Monetary Policy Report

October 2012

SVERIGES RIKSBANK

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 24 October 2012. 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 STRATEGY [2]

- 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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Monetary policy considerations – a summary

Repo rate unchanged at 1.25 per cent

The Swedish economy has so far grown at a good pace, but is now slowing down due to the weak developments abroad. Unemployment is expected to rise somewhat in the coming period and inflationary pressures are low. The Executive Board of the Riksbank decided to hold the repo rate at the continued low level of 1.25 per cent and to lower the repo-rate path to stimulate the economy so that inflation rises towards the target of 2 per cent.

Swedish economy slowing down

The unease on the financial markets has declined somewhat However, the uncertainty over how to resolve the fundamental problems in the euro area remains substantial and GDP growth in the euro area is expected to remain weak. Compared with the euro area, the situation in the United States looks a little better. Although there is now some slowdown in most emerging economies, the world economy as a whole is nevertheless growing at a relatively good pace.

The Swedish economy has so far shown resilience to the debt crisis in Europe, but now Swedish exports are being clearly dampened by the weak activity in the euro area. However, the consequences for the economy as a whole are alleviated by households having relatively good purchasing power. All in all, the Swedish economy is expected to develop in the coming period largely as the Riksbank had forecast earlier.

Employment has increased, but the number of persons in the work force has increased even more, and unemployment has therefore risen. The recovery in the labour market is now expected to be slower, which partly is due to there being signs that it has become more difficult for job seekers to find vacant jobs.

Inflation is low at present. This is mainly because of low cost pressures in recent years and earlier strengthening of the krona, which has a delayed effect on inflation. A continued low repo rate and reduced unease regarding economic developments in Europe are expected to lead to economic activity in Sweden strengthening, wages increasing at a faster pace and inflation rising.

Low repo rate stimulates the economy

A continued low repo rate will stimulate the economy so that inflation rises towards the target of 2 per cent. The Executive Board of the Riksbank has therefore decided to hold the repo rate unchanged at 1.25 per cent and to lower the repo-rate path. It is now more probable that the repo rate will be cut rather than being raised during the winter. Compared with the assessment in September, the repo rate is expected to be raised at a later stage and at a slower pace. This lower repo-rate path should contribute to an inflation rate in line with the target and to resource utilisation stabilising around a normal level. The low repo-rate path is expected to go hand in hand with households' debt ratios not rising, but instead remaining at the current level.

The repo-rate path is a forecast, not a promise

The situation in the euro area is problematic and could worsen, which could have further negative effects on the Swedish economy. In this situation, the repo-rate path may need to be lower. At the same time, the Swedish economy has so far been unexpectedly resilient and demand among Swedish households and companies could be higher than expected. This would justify a higher repo-rate path.

CHAPTER 1 - The economic outlook and inflation prospects

The Swedish economy grew at a good pace during the first half of the year, but is now slowing down due to the weak developments abroad. Although the unease on the financial markets has declined somewhat, economic developments in the euro area are still burdened by problems with public finances, the banking system and other structural problems. Developments in the United States look somewhat better than in Europe, however, and the global economy as a whole is growing at a relatively good pace. The Riksbank assumes that sufficient measures will be taken in the euro area so that the crisis does not worsen dramatically and the uncertainty among households and companies gradually subsides in 2013.

Growth in Sweden is expected to slow down, mainly because exports are expected to be weak. The labour market will also be affected and unemployment will continue rising over the coming year. The Riksbank now assesses that it has become more difficult for job seekers to find vacant posts and that the recovery on the labour market will therefore take longer. Inflation is currently low, as a result of the subdued labour cost increases in recent years and the delayed effects of the earlier krona appreciation.

The repo rate needs to remain low for a long period of time to stimulate the economy and to attain an inflation rate in line with the target of 2 per cent. The Executive Board of the Riksbank has therefore decided to hold the repo rate unchanged at 1.25 per cent and at the same time to adjust the repo-rate path down in relation to the forecast published in September. It is now more probable that the repo rate will need to be cut than to be raised during the winter. In addition, lower inflationary pressures due to weaker international activity, together with a slower recovery in the labour market, mean that the first increase will come later and that the repo rate will then be raised at a slower pace than was assumed earlier. All in all, monetary policy will contribute to CPIF inflation stabilising around 2 per cent and to resource utilisation stabilising around a normal level in the latter part of the forecast period.

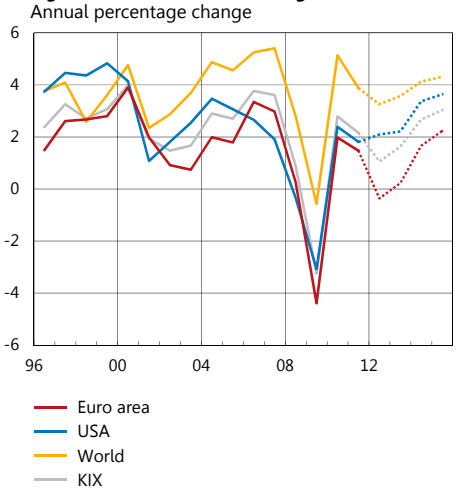
Expected slowdown in Swedish economy

GDP growth abroad slowing down

The global economy is still affected by developments in the euro area. There have recently been reports that have caused the unease on the financial markets to subside somewhat. An important announcement in this context was the decision of the European Central Bank, ECB, at the beginning of September to introduce a new programme for purchasing government bonds with the aim of ensuring that the monetary policy transmission mechanism can function throughout the euro area. However, the underlying structural problems in several euro area countries still remain and will continue to burden the economy in the region going forward. The details of various crisis management measures remain uncertain, as are developments in the coming period in countries such as Greece and Spain.

As before, the starting point for the Riksbank's forecast is that the crisis in the euro area will be managed so that the unease and uncertainty gradually decline over the course of next year. However, this development does not rule out the possibility of setbacks in crisis management that could lead to greater unease and a temporary increase in stress on the financial markets. But the challenges are considerable and there is still a possibility that developments will be much weaker than assumed in the forecast. The forecast also assumes that there will be political agreements in the United States regarding the avoidance of the dramatic fiscal constraint that will otherwise occur automatically at the turn of the year with large tax increases and reductions in public expenditure.

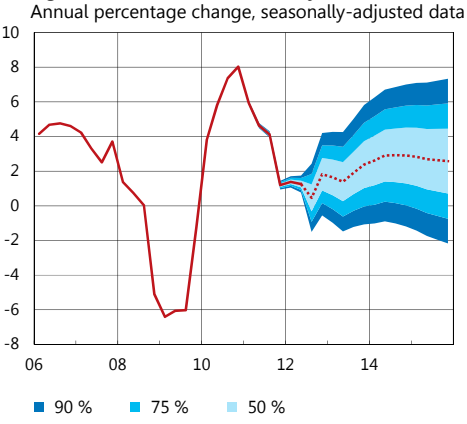
Figure 1:1. GDP in different regions
Annual percentage change



Note. KIX is an aggregate of Sweden's most important trading partners.

Sources: Bureau of Economic Analysis, Eurostat, national sources and the Riksbank

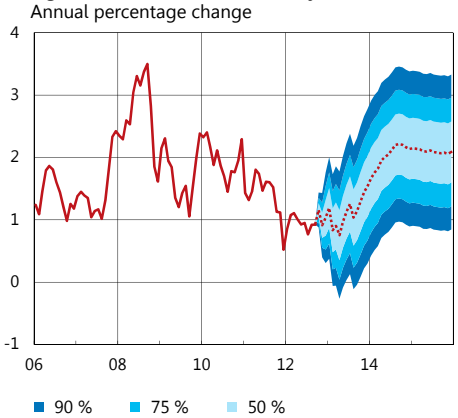
Figure 1:2. GDP with uncertainty bands
Annual percentage change, seasonally-adjusted data



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

Sources: Statistics Sweden and the Riksbank

Figure 1:3. CPIF with uncertainty bands
Annual percentage change



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

Sources: Statistics Sweden and the Riksbank

When GDP growth abroad is weighed together according to the significance the different countries have for the Swedish economy, developments going forward are expected to be weaker (see Figure 1:1).[3] GDP growth measured in this way is dampened from a good 2 per cent in 2011 to just over 1 per cent this year. Next year it will then increase to just below 2 per cent. This slowdown in growth is mainly due to the weak development in the euro area, although growth in most regions of the world will slow down this year. GDP for the world economy as a whole is expected to grow by around 3.5 per cent this year and next year.

■ Developments in euro area weighing down Swedish economy

Although the Swedish economy has so far shown resilience and grown at a good rate in the first six months of the year, developments in the euro area are expected to significantly slow down Swedish growth during the coming year (see Figure 1:2). However, the consequences for the economy as a whole will be alleviated by households' relatively good purchasing power.

The weak economic activity over the coming year is expected to have an impact on the labour market. Unemployment will rise slightly from the current level and remain there for almost all of 2013. At the same time, there are signs that the functioning of the labour market has deteriorated (see the article "Has the functioning of the labour market changed?"). The Riksbank's assessment is that this will mean it takes longer for unemployment to fall back, compared with the assessment in September. From the end of 2013, however, unemployment will fall gradually to around 6.5 per cent towards the end of the forecast period.

Inflation is currently low, as a result of the low rate of increase in unit labour costs in recent years, the earlier krona appreciation and the low resource utilisation. Energy prices have also had a dampening effect on inflation recently. However, inflationary pressures will rise during the forecast period. Wages will increase at a faster rate as economic activity strengthens and resource utilisation rises. At the same time, the dampening effect of the krona on import prices will decline, as the krona is expected to be relatively stable in the coming period. An expansionary monetary policy will also contribute to maintaining the rate of price increase in the coming period. CPIF inflation will rise gradually towards 2 per cent at the beginning of 2014 (see Figure 1:3). CPI inflation shows a similar development, but rises to almost 3 per cent during the latter part of the forecast period (see Figure 1:4). This is connected with a gradual increase in mortgage rates.

[3] The Riksbank has earlier used so-called TCW weights to capture how developments abroad affect the Swedish economy. Starting with this Monetary Policy Report, the Riksbank is supplementing the TCW weights with the weights used in KIX. See the article "KIX index better reflects Sweden's international dependence".

■ Continued low repo rate stimulates the economy

Compared with the forecast in September, somewhat weaker developments abroad are expected in the coming years and policy rates are expected to be low for a long period of time. An unchanged repo-rate path in Sweden in relation to September would mean that this contributes to a stronger krona and lower inflationary pressures in the coming years.

Demand in Sweden has so far held up relatively well and employment has been slightly stronger than expected. Nevertheless, unemployment has increased, which is because more people have entered the labour market than have been able to find work. There are also signs that it has been taking longer for job seekers to find vacant positions, and the Riksbank therefore assesses that the recovery in the labour market will be more sluggish. Although the weaker labour market is not primarily connected to poorer economic activity, it is considered to indicate, together with the weaker international activity, that the repo rate needs to remain low for a long period of time and that the increases in the repo rate should be implemented more slowly. With a lower repo rate the now low inflation rate will rise more quickly in the coming period than would otherwise have been the case.

The Executive Board of the Riksbank has therefore decided to hold the repo rate unchanged at 1.25 per cent, and to adjust the repo-rate path downwards to support economic activity and contribute to CPIF inflation gradually rising and being close to 2 per cent from 2014 onwards. Towards the end of 2015, the repo rate is expected to be 2.6 per cent (see Figure 1:5). If the financial unease were to escalate dramatically, the starting point for the forecasts and for monetary policy would of course change. The likelihood of this happening may seem slight, but there is nevertheless a risk that the potential consequences of such a development would be great.

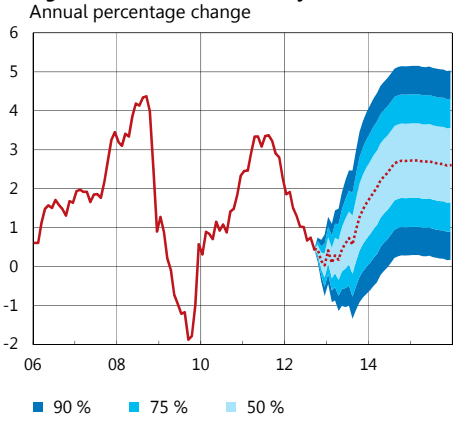
Continued uncertainty over developments abroad

■ Crisis management in the euro area: ECB and Spain in focus

The management of the crisis in the euro area is continuing and recently decisions of both a short-term and long-term nature have been made. The short-term measures have caused the stress on the financial markets to subside. An important announcement in this context was the decision of the ECB at the beginning of September to introduce a new programme for purchasing government securities, Outright Monetary Transactions (OMT). The purpose of the programme is to ensure that monetary policy has an impact throughout the entire euro area. However, government bond purchases will only take place if a number of conditions are met (see the article "New measures to manage the crisis in the euro area"). The announcement regarding the OMT programme caused yields on Spanish and Italian government bonds to fall (see Figure 1:6).

Another important message for the continued management of the crisis was the German Constitutional Court's approval of Germany's participation in the European Stability Mechanism (ESM). The European

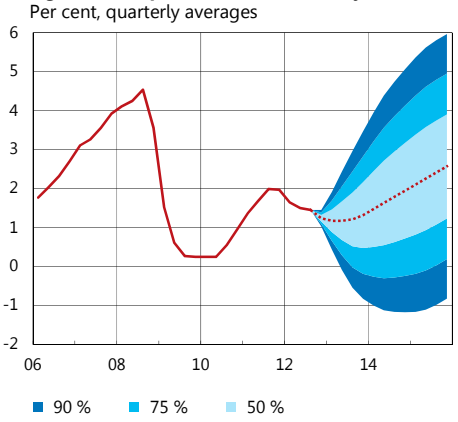
Figure 1:4. CPI with uncertainty bands
Annual percentage change



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

Sources: Statistics Sweden and the Riksbank

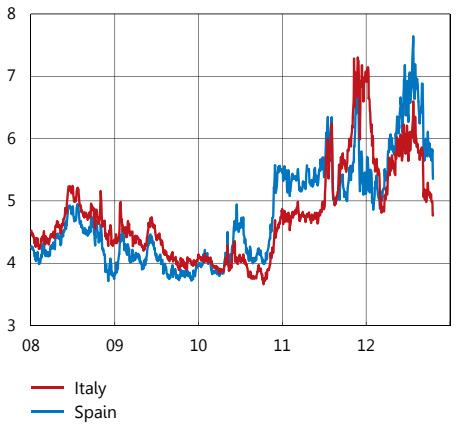
Figure 1:5. Repo rate with uncertainty bands
Per cent, quarterly averages



Note. The uncertainty bands for the repo rate are based on the Riksbank's historical forecasting errors and the ability of risk-adjusted market 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.

Source: The Riksbank

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



Source: Reuters EcoWin

Commission has also presented a plan to introduce a banking union. Part of the proposal concerns the introduction of joint banking supervision, which has been made a condition for supplying capital directly to the banking sector from the ESM. This would make it possible to break the connection between weak banks and weak public finances.

At the same time, the financial markets are still marked by a fundamental uncertainty over future developments. There are, for instance, some uncertainties concerning political unity over the plans for a banking union and over how the financial links between banks and governments can be broken. There is also uncertainty over developments in individual crisis countries. Recently, the main focus has been on public finances in Spain. Five of the country's regions have now applied to the Spanish state for assistance. At the same time, there have been negative reports regarding economic prospects and the government has presented new austerity measures in the budget for next year. Many market participants are therefore assuming that Spain will need to apply for a support programme and turn to the ESM. There is also still uncertainty over the situation in Greece and how the country will manage its funding needs.

All in all, much of the uncertainty over when and how the structural problems in the European countries will be resolved still remains, at the same time as the acute crisis management is underway. As before, the Riksbank assumes that the participants in the euro area will take measures to ensure that uncertainty gradually wanes next year. This assumption does not rule out the possibility of setbacks in crisis management that could lead to greater unease and a temporary increase in stress on the financial markets.

■ Structural problems weighing down the euro area

The structural problems of poor public finances and a need for better competitiveness in some countries will weigh down the euro area in the coming period and developments are therefore expected to be weak. The recovery is now expected to be somewhat slower than was forecast in September. There are increasingly clear signs, for instance, in the form of greater pessimism among households and companies, that countries such as Germany and France are also being affected by the unease. Although the situation in vulnerable countries such as Greece, Spain and Italy will ease somewhat as interest rates in these countries have fallen, the rates are still relatively high.

Fiscal policy in the euro area is expected to be tight in the coming years to attain the budget targets in the various countries. Budget plans that have recently been announced include severe tightening in countries such as Spain and Portugal, and even France. The tightening that has been implemented will have a restraining effect on GDP growth. However, it is hoped that this will lead to confidence in the financial markets returning.

Fiscal conditions are still very strained in the euro area. The ECB's policy rate is low, but the impact of the low policy rate on the different euro area economies varies. Many countries are struggling with problems in the banking sector, which spill over onto households and companies and mean that they face relatively high interest rates and strict credit conditions. Monetary policy is thus less expansionary than the low policy rate would imply for the euro area as a whole. One major problem is the

low capital level in several countries' banking systems and there are plans to increase these levels. Experiences show that it usually takes many years before debt consolidation in the wake of a financial crisis is complete.[4] Despite the assumption that the unease will gradually subside over the course of next year, indications are that growth in the euro area will be low for a number of years. Moreover, several countries in the euro area need to strengthen their competitiveness to create the right conditions for sustainable growth (see Figure 1:7), which takes time. In countries such as Ireland, Spain and Portugal, competitiveness has strengthened recently, while in Italy the adjustment has not yet begun. All in all, negative growth is expected in the euro area during 2012 and growth close to zero during 2013, after which a slow recovery will begin (see Figure 1:8).

In the coming period, inflation in the euro area will be affected by high food and energy prices, and by increases in VAT. However, the weak cost pressures are expected to lead to inflation falling (see Figure 1:9). Inflation will not fall so far below the ECB's target of just under 2 per cent. This is partly due to a coming increase in VAT in Italy and to relatively high wage agreements in Germany.

As the economic situation remains weak, the policy rate is expected to be low during the entire forecast period, and slightly lower than was forecast in September. This, together with the three-year loan issued by the ECB at the start of the year, is expected to lead to short-term interest rates remaining just above the ECB's deposit rate, which is currently 0 per cent.

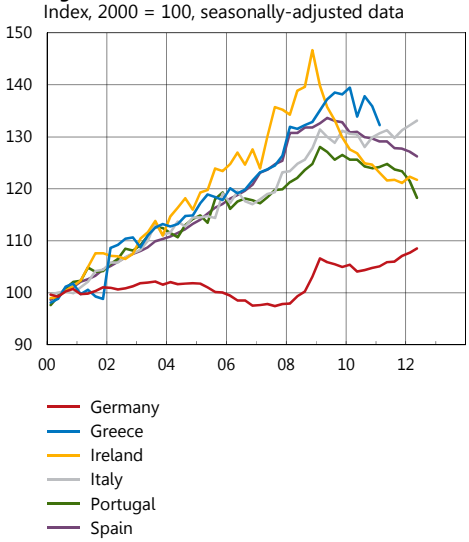
■ Continued recovery in the United States

The recovery in the United States is continuing. The housing market is improving gradually, which is expected to provide a positive contribution to growth in the coming period, not least because the Federal Reserve is intensifying its measures to bring down mortgage rates. Monetary policy is expected to be very expansionary for the whole forecast period and slightly more expansionary than was forecast in September.
Fiscal policy, on the other hand, is expected to be tighter in the coming years. The aim is to begin a long-term budget consolidation, which will subdue US growth, particularly in 2013. However, there is considerable uncertainty over fiscal policy, which will be determined to a large degree by the presidential election and the elections to congress in November. The forecast is based on the assumption that agreements will be reached so that no dramatic tightening will be implemented automatically at the turn of the year when large tax increases and cuts in expenditure would otherwise come into force.

Towards the end of the forecast period indebtedness among US households is expected to have declined so much that they will increasingly move over from saving to consuming. GDP growth will then accelerate (see Figure 1:8). At the same time, unemployment will fall and resource utilisation and inflation will increase.

[4] See, for instance, Reinhart, Carmen M. and Reinhart, Vincent R. (2010), After the fall. NBER Working Paper Series no. 16334. National Bureau of Economic Research.

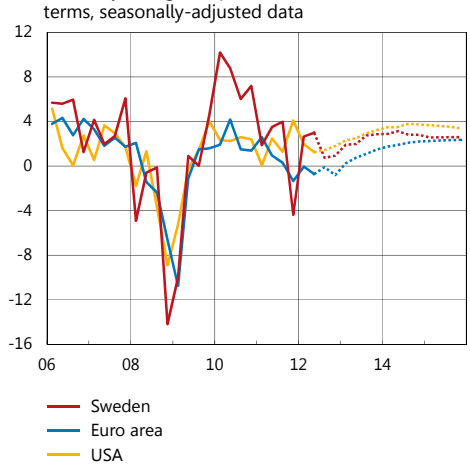
Figure 1:7. Unit labour cost
Index, 2000 = 100, seasonally-adjusted data



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

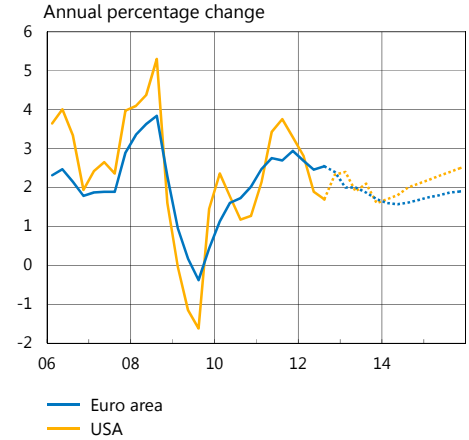
Source: Eurostat

Figure 1:8. GDP in Sweden, the euro area, and USA
Quarterly changes in per cent calculated in annualised terms, seasonally-adjusted data



Sources: Bureau of Economic Analysis, Eurostat, Statistics Sweden and the Riksbank

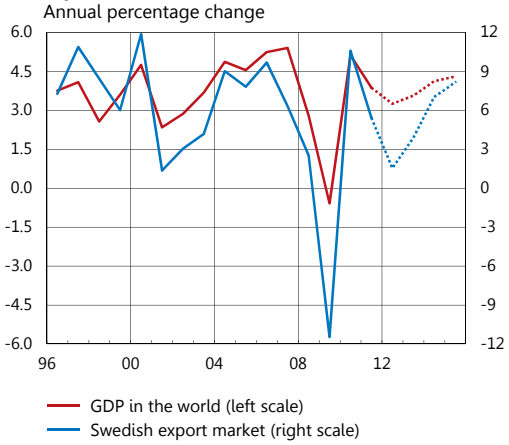
Figure 1:9. Inflation in the euro area and the United States
Annual percentage change



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

Sources: Bureau of Labor Statistics and Eurostat

Figure 1:10. GDP in the world and the Swedish export market
Annual percentage change



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: IMF, Statistics Sweden and the Riksbank

■ Mixed outlook on other important export markets

The Norwegian economy is developing strongly as a result of good growth in real wages and employment, good incomes from the oil industry and an expansionary monetary policy. GDP growth (mainland Norway) is expected to be around 4 per cent in 2012 and then to slow down somewhat, amounting to around 3 per cent during the following years. Cost pressures are low and inflation is expected to be around 1 per cent for the remainder of the year and then begin to rise.

Developments in Denmark are very weak and growth is not expected to be positive until 2013, after which it will begin to slowly gather speed. Household saving to reduce the high level of indebtedness will hold back growth in the coming quarters. Inflation is expected to fall from around 3 per cent in September to around 2 per cent during the forecast period.

In the United Kingdom, growth is expected to be slightly negative this year and then to increase over the course of the forecast period. The measures to stimulate credit granting and the Bank of England's extended asset purchase scheme have had some positive effects on growth. In addition, fiscal policy is expected to be less tight in the coming period. As the uncertainty over developments in the euro area gradually declines, both domestic demand and exports will increase. Inflation is expected to continue to fall in the short term, and then from 2013 to be close to the inflation target of 2 per cent.

■ Global growth slowing down, as is growth in Swedish export markets

Growth in the BRIC countries will slow down somewhat this year, but then strengthen as developments abroad improve.[5] In China, GDP growth is expected to be just under 8 per cent this year, which is lower than expected, but still higher than the Chinese government's target. During the forecast period growth is expected to strengthen. However, developments will not be as good as in recent years, partly because fiscal policy and monetary policy are expected to be less expansionary. Inflation will rise towards the government's target of 4 per cent during the latter part of the forecast period, as activity in the economy increases.

In Brazil, GDP growth looks likely to be just below 2 per cent this year, which is also weaker than expected. Growth is expected to increase gradually in the coming period, partly as a result of expansionary fiscal and monetary policy. Inflation in Brazil has over the year been pushed up by, for instance, high food prices and a weaker exchange rate. Inflation is expected to be between 4 and 5 per cent during the later part of the forecast period. In India, growth will slow down to around 5.5 per cent this year, at the same time as inflation is expected to reach just over 10 per cent. An average GDP growth of 4 per cent and an inflation of approximately 6.0 per cent are expected in Russia during the forecast period.

The emerging economies will thus support global growth during the forecast period. GDP for the world economy as a whole is expected to grow by around 3.5 per cent this year and next year (see Figure 1:10). From a Swedish trade perspective, the slowdown abroad will be greater. Swedish export market growth, that is, the increase in our trading

[5] The BRIC countries include Brazil, Russia, India and China.

partners' demand for imports, will slow down to 1.5 per cent this year. It will then rise gradually during the forecast period as developments, particularly those in the euro area, improve (see Figure 1:10).

■ Krona roughly unchanged going forward

During the period June-August, the krona strengthened against most currencies. The competition-weighted krona exchange rate was roughly at the level the Riksbank had assessed that the krona would reach in the long run. The appreciation was thus expected, but came sooner than anticipated.

The Swedish krona has weakened marginally, both in terms of the KIX and the TCW, since the Monetary Policy Update was published in September (see Figure 1:11). The Riksbank's assessment is that at present the krona is in competition-weighted terms close to its long-run level, and that it will remain around this level during the coming years. In real terms, that is to say when the nominal exchange rate is adjusted to the relative price level in Sweden compared with other countries, the exchange rate is expected to remain in principle unchanged in the coming years (see Figure 1:12).

