicator
Index, mean = 100, standard deviation = 10



Source: National Institute of Economic Research

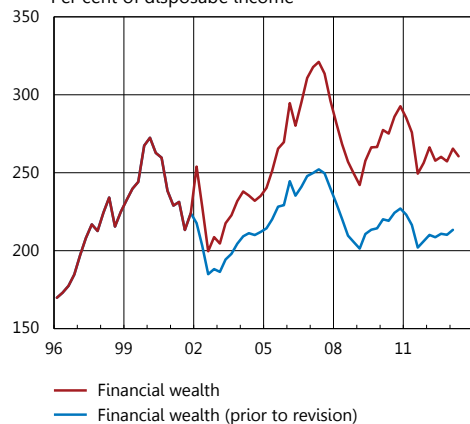
Figure 3:20. Purchasing managers' index
Index, seasonally-adjusted data



Note. Values above 50 indicate growth.

Source: Swedbank/Silf

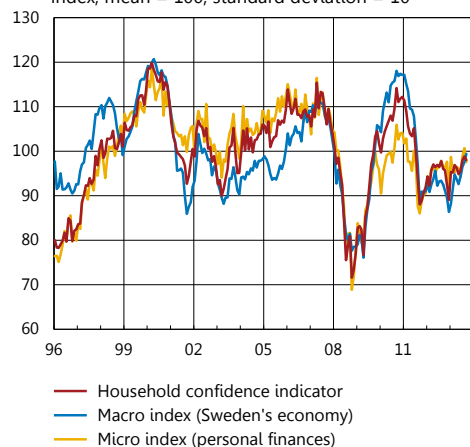
Figure 3:21. Households' financial wealth
Per cent of disposable income



Note. Excluding tenant-owned apartments and collective insurance savings.

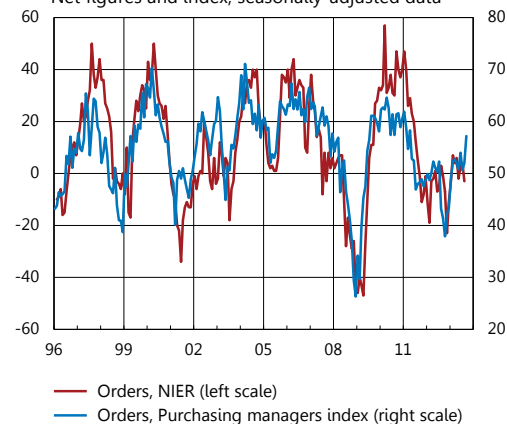
Sources: Statistics Sweden and the Riksbank

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
Net figures and index, seasonally-adjusted data



Sources: National Institute of Economic Research and Swedbank/Silf

from 2002 has been revised up by on average 44 per cent of households' disposable incomes (see Figure 3:21). The upward revision is largely due to Statistics Sweden now including households' holdings of unlisted shares in its data.

According to the National Institute of Economic Research's confidence indicator, household confidence has shifted upwards over the past three months, although it fell back slightly in September, and is now close to its historical average (see Figure 3:22). Turnover in the retail trade and household consumption indicators both rose in August. All in all, household consumption is expected to grow by almost 3 per cent a quarter, when calculated as an annual rate, during the second half of 2013.

■ Investment need remains small

Compared with the previous quarter, investment remained unchanged during the second quarter. However, compared with the corresponding quarter in the previous year, investment fell by 3 per cent. Despite capacity utilisation in industry rising during the second quarter, according to figures from Statistics Sweden, it is still lower than normal. This indicates that the investment need in industry will remain small in the near term. Industrial activity is still weak and companies are expected to be able to meet some upturn in demand without needing to make any new investments. Investment in the business sector will thus not accelerate until next year. The Riksbank's business survey confirms the picture of low investment activity among companies now and in the coming period. Many of the investments nevertheless being made concern the replacement of worn equipment, according to the responding companies.

After falling since the end of 2011, housing investment has begun to rise and the gradually stronger economic activity is expected to contribute to a further increase in housing construction going forward.

Investment in stocks has been high, in relation to demand, during the first half of the year. As demand gradually increases, companies will thus not need to increase the pace of their build-up of stocks. Companies' assessments in the Business Tendency Survey also indicate that they are now relatively satisfied with their stock volumes. If the build-up of stocks remains unchanged, the contribution from investment in stocks will be negative.

■ Weak exports but increase in orders

The continued low growth in important Swedish export markets dampened Swedish exports during the second quarter of this year. Exports thus declined for the fourth quarter in a row. Compared with the corresponding quarter in the previous year, exports fell by 2.3 per cent. Exports of goods have fallen by almost 4 per cent, while service exports have increased by just over 1 per cent during the same period.

However, there are signs of a recovery in global industrial activity. For example, the purchasing managers' index has risen globally. In the United States, the euro area and China, the index is now above 50, which indicates growth. According to foreign trade statistics, goods exports have continued to develop weakly and the order stock and level of new orders for the Swedish export companies are still lower than normal according to the Business Tendency Survey (see Figure 3:23). On the other hand, export orders according to the purchasing managers' index have increased. All-in-all, the assessment is that exports will grow, albeit slowly, in the quarters immediately ahead.

Developments in imports normally follow developments in demand, particularly developments in exports in Sweden. Swedish imports have also been weak recently. During the second quarter of this year, import volumes were around 1 per cent lower than in the same quarter last year. Low growth in exports and investment indicates that growth in imports will also remain subdued in the coming quarters. According to foreign trade statistics, goods imports fell in August after indicating growth for three months.

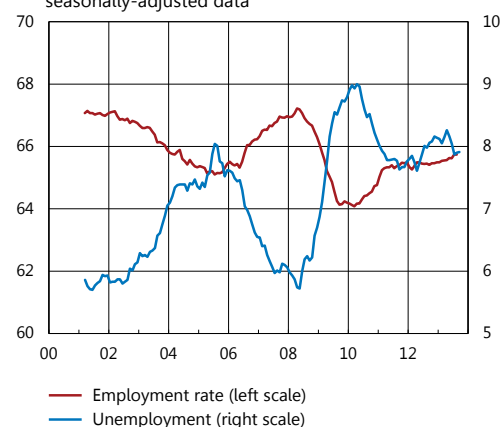
■ Slow improvement in the labour market

Over the year there has been some improvement on the labour market, with a rising employment rate and declining unemployment during the second and third quarters (see Figure 3:24). During the third quarter, employment rose somewhat more than the Riksbank assessed in the September Monetary Policy Update, while the labour force developed largely in line with the assessment. Thus, unemployment was somewhat lower than expected.

Outcomes and indicators point to unemployment remaining at roughly the current level for the remainder of the year and at the start of 2014. According to the latest Business Tendency Survey, companies in the business sector as a whole expect employment to remain subdued in the months immediately ahead (see Figure 3:25). According to the Riksbank's business survey, it is mainly companies in the manufacturing industry that are cautious and expected to wait and see if there is a clear increase in demand before they recruit new staff. According to statistics from the Swedish Public Employment Service, there is still a relatively large number of newly-registered vacancies (see Figure 3:26). Similarly, the number of redundancy notices is back at levels close to the historical average, which could indicate that companies have a more optimistic outlook.

The number of hours worked rose by 3.7 per cent from the first to the second quarter of this year, when calculated as an annual rate. This outcome can be partly explained by temporary effects, and developments are thus expected to be somewhat weaker during the second half of the year. When the National Accounts were published in September, the level of hours worked was adjusted down, particularly for the whole year 2011.

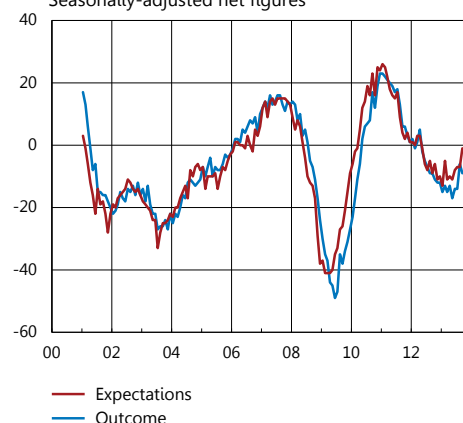
Figure 3:24. Employment rate and unemployment
Per cent of the labour force, aged 15-74,
seasonally-adjusted data



Note. Three-month moving average.

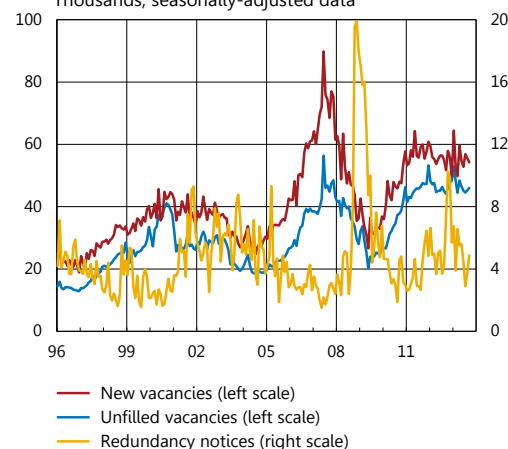
Sources: Statistics Sweden and the Riksbank

Figure 3:25. Employees in the business sector, expectations and outcome
Seasonally-adjusted net figures



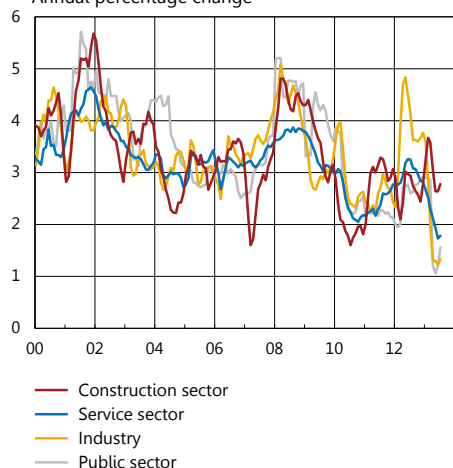
Source: National Institute of Economic Research

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



Sources: Employment Service and the Riksbank

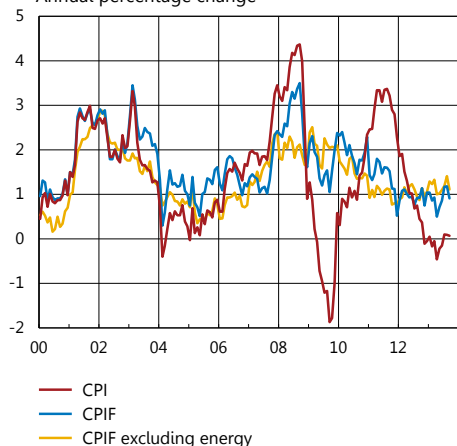
Figure 3:27. Wages
Annual percentage change



Note. Three-month moving average. Refers to wages according to short-term wage statistics. Preliminary outcomes for the last 12 months, which are usually revised upwards.