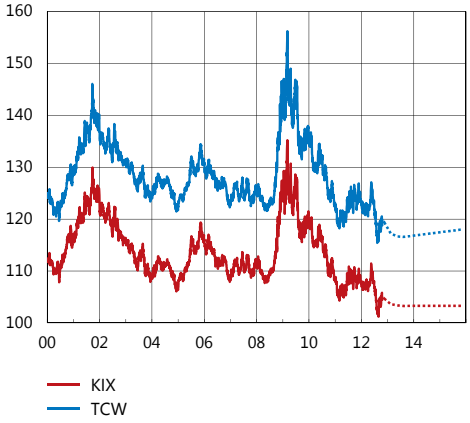
Subdued growth in Sweden in the coming year

■ Weak international activity affects Swedish growth

The Swedish economy grew rapidly during the first half of this year. This also applies after Statistics Sweden's downward revision of the figure for growth in the second quarter (see Figure 1:13). Sweden is affected by developments abroad, but growth in Sweden has so far been resilient to the debt crisis affecting developments in most of Europe. Domestic demand has been relatively stable and is expected to continue to grow during the forecast period. However, developments in the euro area mean that the demand for goods and services from the Swedish export sector will be low this year and next year. This means that exports will grow at a slower rate than normal for some time to come, which also affects investments in the business sector. The forecast assumes that the debt crisis can be managed so that the uncertainty affecting developments in the European economies gradually declines. This means that demand from abroad will increase at the end of next year. Exports would thus increase at a faster rate.

Swedish GDP growth is expected to amount to 0.9 per cent this year and to 1.8 per cent next year. In 2014 and 2015, when international economic activity picks up, GDP will grow by 2.7 and 2.9 per cent respectively (see Table 5).

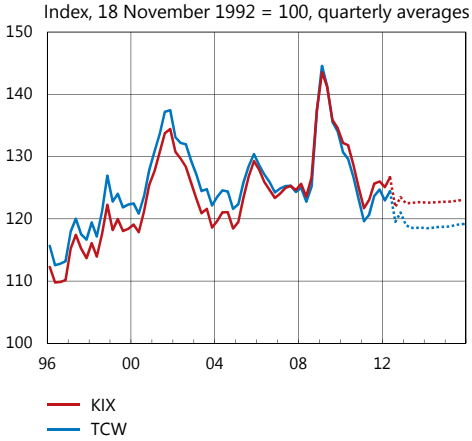
Figure 1:11. KIX- and TCW-weighted nominal exchange rates
Index, 18 November 1992 = 100



Note. KIX and TCW refers to different aggregates of currencies on the basis of trading patterns. KIX weights are updated regularly and cover a larger group of countries. Outcome data are daily rates and forecasts are quarterly averages.

Source: The Riksbank

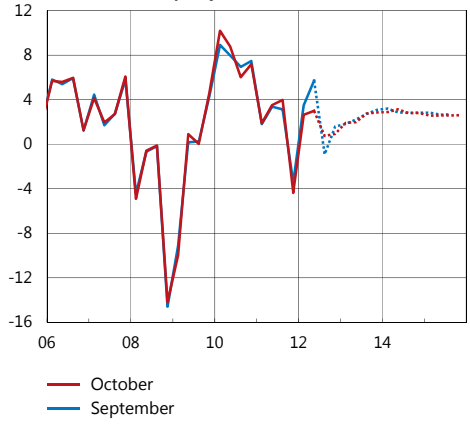
Figure 1:12. KIX- and TCW weighted real exchange rates
Index, 18 November 1992 = 100, quarterly averages



Note. The real exchange rate is deflated by the CPIF for Sweden and the CPI for abroad. The CPIF is the CPI with a fixed mortgage rate.

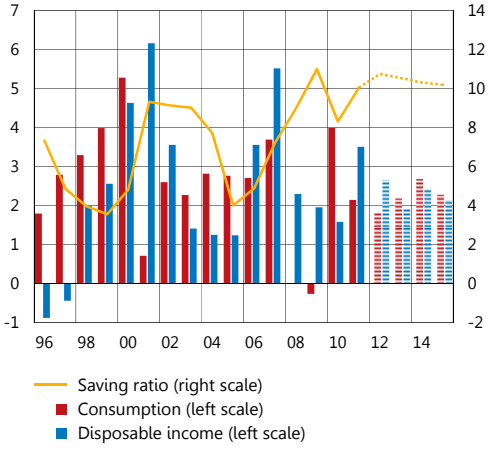
Sources: National sources, Statistics Sweden and the Riksbank

Figure 1:13. GDP
Quarterly changes in per cent calculated in annualised terms, seasonally-adjusted data



Sources: Statistics Sweden and the Riksbank

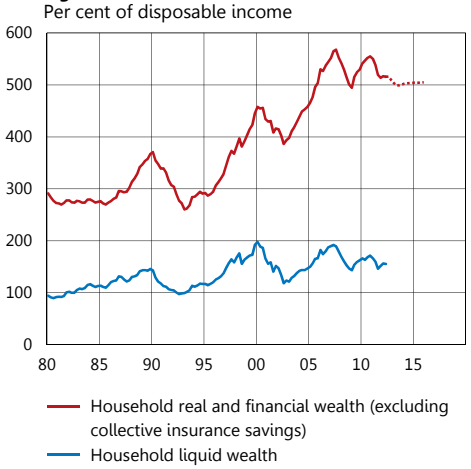
Figure 1:14. Households' disposable incomes, consumption and saving ratio
Annual percentage change and per cent of disposable income



Note. Saving ratio including saving in collective insurance schemes.

Sources: Statistics Sweden and the Riksbank

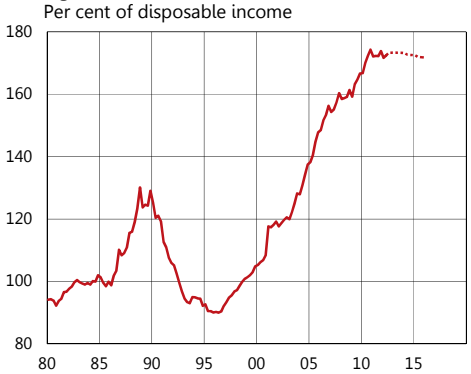
Figure 1:15. Household wealth
Per cent of disposable income



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. Liquid wealth mainly refers here to cash, bank deposits, bonds and shares (directly owned and funds).

Sources: Statistics Sweden and the Riksbank

Figure 1:16. Household debt
Per cent of disposable income



Sources: Statistics Sweden and the Riksbank

■ Swedish households have relatively good purchasing power

Despite the uncertain developments abroad, Swedish households have been relatively optimistic so far. One reason for this may be that their disposable incomes have risen at a good pace. But as the labour market is weak and developments on the housing market are uncertain, consumption will grow slightly more slowly this year than what is considered to be a normal level. With effect from next year, however, consumption will increase at a faster rate as economic prospects improve. Moreover, households have savings, which give them further scope for consumption when confidence gradually increases. All in all, household consumption is expected to grow by around 2.5 per cent a year on average during the years 2013 to 2015 (see Figure 1:14).

Developments in household wealth are also important for consumption decisions. Household wealth is currently around 500 per cent of their disposable incomes, but is much lower if only the more liquid assets are included (see Figure 1:15). Household wealth declined during the first half of the year, but has recently stabilised. One reason for the change is the development of the stock market, which has considerable significance for household wealth. During the first half of the year, stock markets fell, but they have since recovered. Another important component in household wealth is their property holdings. Property prices have developed weakly so far this year. During the forecast period, household wealth is expected to grow as the economic situation improves.

Lending to households will increase at roughly the same rate as household incomes during the coming years. This means that household indebtedness, that is, wealth as a percentage of income, will remain at the current high levels for the whole of the forecast period (see Figure 1:16).

■ Demand for Swedish exports declining

The weak developments in large parts of Europe mean that demand for Swedish exports will be considerably dampened (see Figure 1:17). Although an increasingly large share of Swedish exports are directed towards emerging economies, Europe accounts for around 70 per cent of Sweden's exports (see the article "KIX index better reflects Sweden's international dependence").

It is clear that the weak developments in several of Sweden's most important export markets have dampened growth in Swedish exports recently. Exports of goods so far this year point to weak growth during the remainder of 2012, as do companies' assessments of order intakes. The composition of Swedish exports, with the emphasis on investment goods such as machinery and lorries, means that the slowdown is particularly tangible in a situation where international investment activity is weak.

At the same time, growth in other parts of the world remains high, which will uphold the demand for Swedish exports. Exports are thus expected to remain more or less unchanged this year and to grow by just over 3 per cent next year. When international economic activity improves later on, demand for Swedish export goods will increase at a faster pace. During 2014 and 2015 Swedish exports are expected to grow at a much faster pace than GDP.

Sweden's imports have also developed weakly recently, which is partly related to subdued demand for exports and the slower build-up of stocks. However, imports will rise at an increasingly fast pace during the forecast period as exports and domestic demand accelerate.

■ Housing investment will increase next year

Total fixed gross investment has continued to increase during the first half of this year. However, the weak international developments mean that investment will be weaker than normal during the autumn and early next year. As international economic activity improves, investment is expected to increase at a faster pace in 2014 and 2015 (see Figure 1:18).

It is primarily investments in the service sector that will contribute to total investments increasing this year. Industrial investments, which are particularly sensitive to cyclical changes, fell last year and have been weak so far this year. Developments here are expected to remain weak next year. However, industrial investment's share of production is much less than what can be considered normal. When international economic activity improves, there is thus an underlying investment need within the manufacturing industry, and investment in this sector will therefore increase relatively quickly in 2014 and 2015.

Housing investment continued to decline during the second quarter of this year. Indicators such as the number of apartments under construction point to housing investment continuing to fall during the autumn, and remaining weak next year. After this, housing investment is expected to increase at a faster pace during 2014 and 2015.

■ Public saving increasing

The Riksbank's fiscal policy forecasts are based on budget measures that have already been announced and on what can be regarded as a normal historical development in fiscal policy over an economic cycle. The Government proposed in its Budget Bill for 2013 adjustments to expenditure and income comprising SEK 23 billion. The Government is expected to propose further changes in expenditure and income corresponding to a total of SEK 16 billion for the years 2014 and 2015.

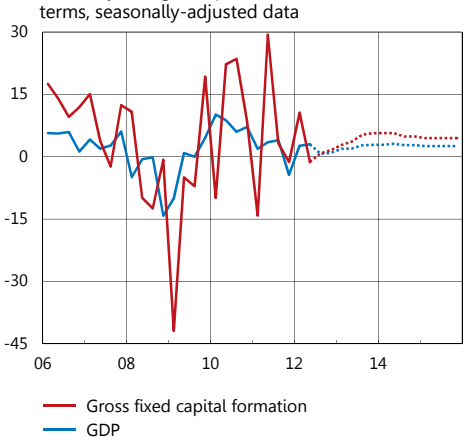
This year, financial saving is expected to be -0.1 per cent as a percentage of GDP. After this it will increase to around 1 per cent of GDP in 2015 (see Figure 1:19). As the economic situation improves and tax income rises, financial saving will strengthen. All in all, fiscal policy is expected to be normal in relation to the economic situation during the forecast period. It is also assumed that the target for public finances, a surplus of 1 per cent of GDP on average over an economic cycle, will be achieved.

Figure 1:17. 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.

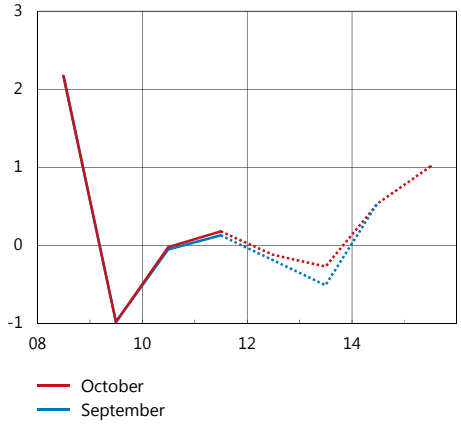
Sources: Statistics Sweden and the Riksbank

Figure 1:18. Gross fixed capital formation and GDP
Quarterly changes in per cent calculated in annualised terms, seasonally-adjusted data



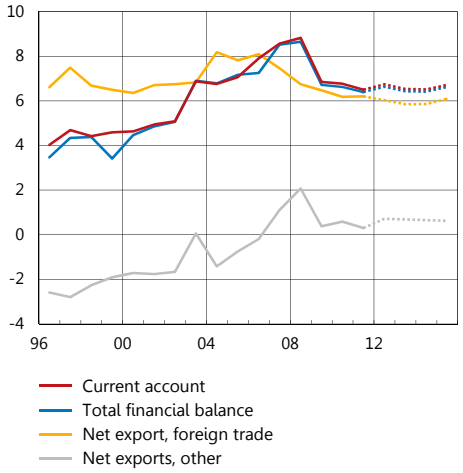
Sources: Statistics Sweden and the Riksbank

Figure 1:19. General government net lending
Per cent of GDP



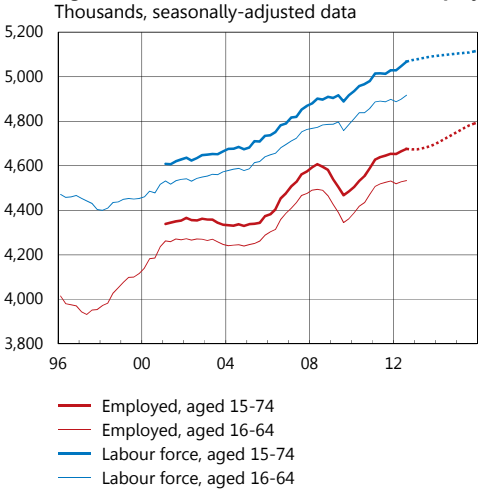
Sources: Statistics Sweden and the Riksbank

Figure 1:20. Net exports, total financial balance and current account
Per cent of GDP



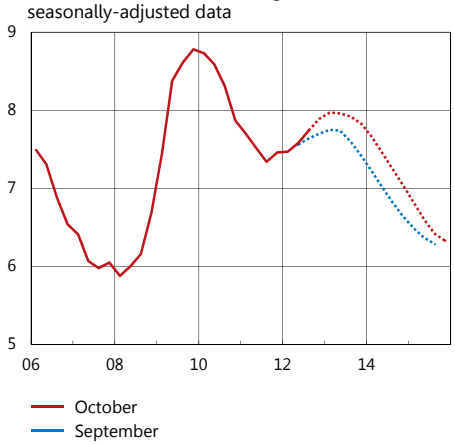
Sources: Statistics Sweden and the Riksbank

Figure 1:21. Labour force and number of employed
Thousands, seasonally-adjusted data



Sources: Statistics Sweden and the Riksbank

Figure 1:22. Unemployment
Per cent of the labour force, aged 15-74, seasonally-adjusted data



Sources: Statistics Sweden and the Riksbank

■ Savings remain high in the economy as a whole

The current account has been at a relatively high level since the mid-1990s, which means that total financial savings in the corporate, household and public sectors have been high.

Over the coming years, the current account and saving are expected to remain at a high level (see Figure 1:20). This is linked to companies having spare capacity and being able to increase their production when international demand picks up without immediately needing to dramatically increase investment. Financial saving in the corporate sector will therefore be relatively high. At the same time, household saving will remain at a relatively high level and saving in the public sector will increase somewhat towards the target of a 1 per cent surplus over an economic cycle.

■ Slower recovery on the labour market going forward

Both employment and the labour force have increased somewhat more than expected in recent months, compared with the forecast in September. However, new information points to a slowdown in the labour market during the coming year. For instance, the number of redundancies has recently shown a relatively rapid increase. Although it is uncertain how many of the redundancy notices will lead to actual loss of jobs, it indicates that unemployment will rise somewhat in the coming period.

Employment is expected to fall somewhat during the remainder of the year, and only to begin to rise again from the middle of next year. The labour force is increasing faster than employment, which will lead to unemployment rising to around 8 per cent and remaining at this level for the first half of 2013 (see Figures 1:21 and 1:22). From the end of 2013, however, employment will increase at a faster pace and unemployment will fall gradually to around 6.5 per cent towards the end of the forecast period.

The article “Has the functioning of the labour market changed?” describes different aspects of the functioning of the labour market. There are signs that the matching between vacancies and applicants has deteriorated in recent years. Something that may have contributed to this is that the population of working age has changed so that the percentage that finds it relatively more difficult to get a job has increased. However, it is also possible that there are elements of cyclical effects here. The Riksbank’s assessment is that this will mean it takes a relatively long time for unemployment to fall again.

■ Resource utilisation will increase

The Riksbank's overall assessment is that resource utilisation is at present slightly lower than normal. This assessment is supported by the Riksbank's indicators of resource utilisation, which summarise the information from surveys and from the labour market (see Figure 1:23). Other measures of resource utilisation, such as the GDP gap, unemployment, the employment rate and the hours worked gap, all point to there being spare capacity in the economy (see Figure 1:24).

During the forecast period, GDP and the number of hours worked will increase at a faster pace. This means that resource utilisation will increase and normalise during the latter part of the forecast period (see Figure 1:24). This outlook is roughly the same as in September.

■ Rising rate of wage increase

During autumn 2012 a new round of wage bargaining will begin with regard to the central agreements that expire in 2013 (see the article "The economic situation remains uncertain ahead of collective bargaining in 2013" in this report). This wage bargaining round will include roughly the same number of employees as the round begun one year ago. During the autumn requirements and conditions for the central wage agreements will be presented by the social partners.

As previously, it is expected that the wage levels set in the agreements for the manufacturing industry will act as a norm for other contractual areas. The system of the collective wage agreements in the manufacturing sector acting as norm has been an important reason why wage formation in Sweden has functioned much better since the late 1990s than it did in the 1970s and 1980s. The outcome of the wage bargaining is expected to be roughly the same as the increases agreed for 2012, which means an increase in wages in the economy as a whole of just over 3 per cent in 2013.

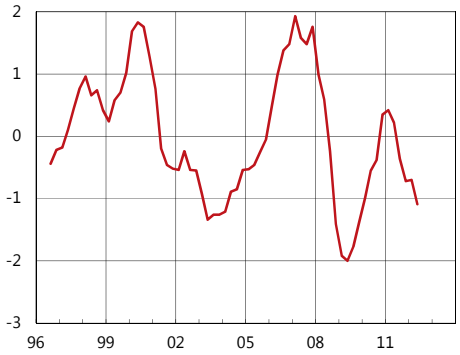
As the labour market situation improves, wages will increase, as will labour costs per hour, and will amount to almost 4 per cent in 2015 (see Figure 1:25 and Table 7).

■ Higher domestic cost pressures this year

Domestic cost pressures can be measured by unit labour costs. These are determined by how labour costs per hour develop in relation to labour productivity. This year costs are increasing faster than they did last year. This is mainly because labour productivity is increasing more slowly, which is normal bearing in mind that economic activity is now slowing down.

In the coming years, both labour costs per hour and labour productivity will increase at a faster rate. Unit labour costs will increase by around 2 per cent a year during the period 2013-2015, which is in line with the historical average (see Figure 1:25).

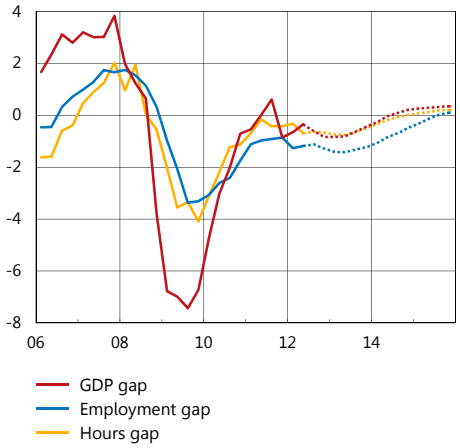
Figure 1:23. RU indicator
Standard deviation



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

Source: The Riksbank

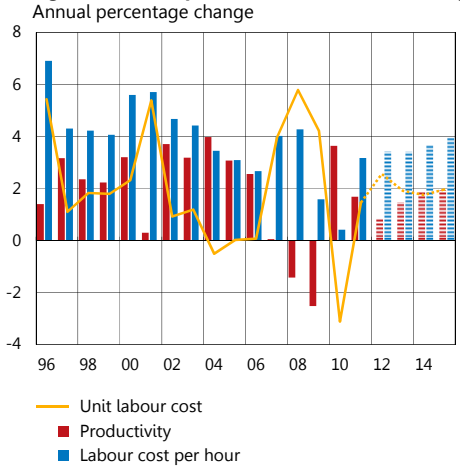
Figure 1:24. GDP and labour market gap
Per cent



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.

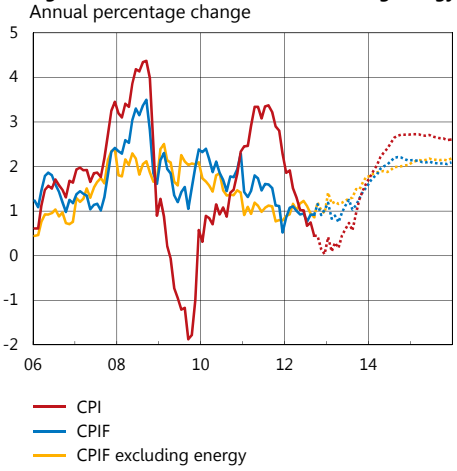
Sources: Statistics Sweden and the Riksbank

Figure 1:25. Cost pressures in the whole economy
Annual percentage change



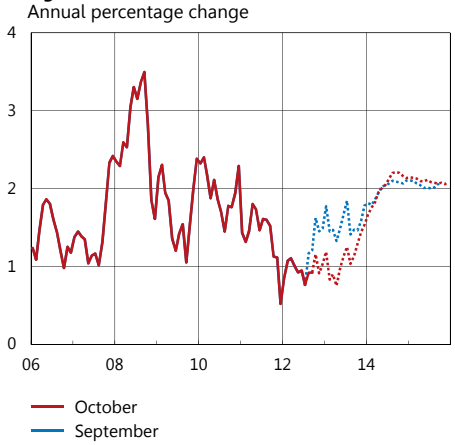
Sources: Statistics Sweden and the Riksbank

Figure 1:26. CPI, CPIF and CPIF excluding energy
Annual percentage change



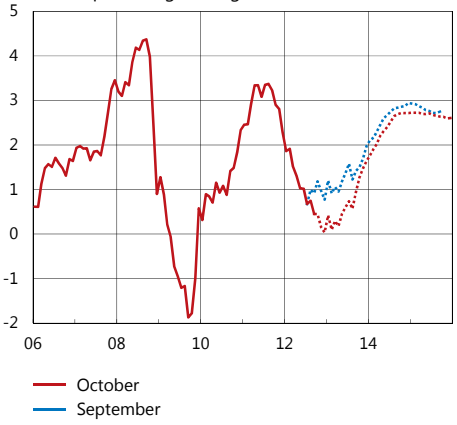
Note. The CPIF is the CPI with a fixed mortgage rate.
Sources: Statistics Sweden and the Riksbank

Figure 1:27. CPIF
Annual percentage change



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

Figure 1:28. CPI
Annual percentage change



Sources: Statistics Sweden and the Riksbank

■ Low but gradually rising inflation

Inflation is currently low, as a result of the low rate of increase in unit labour costs in recent years, the earlier krona appreciation and the low resource utilisation.

However, inflationary pressures will gradually rise during the forecast period. A low interest rate will also contribute to maintaining the rate of price increase in the coming period. Wages will increase at a faster rate as economic activity strengthens and resource utilisation rises. At the same time, the dampening effect of the krona on import prices will decline, as it is expected to be relatively stable in the coming period. CPIF inflation will approach 2 per cent at the beginning of 2014 (see Figure 1:26). CPI inflation will rise more than CPIF inflation from 2014 onwards, as households' interest expenditure, which is included in the CPI but not in the CPIF, will increase faster when the Riksbank eventually begins to raise the repo rate. The rate of increase in the CPI is expected to be around 2.5 per cent at the end of the forecast period.

During periods with large interest rate adjustments, measures of inflation that do not include interest rate costs, such as CPIF inflation, provide a better picture of inflationary pressures. In the much longer run, when the repo rate has stabilised, CPI inflation and CPIF inflation will coincide.

The forecast for inflation is revised down somewhat, compared with the forecast in September, primarily for the coming year. This is mainly due to lower energy prices and to outcomes being lower than expected in August and September (see Figures 1:27 and 1:28). CPIF inflation excluding energy prices is therefore only marginally revised downwards (see Figure 1:29).

Monetary policy considerations

■ Continued low repo rate stimulates the economy

Despite the continued weak economic activity abroad, the Swedish economy grew relatively quickly during the first half of this year. Now the weak international demand is expected to lead to a slowdown in Swedish growth. However, growth is expected to begin to increase again next year. One important condition for this forecast is that the crisis in the euro area is managed so that the uncertainty affecting developments in the region gradually subsides in 2013. As growth in the Swedish economy picks up again, the labour market and inflationary pressures will increase.

Compared with the assessment in the September Monetary Policy Update, international developments are expected to be somewhat weaker in the coming years and international policy rates are expected to be low for a longer period of time. If the repo-rate path in Sweden remained unchanged, this would strengthen the krona and lead to lower inflationary pressures in the coming years.

Demand in Sweden has so far held up relatively well and employment has been slightly stronger than expected. Nevertheless, unemployment has increased, which is because more people have entered the labour market than have found work. There are also signs that it has been taking longer for job seekers to find vacant positions,

which contributes to the Riksbank's assessment that the recovery in the labour market will be more sluggish. Although the weaker labour market is not primarily connected to poorer economic activity can such elements exist. This, together with the weaker international activity, means that the repo rate needs to remain low for a long period of time and that the increases in the repo rate should be implemented more slowly. Inflation is low at present and both CPI and CPIF inflation are adjusted downwards for the year ahead compared to the Monetary Policy Update in September. The main reason for this is lower energy prices which means that the revision for CPIF excluding energy is limited. As monetary policy affects the economy with some time lag, an immediate repo-rate cut would probably have only minor effects on the low inflation rate and economic activity in the coming year. On the other hand, there is a risk that CPIF inflation would rise above 2 per cent in a few years' time. A lower repo rate could also further increase the risks linked to households' high indebtedness.