Sources: National Mediation Office and the Riksbank

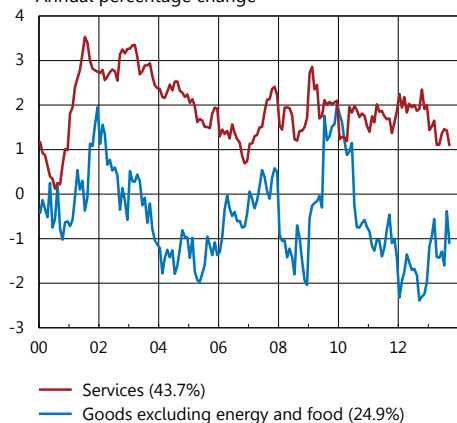
Figure 3:28. CPI, CPIF and CPIF excluding energy
Annual percentage change



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

Source: Statistics Sweden

Figure 3:29. Prices of goods and services in the CPI
Annual percentage change



Note. The weight of the CPI 2013 in the respective components is given in brackets.

Sources: Statistics Sweden and the Riksbank

■ Wages increasing slowly this year

The National Mediation Office's short-term wage statistics indicate that wages in the entire economy rose by an average of 2.0 per cent, calculated as an annual percentage change, during the first seven months of this year. The low outcomes are due to the new agreed wage increases, which apply with effect from the month of April for many of the contracts, still not being included in the statistics. Wages in the construction sector have increased faster than those in other sectors so far this year (see Figure 3:27). When all of the retroactive wage payments have been entered into the statistics for 2013, wages in the whole economy are expected to have increased by 2.6 per cent.

The National Accounts' figures for labour costs per house increased during the second quarter of this year by almost one per cent, when compared with the same quarter last year. This outcome was slightly lower than the assessment in September. Other figures in the National Accounts that were revised include GDP, number of hours worked, wage and labour cost totals going back in time. According to the new figures, labour productivity increased in 2011 and 2012 by 1.0 and 0.7 per cent respectively in terms of an annual percentage change, which is lower than the historical average. During the first half of this year, too, productivity grew slowly and productivity growth for the year 2013 as a whole is now expected to be lower than was forecast in September. The Riksbank's assessment is that unit labour costs will increase by an average of 2.5 per cent a year during the period 2011-2013, which is around 0.3 percentage points higher than before.

■ Inflation slightly lower than expected in September

CPI inflation was 0.1 per cent in September, when measured as an annual percentage change (see Figure 3:28). The low rate of increase is linked to a fall in households' mortgage interest expenditure, primarily as a result of the gradual cuts in the repo rate. The rate of increase in the CPIF, that is, the CPI with a fixed mortgage rate, is higher and amounted to 0.9 per cent. The CPIF adjusted for energy price changes amounted to 1.1 per cent in September. The outcomes for all the measures of inflation were slightly lower than was expected in the latest Monetary Policy Update.

Prices for services have increased by almost 2 per cent in recent years, while goods prices have fallen (see Figure 3:29). Goods prices are expected to continue falling, albeit at a somewhat slower pace, during the remainder of 2013. Prices of services are continuing to rise at roughly the same pace as in recent months. CPIF inflation is expected to remain around 1 per cent for a further period.

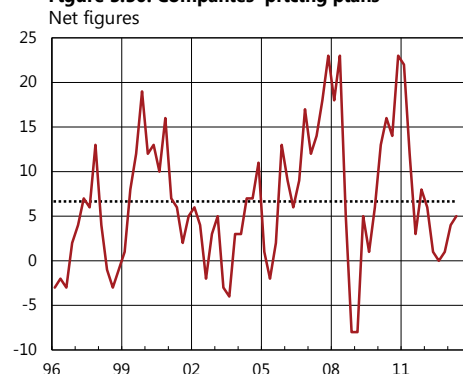
According to the Riksbank's business survey, which was carried out in September, the low price pressures in the economy will persist in the coming period, and this time there were also somewhat fewer companies than in May who had increased or were planning to increase their prices. Many companies say that stiff competition sets tight limits for price increases. According to the Economic Tendency Survey, the number of companies planning to raise their prices during the coming year will increase (see Figure 3:30). Developments in consumer goods prices in the producer channel are expected to have a delayed effect on prices to consumers. This price development has been subdued over the past year, particularly on the import market.

■ Inflation expectations well anchored in the long term

According to the Economic Tendency Survey published in September, households are expecting the rate of inflation to be 1.8 per cent in 12 months' time, which is an upturn of 0.4 percentage points since the survey in August (see Figure 3:31). Companies' inflation expectations one year ahead rose from 0.9 per cent to 1.1 per cent during the second quarter, compared with the first quarter.

The Prospera survey published in October indicates that money market participants are expecting an inflation rate of 1.2 per cent in one year's time, 1.7 per cent in two years' time and 1.9 per cent in five years' time. The survey also showed that expectations of inflation for all those questioned rose somewhat during the third quarter, compared with the second quarter. Expectations rose from 0.9 to 1.0 per cent one year ahead, and from 1.4 to 1.5 per cent two years ahead (see Figure 3:32). Expectations five years ahead were unchanged, amounting to 1.9 per cent.

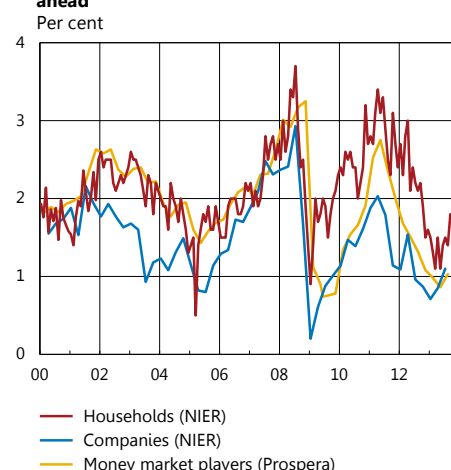
Figure 3:30. Companies' pricing plans



Note. Net figures are defined as the difference between the proportion of firms that have reported an expected increase in their selling prices and the proportion of firms that have reported an expected reduction. Broken line represents the mean value.

Source: National Institute of Economic Research

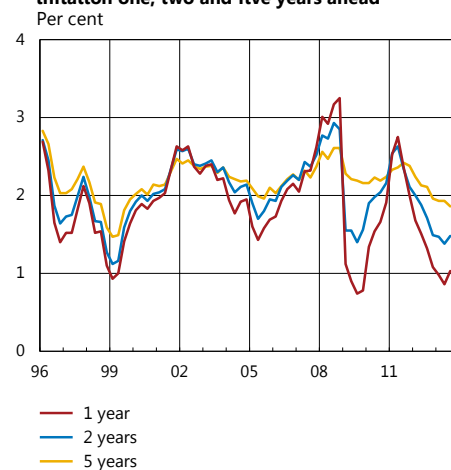
Figure 3:31. Expectations of inflation one year ahead



Note. Households are stated monthly, others quarterly.

Sources: National Institute of Economic Research and TNS SIFO Prospera

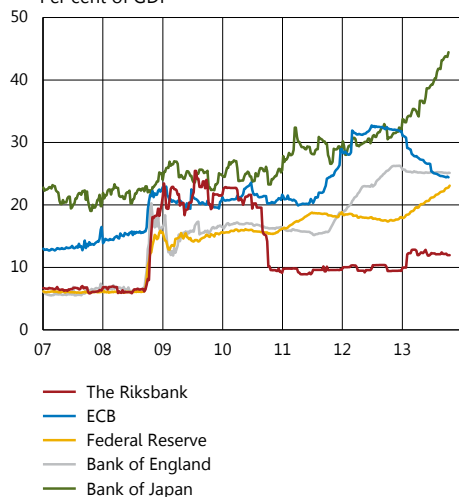
Figure 3:32. All respondents' expectations of inflation one, two and five years ahead



Source: TNS SIFO Prospera

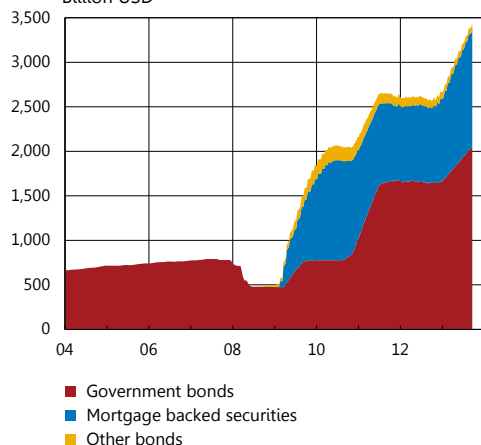
Expected tapering of the Federal Reserve's asset purchases

Figure A1. Central banks' balance sheet totals
Per cent of GDP



Sources: Respective central banks

Figure A2. The Federal Reserve's asset portfolio
Billion USD



Note: The asset portfolio includes the securities that are included in Federal Reserve's dollar portfolio for market operations, the System Open Market Account (SOMA).

Source: Federal Reserve Bank of New York

The signs of a recovery in the US economy have led to speculations of when a normalisation of monetary policy may begin. This has mainly concerned when and how the Federal Reserve will scale down its current asset purchase programme. The tapering process is associated with uncertainty as it is difficult to know how the US and global financial markets may be affected. However, the Riksbank's forecasts are based on the assumption that the normalisation in monetary policy abroad will be adapted so that it does not prevent a gradual international recovery.

Low policy rate and quantitative easing after the financial crisis

The financial crisis 2008–2009 was the start of an extensive global economic downturn. Central banks in several countries have cut their policy rate, to what has been assumed to be their lower bound, to stimulate their economies. Another monetary policy measure has been communication of the future policy rate level (sometimes referred to as forward guidance), where some central banks have indicated that the policy rate is expected to remain low, at least as long as unemployment is higher than a particular level and inflationary pressures are low.²² Moreover, some central banks have introduced measures in the form of quantitative easing, where the central bank buys assets, primarily government bonds and mortgage bonds.²³ The way this quantitative easing has affected the size of the central banks' balance sheets is shown in Figure A1. The Federal Reserve has made asset purchases on several occasions and is currently buying government bonds and mortgage bonds to a value of USD 45 billion and USD 40 billion respectively per month.²⁴ Moreover, they are reinvesting the sums received when the principal of the bonds in the portfolio mature. This means that the Federal Reserve's bond holdings are increasing by just over two per cent a month, see Figure A2.

Quantitative easing has contributed to lower interest rates for banks, households and companies

Quantitative easing has an impact on the macro economy in several ways.²⁵ When a central bank buys government bonds from private investors, the price of government bonds is pushed up. Investors are then expected to demand to a greater extent other assets, such as corporate bonds and shares. The central bank's purchases of government bonds could therefore lead to higher prices for both the assets it is buying and

²² The conditions can also include stable inflation expectations and financial stability.

²³ Monetary policy is thus the sum total of policy rate setting, forward guidance and quantitative easing.

Examples of countries where the central bank has employed quantitative easing include the United States, the United Kingdom and Japan. The ECB has also implemented similar measures, but instead of generally buying bonds has focused on buying specific countries' bonds, mortgage bonds or lending out large sums of money at low interest rates to the banks.

²⁴ This can be compared with the average monthly gross issuance of government and mortgage bonds, which totalled USD 192 and USD 146 respectively in 2012, according to statistics compiled by Securities Industry and Financial Markets Association (SIFMA, www.sifma.org).