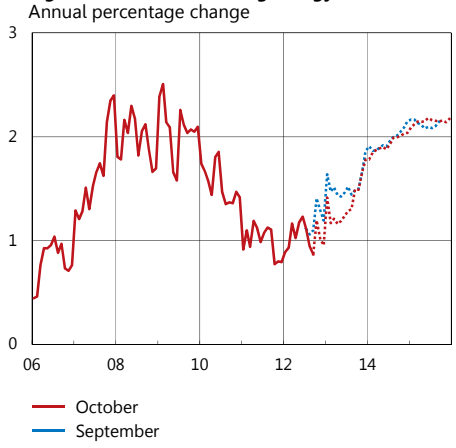
The Executive Board of the Riksbank has decided to hold the repo rate unchanged at 1.25 per cent, and to adjust the repo-rate path downwards to support economic activity and contribute to CPIF inflation being close to 2 per cent from 2014 and onwards. Inflation will therefore rise somewhat more quickly in the period ahead than would otherwise have been the case. This lower repo-rate path means that household debts as a percentage of disposable income will not increase but remain at the current levels. Towards the end of 2015 the repo rate will be 2.6 per cent, which is almost 0.5 percentage points lower than in the forecast in the September Monetary Policy Update (see Figure 1:30). The downward adjustment to the repo-rate path means that it is now more likely that the repo rate will be cut this winter than that it will be raised, and that the first increase will come later than was forecast earlier. The fact that monetary policy is expansionary is illustrated by the real repo rate being negative up to the beginning of 2015 (see Figure 1:31).

■ Economic developments are uncertain

The crisis in the euro area remains an important source of uncertainty with regard to economic developments. A lot of work and major political challenges remain before the underlying causes of the crisis are eliminated. The Swedish economy will be affected irrespective of whether the crisis worsens or whether unease subsides sooner, for example through the effects on export demand or the financial markets. It may then be necessary to further lower the repo rate, or to raise it sooner or at a faster rate than in the main scenario. In previous reports, the Riksbank has presented several scenarios that particularly highlight the uncertainty surrounding the crisis in the euro area.

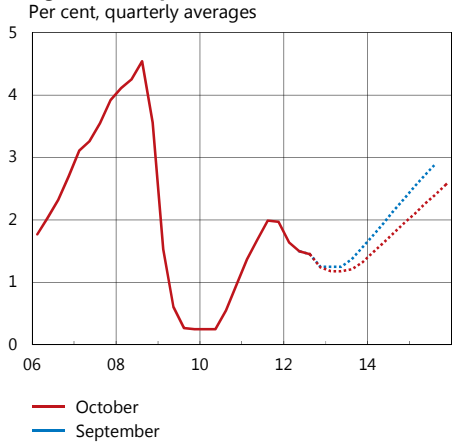
Chapter 2 of this report discusses two other alternative economic scenarios. One scenario describes how different driving forces can lead to higher growth in Sweden and that this would have various consequences for monetary policy. The second scenario describes what would happen if the krona appreciated more than expected.

Figure 1:29. CPIF excluding energy
Annual percentage change



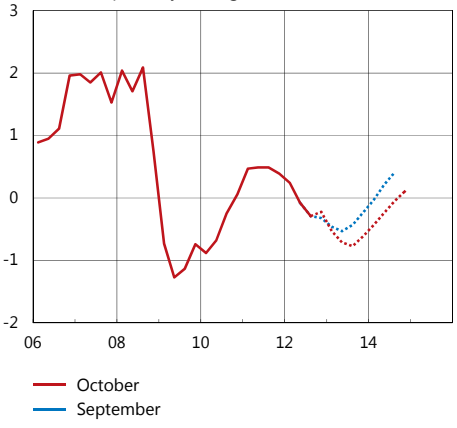
Note. The CPIF is the CPI with a fixed mortgage rate.
Sources: Statistics Sweden and the Riksbank

Figure 1:30. Repo rate
Per cent, quarterly averages



Source: The Riksbank

Figure 1:31. 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

CHAPTER 2 - Alternative scenarios and risks

Growth prospects for the years ahead are uncertain. If the development of the Swedish economy is stronger or weaker than predicted in the Riksbank's forecast, the repo-rate path may need to be changed. However, how monetary policy responds to surprising outcomes for GDP growth depends on how inflation and resource utilisation are affected. A change in GDP growth thus does not always mean that the repo rate will be changed in the same direction. The development of the krona exchange rate has been surprisingly strong in recent months. If the krona strengthens further, the repo-rate path may need to be lower. However, the exchange rate may also cause a surprise by moving in the other direction, which could lead to a higher repo-rate path. The extent to which monetary policy is affected by an altered exchange rate depends, among other things, on the impact of the exchange rate on the economy.

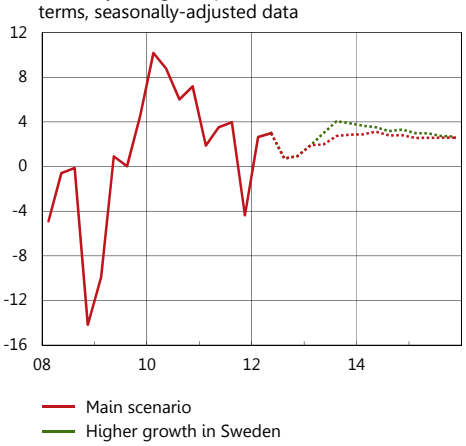
A number of circumstances could lead to a different course of economic development than the one presented in the main scenario. This is reflected in a general way in the uncertainty bands around the forecasts in Figures 1:2-1:5. The debt crisis in the euro area is still a main source of this uncertainty. By stating that in certain circumstances it is prepared to purchase government bonds, the European Central Bank (ECB) has actually helped to create a state of relative calm on the financial markets.[6] But much work and major political challenges remain before the underlying causes of the crisis are eliminated. The Swedish economy will be affected irrespective of whether the crisis worsens or whether unease subsides, for example through the effects on export demand or the financial markets. It may then be necessary to lower the repo rate, or to raise it at a faster rate than in the main scenario. In previous reports, the Riksbank has presented several scenarios that particularly highlight the uncertainty surrounding the European debt crisis.[7]

In this report, we instead present two economic scenarios that focus on GDP growth in Sweden and the krona exchange rate.[8] The scenario "Higher growth in Sweden" illustrates the fact that the monetary policy response differs depending on what drives higher (or lower) growth. One possible cause of higher GDP growth is a temporary increase in labour productivity. Such an increase would lead to lower costs for the companies, subdued resource utilisation and lower inflation. In order to counteract these effects, the Riksbank chooses a lower repo-rate path than in the main scenario. A change in GDP growth thus does not always result in a change in the repo rate in the same direction. For example, ahead of the monetary policy meeting in September, preliminary statistics showed that GDP grew by as much as 1.4 per cent during the second quarter compared with the first quarter of this year. The fact that this strong growth went hand in hand with unexpectedly high productivity growth was one reason for concluding that cost pressures in the period ahead would be lower than in the Riksbank's previous assessment in July.[9]

Another possible cause of higher GDP growth is higher domestic demand. If demand increases, cost pressures will increase and there is a risk that resource utilisation will rise above its normal level. If this

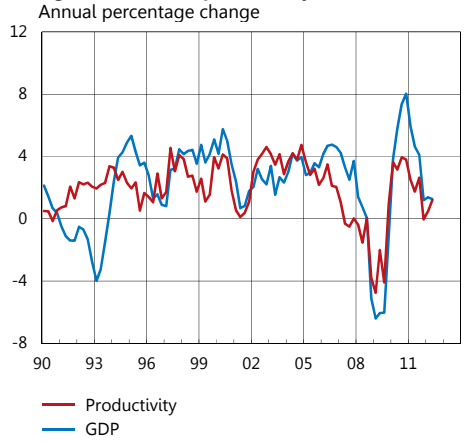
[6] The conditions relating to the ECB's programme Outright Monetary Transactions, OMT, are described in the article "New measures to manage the crisis in the euro area".
[7] See Chapter 2 in the Monetary Policy Reports of October 2011 and July 2012.
[8] The scenarios in this chapter are based on the Riksbank's macroeconomic model, Ramses. For a description of the model see Christiano, L., Trabandt M. and Walentin, K. (2007), "Introducing financial frictions and unemployment into a small open economy model", Working Paper no. 214, Sveriges Riksbank.
[9] The figure for GDP growth in the second quarter has since been revised downwards. Despite this, productivity growth in the second quarter was stronger than the Riksbank's assessment in July.

Figure 2:1. GDP
Quarterly changes in per cent calculated in annualized terms, seasonally-adjusted data



Sources: Statistics Sweden and the Riksbank

Figure 2:2. Labour productivity and GDP
Annual percentage change



Sources: Statistics Sweden and the Riksbank

happens, the Riksbank may instead bring forward the planned repo-rate increases.

The future development of the exchange rate is another constant source of uncertainty. In the scenario "Stronger exchange rate" the krona strengthens unexpectedly in early 2013. The real, trade-weighted exchange rate initially appreciates by just over 3 per cent. The exchange rate then affects inflation in Sweden through the price of imported goods. Resource utilisation is also reduced, which further restrains the rate of price increases. The repo-rate path is therefore lower than in the main scenario. However, it is uncertain how much inflation and resource utilisation are affected by a given strengthening of the exchange rate. The scenario illustrates this uncertainty by describing the effects given various assumptions about the impact of the exchange rate on the economy.

In addition to these alternative scenarios for the development of the economy, this chapter also contains a section that discusses the effects on the economy if the Riksbank chose to conduct a somewhat different monetary policy than the one assumed in the main scenario.

Alternative scenario: Higher growth in Sweden

Growth in the Swedish economy may for various reasons be higher or lower than outlined in the main scenario. Here we describe a scenario in which growth in 2013 is 0.4 percentage points higher, and in 2014 0.8 percentage points higher, than in the main scenario (see Figure 2:1 and Tables 8 and 9). Depending on the causes underlying the higher rate of growth, the consequences may be either a higher or a lower repo-rate path. With the aim of clarifying how monetary policy is affected by an unexpected change in GDP growth, the scenario is presented in two versions. In the first version growth is driven by an unexpectedly strong development of productivity, while in the second version higher domestic demand lies behind the surprising GDP growth.

■ Productivity growth is difficult to assess

Figure 2:2 shows the growth of labour productivity and GDP growth in Sweden from 1990 to 2012.[10] During this period, labour productivity has improved on average by almost 2 per cent per year. This trend growth in productivity rests among other things on the companies' efforts to improve the efficiency of production by means of rationalisation measures and new investments. However, Figure 2:2 also clearly shows that the actual growth of productivity varies quite considerably from year to year. The fluctuations have been particularly sizeable in recent years, but even previously it has been common for periods of relatively rapid growth in labour productivity to be followed by periods of much lower growth.

There are probably several reasons why productivity growth varies from quarter to quarter and year to year. The companies' efforts to improve efficiency and develop their products do not always progress at an even and steady rate. Innovations and new production methods sometimes lead to improvements that are quickly adopted by many companies in several different sectors. Sometimes, however, it may

[10] Labour productivity refers here to the ratio between GDP and the total number of hours worked.

instead take a little time before the changes become visible at the aggregated level. Factors such as these can lead to variations in productivity growth over time.

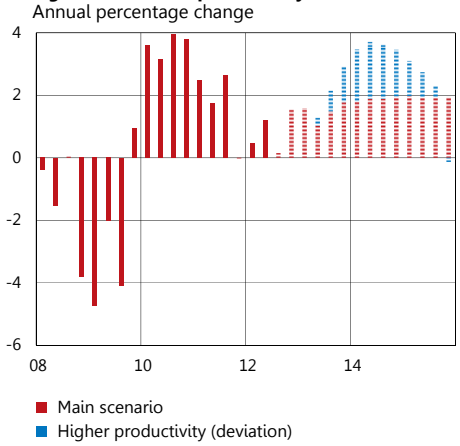
Another factor that contributes to fluctuations in productivity is the time it takes for the companies to adapt their labour force to changes in economic activity. If there is a rapid downturn in demand, for example, it usually takes one or two quarters for companies to begin making staff cuts. There may be administrative reasons for such time lags, but they may also be due to the companies waiting to make skilled personnel redundant until they know whether the downturn will be long term or not. The consequence is that production decreases faster than the labour force, which leads to lower productivity. During an upturn in economic activity, the fact that some companies wait to recruit new staff can in a similar way lead production to rise more rapidly than the number of employees.

■ Higher productivity leads to lower real costs

The main scenario is based on the assumption that labour productivity will increase by approximately 1.5 per cent in 2013 and thereafter by almost 2 per cent per year. However, for the reasons discussed above, it is difficult to make exact forecasts of productivity growth and growth has been particularly volatile in recent years. In the scenario with higher productivity, on average productivity growth will be 2.0 per cent in 2013 and 3.6 in the following year (see Figure 2:3). An improvement in productivity means that companies can generate a greater economic value from a given input of labour and capital. This reduces the companies' real marginal costs, that is, the real additional costs that arise if a company chooses to marginally increase its production. When cost pressures fall, some companies choose to reduce their prices or to increase them at a slower rate. This reduces inflation. This is illustrated in Figure 2:4 with inflation measured in terms of the CPIF.

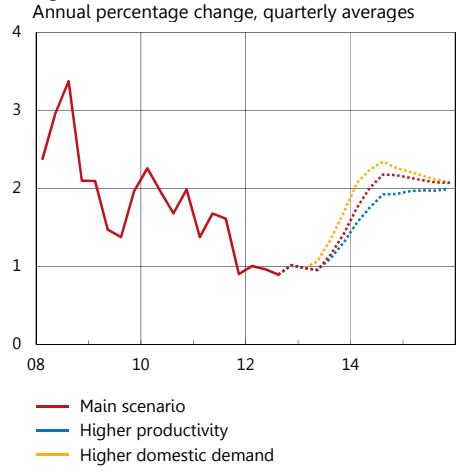
When prices become comparatively lower, the demand for the companies' products increases. The price change is thus important in enabling demand to increase and therefore to adapt to the higher volume of production that the companies can achieve now that their productivity is higher. Normally, however, not all companies choose to immediately change their prices when their situation changes. Many companies in fact choose to change their prices relatively rarely. Such sluggishness in pricing may mean that the average price change is not big enough for demand to fully adapt to the new conditions. Total demand will simply not increase as much as productivity increases. The consequence of this is that some companies will reduce their labour input. Figure 2:5 shows how resource utilisation on the labour market is initially somewhat lower than in the main scenario[11]. However, as companies envisage an eventual increase in demand, they are cautious about making personnel redundant and unemployment is therefore affected to a fairly limited extent (see Figure 2:6).

Figure 2:3. Labour productivity
Annual percentage change



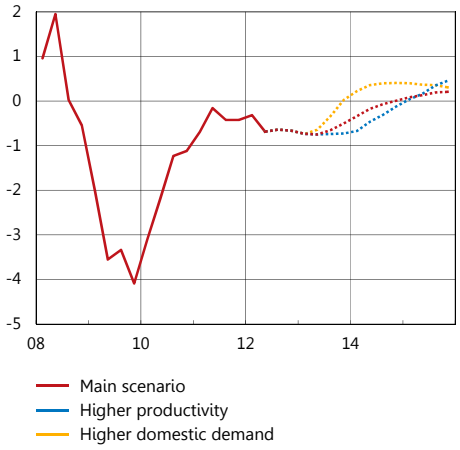
Sources: Statistics Sweden and the Riksbank

Figure 2:4. CPIF
Annual percentage change, quarterly averages



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

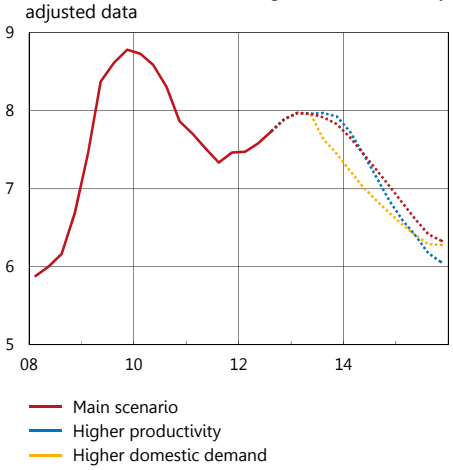
Figure 2:5. Hours gap
Per cent



Sources: Statistics Sweden and the Riksbank

[11]Measured in terms of the hours gap, resource utilisation is thus significantly lower than in the main scenario (the hours gap closes more slowly). If resource utilisation is instead measured using the GDP gap, where the trend is calculated using a production function, the result is the opposite: resource utilisation is higher than in the main scenario. The background to this result is that the scenario's temporarily higher level of productivity growth is not assumed to affect potential GDP.

Figure 2:6. Unemployment
Per cent of the labour force, aged 15-74, seasonally-adjusted data



Sources: Statistics Sweden and the Riksbank

■ More optimistic households lead to higher demand and faster growth

Alongside the development of productivity, household demand is an important factor that affects GDP growth. Household consumption accounts for almost half of GDP and the choices that households make between consumption and saving are therefore highly important. It is probable that the uncertainty about the development of the economy in recent years has led a number of households to increase their saving.

In the main scenario, it is assumed that the savings ratio will decrease gradually as uncertainty about developments in the euro area declines and the general economic situation improves (see Figure 1:14). However, it is difficult to assess by how much and how quickly the households will increase their consumption. In the scenario with higher domestic demand, household expectations about the development of the economy in the period ahead improve more rapidly than in the main scenario. Uncertainty fades and brighter growth prospects make the households more optimistic. Consumption therefore grows more rapidly than in the main scenario, and the savings ratio is lower. The companies increase their production in order to meet the higher level of demand and growth is thus higher than in the main scenario. In order to make comparison easier, it is assumed that demand will increase just enough so that GDP growth is the same in this scenario as in the scenario with higher productivity (see Figure 2:1).

■ Resource utilisation and inflation rise more quickly

In contrast to the productivity scenario, the higher rate of growth in this scenario is thus due to higher demand. When companies increase their production they must therefore increase the input of capital and labour. Overtime work becomes more common and some companies recruit new staff. Resource utilisation on the labour market increases faster than in the main scenario and is higher than normal from the beginning of 2014 (see Figure 2:5). Unemployment also falls faster than in the main scenario (see Figure 2:6). The higher level of demand therefore leads to higher wages and purchasing prices, which ultimately also leads to a higher rate of price increases for the consumers. Inflation is thus higher than in the main scenario and from the beginning of 2014 CPIF inflation will be higher than 2 per cent (see Figure 2:4, Table 9).

■ Monetary policy reacts differently

In the two scenarios for Swedish growth presented here, inflation and resource utilisation are affected in different ways. In the scenario with higher productivity, falling real costs lead to lower inflation. However, sluggishness in price formation partly counteracts this effect and demand therefore tends to not fully adapt to the increase in supply. When productivity develops better than expected, there are therefore good reasons for the Riksbank to choose a somewhat lower repo-rate path. Demand will then be higher than if the repo-rate path were left unchanged. Monetary policy thus helps to keep up inflation and resource utilisation (see Figure 2:7). The initially slower increase in the repo rate means that the corresponding difference between CPI inflation in the productivity scenario and in the main scenario is somewhat larger than the difference in CPIF inflation (cf. Figures 2:4 and 2:8).

In the scenario with higher domestic demand, the effects on inflation and resource utilisation are the opposite. To avoid inflation being too high above the target of 2 per cent, the repo rate is therefore increased more rapidly than in the main scenario (see Figure 2:7). The higher repo rate dampens demand and thus also helps to stabilise resource utilisation around a normal level.

Alternative scenario: Stronger krona

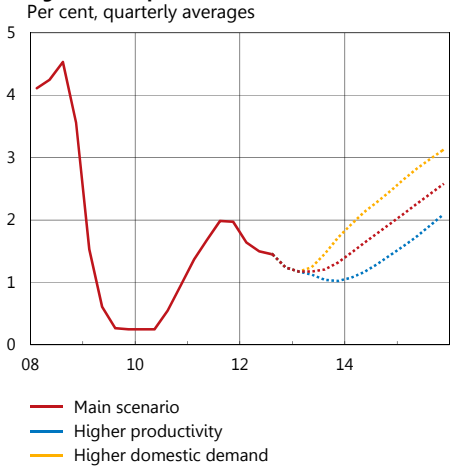
The krona exchange rate strengthened significantly during July and August and at the time of the monetary policy meeting in September the trade-weighted rate (KIX) was 3 per cent stronger than at the time of the meeting in July. The krona has weakened since then and is now just under 1 per cent stronger than in early July.

The strengthening of the krona was probably due to several factors. Swedish GDP growth has been unexpectedly strong at the same time as statistics from the euro area have indicated that development will continue to be weak. Sweden's relatively strong public finances and differences in monetary policy expectations have probably also played a role.

The strengthening of the krona may also be due to changes in various risk premiums. The expected return on a financial asset depends on both the agreed interest rate and the risks associated with the asset. When the risks associated with investments in Swedish kronor decline compared to the risks associated with other currencies, the krona exchange rate usually strengthens. Conversely, rising relative risk premiums for assets in Swedish kronor usually lead to a weakening of the exchange rate. Given the considerable uncertainty that prevails about developments in the euro area, it cannot be ruled out that revised assessments of such relative risk premiums have contributed to the comparatively large fluctuations in the krona exchange rate that we have seen in recent months.

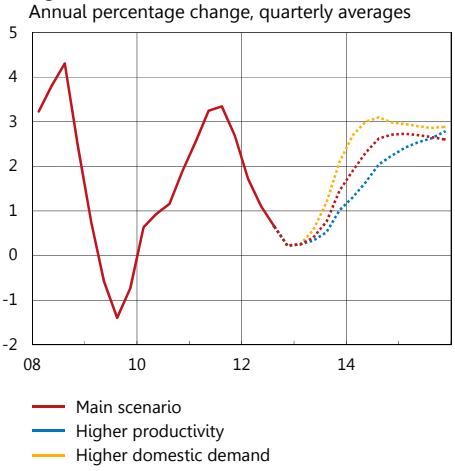
In this scenario we discuss the effects of falling risk premiums on investments in Swedish kronor and any appreciation relating to this. However, it is important to point out that development may also take the opposite course. Previously, increased uncertainty and stress on the international financial markets has usually led to a weakening of the krona. If uncertainty increases once again, the exchange rate may also weaken again.

Figure 2:7. Repo rate
Per cent, quarterly averages



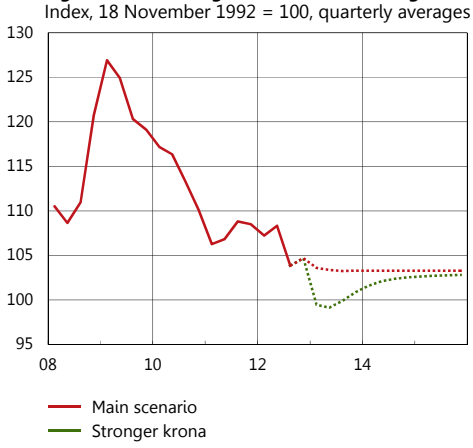
Source: The Riksbank

Figure 2:8. CPI
Annual percentage change, quarterly averages



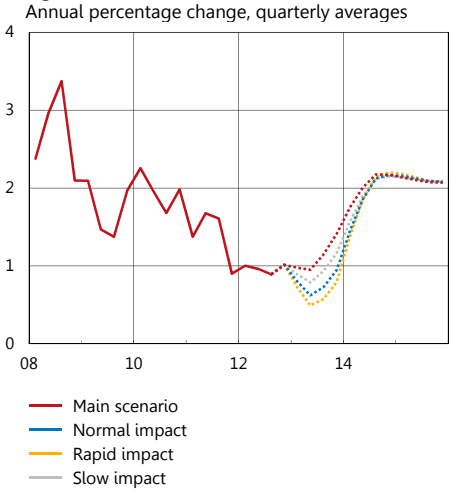
Sources: Statistics Sweden and the Riksbank

Figure 2:9. KIX-weighted nominal exchange rate
Index, 18 November 1992 = 100, quarterly averages



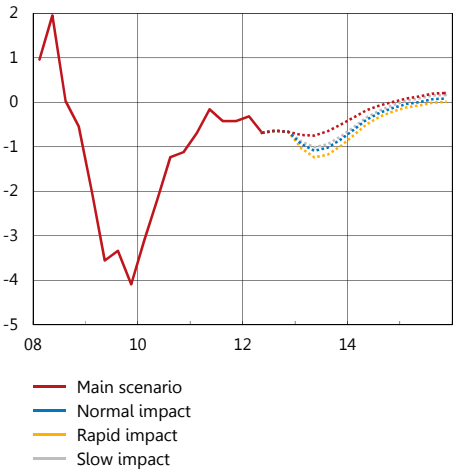
Note. KIX is an aggregate of Sweden's most important trading partners.
Source: The Riksbank

Figure 2:10. CPIF
Annual percentage change, quarterly averages



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

Figure 2:11. Hours gap
Per cent



Sources: Statistics Sweden and the Riksbank

■ Stronger exchange rate leads to lower inflation and resource utilisation

In the "Stronger krona" scenario, the krona unexpectedly strengthens during the first quarter of 2013. At most, the trade-weighted exchange rate (KIX) is approximately 4 per cent stronger than in the main scenario (see Figure 2:9). After several years, the strengthening of the krona diminishes and the real exchange rate returns to the path outlined in the main scenario. When the value of the krona increases in relation to other currencies, the purchase price in kronor of the goods and services imported to Sweden increases. It is therefore natural that the price set in kronor for these products is lowered (or increased at a slower rate).A stronger exchange rate thus has a dampening effect on inflation.
A stronger exchange rate also means that products manufactured in Sweden become more expensive compared to foreign products.
A stronger krona therefore generally leads to some slowdown in Swedish exports and to Swedish companies and households choosing to buy imported goods to a greater extent than previously. This results in lower demand in Sweden and to some decline in resource utilisation.

■ The magnitude of the effects is uncertain

Several factors affect how great the impact of a change in the exchange rate will be on inflation and resource utilisation. One such factor is how quickly changes in the exchange rate lead to changes in the prices of imported goods. If, for example, many importing companies use forward contracts in order to hedge against fluctuations in the krona exchange rate, it may take longer on average before the price charged to consumers in Sweden is changed. For some companies and products, such forward contracts may mean that temporary fluctuations in the exchange rate have hardly any impact at all on Swedish consumer prices.

Another significant factor is the size of the import content in different sectors. Almost all companies use imported input goods in their production to a greater or lesser extent. The price of goods or services produced in Sweden may therefore be affected indirectly if the price of imported input goods changes when the exchange rate changes.

The impact of the exchange rate on import prices and the import content in different sectors may both change over time. Such changes are a source of uncertainty in the assessment of the exchange rate's impact on the Swedish economy. In order to highlight this uncertainty, the scenario's effects on inflation and resource utilisation are presented under different assumptions regarding the impact of the exchange rate. In Figure 2:10, the blue line shows the effect on the CPIF inflation estimated using the Riksbank's macroeconomic model. CPIF inflation will at most be approximately 0.3 percentage points lower than in the main scenario, while resource utilisation will also be lower (see Figures 2:11 and 2:12).

If the impact of the exchange rate on import prices is slower, then the effects on inflation and resource utilisation will be smaller. In Figures 2:10 and 2:11, the grey lines show how inflation and the hours gap will be affected if importing companies change their prices less frequently. Similarly, the impact of the strengthening of the krona on inflation will be

greater if it is assumed to take place more quickly. In this case the effects on resource utilisation will also be more tangible (yellow line).[12]

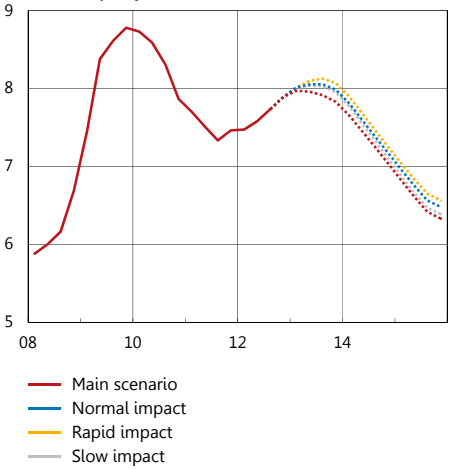
- **The impact of the exchange rate on monetary policy depends on its impact on inflation and resource utilisation.**

To the extent that the exchange rate is affected by interest rate spreads between Sweden and other countries, a lower repo rate can directly counteract the effects of the unexpected strengthening. However, the repo rate also affects inflation and resource utilisation in Sweden through other channels. One such important channel is the significance of the repo rate to the return on saving and to borrowing costs. By choosing a lower path for the repo rate, the Riksbank can affect the total demand for Swedish goods and services. This would counteract the dampening effect that a strengthening of the exchange rate has on resource utilisation. By keeping up resource utilisation, monetary policy also affects costs and thus inflation. How much monetary policy reacts to an unexpected strengthening of the exchange rate depends on the impact this strengthening has on inflation and resource utilisation. The greater the impact on inflation, the greater the risk of inflation being even further from the target of 2 per cent. There are therefore good reasons to lower the repo-rate path more the greater the impact of the exchange rate is (see Figure 2:13). By lowering the repo rate, monetary policy also helps to stabilise resource utilisation. Figure 2:14 shows the effects of the strengthening of the exchange rate on CPI inflation. As the repo rate is set lower than in the main scenario, the impact on CPI inflation is greater than on CPIF inflation.

Alternative paths for the repo rate

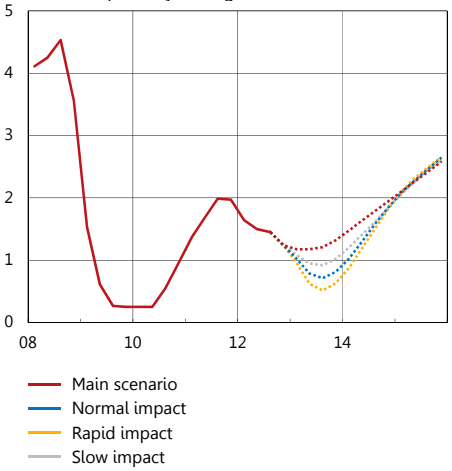
In this section we present how inflation and some different measures of resource utilisation may develop if the Riksbank were to choose a somewhat different monetary policy than that assumed in the main scenario. In a first illustrative calculation, the repo rate is set at a level 0.25 percentage points lower than in the main scenario's repo-rate path over a period of four quarters. A second illustrative calculation instead assumes a repo-rate path that is 0.25 percentage points higher than in the main scenario over four quarters (see Figure 2:15). These illustrative calculations are part of the underlying material for monetary policy which taken as a whole aims to illuminate what is a well-balanced monetary policy.

Figure 2:12. Unemployment
Per cent of the labour force, aged 15-74, seasonally-adjusted data



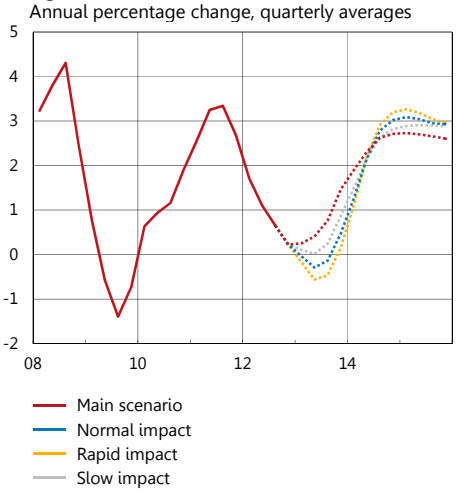
Sources: Statistics Sweden and the Riksbank

Figure 2:13. Repo rate
Per cent, quarterly averages



Source: The Riksbank

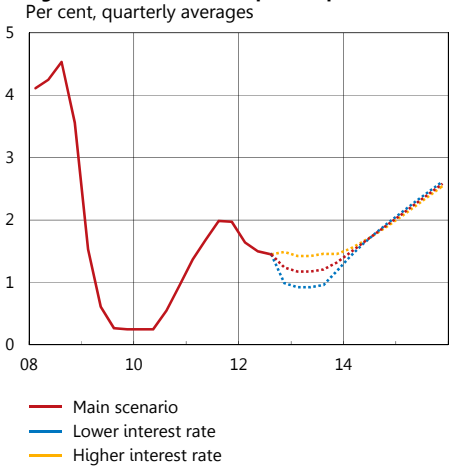
Figure 2:14. CPI
Annual percentage change, quarterly averages



Sources: Statistics Sweden and the Riksbank

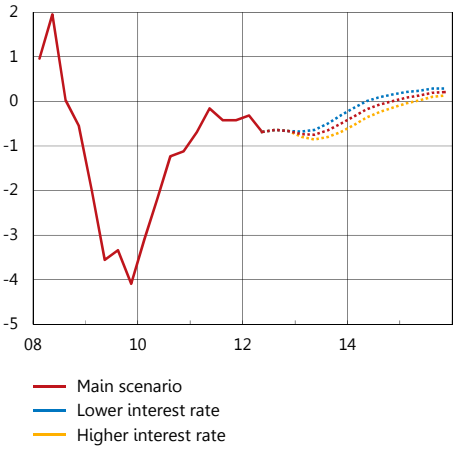
[12] In the two versions of the scenario that are called "Slow impact" and "Rapid impact", two changes are made compared to the version called "Normal impact". First, the frequency with which importing companies alter their prices is changed. Second, it is also assumed that companies and households are a little less or a little more price sensitive when choosing between foreign and domestic products. The Monetary Policy Report published in February this year discusses scenarios in which the krona exchange rate strengthens or weakens in relation to the main scenario. The effects on the Swedish economy presented there are equivalent to the impact that is here designated as "normal" and that has been estimated using the Riksbank's macroeconomic model.

Figure 2:15. Alternative repo-rate paths
Per cent, quarterly averages



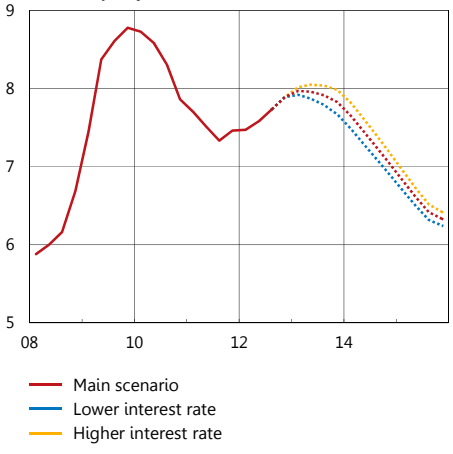
Source: The Riksbank

Figure 2:16. Hours gap
Per cent



Sources: Statistics Sweden and the Riksbank

Figure 2:17. Unemployment
Per cent of the labour force, aged 15-74, seasonally-adjusted data



Sources: Statistics Sweden and the Riksbank

■ Inflation and resource utilisation in the event of a lower or higher repo-rate path

A lower repo rate makes it relatively cheaper to borrow money, but also lowers the return on savings. This stimulates household consumption and corporate investment costs fall. A lower repo-rate path can therefore be expected to lead to total demand being somewhat higher. The repo rate's impact on the krona exchange rate also contributes to this. When the repo rate is lowered, it becomes comparatively less profitable to invest in financial assets in Swedish kronor. A lower repo rate therefore tends to lead to a weaker exchange rate, which stimulates the demand for Swedish exports and restrains the demand for imports. In order to meet the higher demand for their products, the companies increase their use of labour, machinery and input goods. Resource utilisation thus increases somewhat.

An increase in resource utilisation on the labour market exerts upward pressure on wages. The prices of machinery, input goods and premises also increase more rapidly. In order to compensate for the higher costs, the companies choose to increase their prices at a faster rate. All this ultimately leads to increases in consumer prices. The weaker exchange rate, which leads to somewhat higher import prices, also contributes to this. All in all, a lower repo rate leads to higher inflation and higher resource utilisation (see Figures 2:16 to 2:19).

A higher repo-rate path instead leads households to restrain their consumption and demand thus falls. The investment rate also declines and a stronger exchange rate leads to weaker demand for Swedish exports. Resource utilisation is somewhat lower and the rate of price increases declines.

■ The illustrative calculations do not capture all the significant factors

The calculations with a somewhat higher or lower repo-rate path presented here are based on a macroeconomic model of the Swedish economy, which takes into account several different factors that affect inflation and resource utilisation. However, inflation and resource utilisation can also be affected by other factors that are not captured in these calculations.

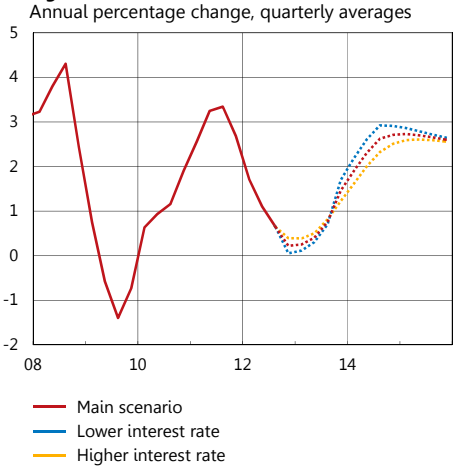
The level of household debt is one such factor. A rapid build-up of debt may make the economy more sensitive to disruptions, even if it is not seen as a threat to financial stability. Monetary policy may therefore need to be somewhat less expansionary to subdue indebtedness and reduce the risk of large fluctuations in resource utilisation and inflation in the future.

Another factor that may affect monetary policy considerations is how quickly monetary policy has an impact on the economy. The illustrative calculations described in Figures 2:15 to 2:19 are based on empirically-estimated links between changes in the repo rate and their effects on the real economy and inflation. According to these estimates, the impact of the repo rate is equivalent to the average impact during the period of time used when estimating the model.

The recent slowdown in the economy is largely due to weak economic development abroad and its negative effects on the demand for Swedish exports, which is limiting the willingness of companies to invest. It is probably also the case that the major uncertainty about the development of economic activity abroad is leading many companies to postpone planned investments. Under these circumstances, it is not certain that monetary policy has the same rapid impact on inflation and resource utilisation as in the illustrative calculations presented here.

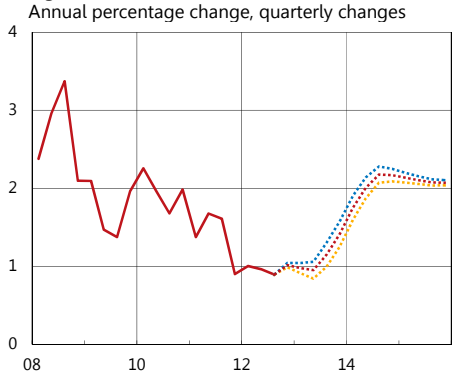
If monetary policy has a more gradual impact on the economy, a lower repo-rate path would still stimulate demand and increase inflation. But the effects would be greatest towards the end of the forecast period, when according to the main scenario resource utilisation will be somewhat above its normal level, CPIF inflation will be around 2 per cent and CPI inflation will be clearly above the inflation target

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



Sources: Statistics Sweden and the Riksbank

Figure 2:19. CPIF
Annual percentage change, quarterly changes



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

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 economic prospects in the coming quarters.

Development remains weak in the euro area, entailing serious risks. Nevertheless, unease on the financial markets has recently decreased slightly, among other reasons due to the implemented or announced central bank measures. The US economy is growing at a moderate pace from a historical perspective, while the rapidly-growing emerging economies have slowed slightly.

Sweden had relatively strong growth over the first six months of the year. However, several indicators for the development of the Swedish economy now point to a slowdown. The labour force is presently growing faster than employment, meaning that unemployment is rising. Inflationary pressures are still low.

Reduced market unease after central bank measures

Lower funding costs for sovereign debt crisis countries

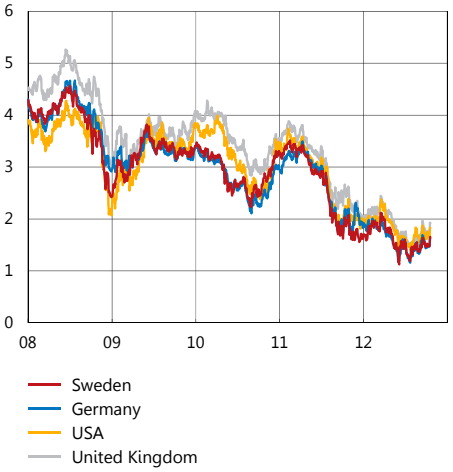
Since the Monetary Policy Update was published in September, unease on the financial markets has continued to decline, despite the fact that the structural problems in the euro area are far from being solved. The more positive mood is due, above all, to the repeated announcement of measures and monetary policy stimulation by the ECB and Federal Reserve. Interest rates on government bonds in the sovereign debt crisis countries have decreased at the same time as they have increased somewhat in the United States, Germany and Sweden as demand for safer investments has fallen (see Figure 3:1).

The lower borrowing costs for Spain and Italy relate to the ECB's new programme for bond purchases (Outright Monetary Transactions or OMT) (see Figure 3:2). The aim of and the conditions governing such bond purchases are described in the article "New measures to manage the crisis in the euro area". The focus of the financial markets has above all been directed at Spain. A large portion of the country's bonds mature in October, but, as yet, the Spanish government has neither applied for assistance from the European Stability Mechanism (the European crisis fund) nor utilised the euro countries' promise of loans via the ESM to the Spanish banks, issued in June. In Greece, the governing coalition has so far had problems in reaching agreement on the savings demanded by the troika (the ECB, the European Commission and the IMF). The portion of the crisis programme's assistance that should have been paid out in June is thus expected to be further delayed.

Rising asset prices

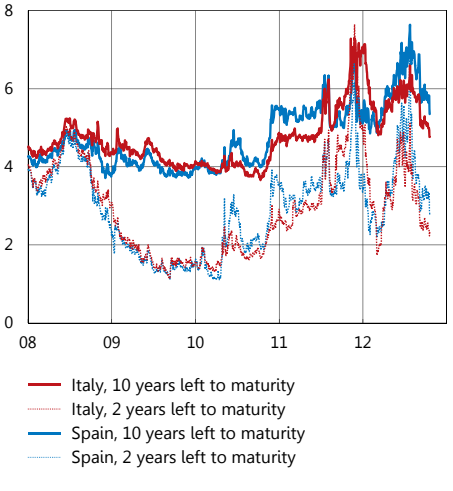
The price of high-risk financial assets such as equities has continued to increase since the start of September, even though growth prospects have been revised downwards by market participants and uncertainty remains over developments in the sovereign debt crisis countries. This may be because the central banks' measures have contributed towards reduced unease on the financial markets, which, together with the low return on safe bonds and the high dividend on equities, has pushed up the price of equities (see Figure 3:3).

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



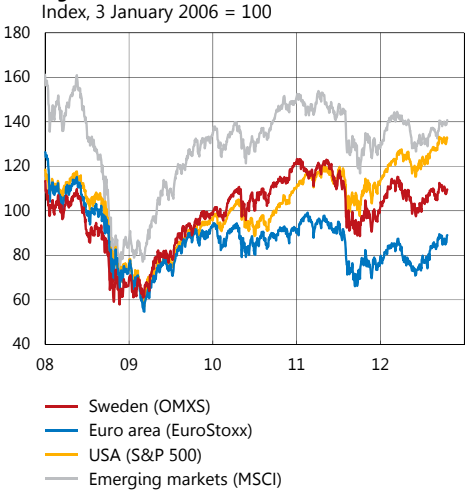
Source: Reuters EcoWin

Figure 3:2. Government bond rates with 2 and 10 years left to maturity
Per cent



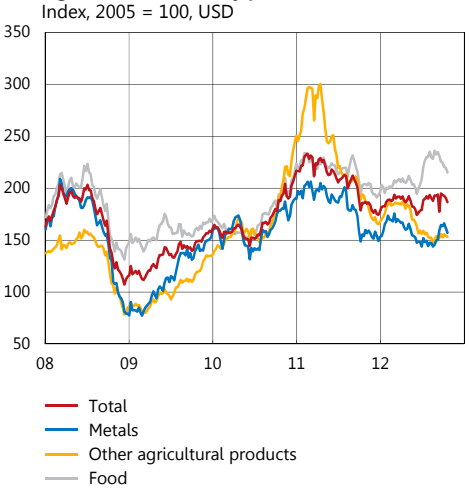
Source: Reuters EcoWin

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



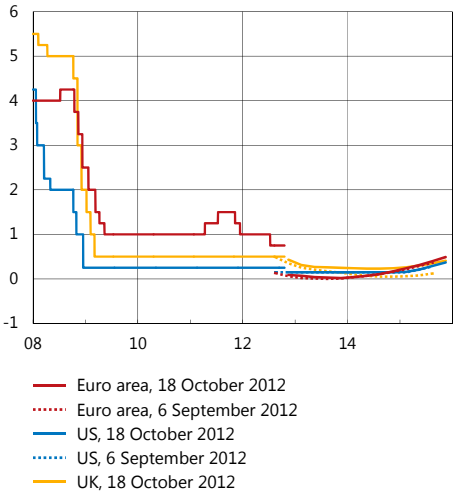
Sources: Morgan Stanley Capital International, Reuters EcoWin, Standard & Poor's and STOXX Limited

Figure 3:4. Commodity prices
Index, 2005 = 100, USD



Source: The Economist

Figure 3:5. Policy rate expectations measured in terms of market prices in the euro area, USA and UK
Per cent



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

Sources: Reuters EcoWin and the Riksbank

The Swedish stock market has risen with the global equity index, although without increasing as much. Expectations of future profits have been revised downwards over the year and only half of the second quarter's company reports exceeded expectations.

The summer's drought in the United States led to significant increases in the price of grain, which, in turn, contributed to the increase of a broad index of commodity prices (see Figure 3:4). However, certain cyclically-sensitive commodity prices have recently fallen slightly. For example, the price of copper has fallen, partly due to the slowdown in China.

■ Policy rates expected to remain low

International policy rates are expected to be very low for a long time to come (see Figure 3.5). Forward rates remain low in several currency areas and have fallen slightly in the United Kingdom. Their pricing on the money market suggests that the ECB will cut its policy rate to 0.50 per cent this year, while the Federal Reserve is expected to hold its policy rate unchanged at a very low level for several years to come.

The ECB held its policy rate unchanged at its meeting in September and also announced the new programme for bond purchases (OMT). In the United States, the Federal Reserve decided at its latest meeting in September to purchase mortgage-backed securities (MBSs) to an amount of USD 40 billion per month. These purchases are aimed at strengthening the households' economies by lowering mortgage rates and thereby stimulating demand. These bond purchases will continue until prospects on the labour market improve. In addition, the Federal Reserve will continue to extend its holding of bonds.

The Bank of England has held its policy rate and the volumes of extraordinary measures at unchanged levels since its monetary policy meeting in July, when a further GDP 50 billion of asset purchases was announced. Together with the UK government, it simultaneously launched the Funding for Lending Scheme, a credit facility aimed at increasing lending from banks to households and companies. Taken together, these measures, and expectations of further measures, have contributed towards lower market interest rates in the United Kingdom.

In Japan, the central bank announced, at its meeting in September, increased asset purchases in an amount of JPY 10,000 billion for a total of JPY 80,000 billion (approximately USD 1000 billion).

Since the Riksbank's monetary policy meeting in September, expectations have remained regarding a further cut in interest rates this year (see Figure 3:6). Pricing on the money market suggests that the repo rate is expected to be lowered to 1 per cent before the end of the year and cut once again in 2013. Prospera's latest survey shows that the participants on the money market expect the repo rate to be cut to 1 per cent this year.

■ Inexpensive funding for Swedish banks at present

European banks have benefited from the ECB's measures. The banks have had more or less unlimited access to inexpensive euro funding from the ECB, which has pushed market rates in the euro area down to record lows. The loan conditions for Swedish banks are also very favourable despite the fact that Swedish policy rate is higher than the euro area's. The banks' low interest rates for borrowing in kronor and other currencies are reflected, for example, in the fall of the three-month Stibor rate (see Figure 3:7). The Stibor rate for a loan between tomorrow and the day after has decreased to a level just 0.05 percentage points above the Riksbank's repo rate. This is close to the level that prevailed in 2010, when there was far too much liquidity in the Swedish banking system. The Swedish banks' prospects of obtaining funding by issuing bonds also remain good and costs have fallen for loans with longer maturities. To date, developments in the euro area have thus led to more favourable funding conditions, rather than the opposite. However, it is important to point out that current developments entail major risks and that the situation can therefore change quickly.

■ Lower interest rates for households and companies after repo-rate cut

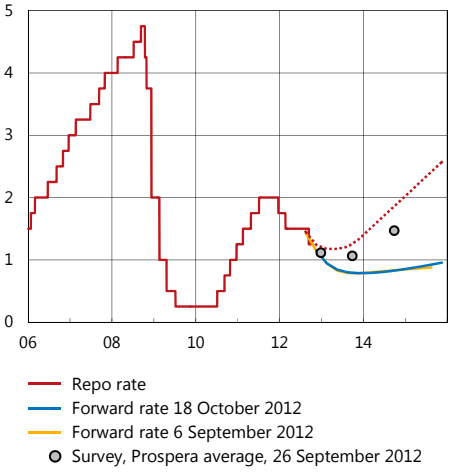
The banks' strong prospects of obtaining inexpensive funding at present have also made it less expensive for households to borrow. The average mortgage rate for households continued to fall during August and, in addition, listed mortgage rates were reduced after the repo-rate cut in September (see Figure 3:7). Since September, the difference between the variable mortgage rates and the repo rate has thus decreased due to the lower funding costs now being incurred by the banks. The average interest rates faced by companies also fell in August, due to the fall in interest rates with a maturity of up to five years.

■ But demand for credit is continuing to increase slowly

The rate of lending to households and companies stopped decreasing in August (see Figure 3:8). However, to households, it is still lower than it has been in a decade. The level of household indebtedness is, nevertheless, still high both historically and in comparison with other countries. Prices for detached houses and tenant-owned apartments have risen recently and are now at about the same level as at the start of the year (see Figure 3:9). Lower costs for loans may provide one explanation for this development.

The rate of corporate borrowing is growing relatively slowly at present (see Figure 3:8). Although, according to the National Institute of Economic Research's Economic Tendency Survey from September, three out of four companies consider that their funding situation is normal. But over the last year the proportion of companies considering their funding situation to be more difficult than normal has increased from 14 per cent to 20 per cent. According to Almi Företagspartner's lending indicator, the proportion of bank managers expecting increased lending has fallen for two quarters in a row, with slightly fewer than four out of ten bank managers now believing that their lending will increase over the year ahead. However, according to the Riksbank's business survey, a clear

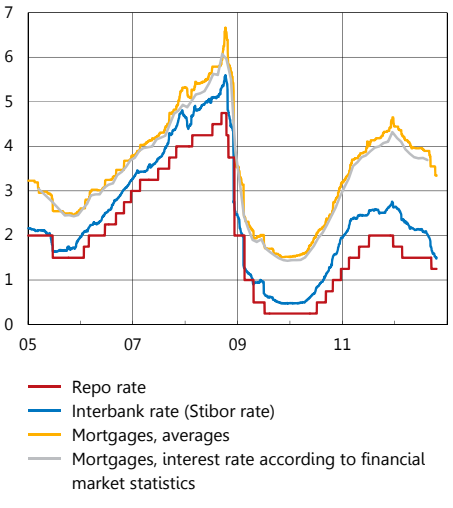
Figure 3:6. Repo rate expectations in Sweden measured in terms of market prices and survey, money market participants
Per cent



Note. Forward rates have been adjusted for risk premiums and describe the expected overnight rate.