²⁵ A summary of potential effects from quantitative easing can be found in Söderström, Ulf and Westermark, Andreas, "Monetary Policy with a Zero Interest Rate", *Sveriges Riksbank Economic Review 2009:2*. See also Joyce, Michael, Tong, Matthew and Woods, Robert, "The United Kingdom's quantitative easing policy: design, operation and impact", *Quarterly Bulletin* 2011:Q3, Bank of England. A more theoretical discussion can be found in Bernanke, Ben, Reinhart, Vincent and Sack, Brian, "Monetary Policy Alternatives at the Zero Bound", *Finance and Economics Discussion Series*, Federal Reserve Board, 2004.

other financial assets.²⁶ When bond prices rise, bond yields fall and thus banks, households and companies can have lower long-term borrowing costs. The asset purchases may also have an effect by emphasising the central bank's determination to hold the policy rate at a low level for a long period of time. All in all, several studies show that the asset purchases have contributed to keeping long-term interest rates at lower levels than would otherwise have been the case, even if the size of the effects may differ between the studies.²⁷ However, experiences of this type of measure are limited, which makes it difficult to know, for instance, whether the recent asset purchases have had the same effect as the first periods of purchases.²⁸

Government bond yields are normally divided into expectations of future short-term yields and term premiums.²⁹ The quantitative easing is thought to have pushed down both of these components.³⁰ Market participants' expectations of policy rate increases may have been postponed because of the Federal Reserve's continued bond purchases signalling a need for continued monetary policy stimulus. Term premiums may have been pushed down as a consequence of the Federal Reserve's direct interventions in the government bond market that have made these bonds more expensive than normal for a given policy rate development.³¹

Interest rates also affected in other countries

The long-term interest rates have been relatively low, even in countries where the central banks have not implemented quantitative easing. This is partly because the quantitative easing has had an effect across national borders when investors have also sought assets with a better return in other countries.³² Financial models that divide government bond yields into expected average policy rate and term premium indicate that term premiums in both the United States and other countries have been pushed down to negative levels in recent years, which is partly an effect of the quantitative easing. For example, the Swedish term premiums have had a similar development to the US ones, which can be interpreted to mean that the quantitative easing in the United States has affected

²⁶ This effect is known as the portfolio balance effect and is described, for instance, in Andrés, Javier, López-Salido, David and Nelson, Edward, "Tobin's Imperfect Asset Substitution in Optimizing General Equilibrium", *Journal of Money, Credit and Banking*, 36(4), pp. 665-690, 2004.

²⁷ On the whole the qualitative conclusion is that the long-term interest rates have become lower as a result of the bond purchases. See, for instance, Gagnon, Joseph, Raskin, Matthew, Remache, Julie and Sack, Brian, "The Financial Market Effects of the Federal Reserve's Large-Scale Asset Purchases", *International Journal of Central Banking*, vol. 7, pp. 3-43, 2011, Krishnamurthy, Anvind and Vissing-Jorgensen, Annette, "The Effects of Quantitative Easing on Interest Rates: Channels and Implications for Policy", *Brookings Papers on Economic Activity*, pp. 215-265, 2011 or D'Amico, Stefania, English, William, López-Salido, David and Nelson, Edward, "The Federal Reserve's Large-Scale Asset Purchase Programs: Rationale and Effects", *Finance and Economics Discussion Series* 2012-85, Federal Reserve Board, 2012.

²⁸ See, for instance, Stein, Jeremy, "Evaluating Large-Scale Asset Purchases", speech at the Brookings Institution, Washington, D.C., on 11 October 2012, for a discussion of this.

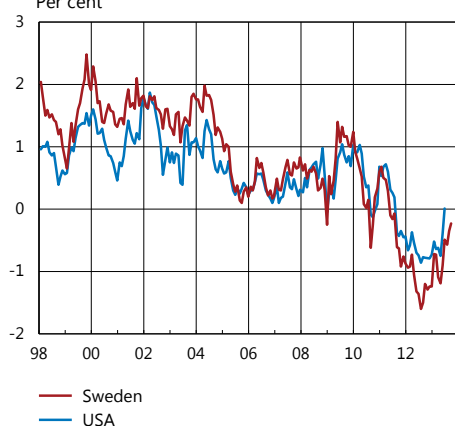
²⁹ The yield on a bond consists of the expected yield on regularly investing at the most short-term interest rate, plus a term premium that is to compensate the investor for the risks entailed in investing in a more long-term investment. The term premium is affected by many different factors and can be both positive and negative. See also the articles "How does the Riksbank make forecasts for long-term market rates?" and "Perspectives on monetary policy expectations and forward rates" in the *Monetary Policy Reports* published in February 2013 and February 2011 respectively.

³⁰ Different studies give different pictures of which of these effects have been most dominant. According to Bauer, Michael and Rudebusch, Glenn, "The Signaling Channel for Federal Reserve Bond Purchases", *FRB San Francisco Working Paper* 2011-21, 2011, the effect via policy rates is largest. According to D'Amico, Stefania, English, William, López-Salido, David and Nelson, Edward, "The Federal Reserve's Large-Scale Asset Purchase Programs: Rationale and Effects", *Finance and Economics Discussion Series* 2012-85, Federal Reserve Board, 2012, it is primarily term premiums that have been affected.

³¹ One could also consider that term premiums are lower than normal as the compensation for interest rate risk should be lower than normal when the overnight rate is limited by the zero lower bound.

³² See, for instance, Neely, Christopher, "Unconventional Monetary Policy Had Large International Effects", *Federal Reserve Bank of St. Louis, Working Paper* 2010-018E, 2010 (revised 2013).

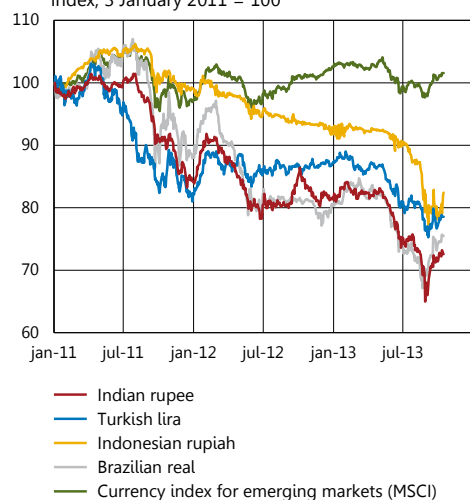
Figure A3. Term premiums in US and Swedish 10-year bond yields
Per cent



Note. The term premiums are calculated using a model for the yield curve described in Kim, Don and Wright, Jonathan, "An Arbitrage-Free Three-Factor Term Structure Model and the Recent Behavior of Long-Term Yields and Distant-Horizon Forward Rates", *Finance and Economic Discussion Series*, The Federal Reserve Board, 2005.

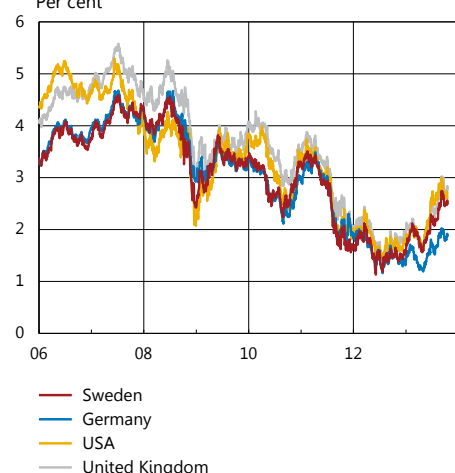
Sources: Federal Reserve Board and the Riksbank

Figure A4. Currencies for selected emerging markets
Index, 3 January 2011 = 100



Source: Bloomberg

Figure A5. Government bond rates with 10 years left to term
Per cent



Source: Reuters EcoWin

Swedish yields to some extent, see Figure A3. Capital inflows into emerging markets also support the theory that bond purchases have affected other countries via financial channels.³³

Recovery in the United States raises the question of tapering

As growth in the US economy accelerates, the Federal Reserve can conduct a less expansionary monetary policy. It was stated, for instance, in the Federal Open Market Committee's (FOMC) press release and at the press conference in June that the current asset purchases could be tapered if the labour market continues to improve in the near term.

In 2011 the Federal Reserve announced a plan for the normalisation of its monetary policy. According to this plan, the first step is to stop buying bonds.³⁴ After that, they want to begin implementing market operations to tie up the large amount of liquidity in the payment system caused by the bond purchases. This is done by allowing the banks to deposit their liquidity with the Federal Reserve at long maturities and at a somewhat better interest rate than the overnight rate. The reason the Federal Reserve wants to make liquidity in the payment system less accessible is that they consider it will create better conditions for controlling the overnight rate when it is time to raise the policy rate, which is the next step in the plan. A final possible step is that the Federal Reserve begins to sell bonds. But one can also choose to merely allow the bonds to mature and in this way allow the central bank's asset portfolio to return to a normal size.³⁵

As early as the beginning of May, following a strong outcome for US employment, some market participants began to speculate on a potential gradual tapering for the bond purchases. When the Federal Reserve then confirmed and intensified these speculations at the end of May and at the FOMC meeting in June, the markets reacted strongly. Market participants began to worry about what effects tapering of the bond purchases would have on asset prices. Long-term US interest rates rose rapidly, which also had a spillover effect on other asset prices and regions. The price of government bonds, mortgage bonds and corporate bonds fell internationally, as did share prices. When international investors wanted to reduce their holdings of high-risk assets in emerging markets, at the same time as several of these markets had shown weak economic development, it led to heavy falls in the value of several of these countries' currencies, see Figure A4.

Although developments and volatility in May and June showed that market agents were surprised by the Federal Reserve's communication, the volatility was largely temporary. Despite the upturn in the more long-term interest rates, these are still at low levels in an historical perspective, see Figure A5.

³³ According to Fratzscher, Marcel, Duca, Marco Lo and Straub, Roland, "On the International Spillovers of US Quantitative Easing", European Central Bank, *Working Paper Series*, No. 1557, June 2013, the quantitative easing in the United States has had global consequences, which have led, for instance, to capital inflows into emerging markets.

³⁴ This includes the reinvestments the Federal Reserve has made to keep the balance sheet unchanged as the most short-term bonds mature and are repaid.

³⁵ According to the minutes of the FOMC meeting in June 2011, it was considered likely that the mortgage bonds would be sold, but the government bonds would be allowed to mature. However, at the FOMC meeting in June 2013, there was discussion of whether they should also allow the holdings of mortgage bonds to decline as they mature.

Prior to the FOMC meeting in September, there were market expectations that the Federal Reserve would begin tapering its bond purchases, but the decision was to leave the monthly purchases unchanged. This surprised market agents, which led to interest rates falling and to an increase in the price of shares and other high-risk assets, as it meant that monetary policy would be more expansionary than had been expected.³⁶

Return to more traditional monetary policy a challenge

The Riksbank's forecast for international developments is that the positive signs seen for the euro area comprise the start of a recovery there and that the recovery begun in the United States some time ago will strengthen in the coming period. It also entails a gradual normalisation of monetary policy in these parts of the world, where the normalisation in the United States is closer to hand than the one in the euro area. The Federal Reserve is expected to follow its plan for the normalisation of monetary policy, where the first step is to gradually taper the bond purchases. Exactly when the tapering begins depends on how the US economy develops, and also on how the uncertainty concerning fiscal policy affects the economy.

Long-term interest rates normally rise prior to an economic recovery. As the quantitative easing in the form of bond purchases has contributed to holding the long-term interest rates at unusually low levels, there is probably scope for a larger upturn in interest rates than in a normal economic recovery. However, the Federal Reserve is expected to adapt its normalisation of monetary policy so that the rise in interest rates does not tighten the overall financial conditions too quickly. There is a discussion in Chapter 1 of the consequences for the forecast of this assumption of future monetary policy in the United States.

The tapering of quantitative easing may create uncertainty in several ways. The coming process is to a large extent "unchartered waters", where there are no previous experiences to lean on with regard to potential effects on the economy and the financial markets.³⁷ This means that both central banks and market participants could be surprised by one another's reactions, which could create temporary volatility on the markets.

A further uncertainty factor is how the financial sector will be able to deal with the changed liquidity situation that arises when the bond portfolio gradually begins to decline. The Federal Reserve's bond purchases have created extra liquidity among the banks, in the form of reserves with the Federal Reserve. The banks' favourable liquidity situation may in the worst case hide problems in the financial sector that

³⁶ The market reaction also showed clearly an example of contagion effects to other regions. The US 10-year interest rate fell by around 17 basis points after the announcement, while for instance German and Swedish yields fell by almost 10 basis points.

³⁷ The IMF's World Economic Outlook from October 2013 contains an in-depth article that studies some episodes, where the Federal Reserve raises its policy rate and analyses the effects the tightening has had on the world economy. The general conclusion is that, in historical terms, global growth has remained strong, despite the tighter US monetary policy. However, as there is very limited experience of phasing out comprehensive quantitative easing there is considerable uncertainty over what effects one can expect when the Federal Reserve begins normalising its policy.

will surface as the bond portfolio and reserves in the system decline.³⁸

It is also unclear how tapering the quantitative easing will affect the economy and asset prices on a global level. The reaction in the currency rates of some emerging markets in connection with the announcement by the Federal Reserve shows that US monetary policy can have a major impact on other countries.³⁹ For example, continued interest rate increases in the United States can lead to higher interest rates in Europe. If the debt-ridden countries in the euro area were to be subjected to a substantial increase in long-term interest rates, it would make it more difficult for them to attain positive budget balances and reduce their sovereign debts. Chapter 2 discusses the possible consequences of such a scenario for Sweden.

Despite the normalisation of monetary policy creating uncertainty and temporary turbulence on the financial markets, it is essentially a positive thing. A recovery in the United States is normally positive for growth in the rest of the world.

³⁸ In 2010, when the Riksbank began to phase out the measures taken during the financial crisis, it was revealed that some market agents had adapted their holdings of securities to the existence of a liquidity surplus. When the liquidity suddenly declined, they were forced to quickly sell off some of these assets, which caused temporary volatility on the markets concerned. See also Elmér, Heidi, Guibourg, Gabriela, Kjellberg, David and Nessén, Marianne, "The Riksbank's monetary policy measures during the financial crises – evaluations and lessons", *Sveriges Riksbank, Economic Review*, 2012:3, 2012.

³⁹ The fact that US monetary policy has global effects has been highlighted by, for instance, Rey, Hélène, "The Global Financial Cycle and Monetary Policy Independence", essay presented at the Jackson Hole conference, Federal Reserve Bank of Kansas City, August 2013.

Perspectives on labour market developments in Sweden

Labour market developments are important to the Riksbank when formulating its monetary policy. To obtain the most correct picture possible of the amount of available resources, it is not enough to only look at the level of unemployment. This article illustrates the labour market situation in several different ways. The Riksbank's overall assessment is that there are available resources in the labour market, which contributes to low inflation and justifies a low repo rate. However, the analysis shows that there are factors that could make it difficult to significantly reduce unemployment in the coming period. One such factor is that the composition of unemployment has changed.

The situation on the labour market is important to monetary policy

Labour market developments are of significance to the formulation of monetary policy. Employment and unemployment affect wage formation and thus also inflation. At the same time, the degree of resource utilisation on the labour market is also an important component of the economic analysis and of the assessment of how the actual development of the economy relates to what can be regarded as sustainable over the long term.

Several central banks' communication has recently contributed to the labour market, and perhaps unemployment in particular, being given a more distinct role in the formulation of monetary policy. Unemployment is often used as a measure of resource utilisation on the labour market but, as several other central banks have also pointed out, the situation on the labour market must be assessed on the basis of a larger set of indicators. Unemployment is currently high in many countries in an historical perspective (see Figure A6). At the same time, the employment rate differs significantly between these countries, which is an indication that the high unemployment has partly different backgrounds in the different countries (see Figure A7). It is, for example, likely that unemployment can be explained in terms of structural factors to varying degrees.

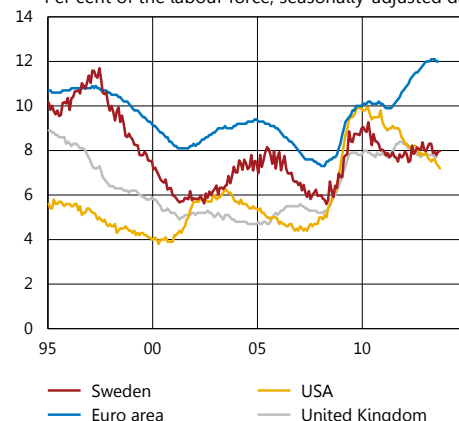
Long-run sustainable unemployment in Sweden

In Sweden, the historically-high level of unemployment indicates that there are available resources in the labour market, meaning that actual unemployment is higher than the long-run sustainable rate of unemployment.⁴⁰

⁴⁰ The long-run sustainable rate of unemployment is the level assessed as possible to achieve given the prevailing institutional conditions without the rest of the economy becoming unbalanced.

Figure A6. Unemployment, international comparison

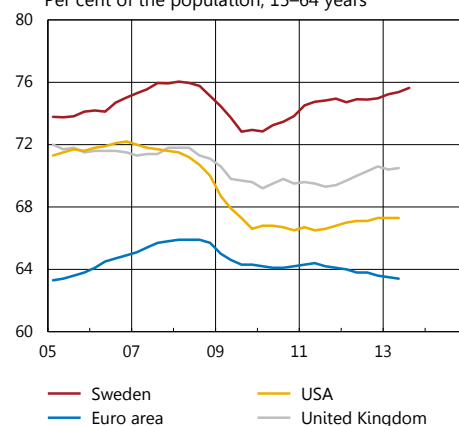
Per cent of the labour force, seasonally-adjusted data



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

Figure A7. Employment rate, international comparison

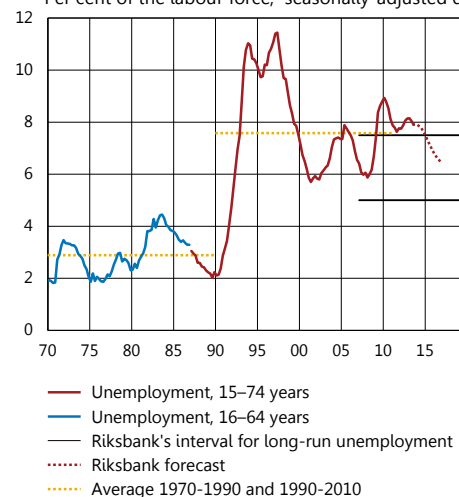
Per cent of the population, 15–64 years



Note. For Sweden the age group referred to is 16–64 years.
Sources: OECD and Statistics Sweden

Figure A8. Unemployment and long-run sustainable unemployment rate

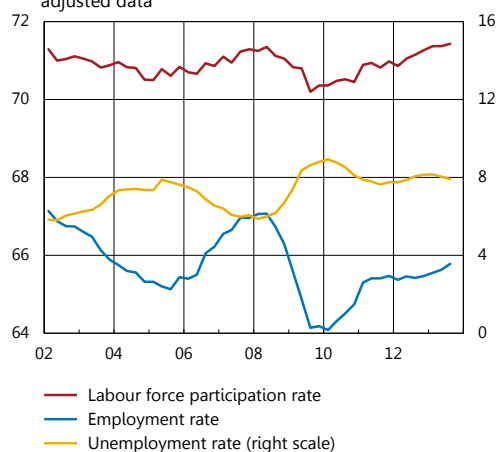
Per cent of the labour force, seasonally-adjusted data



Sources: Statistics Sweden and the Riksbank

Figure A9. Labour force, employment and unemployment

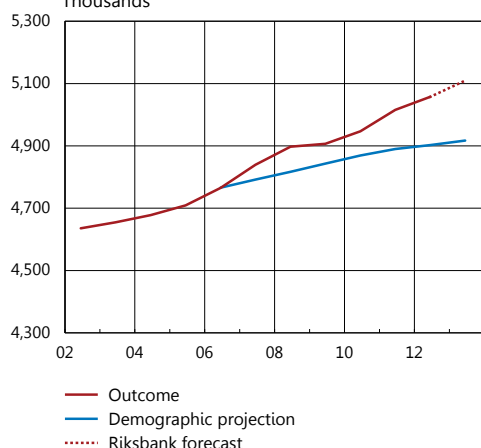
Per cent of population, 15–74 years, seasonally-adjusted data



Source: Statistics Sweden

Figure A10. Labour force, outcomes and forecasts compared with demographic projection

Thousands

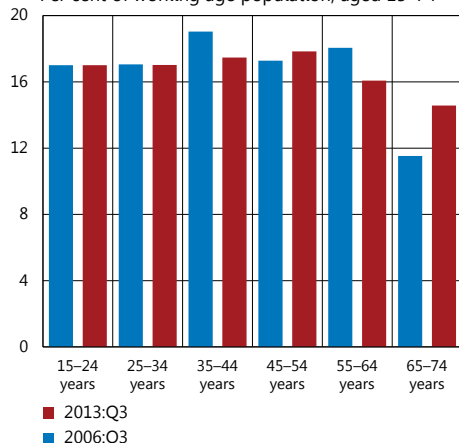


Note. Demographic projections hold constant detailed relationships in the labour market situation in 2006 and show for the following years the effects on the labour market of changes in the number and composition of the population. See also footnote 42.

Sources: Statistics Sweden and the Riksbank

Figure A11. Population in various age groups

Per cent of working age population, aged 15–74



Source: Statistics Sweden

The Riksbank's assessment is that the long-run rate of unemployment is in the interval 5 to 7.5 per cent (see Figure A8).⁴¹ This assessment is based on the assumption that unemployment was close to its long-run sustainable rate in 2006. It is also based on assumptions regarding the effects of the reforms implemented on the Swedish labour market since 2006 and the demographic changes that have taken place during this period.⁴² The broad interval for the Riksbank's assessment reflects how uncertain the various assumptions are.