Sources: Reuters EcoWin, TNS SIFO Prospera and the Riksbank

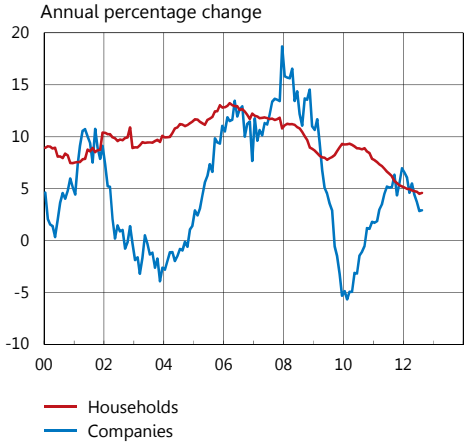
Figure 3:7. Short-term interest rates in Sweden
Per cent



Note. Refers to average of three-month listed mortgage rates from banks and mortgage institutions, the three month interbank rate and the monthly average for three month mortgage rates for new loans according to the Riksbank´s financial market statistics. Listed mortgage rates are the rates published by Nordea, SBAB, SEB, Swedbank Hypotek and Stadshypotek, for example in the daily press.

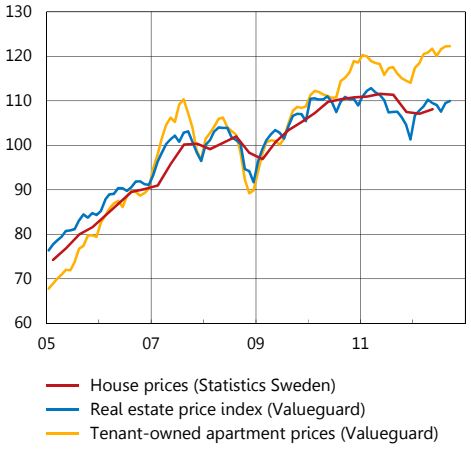
Sources: Reuters EcoWin, Statistics Sweden and the Riksbank

Figure 3:8. Bank lending to companies and households
Annual percentage change



Source: Statistics Sweden

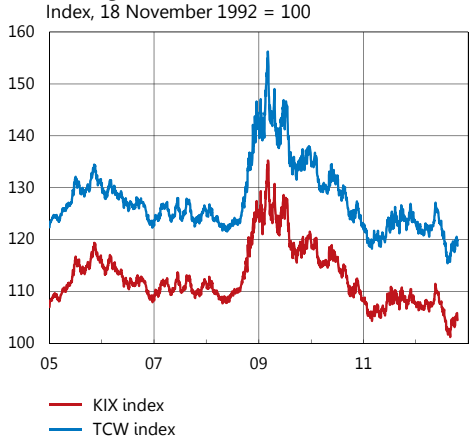
Figure 3:9. Housing prices
Index, 2008 = 100



Note. The data from Valueguard is on a monthly rate and the data from Statistics Sweden is on a quarterly rate. Statistics Sweden's real estate price index is based on land registration data, while Valueguard's index is based on purchasing contracts. Purchasing contracts are normally registered about two months before land registration, which means that statistics from Statistics Sweden lag behind those from Valueguard.

Sources: Statistics Sweden and Valueguard

Figure 3:10. KIX- and TCW-weighted nominal exchange rates
Index, 18 November 1992 = 100



Note. KIX and TCW refer to different aggregates of currencies on the basis of trading patterns. KIX weights are updated regularly and cover a larger group of countries.

Source: The Riksbank

majority of companies consider that their funding prospects have not deteriorated recently.

■ Minor fluctuations in the krona exchange rate

During the summer, the Swedish krona reached its strongest nominal level for more than ten years. Since then, it has weakened and is now listed at 118.9 and 104.7 in the TCW and KIX-weighted index measures respectively (see Figure 3:10).[13]

Part of the explanation for this may be that the development of the Swedish economy has not been as strong as expected. Above all, however, the krona's recent weakening is likely a result of investors' increased inclination to return to higher risk investments in the euro area. The euro has generally strengthened against other currencies in tandem with this development. Moreover, the repo-rate cut in September may have contributed towards weakening the krona in that it reduced the gap in policy rates between Sweden and the rest of the world.

In contrast, the krona has continued to strengthen against the US dollar. The Federal Reserve's measures, which have entailed lower US interest rates relative to the rest of the world, have probably contributed towards weakening the dollar.

[13] The Riksbank has complemented the TCW index with the broader KIX index in its international analysis. See the article "KIX index better reflects Sweden's international dependence" in this report.

Slowdown in growth abroad

■ Declining growth and high unemployment in the euro area

GDP is falling in the euro area. In the second quarter, GDP fell by 0.7 per cent, calculated on an annual basis, when compared with the previous quarter (see Figure 3:11). Private consumption and investments fell, while exports contributed positively to growth. Growth was positive in Germany and France, but GDP fell in Spain, Italy and a number of smaller countries.

Industrial output increased in July and August for most euro area countries. For the area as a whole, it grew by 0.6 per cent in both months, after having fallen by as much in June (see Figure 3:12). The main increase in August referred to durable consumer goods. Forward-looking indicators, such as new orders, indicate that industrial output will be weak in the period ahead.

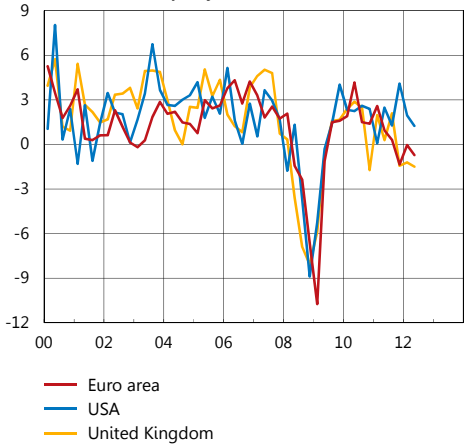
The labour market is also still weak in the euro area. Employment was unchanged during the second quarter and remained unchanged in August, reaching a record-high level of 11.4 per cent (see Figure 3:13). However, there are substantial differences between the various euro area countries; unemployment continues to be low in Germany, while it is very high in, for example, Spain and Italy. Retail sales figures increased slightly in the euro area in August but remained largely unchanged throughout 2012.

Confidence among both households and companies is at a very low level. The overall purchasing managers' index for the euro area fell in September, with figures for the third quarter being at the lowest level since the start of 2009. This low level is primarily due to the index for the manufacturing industry, even if this improved slightly in September (see Figure 3:14). Confidence is also low in the core countries. In France, both output and new orders fell at the fastest rate since July 2009. However, the purchasing managers' index in Germany improved slightly. The European Commission's European Sentiment Indicator shows continued falling confidence among households and companies in the euro area as a whole, including countries such as France and Germany. All in all, the development of GDP in the euro area is expected to remain weak in the second half of the year.

■ Weak growth in the United Kingdom and Denmark, but high growth in Norway

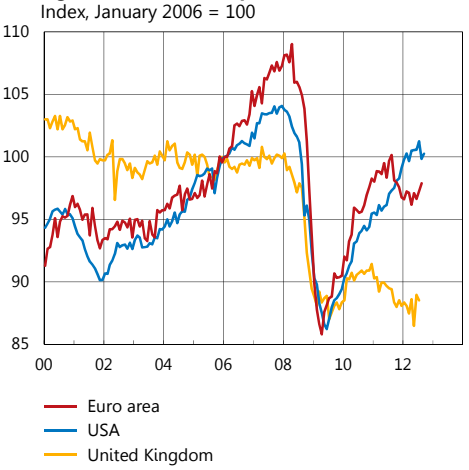
Swedish exports are dominated by trade with Germany and the Scandinavian countries, with the United Kingdom also being an important trading partner. In the United Kingdom, GDP has fallen in the last three quarters. In the second quarter of this year GDP fell by 1.8 per cent, calculated at an annual rate, compared to the first quarter (see Figure 3:11). This decline was partly the result of temporary factors such as poor weather and more public holidays than normal. One indication that this was the case is that industrial output increased by almost 3 per cent in July after having fallen by almost the same amount in the previous month (see Figure 3:12). Output fell once again in August. Retail sales have increased at a rising pace in recent months. The purchasing managers' index improved in August in both the manufacturing sector and the service sector, reaching levels indicating

Figure 3:11. GDP
Quarterly changes in per cent calculated in annualised terms, seasonally-adjusted data



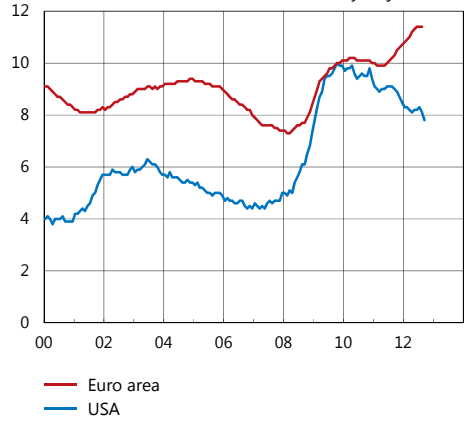
Sources: Bureau of Economic Analysis, Eurostat and Office for National Statistics

Figure 3:12. Industrial production
Index, January 2006 = 100



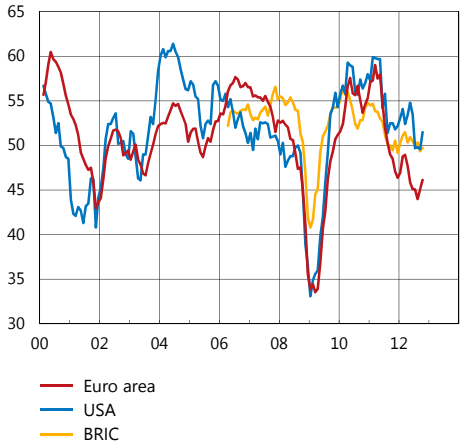
Sources: National sources and the Riksbank

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



Sources: Bureau of Labor Statistics and Eurostat

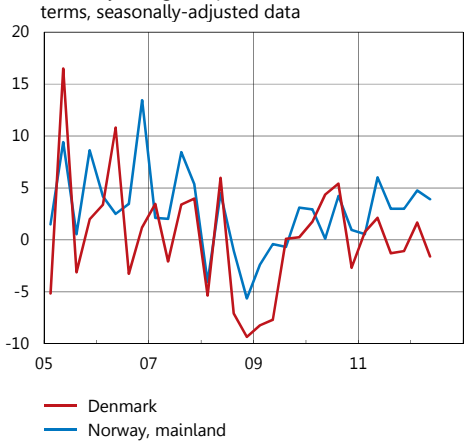
Figure 3:14. Purchasing managers' index, manufacturing sector
Index



Note. Values above 50 indicate growth. Note. Values above 50 indicate growth. The BRIC countries consists of Brazil, Russia, India and China.

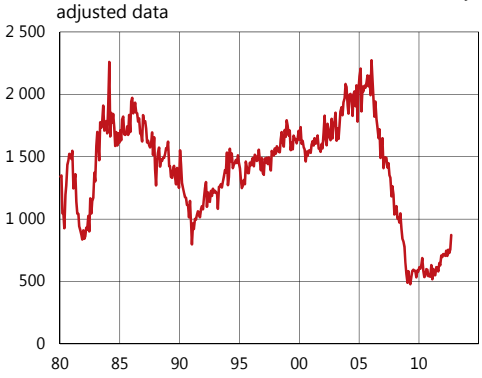
Sources: Institute for Supply Management and Markit Economics

Figure 3:15. GDP in Denmark and Norway
Quarterly changes in per cent calculated in annualized terms, seasonally-adjusted data



Sources: Statistics Denmark and Statistics Norway

Figure 3:16. Housing construction in the United States
Number of new homes constructed per month calculated as an annual rate, thousands, seasonally-adjusted data



Source: U.S. Census Bureau

rising GDP in the third quarter. Although indicators have improved recently, the weak start to the year means that average growth this year is expected to be slightly negative.

In Denmark, the economy is continuing to develop weakly. GDP fell by 2 per cent at an annual rate in the year's second quarter (see Figure 3:15). Falling consumption was a contributory factor to this. However, rising industrial output and consumer confidence in the third quarter indicate that GDP is no longer falling.

In contrast, in Norway (the mainland) development has been stronger and GDP increased by 4 per cent at an annual rate in the year's second quarter (see Figure 3:15). However, this implies a certain slowdown of the growth rate compared with the first quarter. Industrial output continued to rise in July and August, which, together with other published statistics, suggests continued strong growth in the third quarter.

■ Some positive signs in the United States

GDP in the United States fell by 1.3 per cent, calculated at an annual rate, during the second quarter of 2012 compared with the first quarter (see Figure 3:11). Among other things, the growth of household consumption slowed down in the second quarter. However, consumption increased strongly in July, while it remained largely unchanged in August. Retail sales statistics indicate that consumption increased in September.

On the other hand, the housing market has shown a trend improvement and credit conditions have successively eased recently. In principle, all indicators for the US housing market are pointing upwards. The time it takes to sell a house has continued to fall to levels below the historical average and housing construction has increased in recent months (see Figure 3:16). However, confidence indicators among construction companies as well as housing construction are still at historically low levels.

The summer's drought is expected to have a certain continued negative effect on GDP growth in the second half of the year due to the rapid fall in agricultural output. A higher rate of inflation than expected will also contribute to a reduction of the scope for consumption. Compared with the assessment in September, the forecast for GDP growth in 2012 has been revised downwards slightly.

Indicators for confidence among households and companies have recently increased somewhat. The University of Michigan Consumer Sentiment Index rose in both August and September, but is still well below the historical average. The purchasing managers' indices for both the manufacturing sector and the services sector rose in September (see Figure 3:14). Profits also continue to look good for US companies. These increased in the second quarter to one of the highest levels since the early 1950s.

Unemployment remains high, but fell to 7.8 per cent in September (see Figure 3:13). Employment growth slackened off in the spring and continues to be relatively weak. No major improvement of the labour market is expected in the quarters ahead.

■ Slowdown in growth in Japan

During the second quarter, Japan's GDP increased by 0.7 per cent at an annual rate, a downward revision of the first published outcome, which indicated an increase of 1.4 per cent. This downward revision is due to the less favourable than expected development of investments. Industrial output and exports have continued to slacken off in July and August, which is due, among other factors, to the strong yen and weak development abroad. Private consumption has slackened as the government has cut subsidies for purchases of green cars and other products. The Bank of Japan's survey of business sentiment, the Tankan, which is published in October, indicates a continued slowdown over the rest of the year.

■ Slight slowdown in the rapidly-growing emerging economies

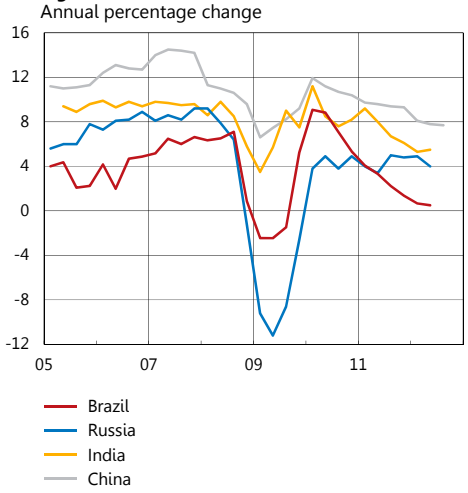
There are some signs of a slowdown in the emerging economies. In China, GDP growth has retreated from high levels over the last year. In the third quarter of the year, GDP nevertheless increased by 7.4 per cent compared with the same quarter of the previous year, which was somewhat weaker compared with the assessment in September (see Figure 3:17). Monthly data shows that exports gradually increased during the third quarter, which may indicate higher GDP growth in the fourth quarter. The Chinese government has announced new fiscal policy measures to stimulate growth. An infrastructure programme for USD 150 billion was recently launched at the same time as measures to improve the conditions for export companies were adopted. In September and October, the Chinese central bank has so far injected almost USD 100 billion into the financial system to counteract liquidity shortages.

In India, growth has slowed over the last year, even though it stabilised slightly in the second quarter of 2012, when GDP growth amounted to 5.5 per cent compared to the second quarter of 2011 (see Figure 3:17). The Reserve Bank of India introduced new stimulation measures in the middle of September, by lowering the reserve requirements for the banks.

Growth continues to be weak in Brazil. GDP growth in the second quarter was 0.5 per cent compared with the same quarter in the previous year. Industrial output in August continued to be very low, but is showing some signs of recovery at the start of the third quarter. However, the purchasing managers' index for September indicates that companies in the manufacturing industry have become slightly more pessimistic. Confidence is below the historical mean value and indicates weak growth.

GDP growth in Russia amounted to 4 per cent in the second quarter, compared with the same quarter in the previous year. The purchasing managers' index for September indicates that companies, particularly in the manufacturing industry, are more optimistic than previously. In the

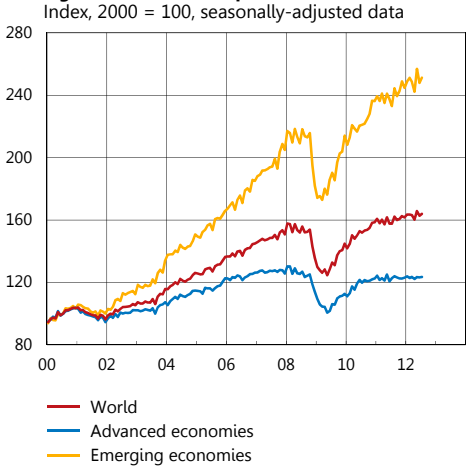
Figure 3:17. GDP in the BRIC countries
Annual percentage change



Note. The BRIC countries consists of Brazil, Russia, India and China.

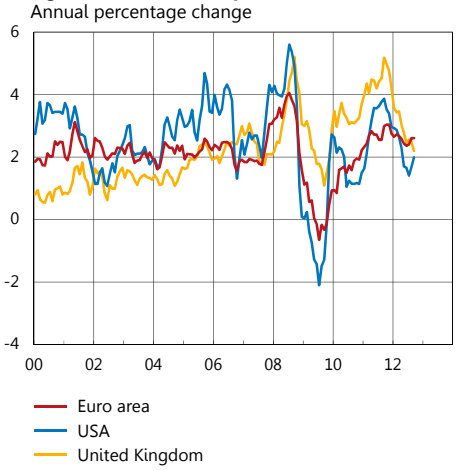
Sources: Central Statistical Organisation, India, Federal State Statistics Service, Russia, Instituto Brasileiro de Geografia e Estatística and National Bureau of Statistics of China

Figure 3:18. World Import Volume
Index, 2000 = 100, seasonally-adjusted data



Source: Netherlands Bureau for Economic Policy Analysis

Figure 3:19. Consumer prices
Annual percentage change



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

middle of September, the Central Bank of Russia raised its policy rate by 0.25 percentage points to 8.25 per cent.

World trade is heavily influenced by developments in the emerging economies (see Figure 3:18). While the developed economies have had largely unchanged trade volumes since mid-2010, the trade volumes of the emerging economies have continued to grow at a relatively good rate. Total world trade has thus continued to grow. However, indicators and data suggest that world trade has declined during the third quarter this year.

■ Higher inflation in Europe than in the United States and China

The rate of inflation in Europe remained at 2.6 per cent in September, after rising in August (see Figure 3:19). High petrol prices are making the main contribution to holding inflation up, but VAT increases and increased administrative prices are also playing a part. Underlying inflation (excluding energy, food, alcohol and tobacco) amounted to 1.5 per cent in September.

In the United States, CPI inflation increased to 2.0 per cent in September, after having fallen rapidly over the last year (see Figure 3:19). It was mainly energy prices that contributed to this increase, although underlying CPI inflation was also 2.0 per cent. Underlying PCE (Personal Consumption Expenditures) inflation was 1.6 per cent in August.

Inflation has fallen sharply in the United Kingdom since the end of the previous year and amounted to 2.2 per cent in September. In Norway, inflationary pressures are low, and inflation in September amounted to 0.5 per cent.

In China, inflation has fallen rapidly over the last year. CPI inflation was 1.9 per cent in September. The Japanese economy is again characterised by deflation. In August, CPI inflation was -0.4 per cent.

Weaker Swedish economy in the next few quarters

■ Relatively strong GDP growth in the first half of the year

The Swedish economy has grown at a relatively fast rate over the first half of the year (see Figure 3:20) but growth is expected to be lower in the second half. Demand from companies is primarily being dampened by the weak development of the Swedish export markets. In turn, this is contributing towards dampening corporate investment, particularly in comparison with the strong growth of investment seen at the end of last year and the start of 2012. It is also assumed that household consumption will decline somewhat due to weak economic activity abroad, but as the development of imports is also weak the weakening of Swedish GDP will be counteracted.

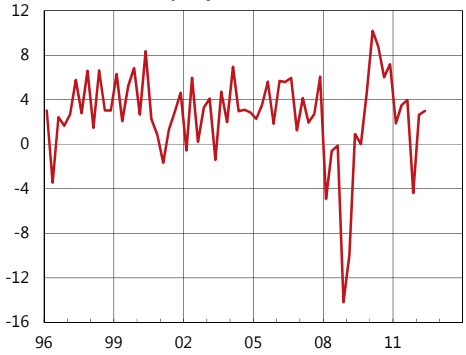
Since the Monetary Policy Update was published in September, Statistics Sweden has published a new outcome of the National Accounts for the second quarter of 2012. This showed significantly weaker growth than the preliminary version of the National Accounts, which was used as a basis for the forecast in September. The main downward revision concerned exports, which means that Swedish exports were more deeply affected by the crisis in the euro area than the preliminary version suggested. Other new information since the forecast in September indicates continued weak exports and sluggish manufacturing activity. The Economic Tendency Indicator, which examines both households and companies, fell to 95.8 in September, which indicates that growth in the Swedish economy is presently weaker than normal (see Figure 3:21). All in all, GDP growth for the full year 2012 is expected to be weak and to stop at 0.9 per cent.

■ High rate of investment is slowing down

Investments decreased in the second quarter and growth is expected to slow down in the quarters ahead. This is connected with factors such as the weak growth of Sweden's export markets, which is dampening the growth of Swedish industry and also having knock-on effects on the Swedish service sector. Low demand and uncertainty over economic developments lead to a decrease in both the willingness and the need of companies to invest. But the weak development of investments in the period ahead should also be seen in the light of the strong investment growth at the end of last year and the start of 2012.

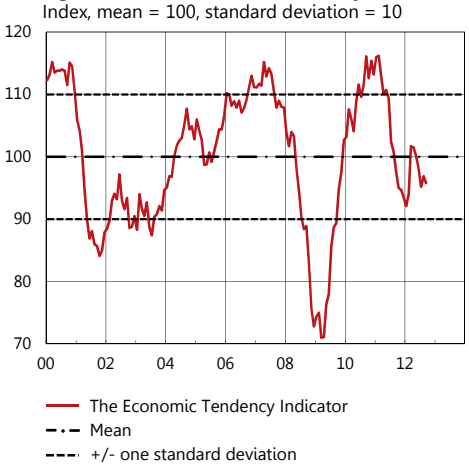
However, there is a great difference between different types of investment (see Figure 3:22). Housing investment has fallen sharply since the end of 2011 and the statistics for apartments under construction suggest continued weak development in the period ahead. In contrast, business sector investment, excluding housing, is deemed to be growing at a good rate if one looks at the full year 2012, even if growth slows down slightly in the second half of the year.

Figure 3:20. GDP
Quarterly changes in per cent calculated in annualised terms, seasonally-adjusted data



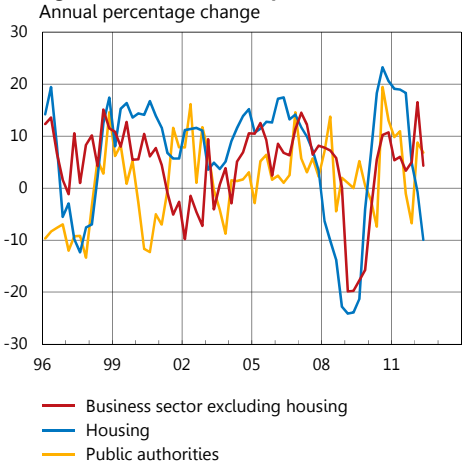
Source: Statistics Sweden

Figure 3:21. The Economic Tendency Indicator
Index, mean = 100, standard deviation = 10



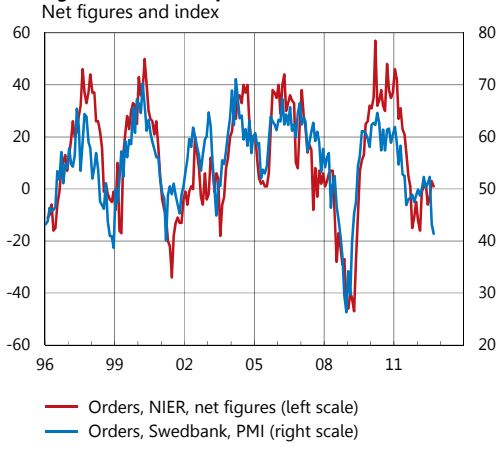
Source: National Institute of Economic Research

Figure 3:22. Gross fixed capital formation
Annual percentage change



Source: Statistics Sweden

Figure 3:23. New export orders
Net figures and index



Note. Values above 50 on the right scale indicate growth.

Sources: National Institute of Economic Research, Silf and Swedbank

Figure 3:24. Production, export and import of goods
Index, 2007 = 100

Source: Statistics Sweden

Figure 3:25. Confidence indicator for households
Net figures

Source: National Institute of Economic Research

Investment in inventories is assumed to contribute to somewhat weakening GDP growth in the second half of the year. This is due to companies reducing the rate of build-up of inventories, as they are now judged to be large enough in relation to demand. According to the Riksbank's business survey from September, a larger proportion of companies now, compared to previously, consider that their current inventories of finished goods are too large.

■ Growth in Swedish exports slackening

The weak developments in several of Sweden's most important export markets have dampened growth in Swedish exports recently. The development of the export of goods and services until the end of August indicates continued weak growth in Swedish exports in the period ahead, as do the companies' assessments of export orders according to the Economic Tendency Survey and the purchasing managers' index (see Figure 3:23).

Sweden's imports have also developed weakly recently, which is related to weak demand and the slower build-up of stocks. The development of goods imports until the end of August does indicate a certain increase (see Figure 3:24). But output expectations and the assessed development of imports according to the purchasing managers' index for the manufacturing sector indicate a continued weak development of imports. This is also in line with the picture of continued weak demand.

■ Subdued growth in consumption

In the second quarter of this year, consumption grew by slightly less than 1 per cent, calculated at an annual rate. At the same time, incomes increased by a significantly larger degree (about 3.8 per cent at an annual rate), with saving therefore increasing. The household saving ratio, which is saving as a proportion of disposable income, amounted to over 10 per cent in the second quarter of the year.