However, uncertainty about long-run sustainable unemployment and its development over time is only one of the difficulties associated with assessing resource utilisation on the labour market. The picture is further complicated by the fact that unemployment is in several ways an imprecise measure of the amount of available resources. For example, the unemployed are a heterogeneous group that have different possibilities to find work. At the same time, there are other groups of the population of working age who are relatively close to the labour market, despite the fact that they are not actively seeking work and are therefore not classified as being unemployed.⁴³

To follow up the assessment of long-term unemployment and be able to make an overall assessment of the amount of available resources on the labour market, the Riksbank complements the analysis of unemployment by studying a broad set of labour-market indicators.

The labour force has increased rapidly despite weak demography

In the wake of the crisis in 2008–2009, unemployment increased when the employment rate fell (see Figure A9). Following a period of recovery, unemployment rose once again in 2011 and 2012, but the employment rate remained more or less unchanged in this period. The rise in unemployment was instead due to the fact that the labour force increased more than employment.

The number of people in the labour force can change for various reasons. First, changes may be due to demographic developments, that is how the population changes in terms of numbers and composition. Second, changes may be due to trends in labour force participation, that is the proportion of the population or of a population group that choose to participate in the labour force. It is expected that there will be approximately 340 000 more individuals in the labour force in 2013 than in 2006. Demographic developments account for around 150 000 individuals in this increase, while positive trends in labour-force participation among several population groups account for the remaining 190 000 (see Figure A10).

⁴¹ See the article "The long-term development of the Swedish labour market", *Monetary Policy Report*, July 2012, Sveriges Riksbank.

⁴² One of the reasons for this is that resource utilisation in the economy as a whole was almost in balance in 2006, which makes it easier to calculate the labour-market effects of the demographic changes that are expected to occur according to Statistics Sweden's population forecast. A demographic projection of the labour market is performed in two stages. The initial position for a specific starting year is generated from the observed relative key indicators (e.g. employment rate, i.e. number of employed in relation to the population) in the population divided into the dimensions age (single-year classes), gender and origin. The initial position's detailed relationships are then held constant and the labour market is projected using Statistics Sweden's outcomes and forecasts for the populations in the specified population groups. See also Figure A10 and A12.

⁴³ In the Labour Force Surveys, the population between the ages of 15 and 74 is regarded as the working age population. Below, the term "population" is used synonymously with this.

The population is estimated to have increased by 425 000 individuals between 2006 and 2013. The largest increase has been in the age group 65–74 years, which now mainly comprises the large number of people born in the 1940s. The age composition of the population has thus changed so that a higher percentage has attained an age where labour force participation is low (see Figure A11). All in all, demographic developments contribute to an increase in the size of the labour force, but to a decline in labour-force participation (see Figure A10 and A12). However, trend changes in the labour-force participation of different groups counteract this decline. The fact is that labour-force participation has shown an increasing trend in most age groups, particularly in the 65–74 age group (see Figure A13). Another trend is that labour-force participation among those born abroad has in general increased more than among those born in Sweden.

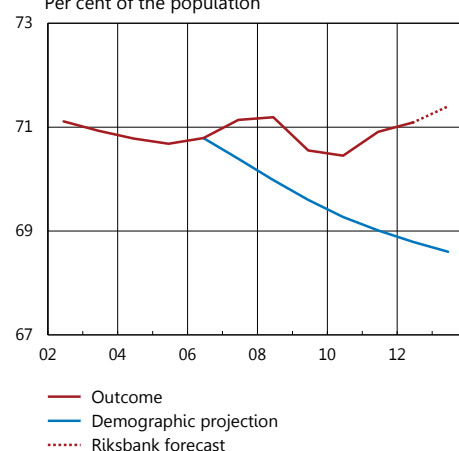
The increase in the labour force between 2006 and 2013 has been surprisingly high. Participation in the labour force tends to vary with the business cycle, but this would indicate rather a decline in the labour force as the economic situation is assessed to be somewhat weaker now than in 2006. The assessment is that the trend changes in the labour force participation of different groups are instead due to changes in their behaviour. The reforms implemented on the Swedish labour market since 2006 are one of the reasons for these changes and thus one reason why the labour force has increased so much.⁴⁴

Changed composition in unemployed group

As the employment rate has remained more or less unchanged since 2006, the gradual increase in labour-force participation has so far entailed a rise in unemployment. However, it is assumed that the fact that the number of individuals in the labour force has risen will increase the chances of employment rising in the period ahead and unemployment may thus decline.

As in the case of the labour force, demographic developments and trends in the labour-force participation of certain groups mean that the composition of unemployment has changed. To begin with, groups that tend to experience difficulties finding a job even in good times now constitute a larger proportion of the unemployed than in 2006 (see Figure A14). The Swedish Public Employment Service usually highlights four groups as being the particularly "vulnerable" unemployed – people with a disability that reduces their capacity for work, people between the ages of 55–64, people who were born outside Europe and people without an upper-secondary school education.⁴⁵

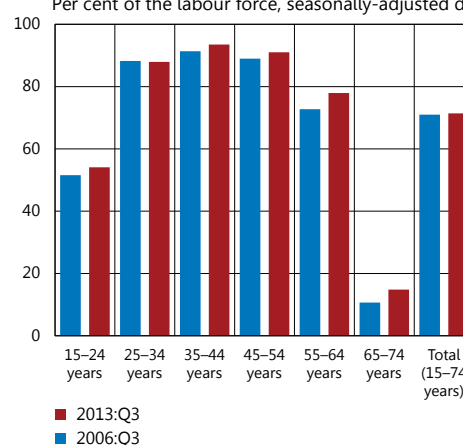
Figure A12. Labour force participation, outcomes and forecasts compared with demographic projection
Per cent of the population



Note. Demographic projections hold constant detailed relationships in the labour market situation in 2006 and show for the following years the effects on the labour market of changes in the number and composition of the population. See also footnote 42.

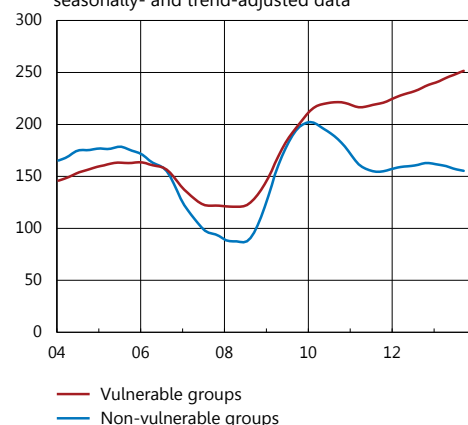
Sources: Statistics Sweden and the Riksbank

Figure A13. Labour force participation in different age groups
Per cent of the labour force, seasonally-adjusted data



Source: Statistics Sweden

Figure A14. Number of unemployed in vulnerable groups and other total registered unemployed
Number of unemployed, thousands of persons, seasonally- and trend-adjusted data



Note. Unemployed including people in programmes with activity grants. Vulnerable groups as defined by the Swedish Public Employment Service. See also footnote 45.

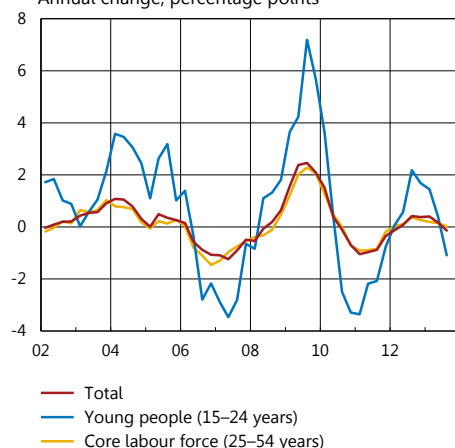
Source: The Swedish Public Employment Service

⁴⁴ See the article "The long-term development of the Swedish labour market", *Monetary Policy Report*, July 2012, Sveriges Riksbank.

⁴⁵ Experience shows that certain groups of the population face a greater risk of long periods of unemployment after losing their jobs. For more information on vulnerable groups on the labour market see *Labour Market Report 2013*, The Swedish Public Employment Service, page 54. There are significant overlaps between different vulnerable groups and the Labour Force Survey (LFS) is not broken down to a sufficient extent to avoid double counting. There is also a lack of information on disability among the working age population in the LFS, so The Swedish Public Employment Service operational statistics are used here instead. However, the LFS paint a similar picture, in which the vulnerable groups appear to have increased as a proportion of the unemployed. For example, people born abroad now constitute a larger proportion of the unemployed despite the fact that the employment rate has increased more in this group than for those born in Sweden.

Figure A15. Unemployment and youth unemployment

Annual change, percentage points

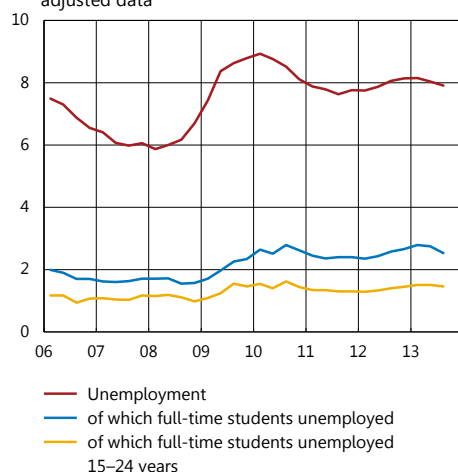


Note. Unemployment is calculated as the number of unemployed as a percentage of the labour force.

Source: Statistics Sweden

Figure A16. Unemployment

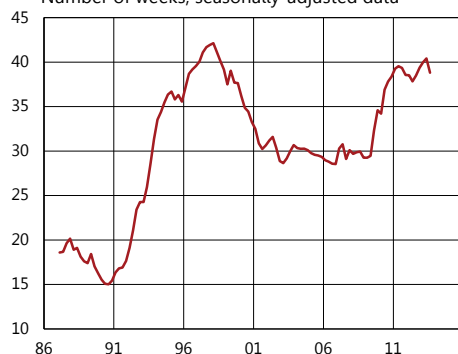
Per cent of the labour force, 15–74 years, seasonally-adjusted data



Source: Statistics Sweden

Figure A17. Average duration of unemployment, 20–64 years

Number of weeks, seasonally-adjusted data



Source: Statistics Sweden

In an historical perspective, young people also constitute a large proportion of the unemployed. Unlike the vulnerable groups, the labour market situation for young people tends to be strongly dependent on the business cycle (see Figure A15) and only a small percentage suffer long-term unemployment. Finally, it is interesting to note that the group of unemployed individuals who are studying full time has also increased as a proportion of the unemployed since 2006 (see Figure A16). This increase is mainly due to an increase in the number of participants in active labour market policy programmes – in practice individuals of varying ages who are long-term unemployed – but also to the fact that the proportion of unemployed young people has increased. The group of young unemployed individuals largely consists of upper-secondary school students and students in higher education and there is thus a significant overlap here with the group of unemployed individuals who are studying full time.

All in all, the changes in the composition of the unemployed since 2006 indicate that available resources on the labour market are in practice limited at present, despite the high level of unemployment. The picture that the unemployed largely consist of vulnerable groups is also reflected in the fact that the average period of unemployment is still unusually long, after increasing in the wake of the crisis 2008–2009 (see Figure A17). More individuals appear to have difficulty finding a job at all and are hit by long-term unemployment, particularly periods of unemployment longer than one year.