Turnover in retail sales increased by 1.8 per cent in August, compared with the same month in the previous year. Trade in durable consumer goods increased by about 2.5 per cent in August, while turnover in the non-durable goods sector increased by just over 1 per cent. Household confidence, measured according to the National Institute of Economic Research's Consumer Confidence Indicator, has risen since the end of last year and lay close to its historical mean value in both July and August but fell somewhat in September (see Figure 3:25). Household confidence is strongest regarding the households' own economies, while a more pessimistic view is taken of Sweden's economy.

■ Somewhat more expansionary fiscal policy

The public sector financial balance amounted to SEK 47 billion in the first six months of the year, which is slightly more than in the first six months of 2011. However, the assessment is that the higher level of saving was temporary and due to the repayment of insurance premiums to municipalities and county councils. Figures for public consumption and investments in the first half of the year were revised downwards in line with new outcomes from the National Accounts. All in all, the financial

balance has been revised upwards from -0.2 per cent to -0.1 per cent of GDP in 2012.

In its Budget Bill for 2013, the government proposed discretionary measures comprising SEK 23 billion, equivalent to 0.6 per cent of GDP. Discretionary fiscal policy will be somewhat more expansionary in 2013 than during the last two years. A cut in corporate tax was the largest item of expenditure in the budget. The lowering of corporate tax is a permanent measure, the net cost of which is SEK 7 billion, including the deduction limit for tax planning. The fiscal policy framework will be made more flexible from the start of 2013, when the municipal sector will be given the possibility of building up surpluses in good times that can be used to cover any deficit arising in less favourable periods.

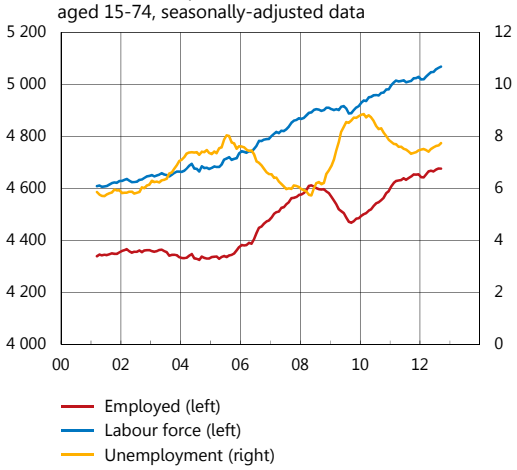
■ Weakly rising unemployment

Changes on the labour market have been limited over the last 12 months (see Figure 3:26). Employment in the last two months has been higher than the Riksbank expected in September, at the same time as the labour force has grown even more. This also means that unemployment was somewhat higher in the third quarter than the assessment in September.

Indicators still suggest that a slowdown can be expected in the next six months. The number of redundancy notices has increased relatively rapidly in recent weeks, which is a signal that the companies' expectations of the future have weakened. According to the most recent Economic Tendency Survey, companies in the business sector as a whole expect employment to decrease slightly in the months ahead (see Figure 3:27). In the Riksbank's company interviews, several companies also see a risk of staff cuts in the period ahead. However, the number of job vacancies reported to the Swedish Public Employment Service is still at a relatively high level, although it has decreased during the year (see Figure 3:28). The results indicate that the matching between job seekers and vacancies has deteriorated in recent years (see the article "Has the functioning of the labour market changed?"), which can contribute to higher unemployment.

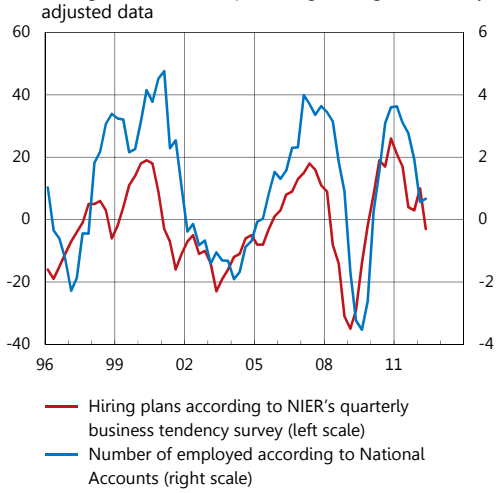
The number of hours worked in the second quarter was in line with the assessment published in September. In combination with the major downward revision of GDP for the second quarter, this means that productivity has been revised downwards. Outcomes from Statistics Sweden indicate that the number of hours worked in the third quarter also developed in line with the latest forecast. The Riksbank's assessment for the fourth quarter of this year is that there will be slight increase in hours worked, that employment will decline somewhat and that unemployment will continue to rise. All in all, this means that the forecasts for the number of those employed, the labour force and unemployment have been adjusted upwards for the full year 2012 compared to the forecast in September.

Figure 3:26. Employment, labour force and unemployment
Thousands and per cent of the labour force, aged 15-74, seasonally-adjusted data



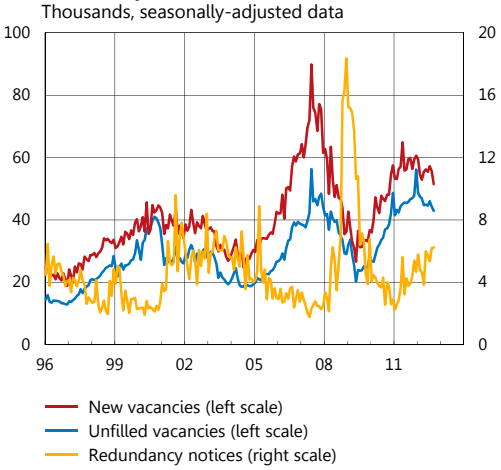
Note. Three-month moving averages.
Sources: Statistics Sweden

Figure 3:27. Hiring plans and number of employed in the business sector
Net figures and annual percentage change, seasonally-adjusted data



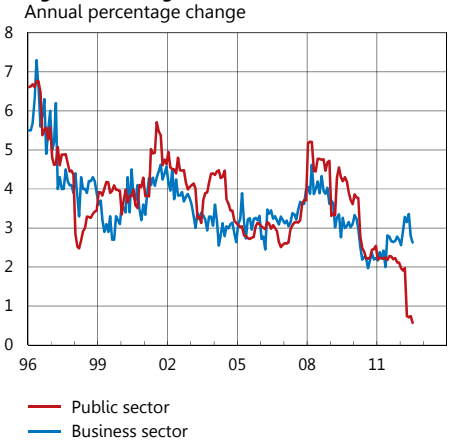
Note. The net figures are defined as the difference between the proportion of firms reporting a wish to increase the number of employees and the proportion of firms reporting a wish to reduce numbers.
Sources: National Institute of Economics Research and Statistics Sweden

Figure 3:28. New and unfilled vacant jobs and redundancy notices
Thousands, seasonally-adjusted data



Sources: Employment Service and the Riksbank

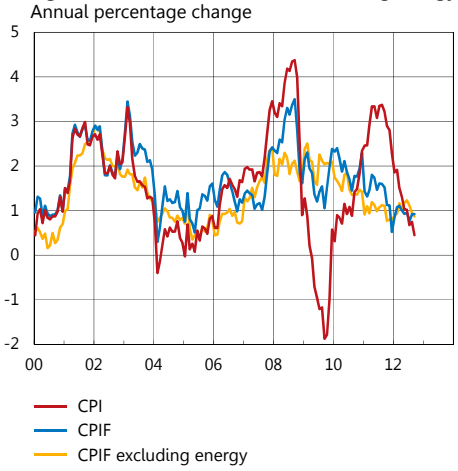
Figure 3:29. Wages
Annual percentage change



Note. Preliminary outcomes in the past 12 months, usually revised upwards.

Sources: National Mediation Office and the Riksbank

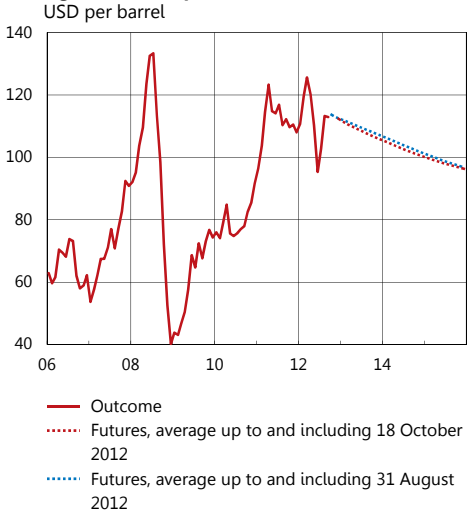
Figure 3:30. CPI, CPIF and CPIF excluding energy
Annual percentage change



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

Source: Statistics Sweden

Figure 3:31. Oil price, Brent crude
USD per barrel



Note. Futures are calculated as a 15-day average. Outcomes represent monthly averages of spot prices.

Sources: Intercontinental Exchange and the Riksbank

■ Rate of wage increases will rise in the second quarter

According to short-term wage statistics from the National Mediation Office, wages in the economy as a whole have increased over the year's first seven months by an average of 2.4 per cent, measured as an annual percentage change. This figure will be adjusted upwards when more retroactive wage payments are included in the statistics. The rate of wage increases is now significantly higher in the private sector than in the public sector, but the gap will close as more retroactive wage payments are expected to be included in the statistics for the public sector (see Figure 3:29). The assessment is that when retroactive wage payments have been included in the statistics, wages for the economy as a whole will have increased by 3.2 per cent for the full year 2012.

According to the National Accounts, hourly wages and labour costs per hour grew by about 4 per cent as an annual percentage change in the second quarter of the year. This outcome was in line with the forecasts published in September. At the same time, the rate of growth in labour productivity, measured as an annual percentage change, was just over one percentage point lower than the assessment published in September. This meant that the annual rate of increase of unit labour costs in the second quarter was higher than the assessment published in September. For the full year 2012, unit labour costs are expected to increase by 2.6 per cent.

■ Inflationary pressures remain low

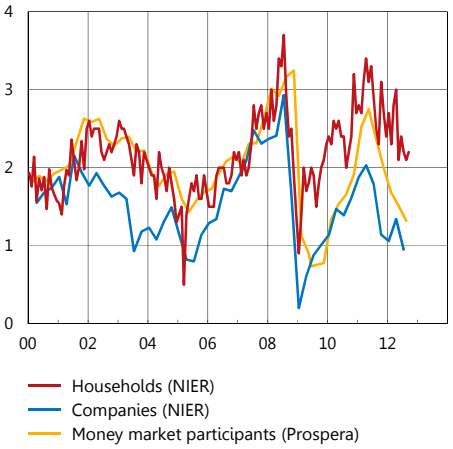
Inflation remains low, and the annual rate of increase in the CPIF, that is, the CPI with a fixed mortgage rate, amounted to 0.9 per cent in both August and September (see Figure 3:30). The rate of increase in the CPIF excluding changes in energy also remained at 0.9 per cent in September, while the rate of increase in the CPI fell to only 0.4 per cent. The very low level of CPI inflation relates to the fact that mortgage rates have fallen recently. The outcomes for all measures of inflation were lower than in the assessment in the Monetary Policy Update published in September, and the forecasts for the months ahead have now been revised slightly downwards.

CPIF inflation is expected to remain low and to be approximately 1.0 per cent in December. Forward pricing indicate that the oil price will fall in the period ahead (see Figure 3:31). Petrol prices will also fall in the coming month. The rate of increase in the CPI will be somewhat lower as mortgage rates are expected to continue to fall in the period ahead.

■ Inflation expectations well anchored in the long term

According to the National Institute of Economic Research's Economic Tendency Survey, household inflation expectations one year ahead rose from 2.1 per cent in August to 2.2 per cent in September (see Figure 3:32). Prospera's monthly survey of money market participants showed that inflation expectations one year ahead were unchanged at 1.2 per cent in October. They were also unchanged two years ahead, remaining at 1.7 per cent. Expectations five years ahead fell from 2.1 per cent in September to 2.0 per cent in October. Prospera's monthly survey for all participants, which was published in September, showed that inflation expectations fell from 1.5 to 1.3 per cent one year ahead, and from 1.9 to 1.7 per cent two years ahead (see Figure 3:33). Expectations five years ahead were unchanged at 2.1 per cent and are thus firmly anchored around the inflation target.

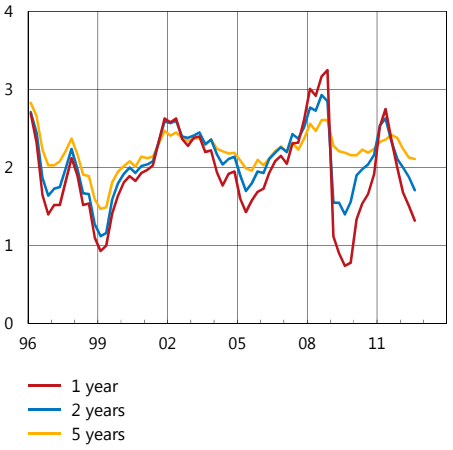
Figure 3:32. Expectations of inflation one year ahead
Per cent



Note. Company figures are quarterly, others monthly.

Sources: National Institute of Economic Research and TNS SIFO Prospera

Figure 3:33. All respondents' expectations of inflation one, two and five years ahead
Per cent



Source: TNS SIFO Prospera

KIX index better reflects Sweden's international dependence

The Riksbank follows developments in, and makes forecasts of, for instance, GDP growth and inflation in various countries around the world. So far, developments in the various countries have mainly been weighed together using what are known as TCW weights. The idea is, for instance, that international GDP will be weighed together taking into account the significance of the various countries for the Swedish economy. However, Sweden's trade patterns change over time and so too does Sweden's international dependence. The development of the emerging markets has come to play an increasingly important role for the Swedish economy, and this is not captured in an international TCW-weighted measure. For these reasons, the Riksbank is supplementing the TCW weights with the broader index of KIX weights. This does not entail any major change in the Riksbank's international analysis, as the increased significance of the emerging economies is already captured in other ways in the Riksbank's forecasts.

The KIX captures the emerging markets' increased importance

One important difference between the TCW and the KIX is that the TCW weights do not change, but are based on the flow of trade in the years 1989–1991.[14] TCW-weighted variables thus do not capture the increased significance, over time, of the emerging markets for the Swedish economy.[15] In contrast, the KIX weights, which are calculated by the National Institute of Economic Research, are updated annually on the basis of available trade data and thus take account of changes in Sweden's trade patterns. Another difference is that the KIX includes more countries than the TCW. Otherwise the same principles are used for calculating the KIX and the TCW.[16]

Table 1 shows that the BRIC countries (Brazil, Russia, India and China) together have a weighting of just over 10 per cent in the KIX. These countries are not included in the TCW. At the same time, important industrialised nations such as Japan, the United Kingdom and the United States have lost significance since the introduction of the TCW weights. This also applies to the euro area to a certain extent, although it remains the most important region for Sweden by a broad margin.

[14] TCW stands for Total Competitiveness Weights. KIX stands for *Konjunkturinstitutets kronindex*, the National Institute of Economic Research's index for the Swedish krona.
[15] See the article "The emerging economies and Sweden's exports" in the Monetary Policy Report published in February 2012.
[16] A more detailed account of the KIX is given in M. Erlandsson and A. Markowski, The Effective Exchange Rate Index KIX – Theory and Practice, working paper no. 96, November 2006, National Institute of Economic Research. See also J. Alsterlind, "Effective exchange rates – theory and practice", Sveriges Riksbank Economic Review 2006:1 for a more detailed description of the principles governing the calculation of TCW and KIX weights. Briefly, it can be said that the KIX weights are based on the volume of imports, exports and trade in commodities that Sweden has with various countries or regions. The calculation of the KIX also takes account of the facts that Swedish exports are met with competition from a country's domestic producers and that this country is also competing with Sweden on other markets. One difference between the calculation of the KIX and the TCW is that the KIX includes trade in commodities, which is not the case with the TCW.

Table A1. Summary of weightings for different weighting systems
Percentages

Currency area	KIX (2012)	TCW
Australia	1.34	0.27
Brazil	0.94	-
Denmark	4.67	5.60
India	1.24	-
Iceland	0.07	-
Japan	2.41	5.20
Canada	1.76	1.16
China	6.37	-
Mexico	0.86	-
Norway	5.67	5.58
New Zealand	0.14	0.14
Poland	2.89	-
Russia	2.25	-
Switzerland	1.41	2.74
United Kingdom	6.13	11.56
South Korea	1.33	-
Czech Republic	1.45	-
Turkey	1.36	-
Hungary	0.75	-
United States	8.32	11.63
Euro area	48.64	56.12
Total	**100**	**100**

Note. The KIX comprises 21 countries and regions, including the euro area. When calculating the KIX-weighted development of, for instance, international GDP growth and inflation, the countries in the euro area do not have their own weights, but are weighted as a single unit.
Sources: National Institute of Economic Research and the Riksbank.

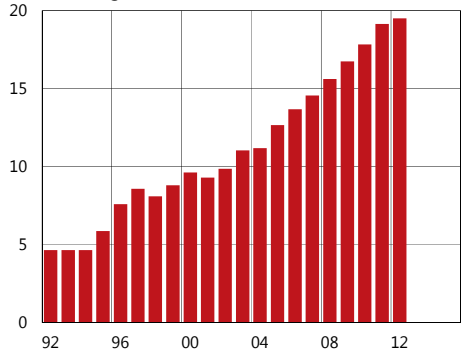
The differences between the KIX and TCW weights were fairly small at the start of the 1990s, but have shown an increase trend since the mid-1990s (see Figure A1). To better capture Sweden's trade patterns and international dependence, the Riksbank's international analysis will therefore be based to a greater extent on KIX-weighted variables in the future. However, there may be situations in which the Riksbank will use other weights than the KIX in its analysis of how the Swedish economy is affected by international developments, just as the TCW weight-based analysis has been supplemented before.

Slightly higher growth and inflation abroad when measured using the KIX

As the KIX places greater weight on emerging markets, KIX-weighted GDP growth and inflation tend to be higher than the corresponding TCW-weighted variables (see Figures A2 and A3). However, the covariation between KIX and TCW-weighted variables is very high.

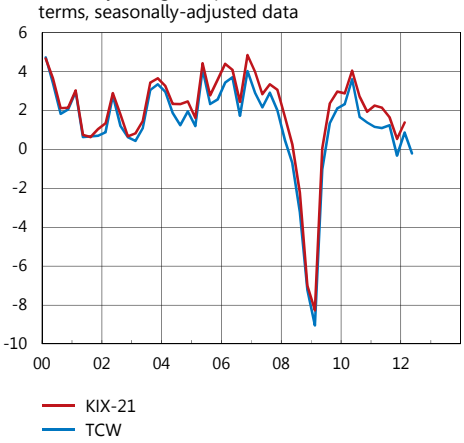
An international analysis that is largely based on KIX-weighted international variables means that it is also appropriate to measure the krona's effective exchange rate with the KIX index instead of the TCW index. This accordingly means that, in the future, the Riksbank will prefer to discuss the development of the krona in terms of the KIX instead of the TCW. Since November 1992, the krona has developed more strongly, in nominal terms, according to the KIX than according to the TCW (see Figure A4). This is because most emerging economies have had currencies that have depreciated against the krona in nominal terms. As these countries have been given increasingly heavy weightings in the KIX and countries with relatively strong currencies, such as the United Kingdom and Japan, have been given decreased significance, the krona has accordingly developed more strongly when weighed together with KIX weights than with TCW weights. At the same time, the inflation rate

Figure A1. Total of KIX weights for countries outside the TCW area
Percentage



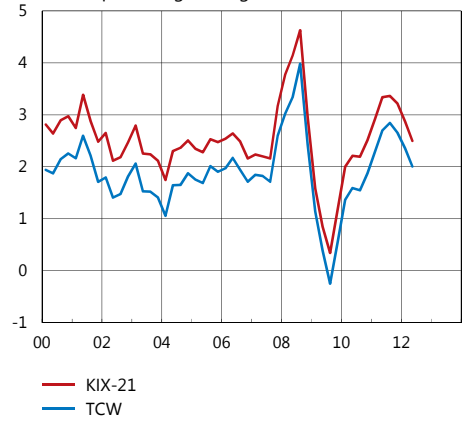
Sources: National Institute of Economic Research and the Riksbank

Figure A2. GDP abroad
Quarterly changes in per cent calculated in annualised terms, seasonally-adjusted data



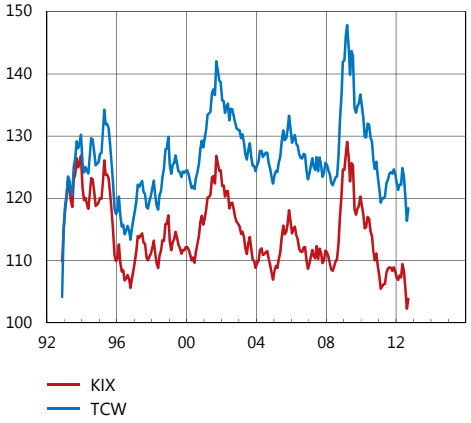
Note. KIX-21 includes the countries and regions presented in Table A1.
Sources: National sources and the Riksbank

Figure A3. CPI abroad
Annual percentage change



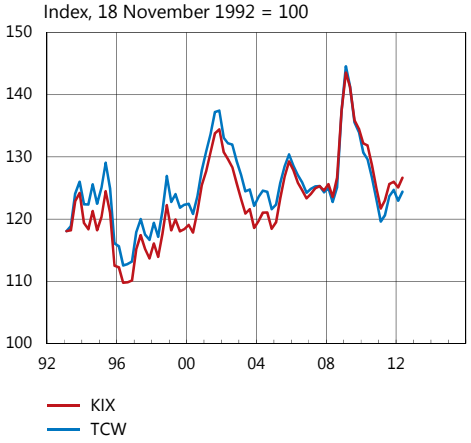
Note. KIX-21 includes the countries and regions presented in Table A1.
Sources: National sources, OECD and the Riksbank

Figure A4. KIX- and TCW-weighted nominal exchange rates
Index, 18 November 1992 = 100



Source: The Riksbank

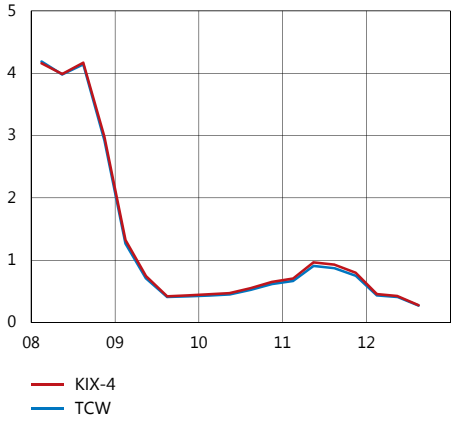
Figure A5. KIX- and TCW-weighted real exchange rates
Index, 18 November 1992 = 100



Note. The real exchange rate is deflated by the CPIF for Sweden and the CPI for abroad. The CPIF is the CPI with a fixed mortgage rate.

Source: National sources, Statistics Sweden and the Riksbank

Figure A6. Policy rates abroad
Per cent



Note. KIX-4 includes the euro area, Norway, the United Kingdom and the United States

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

in the emerging economies has been relatively high, which means that the difference between the KIX and the TCW in real terms is relatively small (see Figure A5).

No change regarding international policy rates

A greater focus on KIX-weighted forecasts will apply in particular to international GDP growth and inflation. However, with regard to weighing together international policy rates, there will be no change from before. Only four currency areas (the euro area, Norway, the United Kingdom and the United States) have so far been included in the aggregate measure for policy rates abroad. The same four currency areas are weighed together after the introduction of the KIX. The difference between the TCW and KIX-weighted policy rates is thus very slight and is largely due to the fact that the KIX weights are updated annually, while the TCW weights are constant (see Figure A6). One important reason for using only a few countries to measure international policy rate levels is that several countries included in the KIX still have comprehensive capital controls, which mean that these countries' interest rates do not have any direct relevance for pricing on the foreign exchange and financial markets. This argues for excluding countries with capital controls or restrictions. Another reason is the difficulty in producing reliable market expectations for many currency areas. However, the fact that the different international variables are not weighed together with the same countries could lead to problems with interpretation and must be borne in mind when, for instance, linking interest rate-setting to exchange rates, inflation and resource utilisation.

The introduction of the KIX will not involve any major changes

The introduction of KIX-weighted international forecasts does not entail any major change in the Riksbank's international assessment. The Riksbank has been considering the development of the emerging markets for several years, even if this has not fully been captured in the TCW-weighted forecasts. For example, the economic development of the emerging markets has been captured, to a certain extent, in the Riksbank's assessment of Swedish export market growth. Swedish export market growth balances imports from various countries against their weight in Swedish exports, and is an important explanatory variable for Swedish exports. The introduction of a KIX-weighted international analysis will mean that the forecast for Swedish export market growth is calculated on the basis of forecasts for the countries included in the KIX. This means that more countries than previously will be included in the calculation of export market growth. The introduction of the KIX index is very much aimed at clarifying that the Riksbank has a broad focus in its international analysis, in which the development of emerging markets plays an important part.

However, it is not possible to fully capture Sweden's international dependence with a single weighting system. Depending on requirements, international developments can be weighed together with other weights. One example is that Swedish export market growth is weighed together with how large a share of Swedish exports of goods and services goes to different countries and regions. Furthermore, Sweden's international dependence sometimes passes through more-or-less complicated financial channels that cannot be captured by a given weighting system.

New measures to manage the crisis in the euro area

Several measures have recently been presented for managing the crisis in the euro area. With regard to short-term crisis management, the ECB has decided on an asset purchase programme for government bonds. With regard to dealing with long-term problems, there are proposals on a banking union and capitalisation of the banking system.

Developments in the euro area are important for the Swedish economy and an important assumption in the forecast presented in this report is that the crisis in the euro area is managed such that the unease gradually declines in 2013. Since the crisis began, many measures have been taken by various authorities to alleviate the effects on the economy.[17] The ECB has on two occasions offered European banks the possibility to borrow unlimited funds, against collateral, with a maturity of three years, and has also purchased large volumes of government bonds. Examples of more long-term measures are the common funds established[18] to provide economic support to the euro area countries. The facilities have been used to give loans to Ireland, Greece and Portugal.