No clear signs of improved matching efficiency

A year ago, the Riksbank noted that one of the reasons for the high unemployment is that matching efficiency on the Swedish labour market has declined; in other words it takes longer for unemployed individuals and employers to find each other. The Riksbank's assessment was therefore that it would take longer for unemployment to fall.⁴⁶ In order for matching to improve the economy must adapt better to the supply of labour, as it is assumed the economy will do over time. However, there are no clear signs that matching efficiency has begun to improve. For example, the chances of the unemployed finding work are still limited in relation to the historical covariation with the demand for labour (see Figure A18).

⁴⁶ See the article "Has the functioning of the labour market changed?" in *Monetary Policy Report*, October 2012, Sveriges Riksbank.

Other available resources in the labour market than the unemployed?

Alongside the unemployed there are several groups that are relevant when assessing the amount of available resources. Some groups are outside the labour force but are nevertheless relatively close to the labour market, for example individuals who want to and can work but who have not applied for any jobs. In the Labour Force Survey the individuals in this group are referred to as latent job seekers and can in practice be seen as part of the labour supply even though they do not meet the conditions for classification as part of the labour force in the statistics. Many of those who are employed also want to work more than they do. Together with the unemployed, the latent job seekers and the underemployed comprise the so-called unutilised labour supply.

Like the unemployed, the numbers of latent job seekers and the underemployed have increased significantly since 2006 (see Figure A19). The fact that there are latent job seekers and underemployed reveals that the amount of available resources on the labour market is affected by more factors than unemployment.

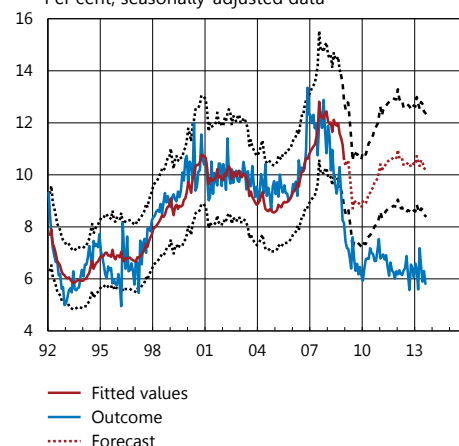
Other measures than expansionary monetary policy are required to achieve significantly lower unemployment

The Riksbank's overall assessment is that there are available resources in the labour market as present, which is one of the factors that justify an expansionary monetary policy. At the same time, there are a number of factors and circumstances that can make it difficult to significantly reduce unemployment in the coming period. Firstly, the composition of the group of unemployed and the duration of unemployment indicate that the unemployed are further from the labour market now than they have been in recent decades. Secondly, there are as yet no clear signs that matching efficiency has improved. Moreover, the variation in the unutilised labour supply indicates that available resources on the labour market relate to more than just unemployment.

The expected improvements in the economy should have a positive impact on the labour market. But, assessing the size of the cyclically-related unemployment is very difficult. If it is limited, measures will need to be taken mainly in policy areas other than monetary policy to attain a low rate of unemployment in the long run.

Figure A18. Job opportunities – outcome and forecast

Per cent, seasonally-adjusted data

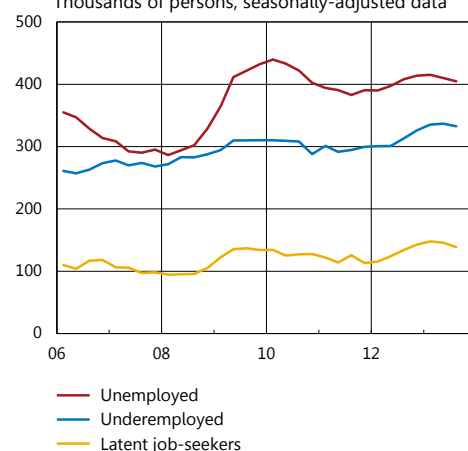


Note. The historical correlation between the chance of obtaining a job and the labour market situation is estimated for the period 1992-2008. Given this correlation, the actual development of the labour market situation has been used to forecast how the chances of obtaining a job should have developed (broken red line). The blue line shows that the actual chance of obtaining a job has become much lower, which points towards less efficient matching. The broken black line represents the 95% forecast interval.

Sources: The Swedish Public Employment Service and the Riksbank

Figure A19. Unutilised labour supply

Thousands of persons, seasonally-adjusted data



Source: Statistics Sweden

■ Macprudential policy and monetary policy

One important lesson from the financial crisis is that supervision of individual institutions is not enough to safeguard financial stability. An active policy is also needed to manage and counteract risks threatening the financial system as a whole. This new policy area is called macroprudential policy. Its aim is to increase the financial system's resilience to disruptions in the financial system and to prevent the build-up of financial imbalances in the economy. The Government has recently proposed giving Finansinspektionen the main responsibility for macroprudential policy tools, including the countercyclical capital buffer. This clarification of responsibility will create better conditions, among other things, for the reduction of the risks inherent in household indebtedness. As different macroprudential policy instruments are introduced and knowledge increases over how they function in practice, the consequences for monetary policy will gradually become clearer. The Riksbank's tasks and objectives remain unchanged. As before, the Riksbank will need to monitor and analyse risks and resilience in the financial system, partly to see how these affect economic developments in general and thus monetary policy, and partly to contribute to promoting financial stability.

The financial crisis that broke out in the autumn of 2008 following the crash of the US investment bank Lehman Brothers has demonstrated the enormous costs that impact society when the financial system stops working.⁴⁷ In many countries, companies and banks filed for bankruptcy with high unemployment as a consequence. The debt burden of the public sector increased when governments were forced to intervene to support the banking system. In turn, this entailed major cutbacks in the public sector.

One important lesson from the financial crisis is that the supervision of individual institutions is not enough to safeguard financial stability but that an active policy is needed to manage and counteract risks threatening the financial system as a whole. This implies a clearer focus on preventing systemic risks, which is to say preventing risks threatening the functionality of the financial system. Consequently, comprehensive international work is underway to strengthen the resilience of the financial system. A new policy area, known as macroprudential policy, has emerged, the aim of which is to increase the financial system's resilience to disruptions and also to prevent the build-up of financial imbalances in the economy.⁴⁸ Macroprudential policy should be seen as a complement to traditional supervision (microprudential supervision), which focuses on individual institutions.

At the European level, the European body for macroprudential policy, the European Systemic Risk Board (ESRB), plays an important role.

⁴⁷ The cost to society of the global financial crisis, in terms of lost growth, has been estimated at between 1 and 5 times global GDP by some economists (see Haldane, Andrew (2010), *The \$100 Billion Question*). Speech, Bank of England.

⁴⁸ However, the term macroprudential has existed since the 1970s – see Clement, Piet (2010), *The term 'macroprudential': origins and evolution*. *BIS Quarterly Review* March 2010.

Among other measures, the ESRB has issued a recommendation on interim targets and instruments for macroprudential policy in the EU countries.⁴⁹ It is thereby contributing to the development of a well-functioning toolbox for macroprudential policy by the EU countries. Macroprudential policy tools are normally divided into structural tools, that is, tools intended to reduce the structural risks in the financial sector, and cyclical tools, which are intended to vary over time.

The Government proposes that Finansinspektionen will be given the main responsibility for the macroprudential tools

The Government has recently proposed giving Finansinspektionen the main responsibility for macroprudential policy tools, including the countercyclical capital buffer.⁵⁰ The Government also proposes establishing a formalised financial stability council, consisting of the minister for financial markets and the heads of Finansinspektionen, the Riksbank and the Swedish National Debt Office. This council is to act as a forum with minuted meetings, but not as a decision-making body. The council gives the participating parties the opportunity to discuss risks in the financial system and their assessments of appropriate measures to manage and counteract such risks.

It is positive that the Government has made a decision on where responsibility for macroprudential policy is to lie. This will create better conditions to reduce the risks inherent in household indebtedness, among other things. However, the work on counteracting financial imbalances is relevant for several different policy areas. It is therefore good that the authorities working on these issues are given the opportunity to meet and hold discussions in the formalised financial stability council.

With this, the Riksbank's tasks and objectives remain unchanged. The Riksbank aims to maintain price stability and promote a safe and efficient payment system. In practice, this latter means promoting stability in the financial system. In addition, without prejudice to the objective of price stability, the Riksbank is to support the targets for general economic policy, the aim of which is to achieve sustainable growth and high employment. This will give the Riksbank a central role in ensuring that macroeconomic development is sustainable and stable.

Macroprudential policy and monetary policy largely act through the same channels

Monetary policy and macroprudential policy both influence the financial conditions on various financial markets. The policy rate has a direct effect on the interest rate the banks apply when they lend to and borrow from each other from one day to the next. Changes to this, the overnight rate, then spread to interest rates with longer maturities and higher credit risk. The Riksbank publishes a forecast for the policy rate, which also contributes towards influencing interest rates with longer maturities. The banks fund a large part of their lending with deposits, which often have a

⁴⁹ The ESRB's tasks are to identify risks to the stability of the EU's financial system and to issue warnings and/or recommendations in the case of serious risks.

⁵⁰ See Swedish Ministry of Finance (2013), Ett förstärkt ramverk för finansiell stabilitet [A stronger framework for financial stability] (only in Swedish), memorandum, 26 August 2013.

relatively short maturity. Monetary policy thus influences the banks' funding costs and the amount of credit in the economy when the policy rate is adjusted. A policy rate increase normally dampens demand and the rate of inflation in the economy, and the reverse when the policy rate is lowered.⁵¹

Certain macroprudential policy instruments also act by restricting or increasing the amount of credit in the economy in various ways.⁵² The **countercyclical capital buffer** is a new tool included as a part of the new capital adequacy regulations, Basel III.⁵³ During periods in which the risks in the financial system are increasing, the banks will be required to build up capital buffers that can then be used when the risks are realised or decline.⁵⁴ The instrument will thereby have a direct effect on the financial system's resilience, but can also contribute towards restricting credit growth and debt accumulation. It is normally more expensive for the banks to fund their operations with equity than with loans.⁵⁵ An increase of the capital buffer will therefore increase the banks' funding costs, which may entail higher lending rates and thus reduced lending. However, the countercyclical capital buffer has a more explicit influence than monetary policy with regard to the relative price of risk in the economy. An increase in the buffer makes high-risk lending relatively more expensive than lending with a low risk.

The countercyclical capital buffer is a powerful but blunt instrument that affects all lending by the banks. If any problems were to be concentrated on a certain sector, **sectoral capital requirements**, which is to say capital adequacy requirements focused on a certain sector, could be more effective. The transmission mechanism for sectoral capital requirements is reminiscent of the one for the countercyclical capital buffer. In this case, too, relative prices are affected, but the change is between different sectors rather than according to risk. If capital adequacy requirements increase for a certain sector, the funding costs for this sector will thus become higher relative to other sectors. This would tend to reduce lending to that sector. One way of introducing sectoral capital requirements is to adjust the **risk weights** of the assets to a certain sector. For example, this could include increasing the risk weights for mortgages in relation to other loans.⁵⁶ This would increase the banks' funding costs for mortgages and would probably mean that mortgage rates would be raised more than other lending rates.

⁵¹ See also Hopkins, Elisabeth, Lindé, Jesper and Söderström, Ulf (2009), The transmission mechanism and the financial crisis. *Sveriges Riksbank Economic Review* 2009:2. Sveriges Riksbank.

⁵² For a review of macroprudential policy and its instruments. see Nordh Berntsson, Christina and Molin, Johan (2012), A Swedish framework for macroprudential policy. *Sveriges Riksbank Economic Review* 2012:1. Sveriges Riksbank and Smets, Frank (2013), Financial stability and monetary policy: How closely interlinked? *Sveriges Riksbank Economic Review* 2013:3, under publication. Sveriges Riksbank.

⁵³ Basel III is a regulatory framework developed after the outbreak of the financial crisis that places requirements on the banks' capital and liquidity. Within the EU, the new regulations will start to be applied in January 2014 and will be fully introduced in January 2019.

⁵⁴ Describing the capital buffer as countercyclical means that it varies over time. In good times, when the economy is strong and systemic risks tend to increase, the banks are required to strengthen their capital positions. When times are worse and systemic risks are realised or decline, the buffer requirement will be lowered so that the banks can cover their losses without having to reduce credit granting. See Juks, Reimo (2012), An application of the Basel standard method for the calculation of the countercyclical capital buffer rate in Sweden, *Economic Commentary* no. 1, 2013. Sveriges Riksbank.

⁵⁵ There are also arguments that suggest that the cost of equity can be reduced by lower indebtedness. Lower indebtedness reduces risk for shareholders, meaning that their compensation for risk may thereby become lower. See Modigliani, Franco and Miller, Merton (1958), The cost of capital, corporation finance, and the theory of investment. *American Economic Review*, 48 (3), 261–297.

⁵⁶ Determining the capital adequacy requirement involves first multiplying the mortgage with what is known as a risk weight, which reflects the risks in the banks' mortgage lending. This results in a risk-weighted amount, which is the amount that is subject to the capital adequacy requirement.

Unlike the other instruments discussed, the **mortgage cap** (loan-to-value ratio) has a direct impact on demand for credit, as it restricts the size of household loans in relation to the value of the property. The aim of using the mortgage cap as a macroprudential policy instrument is to reduce the risk of an unsustainable accumulation of debt and to increase the banks' resilience by reducing losses on default.

There are also differences between monetary policy and macroprudential policy

Monetary policy and many macroprudential policy tools thus have an impact on similar channels and have similar effects, but there are also decisive differences. Monetary policy plays an important part in household and corporate inflation expectations. These are important for companies' pricing and wage formation, among other areas. Monetary policy is also of great importance to the development of the exchange rate. The effect of the macroprudential policy instruments on these variables is less certain.

Furthermore, there are differences as regards how well the targets for both policy areas can be quantified. The price stability target can be measured and quantified relatively easily using the CPI. Promoting a stable financial system is largely a matter of avoiding events that have a low probability but which may entail major costs. The target is thereby significantly more difficult to capture in terms of a value.

Finally, monetary policy may be a 'broader' tool than the macroprudential policy instruments in certain respects. For example, the policy rate may be more effective than the macroprudential policy instruments if a credit expansion occurs in parts of the financial sector that are not covered by the financial regulations. There is a risk that if regulation only covers certain parts of the financial system it will be circumvented (that so-called regulatory arbitrage will arise). This was expressed by Jeremy Stein at the Federal Reserve's Board of Governors, as "changes in rates may reach into corners of the market that supervision and regulation cannot".⁵⁷

The link between different policy areas

The link between macroprudential policy and monetary policy is thus a matter of the effects of different tools but also of finding a balance between different objectives. The different objectives of price stability, macroeconomic stability and financial stability are not independent of each other. For example, it is hardly possible to maintain price stability and macroeconomic stability when a financial crisis has broken out. At the same time, financial imbalances often accumulate when the economy is overheated. However, financial imbalances can also accumulate under relatively calm conditions, of which the latest financial crisis is an example. There is also a link that is due to the different policy areas' tools having effects that have different breadths and to the possibility of circumventing financial regulation, as pointed out above. Monetary

⁵⁷ See Stein, Jeremy C. (2013), *Overheating in Credit Markets: Origins, Measurement, and Policy Responses*. Speech at "Restoring Household Financial Stability after the Great Recession: Why Household Balance Sheets Matter", research symposium sponsored by the Federal Reserve Bank of St. Louis, St. Louis, Missouri.

policy can thus in some cases function as a complement to macroprudential policy. Hence, the policy rate and macroprudential policy instruments can both counteract and support each other's objectives.

Macroprudential policy and monetary policy also have links to other policy areas such as fiscal policy and microprudential supervision. Fiscal policy measures such as restrictions to the possibility of deducting interest rate expenditures can contribute towards reducing the risk of financial imbalances accumulating. Measures deemed appropriate for individual institutions from the perspective of microprudential supervision can, put together in certain situations, lead to systemic risks in the financial system. There are thus connections between several different policy areas, not just in crisis situations but also in preventive policy. The financial stability council will provide an important forum for discussions on such connections.

Macroprudential policy affects the macroeconomy and thus the conditions for monetary policy

As different macroprudential policy measures affect economic development, the Riksbank will have to take this into consideration when monetary policy is designed. For example, if demand should be dampened due to macroprudential policy measures, monetary policy will have to take this into account. In a similar way the Riksbank already takes developments in other policy areas such as fiscal policy into consideration.

Fiscal policy influences the level of demand in the economy, among other means via the public sector's incomes and expenses. For example, changes to tax levels have an effect on household consumption and corporate investments and, ultimately, on demand and inflation. The material on which the monetary policy decision is based includes forecasts of economic development, which include the effects of fiscal policy. It is usually assumed that fiscal policy will follow its historical pattern, determined by economic developments and established targets.

The macroeconomic effects of the new macroprudential policy instruments will also have to be integrated into the monetary policy decision-making material. However, there will also be differences, as there is no historical pattern of macroprudential policy to proceed from and because the goals of macroprudential policy are more difficult to quantify than fiscal policy's goals. Consequently, the analysis of how different macroprudential policy instruments influence macroeconomic developments will successively have to be developed and clarified.

Both monetary policy and macroprudential policy affect risks

The unsustainable accumulation of debt can impair the possibility of stabilising inflation around the inflation target and achieving balanced economic development over the longer term. Monetary policy itself can contribute towards the accumulation of financial imbalances. Holding interest rates at a low level for a long time can lead participants in the economy to expect these low interest rates to be permanent. This can mean that they increase their indebtedness to an unsustainable level. The

monetary policy decision therefore involves finding a balance between short-term effects on the prospects for inflation and economic activity and long-term risks associated with the unsustainable accumulation of debt.⁵⁸ However, the long-term risks associated with household debt should decrease when macroprudential policy measures are implemented.

The introduction of new macroprudential policy instruments will affect the conditions for monetary policy one way or another. But how they will be affected and at which rate is difficult to ascertain at present. We still have only limited experience of how macroprudential policy works in practice. Moreover, academic research into this area is still in its infancy as regards both empirical and theoretical studies. But as different macroprudential policy instruments are introduced and knowledge increases over how they function in practice, the consequences for monetary policy will gradually become clearer. The Riksbank will need, as before, to monitor and analyse risks and resilience in the financial system, partly to see how these affect economic developments in general and thus monetary policy, and partly to contribute to promoting financial stability.

⁵⁸ For a detailed description, see "Financial imbalances in the monetary policy assessment". Article in *Monetary Policy Report*, July 2013. Sveriges Riksbank.

■ Appendix

- Tables
- Articles 2011-2013
- Interest rate decisions 2009-2013
- Glossary

Tables

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

Table 1. Repo rate forecast

Per cent, quarterly average values

	Q2 2013	Q3 2013	Q4 2013	Q4 2014	Q4 2015	Q4 2016
Repo rate	1.0	1.0 (1.0)	1.0 (1.0)	1.2 (1.3)	2.2 (2.3)	2.9

Source: The Riksbank

Table 2. Inflation

Annual percentage change, annual average

	2012	2013	2014	2015	2016
CPI	0.9 (0.9)	0.0 (0.1)	1.2 (1.3)	2.7 (2.6)	2.9
CPIF	1.0 (1.0)	0.9 (1.0)	1.3 (1.4)	1.9 (1.9)	2.0
CPIF excl. energy	1.0 (1.0)	1.2 (1.3)	1.5 (1.6)	2.0 (2.0)	2.1
HICP	0.9 (0.9)	0.5 (0.6)	1.3 (1.4)	1.9 (1.9)	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 average

	2012	2013	2014	2015	2016
Repo rate	1.5 (1.5)	1.0 (1.0)	1.0 (1.0)	1.8 (1.9)	2.7
10-year rate	1.6 (1.6)	2.2 (2.2)	3.0 (3.0)	3.7 (3.7)	4.2
Exchange rate, KIX, 18 November 1992 = 100	106.1 (106.1)	102.7 (102.7)	102.3 (102.1)	101.5 (101.2)	101.2
General government net lending*	-0.4 (-0.6)	-1.3 (-1.4)	-1.1 (-0.9)	-0.2 (0.1)	0.6

* 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	2012	2013	2014	2015	2016
Euro area	0.14	0.47	-0.6 (-0.5)	-0.4 (-0.4)	1.3 (1.3)	1.9 (1.9)	2.1
USA	0.19	0.09	2.8 (2.8)	1.6 (1.6)	3.0 (3.2)	3.5 (3.5)	3.3
Japan	0.06	0.03	2.0 (2.0)	1.9 (1.6)	2.1 (1.9)	1.1 (1.3)	1.2
China	0.15	0.08	7.8 (7.8)	7.6 (7.4)	7.3 (7.4)	7.0 (7.5)	7.0
KIX-weighted	0.79	1.00	1.0 (1.0)	1.0 (1.0)	2.3 (2.4)	2.8 (2.9)	3.0
World (PPP-weighted)	1.00	-	3.2 (3.1)	2.9 (3.0)	3.7 (3.9)	4.0 (4.2)	4.1

Note. Calendar-adjusted growth rates. The PPP-weights refer to the global purchasing-power adjusted GDP-weights for 2012, 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 new KIX weights that are used for 2013, and on an assumption that the weights will develop according to the trend of the past five years in the coming forecast year.