This article reviews two new measures that have recently come under focus: the OMT programme and the proposal for a banking union.

Acute crisis measures: The OMT programme

The ECB decided at the beginning of September to introduce a new programme called "Outright Monetary Transactions" (OMT) with the aim of ensuring that the monetary policy transmission mechanism can function throughout the euro area. Within the scope of this programme, the ECB is prepared to buy a euro area country's government bonds on the secondary market, if a number of conditions are met. The country must have applied for and been granted a support programme from the ESM, which means that a number of requirements for economic reforms will be made. The IMF's involvement will be sought in drawing up and following up these requirements. In addition, it is required that the country retains the possibility of some market-based funding. If all of these requirements are met, and there is monetary policy justification, the ECB can make the purchases.[19] The ECB has also made it clear that government bonds purchased within the OMT programme will not be prioritised above holdings by private investors.

At present, however, it is not possible to purchase government bond securities within the OMT programme, as the current EFSF/ESM programme countries must first return to some level of market funding to qualify, and Spain, which is considered to be closest to qualifying for an ESM programme, has not yet applied.

[17] For a detailed description of measures and the economic background, see the articles "The debt crisis in Europe – developments during the spring", MPR July 2012, and "The EMU and the debt crisis", MPR February 2012.
[18] The European Financial Stability Facility (EFSF), the European Financial Stability Mechanism (EFSM) and, with effect from 8 October, the European Stability Mechanism (ESM).
[19] See press release from the ECB, 6 September, "Technical features of Outright Monetary Transactions".

Problems in banks and governments interlinked

With regard to a longer perspective, the financial crisis has made clear the strong links between the banking systems in different countries, as well as between banking systems and public finances in the same country. The current system, in which the supervision and crisis management of banks that have large parts of their operations in other countries are conducted at the national level, has been shown to have numerous weaknesses from this perspective. National financial supervisory authorities have rarely given sufficient consideration to how problems in one bank can spread to other banks and to other countries. In some countries there has also been an unwillingness to be clear about the problems – how loan losses resulting from the crisis have led to unsustainably low capital levels in their own banking sectors.

This has meant that problems in relatively small banks have been able to spread so that they threaten the stability of the entire financial sector, resulting in large costs to the country's central government. In Ireland, for instance, public debt increased as a direct result of measures to strengthen the banking sector. In Spain, it is clear that the weak banking system is having a negative effect on the Spanish government's credit rating, which further accentuates the already large problems with returning public finances to sustainable levels after several years of large budget deficits.

Given this, the Commission recently presented a fairly radical proposal to introduce single banking supervision and ultimately a full-scale banking union.[20]

More long-term measures: the banking union

The Commission's proposal is very comprehensive and would entail a substantial change in European banking supervision. Instead of national supervision, the ECB would be responsible for exercising supervision over all of the banks in the euro area. The proposal entails a gradual introduction whereby the ECB with effect from 1 July 2013, the ECB will take over the supervision of systemically-important banks, and from 1 January 2014 will supervise all of the banks in the euro area. Already from 1 January 2013, however, the ECB will be able to choose to conduct the supervision of individual banks. The proposal particularly mentions banks that have received or applied for support.

It is proposed that the euro area's national financial supervisory authorities will continue to exercise day-to-day supervisory duties, but that the ECB will have overall responsibility and the right to make decisions. The idea is that a special supervisory board will be created within the ECB to plan and carry out the supervision work. However, as is the case with monetary policy, the ultimate responsibility would lie with the ECB's Governing Council. The proposal offers countries outside of the euro area the opportunity to join the single supervision on a voluntary basis, but without having any voting rights on the ECB's supervisory board.

[20] The Commission's plan for a banking union includes three parts: joint supervision, a deposit guarantee and crisis management. The legislative bill presented so far only concerns joint supervision.

The Commission's timetable is very ambitious, aiming to reach a decision before the end of the year, so that the ECB can begin to exercise banking supervision from 1 January. One reason for the tight timetable is that the heads of state and heads of government in the euro area agreed in June that a smoothly-functioning single supervisory mechanism for all the banks in the euro area was a necessary condition for broadening the use of the ESM to include capitalising banks directly.[21] This mean that one would not need to go via loans to the respective member states, which could lead to a corresponding increase in public debt. The link between the banks and public finances would thus be weakened. However, the results of the European Council meeting on 17-18 October indicate that it may take some time before such direct capitalisation becomes possible.

Many issues remain to be resolved

However, there are still some major question marks with regard to both the timetable and feasibility of the Commission's proposal. In addition to the purely practical difficulties that need to be overcome for the ECB to be able to exercise a purposeful and effective supervision of the banks, there are also a number of political and economic obstacles.

One important obstacle here is how to achieve agreement on the questions that have fiscal policy implications for the individual EU countries. To ensure that single banking supervision functions effectively, it is important, for instance, to agree on what will happen if the financial supervisory authority requires banks to be restructured or wound up. This could entail substantial costs for individual countries. A joint framework for the management of banks in crisis is thus an important component of a stable system. Another important question that needs to be resolved is how the deposit guarantee will work, and how to ensure that capital and liquidity requirements can be adapted to the particular conditions applying in different countries. Finally, the opportunities for influence for countries outside the euro area choosing to submit to the single supervision are very limited.

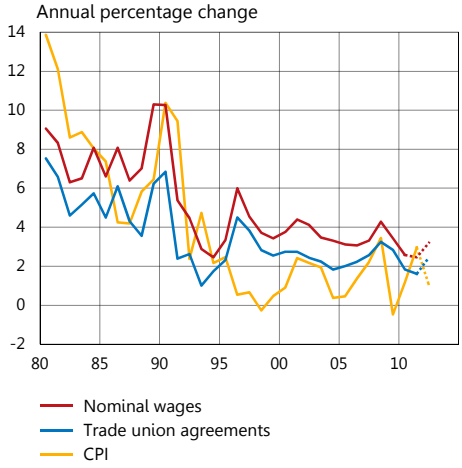
It is necessary to implement carefully-considered solutions to these questions to ensure that the single banking supervision functions efficiently and is sustainable in the long run.

[21] The document "European Council conclusions on completing EMU, European Council", 18 October 2012 states:"When an effective single supervisory mechanism is established, involving the ECB, for banks in the euro area the ESM could, following a regular decision, have the possibility to recapitalize banks directly".

The economic situation remains uncertain ahead of collective bargaining in 2013

A new round of collective bargaining began in the autumn of 2012 and will continue throughout 2013. New wage agreements affecting around 2.5 million employees are to be signed in what continues to be an uncertain economic situation. The social partners will need to take this and a number of other factors into account when they negotiate new collective agreements. As previously, it is expected that the wage levels set in the agreements for the manufacturing industry will act as a norm for other contractual areas on the Swedish labour market. As the sector that sets the norm for wage increases, the social partners in the manufacturing sector should reach new wage agreements that also take into account the development of employment and unemployment in Sweden.

Figure A7. Nominal wages, trade union agreements and the CPI in Sweden
Annual percentage change



Sources: National Mediation Office, Statistics Sweden and the Riksbank

Wage formation has worked well over the last 15 years

During the 1990s, several institutional changes were implemented in the Swedish economy which also had an impact on pay formation. For example, the Riksbank introduced an inflation target in January 1993 and this came to affect the inflation expectations of the social partners. Wage formation in Sweden was also changed by the Rehnberg Agreement of 1991-1992 and the Industrial Agreement that was introduced in 1997.[22] The structural reforms implemented during this period have helped to slow down the rate of increase in wage levels in trade union agreements, and nominal wages and inflation have decreased (see Figure A7). At the same time, GDP growth has increased.

Real wages are an important part of the companies costs and thus play major role in the development of employment. In the collective bargaining process, the social partners must balance the need for good purchasing power for the employees on the one hand against a reasonable development of costs for the companies on the other hand so that employment does not fall.

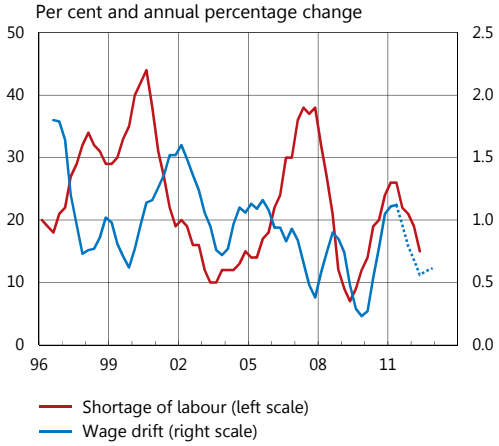
Collective bargaining in 2012 – a brief review

The 2012 round of collective bargaining is now in principle complete. The conclusions from the collective bargaining process this year are that the manufacturing industry set the norm for wage increases and that other contractual areas closely followed this norm. The round of collective bargaining in 2012 was preceded by the signing of a new Industrial Agreement in the summer of 2011.[23] This agreement, which among other things regulates bargaining procedures within the contractual areas in the manufacturing sector, more clearly outlined the leading and normative role of the manufacturing industry with regard to wages. The hope was that this would lead to other contractual areas following the norm more closely.

[22] The Rehnberg Agreement was a proposed stabilisation agreement that all of the contractual areas followed to a very great extent in their collective agreements. The Rehnberg Agreement also entailed the removal of the price and wage clauses in the collective agreements, which in turn has reduced the risk of so-called price-wage spirals and/or wage-wage spirals arising in the economy. The Industrial Agreements is an agreement between the social partners in the manufacturing sector that, among other things, includes regulations on collective bargaining procedures in the sector. The Industrial Agreement has become an important institution in Swedish wage formation and the collective agreements in the manufacturing sector have come to act as a benchmark for other contractual areas.

[23] Five trade unions and 12 employer organisations signed the new Industrial Agreement. The Swedish Paper Workers' Union, which signed the old Industrial Agreement, chose not to sign the new agreement for various reasons.

Figure A8. Labour shortage and wage drift in the business sector
Per cent and annual percentage change



Note. The series for wage drift is smoothed using a 3-quarter moving average. Shortage of labour refers to seasonally-adjusted data.

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

In mid-December 2011, the trade unions and employers signed new collective agreements within the framework of the Industrial Agreement. The agreement for workers in the engineering sector entailed agreed wage increases of 3.0 over a period of 14 months, that is, 2.6 per cent per year, which became the norm for the rest of the labour market. A total of 57 wage agreements were signed in the manufacturing industry in December last year.

The wage agreements reached since the agreements in the manufacturing sector were signed have closely followed the norm set in this sector. The mediation work of the National Mediation Office and strong coordination among the employers probably contributed to this. In some agreements, for example the agreements for employees in the retail, local government and hotel and restaurant sectors, the increase in average wages was actually above the norm. However the increase in wage cost was in line with the norm as there were several different cost-reducing components, or so-called offsetting items, in the agreements.[24] On the other hand, the social partners in the teachers' contractual area signed wage agreements in which the wage-cost increases for 2012 were above the manufacturing industry's norm.

The agreement level is important for the final wage level – but other factors also play a role

Since 1998, the agreements at the trade union level have on average accounted for approximately 70 per cent of the final wage level in Sweden. There are thus other factors that also affect the final wage level. If employers find it difficult to recruit a certain occupational category, then this may, for example, push up wages for workers in this category. The difficulties may be due to an increase in the demand for certain skills at the same time as there is a shortage of this particular type of labour. Other factors can also affect the local pay formation process, for example companies may want to change their wage structure in order to increase productivity and this can contribute to the final wage level being higher than the level in the trade union agreements. It is assumed that these factors will be reflected in the difference between the final wage level and the level in the trade union agreements. This residual item is often referred to as wage drift.

The demand for labour in Sweden has continued to decline in 2012, which among other things is reflected in the companies' employment plans and their perception of the shortage of labour as expressed in the Business Tendency Survey of the National Institute of Economic Research. It is expected that the rate of wage drift in the business sector will continue to fall in 2012 against the background of an improvement in the shortage of labour (see Figure A8). The Riksbank's assessment is that the rate of wage drift in the economy as a whole will fall to around 0.6 per cent, which is approximately 0.5 percentage points below the historical average. This assessment means that the total rate of wage increases, that is the level in the trade union agreements plus wage drift, will be 3.2 per cent in 2012.

[24] The offsetting items included lower increases in starting salaries, lower wage increases for certain age groups, the introduction of a new form of employment, a postponed revision of starting salaries and various wage supplements, reduced administration costs by simplifying the regulations on trial employment, greater flexibility in the scheduling of working hours and productivity improvements by the removal of individual guarantees and increased local pay formation. The new form of employment relates to vocational introduction or vocational training programmes in which young people can be employed on 75 per cent of a starting salary or, alternatively, the average wage for the age group for a period of 12 months.

Many wage agreements will be renegotiated in 2013

A new major round of collective bargaining covering approximately 2.5 million employees will begin in 2013 (see Table A2).[25] In addition, there will be a large number of application agreements that will cover several hundred thousand employees.[26] In total, approximately two thirds of the employees in Sweden will be affected by the round of collective bargaining in 2013. A large proportion of the current collective agreements will expire on 31 March next year.

Table A2. Major wage agreements that will expire in 2013

Expiry date	Examples of sector/branch/group/ agreement	No. of trade union agreements	Number of employees (thousands)
2013-01-31	Ships' officers	3	4
2013-02-28	Blue-collar workers in the construction and transport sectors	12	115
2013-03-31	The manufacturing industry, blue-collar workers in the retail and wholesale sectors, IT, telecom, rail transport, energy companies, local authorities (not teachers)	269	1 800
2013-04-30	Chemists' shops, white-collar workers in the retail, construction and transport sectors	78	140
2013-05-31	Smaller industrial branches, hotels and restaurants, bus transport, property maintenance	74	210
2013-06-30	Smaller industrial branches and taxi	20	35
2013-07-31 – 2013-08-31	Independent schools, household services	12	44
2013-09-30	The central-government sector, air freight	6	120
2013-10-31 – 2013-12-31	Insurance, private care and healthcare	10	39
2013		**484**	**2 507**

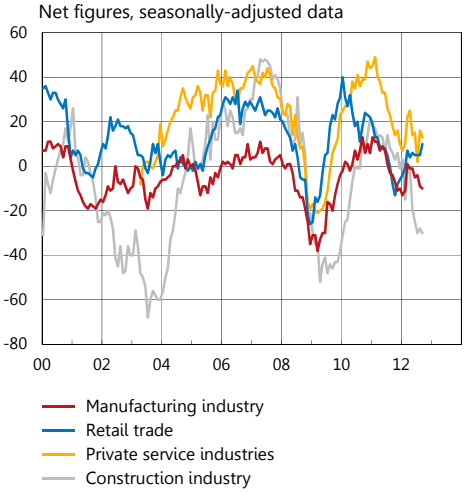
Note. The table presents collective agreements reported to the National Mediation Office up to and including 4 October 2012. Around 100 agreements remain to be renegotiated during 2012. These agreements, which cover a total of approximately 100 000 employees, are not included in the table as they have not yet been reported to the National Mediation Office.
Source: National Mediation Office

The trade unions affiliated to the Swedish Trade Union Confederation presented their joint demands in mid-October. One of the demands is that wage increases in contractual areas where wages are less than the average wage of worker in the manufacturing sector should match the amount in Swedish kronor awarded to manufacturing workers in their new wage agreements. There is also a demand that that the lowest wages in all the Confederation's contractual areas should be raised by an amount equivalent to the amount awarded to manufacturing workers. The Confederation of Swedish Enterprise, on the other hand, claims that the unions' demands will squeeze out jobs for young and inexperienced workers. If the unions affiliated to the Confederation succeed in achieving their demands in the approaching round of collective bargaining the increases in wage costs for the new agreements will be higher than the manufacturing sector's norm, which would be a deviation from the pattern set in the rounds of collective bargaining in recent years. It remains to be seen what this will mean for the final results of collective bargaining.

It is likely that the social partners in the manufacturing sector will be the first to sign new wage agreements. Negotiations will probably begin

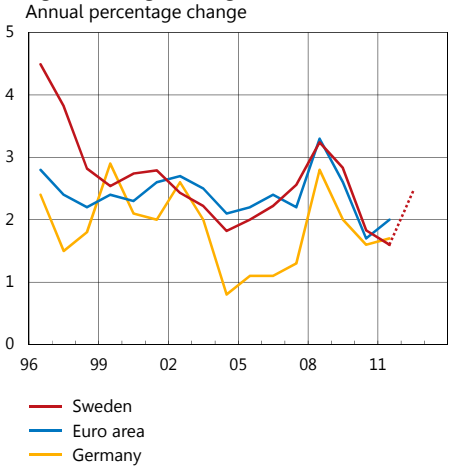
[25] This means that the round of collective bargaining in 2013 will be of roughly the same extent as the round in 2012.
[26] An application agreement is an agreement signed between an employees' organisation and a single company that is not a member of an employers' confederation.

Figure A9. Confidence indicators for the business sector
Net figures, seasonally-adjusted data



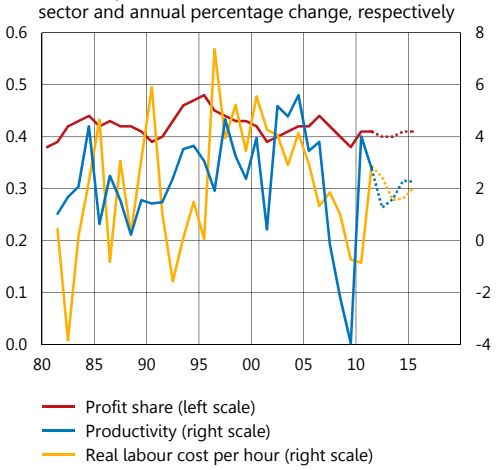
Source: National Institute of Economic Research

Figure A10. Agreed wage increases
Annual percentage change



Sources: Deutsche Bundesbank, ECB, National Mediation Office and the Riksbank

Figure A11. Profit share in the business sector
Gross surplus as share of value added in the business sector and annual percentage change, respectively



Note. Real labour cost per hour deflated by the added-value deflator in the business sector.

Sources: Statistics Sweden and the Riksbank

in November or December. By virtue of the Industrial Agreement, the model in which the manufacturing sector takes the lead on wages has been used in the rounds of collective bargaining since 1998. This has worked well and is an important explanation of why wage formation in Sweden has worked much better over the last 15 years than in the 1970s and 1980s. This wage formation model will probably be used in this round too. However, there are also factors that indicate that the norm set in the manufacturing sector will not be followed as closely this time. The export-oriented manufacturing sector is under pressure from weak international demand, while the situation looks better for the retail and service sectors. The confidence indicators also show that there are clear differences between the levels of confidence in different sectors (see Figure A9). The fact that wage increases in the teachers' agreements were higher than in other wage agreements in 2012 may also indicate that the manufacturing sector's norm will be followed less closely.

Many factors to take into account in collective bargaining

As in previous rounds of collective bargaining, the social partners in the manufacturing sector, and ultimately the partners in other parts of the labour market, will need to take a number of different factors into account in the course of the negotiations. For example international competition, global demand, wage levels abroad, the exchange rate, profit levels, inflation expectations, the supply of labour and the effects on employment and unemployment. Collective bargaining will also be conducted in a situation in which there is great uncertainty about the prospects for the Swedish economy. Development in above all the euro area is weak and entails serious risks. Several indicators for the development of the Swedish economy, for example the purchasing managers' index, point to a slowdown.

The social partners in the manufacturing sector also take into account wage formation in other countries in the course of the collective bargaining process. The competitiveness of the manufacturing industry will be affected if pay levels are higher in Sweden than in the countries we compete with.[27] This is because the agreed wage increases are a significant part of the unit labour costs. Since 1998, the agreed wage increases in Sweden have covaried well with those in the euro area as a whole, while they have on average been higher than in, for example, Germany (see Figure A10).

Assessments of the development of the Swedish krona are also important in the collective bargaining process in the manufacturing industry. [28] During the latest period of unease, the krona has acted as an interesting investment alternative to the larger currencies to a greater extent than previously. The strong krona has increased the pressure on the Swedish export sector, although this has hardly been a decisive factor for the decline in exports in general.

However, not only international factors are important to the manufacturing sector's negotiators; domestic factors such as profit levels, inflation expectations and the supply of labour are also important. It is expected that real labour costs per hour will increase more quickly than

[27] This particularly applies because most of the countries that Sweden trades with and/or competes with have an inflation target that is similar to Sweden's.
[28] The future development of the krona is discussed in for example Krisen i eurozonen – konsekvenser för svensk industri (The crisis in the eurozone – consequences for Swedish industry), the Economic Council for the Manufacturing Industry, June 2012, and Inför 2013 års avtalsrörelse (Ahead of collective bargaining in 2013), Economic Council for the Manufacturing Industry, October 2012.

productivity in 2012, which means that the profit share in the business sector will be somewhat lower than last year and thus continue to be below its historical average (see Figure A11). According to the Prospera surveys, inflation expectations in the longer term are well-anchored around 2 per cent, while in the shorter term most measures indicate that they are lower than 2 per cent. However, it is unclear what inflation expectations the partners take as their starting point in the negotiations in the manufacturing sector. According to *Facken inom industrin*, an organisation for the trade unions in the manufacturing sector, the Riksbank's inflation target is an important basis for the collective bargaining of the social partners in the sector.[29] It is also possible that in the case of longer contractual periods the partners take the Riksbank's inflation target as their starting point, while in the shorter term they look at various inflation expectations and/or inflation forecasts.[30] The supply of labour in the manufacturing sector is better today than it was before the sector's crisis years of 2008-2009. However, according to the Business Tendency Survey, the shortage of labour in the sector is somewhat more acute than in other sectors.

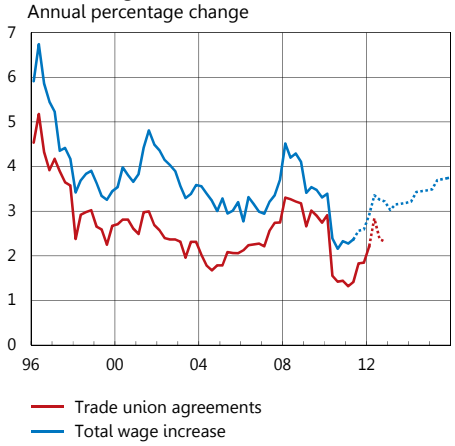
As the sector that sets the norm for wages, the manufacturing sector should also take into account the effects of the new wage agreements on employment and unemployment in Sweden. This may be particularly important as unemployment is high and there are signs that matching on the labour market has become less effective (see the article "Has the functioning of the labour market changed?" in this report). High minimum wages in particular may affect employment for vulnerable groups such as the young, those born abroad and the less qualified.[31]

The rate of wage increases will continue to be around 3 per cent next year

As the manufacturing sector, which is expected to continue to take the lead on wages, is under strain, the assessment is that the level of wage increases in the economy as a whole will be 3.1 in 2013 (see Figure A12). This assessment is based on a number of different factors, such as developments on the labour market, corporate profits and current inflation expectations. The relatively weak development of the labour market in 2013 will entail an ongoing low level of wage drift. The Riksbank's company interviews in September this year also show that a larger proportion of the companies believe that wage drift will be lower in 12 months' time than it is at present (see Figure A13).

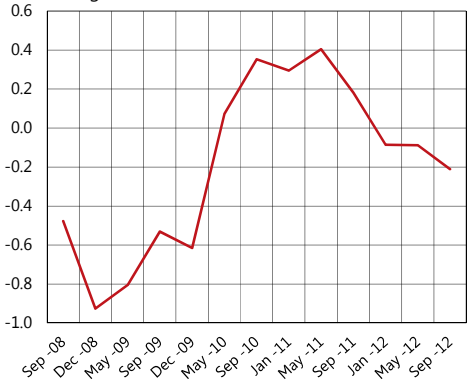
Since 1998, wage increases agreed at the union level have constituted between 60 and 80 per cent of total wage increases in Sweden. If we assume that this will continue to be the case during 2013, then the Riksbank's forecast for total wage increases of 3.1 per cent means that the agreed wage increases will, according to the statistics of the National Mediation Office, be between 1.8 and 2.5 per cent per year, that is equal to or lower than the agreed wage increases in 2012.

Figure A12. Total wage increases and wage increases agreed at union level in Sweden
Annual percentage change



Sources: National Mediation Office, Statistics Sweden and the Riksbank

Figure A13. Expected wage drift at companies according to the Riksbank's company interviews
Net figures



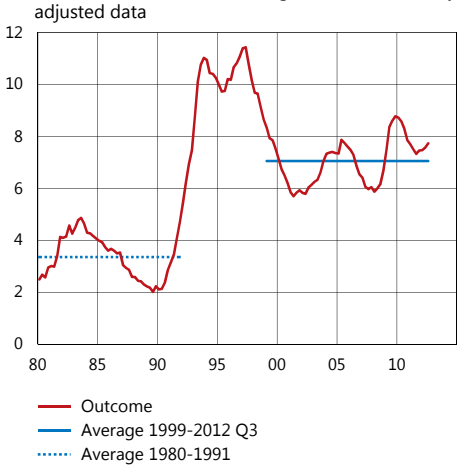
Note. Weighted net figures based on the number of employees in Sweden at the interviewed companies. The question relates to the companies' assessments of wage drift over the next 12 months. The net figures in the diagram represent the balance between the percentage of companies stating that wage drift will increase and those stating that wage drift will decrease. The dates specified in the figure refer to the month in which the company interviews were mainly conducted.

Source: The Riksbank

[29] See Facken inom industrin, Avtalspolitisk plattform inför avtalsrörelsen 2011 (Policy platform ahead of the round of collective bargaining in 2011), 15 September 2011.
[30] In recent years, the reports of the Economic Council for the Manufacturing Industry, which are used as a basis for collective bargaining in the manufacturing sector, have discussed the inflation forecasts of the Riksbank and other forecasters one and two years ahead. The two latest rounds of collective bargaining resulted in contractual periods in the manufacturing sector that averaged 22 months (2010-2011) and 14 months (2012). The five rounds of collective bargaining during the period 1995-2009 resulted in contractual periods of around 36 months.
[31] The OECD points to the problem of too high minimum wages in Sweden. See OECD, Economic Outlook, no. 91, May 2012.