CPI	2012	2013	2014	2015	2016
Euro area (HICP)	2.5 (2.5)	1.5 (1.5)	1.5 (1.5)	1.6 (1.6)	1.7
USA	2.1 (2.1)	1.5 (1.5)	1.8 (2.0)	2.1 (2.2)	2.4
Japan	0.0 (0.0)	0.3 (0.1)	3.2 (2.1)	2.0 (1.9)	1.7
KIX-weighted	2.6 (2.6)	2.0 (2.0)	2.2 (2.2)	2.2 (2.3)	2.3

	2012	2013	2014	2015	2016
Policy rates in the rest of the world, per cent	0.4 (0.4)	0.2 (0.2)	0.2 (0.3)	0.5 (0.5)	1.0
Crude oil price, USD/barrel Brent	112 (112)	109 (109)	105 (105)	99 (99)	95
Swedish export market	1.6 (1.7)	0.9 (0.8)	5.1 (5.2)	6.5 (6.6)	7.0

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

	2012	2013	2014	2015	2016
Private consumption	1.6 (1.5)	2.0 (2.0)	3.2 (3.1)	3.3 (3.3)	2.5
Public consumption	0.7 (0.7)	1.0 (0.9)	0.9 (0.7)	1.2 (1.1)	1.1
Gross fixed capital formation	3.1 (3.2)	-3.2 (-2.7)	4.6 (5.2)	7.5 (7.5)	5.4
Inventory investment*	-1.2 (-1.1)	0.4 (0.5)	-0.1 (-0.1)	0.0 (0.0)	0.0
Exports	0.7 (0.8)	-1.4 (-2.2)	4.0 (4.0)	6.5 (6.6)	6.7
Imports	-0.6 (0.0)	-0.9 (-2.5)	4.4 (4.2)	6.9 (6.9)	7.2
GDP	1.0 (0.7)	0.7 (1.2)	2.6 (2.7)	3.5 (3.6)	2.7
GDP, calendar-adjusted	1.3 (1.1)	0.8 (1.2)	2.7 (2.8)	3.3 (3.3)	2.5
Final figure for domestic demand*	1.5 (1.5)	0.6 (0.7)	2.6 (2.6)	3.3 (3.3)	2.5
Net exports*	0.6 (0.4)	-0.3 (0.0)	0.0 (0.2)	0.2 (0.3)	0.2
Current account (NA), per cent of GDP	6.2 (6.7)	5.7 (6.3)	5.5 (6.2)	5.3 (6.1)	5.2

*Contribution to GDP growth, percentage points

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

Sources: Statistics Sweden and the Riksbank

Table 6. Production and employment

Annual percentage change, unless otherwise stated

	2012	2013	2014	2015	2016
Population, aged 16-64	0.1 (0.1)	0.1 (0.1)	0.4 (0.4)	0.5 (0.5)	0.5
Potential hours worked	0.5 (0.5)	0.5 (0.5)	0.6 (0.6)	0.6 (0.6)	0.6
GDP, calendar-adjusted	1.3 (1.1)	0.8 (1.2)	2.7 (2.8)	3.3 (3.3)	2.5
Number of hours worked, calendar-adjusted	0.6 (0.6)	0.5 (0.3)	1.3 (1.2)	1.3 (1.3)	1.0
Employed, aged 15-74	0.6 (0.6)	1.0 (0.9)	0.9 (0.8)	1.1 (1.2)	0.9
Labour force, aged 15-74	0.8 (0.8)	1.0 (1.0)	0.7 (0.6)	0.5 (0.4)	0.3
Unemployment, aged 15-74 *	8.0 (8.0)	8.0 (8.1)	7.8 (7.9)	7.2 (7.2)	6.6

* 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 unit labour cost for the economy as a whole

Annual percentage change, calendar-adjusted data unless otherwise stated

	2012	2013	2014	2015	2016
Hourly wage, NMO	3.0 (3.0)	2.6 (2.6)	2.8 (2.8)	3.2 (3.2)	3.4
Hourly wage, NA	3.1 (3.2)	2.7 (2.8)	3.0 (3.1)	3.4 (3.5)	3.7
Employers' contribution*	0.3 (0.2)	-0.1 (0.0)	0.0 (0.0)	0.0 (0.0)	0.0
Hourly labour cost, NA	3.4 (3.4)	2.5 (2.8)	3.0 (3.1)	3.4 (3.5)	3.7
Productivity	0.7 (0.5)	0.2 (0.8)	1.4 (1.6)	2.0 (2.0)	1.5
Unit labour cost	2.7 (2.9)	2.3 (2.0)	1.6 (1.4)	1.4 (1.4)	2.2

* Contribution to the increase in labour costs, percentage points

Note. NMO is the National Mediation Office's short-term wage statistics and NA is the National Accounts. Labour cost per hour is defined as the sum of actual wages, collective 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 8a. Alternative scenario: increased financial unease, international variables

Annual percentage change, unless otherwise stated, annual average

	2013	2014	2015	2016
GDP abroad	1.0 (1.0)	1.9 (2.3)	2.6 (2.8)	3.1 (3.0)
Policy rate abroad, per cent	0.2 (0.2)	0.1 (0.2)	0.1 (0.5)	0.5 (1.0)
Inflation abroad	2.0 (2.0)	2.2 (2.2)	2.1 (2.2)	2.1 (2.3)

* Per cent of the labour force

Note. Main scenario forecast in brackets. CPIF is the CPI with a fixed mortgage rate. Asterisk, note and sources relate to Tables 8-13.

Sources: Statistics Sweden and the Riksbank

Table 8b. Alternative scenario: increased financial unease, unchanged monetary policy

Annual percentage change, unless otherwise stated, annual average

	2013	2014	2015	2016
Repo rate, per cent	1.0 (1.0)	1.0 (1.0)	1.8 (1.8)	2.7 (2.7)
GDP-growth	0.8 (0.8)	2.6 (2.7)	2.7 (3.3)	1.9 (2.5)
Hours gap, per cent	-1.4 (-1.4)	-0.8 (-0.7)	-0.5 (0.0)	-0.5 (0.4)
Unemployment, aged 15-74*	8.0 (8.0)	7.8 (7.8)	7.3 (7.2)	7.0 (6.6)
CPIF	0.9 (0.9)	1.2 (1.3)	1.6 (1.9)	1.4 (2.0)
CPI	0.0 (0.0)	1.1 (1.2)	2.4 (2.7)	2.3 (2.9)
Exchange rate, KIX, 18 November 1992 = 100	102.7 (102.7)	102.0 (102.3)	100.4 (101.5)	99.1 (101.2)

Table 8c. Alternative scenario: increased financial unease, more expansionary monetary policy

Annual percentage change, unless otherwise stated, annual average

	2013	2014	2015	2016
Repo rate, per cent	1.0 (1.0)	0.8 (1.0)	1.3 (1.8)	2.0 (2.7)
GDP-growth	0.8 (0.8)	2.6 (2.7)	3.1 (3.3)	2.4 (2.5)
Hours gap, per cent	-1.4 (-1.4)	-0.8 (-0.7)	-0.3 (0.0)	0.1 (0.4)
Unemployment, aged 15-74*	8.0 (8.0)	7.8 (7.8)	7.2 (7.2)	6.6 (6.6)
CPIF	0.9 (0.9)	1.3 (1.3)	1.8 (1.9)	1.9 (2.0)
CPI	0.0 (0.0)	0.9 (1.2)	2.3 (2.7)	2.6 (2.9)
Exchange rate, KIX, 18 November 1992 = 100	102.7 (102.7)	102.3 (102.3)	101.7 (101.5)	101.6 (101.2)

Table 9a. Alternative scenario: stronger international economic activity, international variables

Annual percentage change, unless otherwise stated, annual average

	2013	2014	2015	2016
GDP abroad	1.1 (1.0)	2.7 (2.3)	3.0 (2.8)	3.0 (3.0)
Policy rate abroad, per cent	0.2 (0.2)	0.3 (0.2)	0.6 (0.5)	1.5 (1.0)
Inflation abroad	2.0 (2.0)	2.2 (2.2)	2.3 (2.2)	2.4 (2.3)

Table 9b. Alternative scenario: stronger international economic activity, unchanged monetary policy

Annual percentage change, unless otherwise stated, annual average

	2013	2014	2015	2016
Repo rate, per cent	1.0 (1.0)	1.0 (1.0)	1.8 (1.8)	2.7 (2.7)
GDP-growth	0.8 (0.8)	3.0 (2.7)	3.9 (3.3)	3.0 (2.5)
Unemployment, aged 15-74*	8.0 (8.0)	7.7 (7.8)	6.9 (7.2)	6.2 (6.6)
CPIF	0.9 (0.9)	1.4 (1.3)	2.2 (1.9)	2.6 (2.0)
CPI	0.0 (0.0)	1.2 (1.2)	3.0 (2.7)	3.4 (2.9)
Exchange rate, KIX, 18 November 1992 = 100	102.7 (102.7)	102.4 (102.3)	102.3 (101.5)	103.7 (101.2)

Table 9c. Alternative scenario: stronger international economic activity, monetary policy tightening

Annual percentage change, unless otherwise stated, annual average

	2013	2014	2015	2016
Repo rate, per cent	1.0 (1.0)	1.0 (1.0)	2.4 (1.8)	3.5 (2.7)
GDP-growth	0.8 (0.8)	3.0 (2.7)	3.6 (3.3)	2.4 (2.5)
Unemployment, aged 15-74*	8.0 (8.0)	7.7 (7.8)	7.0 (7.2)	6.5 (6.6)
CPIF	0.9 (0.9)	1.4 (1.3)	2.0 (1.9)	2.0 (2.0)
CPI	0.0 (0.0)	1.3 (1.2)	3.3 (2.7)	3.2 (2.9)
Exchange rate, KIX, 18 November 1992	102.7 (102.7)	102.4 (102.3)	101.2 (101.5)	101.6 (101.1)

Table 10a. Alternative scenario: higher repo rate

Annual percentage change, unless otherwise stated, annual average

	2013	2014	2015	2016
Repo rate, per cent	1.1 (1.0)	1.2 (1.0)	1.9 (1.8)	2.7 (2.7)
GDP-growth	-1.8 (-1.7)	-1.0 (-0.8)	0.0 (0.3)	0.1 (0.3)
Hours gap, per cent	-1.4 (-1.4)	-0.8 (-0.7)	-0.2 (0.0)	0.2 (0.4)
Unemployment, aged 15-74*	8.0 (8.0)	7.8 (7.8)	7.3 (7.2)	6.7 (6.6)
CPIF	0.9 (0.9)	1.2 (1.3)	1.7 (1.9)	1.9 (2.0)
CPI	0.0 (0.0)	1.2 (1.2)	2.4 (2.7)	2.8 (2.9)

Table 10b. Alternative scenario: lower repo rate

Annual percentage change, unless otherwise stated, annual average

	2013	2014	2015	2016
Repo rate, per cent	0.9 (1.0)	0.8 (1.0)	1.8 (1.8)	2.8 (2.7)
GDP-growth	-1.7 (-1.7)	-0.6 (-0.8)	0.5 (0.3)	0.5 (0.3)
Hours gap, per cent	-1.4 (-1.4)	-0.5 (-0.7)	0.2 (0.0)	0.4 (0.4)
Unemployment, aged 15-74*	8.0 (8.0)	7.7 (7.8)	7.0 (7.2)	6.5 (6.6)
CPIF	0.9 (0.9)	1.4 (1.3)	2.0 (1.9)	2.0 (2.0)
CPI	0.0 (0.0)	1.1 (1.2)	2.9 (2.7)	2.9 (2.9)

Articles 2011-2013⁵⁹

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

⁵⁹ A list of the articles published since 1993 can be found on the Riksbank's website www.riksbank.se.

Interest rate decisions 2009-2013⁶⁰

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

⁶⁰ 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.

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.

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 Executive Board of the Riksbank decides on the repo rate as the level that the Riksbank wants to steer the overnight rate towards.

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.

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.

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