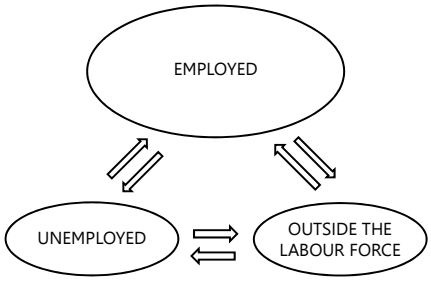
Has the functioning of the labour market changed?

Figure A14. Unemployment
Per cent of the labour force, aged 15-74, seasonally-adjusted data



Source: Statistics Sweden

Figure A15. Flows on the labour market



The labour market is important to the formulation of monetary policy for several reasons. The labour market situation is an important indicator of inflationary pressures, but also an important factor in the assessment of resource utilisation in the economy. This article focuses on the way the labour market functions and how it can influence developments in unemployment and employment in the years ahead. The results indicate that the matching between job seekers and vacancies has deteriorated in recent years, which means it may take longer to attain lower unemployment.

Over the past year, unemployment in Sweden has been around 7.5 per cent, which is relatively high in an historical perspective (see Figure A14). It is difficult to determine what level of unemployment is sustainable in the long run and the problem is currently being discussed not only in Sweden, but also around the world. However, it is central to understanding the role that monetary policy can play in influencing the development of unemployment.[32] The monetary policy target is to keep inflation at around 2 per cent, but the Riksbank also strives to stabilise output and employment around long-term sustainable development paths. When assessing what development of the labour market is sustainable in the long run, the efficiency of the matching on the labour market plays a central role.[33]

Matching efficiency in theory

As the labour market is associated with frictions, there are always people unemployed and vacancies at the same time. At each point in time there are individuals moving from one status to another on the labour market, between work and unemployment or into and out of the labour force (see Figure A15). For the labour market to work well, the matching between vacancies and job seekers must function efficiently. The shorter the unemployment spells and the shorter the recruitment times, the higher the employment rate and the lower unemployment will be.

One way of describing how the labour market works is to use search and matching models. To put it simply, one could say that the level of unemployment is determined by how many people become unemployed and how long their unemployment lasts. Employers seek labour with the right skills and the job seekers look for vacancies for which they are qualified and which suit them geographically.

There are many factors affecting the efficiency of the matching process. For example, structural changes, where new companies and sectors replace old ones, may lead to job seekers and employers finding it more difficult to meet one another. Job seekers initially seek work in other sectors, professions or geographical areas than those where the vacancies are and the transition takes time. It may require a change in skills, but also be due to externalities such as housing and public

[32] This discussion has been under way in a number of countries, including the United States, where unemployment has been high for a long time. Some observers are concerned that there is a risk that unemployment will become entrenched at a high level, and that this is due to imbalances over which monetary policy has no influence. Others assert that unemployment is largely cyclical and that monetary policy can therefore play a greater role.
[33] Matching efficiency measures how easy or difficult it is for jobseekers and employers to find each other.

transport.[34] Matching is also affected by changes in the composition of the working population with respect to for example age, origins and education. If groups that experience greater difficulty finding work increase as a percentage of the job seekers, this will make the matching process more difficult.

Change in the composition of unemployment

In recent years a number of measures have been implemented to increase the incentives to work and in this way raise the long-term employment rate and to reduce unemployment.[35] At the same time, the composition of the working population has changed in a way that counteracts this, as groups with an average lower rate of labour force participation and lower employment rate have increased as a percentage of the working population. For example, the percentage of young people (15-24 years) and older people (55-74 years) has increased during the past ten years (see Figure A16). The percentage of those born abroad has also increased. At the same time, however, the percentage with tertiary education has increased. For them the average employment rate is much higher (see Table A3).

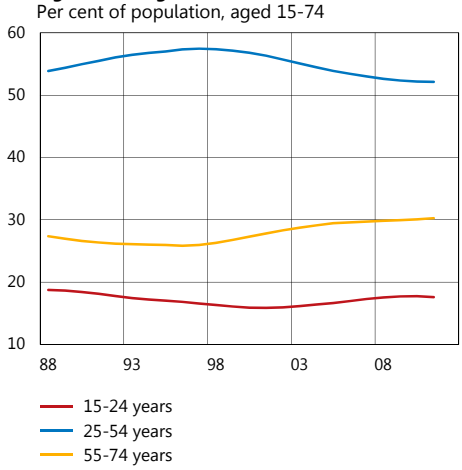
Table A3. Labour market status for different groups 2006 and 2011
Percentage of labour force and population respectively in each sub-group (15-74 years)

	Unemployment		Labour force participation		Employment rate	
	2006	**2011**	**2006**	**2011**	**2006**	**2011**
Education						
At most compulsary school	17.4	45.6	42.6	39.4	35.2	17.4
Upper-secondary school	6.6	7.3	77.8	76.7	72.6	71.2
Tertiary education	4.7	4.6	82.3	81.8	78.4	78.0
Age						
15-24	21.5	22.9	50.9	52.4	39.9	40.4
25-54	5.3	5.5	89.4	91.0	84.7	86.0
55-74	4.2	4.4	48.6	47.2	46.5	45.2
Origin						
Sweden	6.1	5.9	71.9	71.8	67.5	67.6
Abroad	13.1	15.8	64.7	66.8	56.2	56.2
All	7.1	7.5	70.8	71.0	65.8	65.6

Source: Statistics Sweden

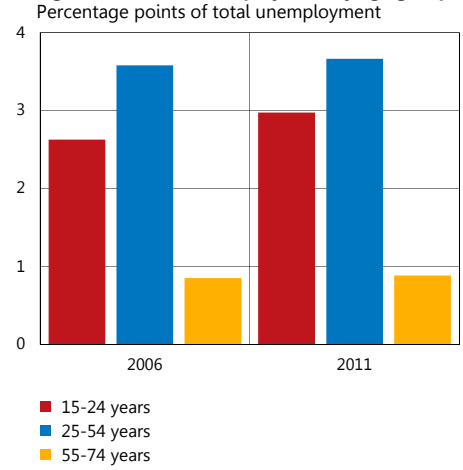
Between 2006 and 2011 the number of people in the age group 15-74 years has increased by around 250,000.[36] In this group, the employment rate in 2011 was slightly lower, while labour force participation and unemployment were slightly higher than in 2006, but as shown in the last row in Table A3, the differences are slight. As also shown in the table, however, there are major differences if one looks at different sub-groups.

Figure A16. Age structure
Per cent of population, aged 15-74



Sources: Statistics Sweden and the Riksbank

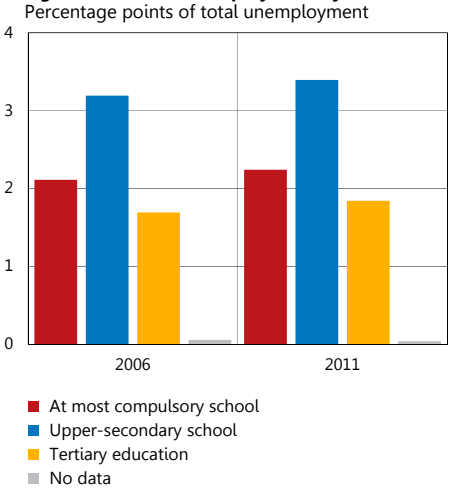
Figure A17. Total unemployment by age group
Percentage points of total unemployment



Source: Statistics Sweden

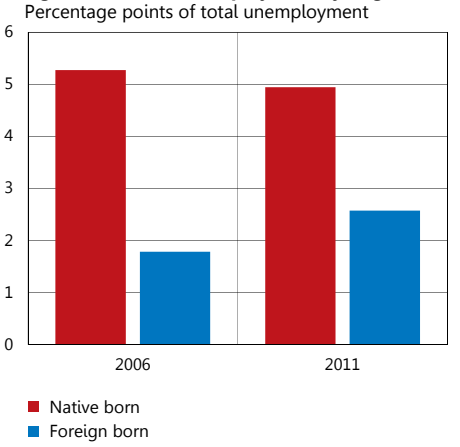
[34] One method of studying how mismatching between job seekers and vacant jobs affects unemployment was developed by A. Sahin, et al., "Mismatch Unemployment", Federal Reserve Bank of New York Staff Reports no. 566, 2012. The method was applied to Swedish data by G. Marthin in the report "Measuring Mismatch in the Swedish Labor Market", *Studier i Finanspolitik* (Studies in fiscal policy) 2012:3, Swedish Fiscal Policy Council, which found that mismatching between occupations is a factor in total unemployment. The study also finds, in a comparison between 2002 and 2011, results indicating that there has been an increase over time in mismatching between occupations.
[35] Examples of reforms are the Earned Income Tax Credit and reduced replacement ratios in the unemployment insurance. For a discussion of these reforms, see the article "Long-run developments in the Swedish labour market", Monetary Policy Report, July 2012.
[36] The comparison is restricted to the period 2006 - 2011 due to data limitations on subgroups in the Labour Force Survey.

Figure A18. Total unemployment by education level
Percentage points of total unemployment



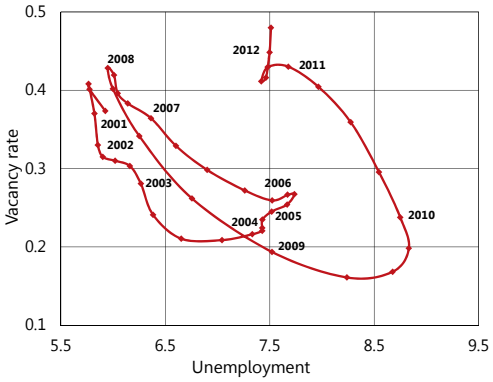
Source: Statistics Sweden

Figure A19. Total unemployment by origin
Percentage points of total unemployment



Source: Statistics Sweden

Figure A20. Beveridge curve
Per cent of the labour force



Note. Data labels mark the first quarter of the respective year.

Sources: Employment Service, Statistics Sweden and the Riksbank

Total unemployment in 2006 was 7.1 per cent and in 2011 it had increased to 7.5 per cent (see Table A3). Figure A17 shows how unemployment in these years is broken down into different age groups. The columns for the different groups thus add up to the total unemployment for the respective year. The contribution to unemployment from the younger age groups has increased, while the contribution from the older groups, 25-54 years and 55-74 years, remains almost unchanged between the years.[37]

According to educational level, one does not find such clear differences in the composition of unemployment between the years. The percentage of unemployed has increased in all groups, but those with pre upper-secondary school and upper-secondary school education level have increased the most on the whole (see Figure A18).

The differences are greater if one instead breaks down the population according to origins. The contribution to unemployment from those born abroad is much greater in 2011 than in 2006, the contribution from those born in Sweden has declined during this period (see Figure A19).

All in all, a comparison between 2006 and 2011 shows that the group of unemployed is now to a greater extent composed of those born abroad and younger people. With regard to the level of education, the differences are slight, but there has been some further shift towards groups with a lower educational level. The changes that have occurred since 2006 show that in the group of unemployed there are now more people with a weaker attachment to the labour market. This is confirmed by statistics from the Swedish Public Employment Service, according to whom, there are four main groups who have a relatively vulnerable position on the labour market and who find it difficult to get a new job if they become unemployed. These "vulnerable" groups include those born outside of Europe, people with less than upper-secondary school education, people in the age group 55-64 and people with a physical disability which reduces their capacity to work. The percentage of those registered as unemployed belonging to vulnerable groups has shown an increasing trend of ten percentage points in the period 2004-2011 and they now comprise a majority of all those registered as unemployed with the Swedish Public Employment Service.[38] The fact that an increasing number of job seekers belong to groups that find it relatively difficult to obtain work risks having a negative effect on matching efficiency.

Indications of poorer matching

Several indicators can be used to illustrate matching efficiency. The Beveridge curve, which shows the relationship between unemployed and vacancies, is a common indicator. Normally, one imagines a negative relationship between vacancies and unemployment; in an economic boom the percentage of job vacancies rises and unemployment falls, while the reverse applies in a recession. If both unemployment and the vacancy rate increase at the same time (the curve shifts outwards), on the other hand, it may be a sign of imbalances in the labour market that mean the matching efficiency has deteriorated. This is exactly what has

[37] Unemployment in each group is weighted by the group's share of the total workforce.
[38] See the 2012 Labour Market Report, Swedish Public Employment Service.

happened since mid 2009; the vacancy rate has increased significantly without unemployment showing a corresponding fall (see Figure A20).[39]

As mentioned above, geographical mobility may also play a major role in how efficiently the labour market functions. Figure A21 shows the annual change in the vacancy rate, together with the annual change in geographical mobility. There is a strong covariation until the end of 2008, but it is weaker after that. A forecast based on the historical correlation up to 2007 (inclusive) shows that geographical mobility ought now to be higher than it is. This might, therefore, also indicate poorer matching efficiency. Geographical or occupational imbalances could, in other words, have led to companies experiencing recruitment problems despite high unemployment, since the vacant jobs and the unemployed are not in the same place. This is also illustrated by the fact that the average recruitment time in the private sector has continued to increase recently, at the same time as labour shortages in most sectors have successively fallen.

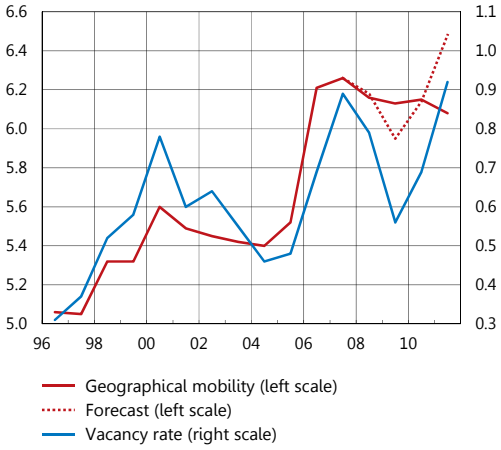
One way of illustrating the labour market situation for various groups is by the job finding rate, that is, the probability of moving from unemployment to work. According to statistics from the Swedish Public Employment Service, job finding rates vary widely for different groups. They are highest for young people and lowest for the disabled (Figure A22).[40] Job finding rates declined sharply during the financial crisis and seem to have stabilised at lower levels, particularly for the young, those with only secondary-school education and those born outside Europe.[41]

Like the job finding rate, developments in the duration of unemployment reflect changes in the labour market. There has been a clear increase in the average duration of unemployment since mid-2009 (see Figure A23). Longer periods of unemployment can contribute to changes in search behaviour and make matching less efficient, as the unemployed risk losing their professional skills, which can have a stigmatising effect. This could contribute to making some unemployment entrenched.

Change in the relationship between matching and the labour market situation?

Matching efficiency can also be analysed using 'matching functions'.[42] Matching functions relate the number of matches, that is, individuals who have found a job, to the number of jobseekers and the number of vacancies in the economy. If there is an increase in the number of unemployed or the number of vacancies, more matches can be achieved. Figure A24 shows an estimated relationship of this type, using Statistics Sweden's quarterly statistics, in which the job finding rate (the number of matches in relation to the unemployed) is related to the tightness of the labour market (the relationship between vacancies and unemployed).[43] Each point in the figure corresponds to job finding rate and the tightness

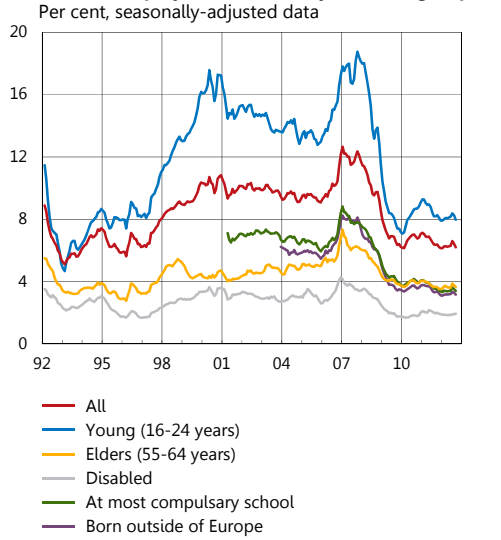
Figure A21. Geographical mobility and vacancy rate
Per cent of the labour force



Note. Geographical mobility is defined as the number of people moving into the area as a percentage of the labour force. The vacancy rate is defined as the number of vacancies as a percentage of the labour force.

Sources: Employment Service, Statistics Sweden and the Riksbank

Figure A22. Job finding rate for those registered with the Employment Service, by different groups
Per cent, seasonally-adjusted data

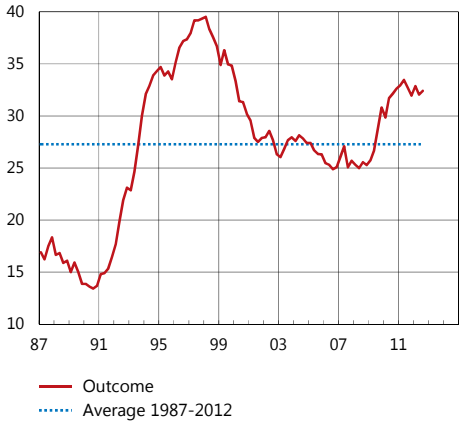


Note. The Figure shows the number of individuals in different groups that have got an unsubsidised job in the month concerned as a percentage of the remaining number of unemployed and participants in programmes with activity grants in the preceding month. Three-month moving average.

Sources: Employment Service and Statistics Sweden

[39] The OECD notes in its 2012 Employment Outlook (Chapter 1) that the Beveridge curves in Sweden, the United States and the United Kingdom have shown a relatively large outward shift in recent years.
[40] Note that the 2007 statistics do not include jobs which lasted for less than six months for those jobseekers covered by the government Job and Development Guarantee and the Job Guarantee for Young People.
[41] The same picture using data from the LFS from Q3 2005 and onwards shows that job chances have recovered, but are still somewhat lower than the average for the period.
[42] See B. Petrolongo and C. Pissarides, "Looking into the Black Box: A Survey of the Matching Function", Journal of Economic Literature, 39, pp. 390-431, 2001, for a survey.
[43] In this article, a log-linear matching function is often used in which the job finding rate, that is, the number of matches (M) in relation to the number of unemployed (U), is explained by tightness in the labour market, defined as the number of vacancies (V) in relation to the number of unemployed in the previous period:
$\ln\left(\frac{M_t}{U_t}\right) = a + b * \ln\left(\frac{V_{t-1}}{U_{t-1}}\right) + \varepsilon_t$

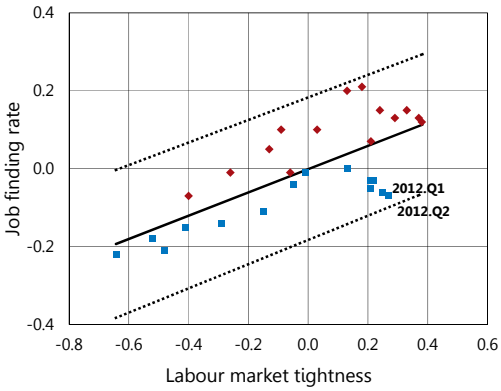
Figure A23. Average period of unemployment
Number of weeks



Note. Refers to the 16-64 age group.

Source: Statistics Sweden

Figure A24. Job finding rate and tightness on the labour market, quarter



Note. Job finding rate is calculated as the percentage of unemployed that move from unemployment to employment from one quarter to another. Labour market tightness is measured as the number of vacancies, according to Statistics Sweden's vacancy statistics, in relation to the number of unemployed. Both variables are seasonally-adjusted, logarithmed and measured as a deviation from the average during the period. Observations up to the end of the fourth quarter 2008 are marked in red and observations thereafter are marked in blue.

Sources: Statistics Sweden and the Riksbank

of the labour market during a given quarter. The solid line represents the estimated relationship.[44] The better the labour market situation, the tighter the labour market, the greater the likelihood that the unemployed will find work. Observations over the past year (the blue symbols in the figure) are lower than observations for previous years, but all observations lie within an estimated 95% forecast interval.[45] The estimation period is short, however, since data are only available from 2005 onwards.

If we instead use monthly data for job chances and tightness from the Swedish Public Employment Service, we can study a longer period, from January 1992 until September 2012.[46] The result shows that a change seems to have occurred in the relationship in recent years. Observations after autumn 2008 and the onset of the financial crisis (again blue symbols in the figure) are systematically lower than before (see Figure A25).[47] Figure A26 shows an estimate for the period 1992–2008 instead. Given this historical relationship, the actual outcomes for tightness thereafter were used to forecast how the job finding rate should have developed (the red dashed line) had the relationship remained unchained.[48] The blue line shows that the actual rate was significantly lower than the estimated relationship suggests. This indicates that matching is now less efficient.[49,50] The deep crisis which has impacted on the Swedish economy over the past few years may, of course, be affecting the results, and it is too early to draw any far-reaching conclusions on how permanent the deterioration in efficiency will be.[51]

[44] The Fiscal Policy Council and the National Institute of Economic Research have previously used the same specification and data. See inter alia the Fiscal Policy Council's 2011 report and the August 2012 Economic Tendency Survey. The Fiscal Policy Council has also used the same specification using data from the Swedish Employment Service. They studied the link between the labour market situation and job chances for experienced and inexperienced jobseekers, respectively (see the 2012 Fiscal Policy Council report).
[45] A forecast interval shows the interval within which one can expect future observations to lie.
[46] The statistics are not entirely comparable before and after 2007 (see footnote 40). The Swedish Public Employment Service's calculations show that job finding rate may be underestimated by 0.5–1 percentage point after 2007. To take this into account, the job finding rate has been corrected upwards to a corresponding degree in the estimates presented here.
[47] The pattern remains the same if we analyse sub-groups with the same functional formula. Estimates were carried out of job finding rate for groups that are defined as having weaker attachment to the labour market.
[48] The same approach – to estimate the matching function using data from before the crisis, and then forecast developments using actual developments in the labour market tightness – is also used in the most recent Employment Outlook (OECD, 2012). It also finds signs that matching in the Swedish labour market has deteriorated over the past few years.
[49] The results are qualitatively the same if we instead assume that the labour market is characterised by stock-flow matching, see P. Gregg and B. Petrolongo, "Stock-flow matching and the performance of the labor market", European Economic Review 49, 2005 and A. Forslund and K. Johansson, "Random and stock-flow models of labour market matching – Swedish Evidence", IFAU Working Paper, 2007:11 for a study of Swedish data.
[50] The choice of estimation period is not given. The result is not qualitatively affected by instead estimating the relationship up to December 2007, as used by for example the OECD in its estimates in the 2012 Employment Outlook.
[51] Various rigidities in unemployment following cyclical disruptions, known as persistence effects, are described in, for instance, B. Holmlund "The Swedish Unemployment Experience", Oxford Review of Economic Policy, 2009. See also L. Ljungqvist and T.J. Sargent "How Sweden´s Unemployment Became More like Europe's", in R. B. Freeman, B. Swedenborg and R.H. Topel (eds.), Reforming the Welfare State: Recovery and Beyond in Sweden, NBER Books, 2010.

Summarising conclusions

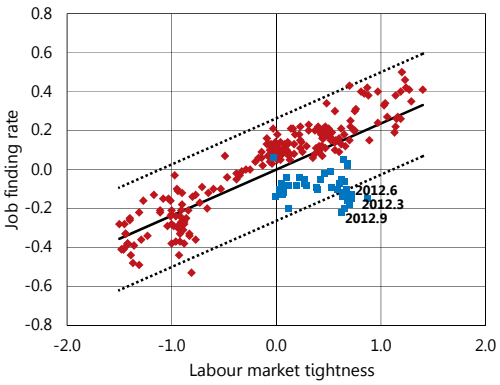
Short term changes in unemployment can largely be explained by cyclical variations. At the same time, the level of unemployment around which these short-term variations take place is dependent on how well the labour market works. The amount of unemployment which can be explained by the latter may also vary over time. There are various ways of analysing the functioning of the labour market, and the results of the present analysis indicate that there are some signs of deterioration in matching efficiency over recent years.[52]

There has been an increase in the vacancy rate since the end of 2009 without any particular fall in unemployment. It is natural to see poorer efficiency after a deep recession, but there are indicators that other factors have also been in play. One is that the composition of the pool of unemployed has changed, and now contains a higher proportion of people who find it harder to find work. Compared with the situation a few years ago, the unemployed now consist to a greater degree of people born abroad and the young, and to some extent groups with a lower level of education.

A number of estimated matching functions which show the relationship between the job finding rate and the tightness of the labour market point to a possible deterioration in efficiency in recent years. The strength of the result, however, depends on what period is studied and what data source is used. Since the extreme fluctuations in the economy have probably impacted on matching efficiency, it is too early to draw far-reaching conclusions on how permanent the change is.

On the whole, the results indicate that it will become more difficult to achieve low unemployment in the next few years. The Riksbank's assessment now is that the reduction will take somewhat longer than envisaged in the September Monetary Policy Update, which is a contributing factor to why the repo-rate path has been adjusted down. At the same time, the indicators that matching efficiency has deteriorated present challenges that lie mainly outside the field of monetary policy, primarily within wage formation and labour market, integration and education policy.

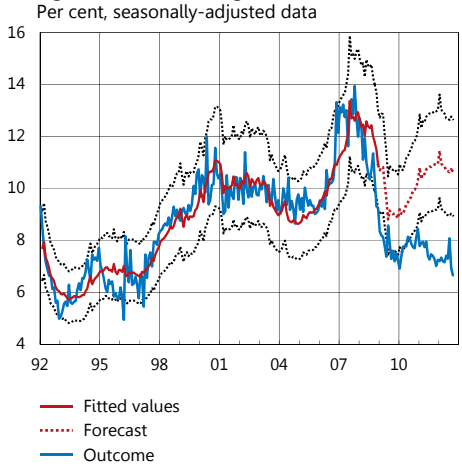
Figure A25. Job finding rate and tightness on the labour market, month



Note. Job opportunities is defined as the number of job-seekers who have got an unsubsidised job in relation to the total number of job-seekers in the preceding month. Tightness on the labour market is defined as remaining vacancies in relation to the total number of job-seekers. Observations up to and including December 2008 are marked in red and observations from January 2009 to August 2012 are marked in blue. Seasonally-adjusted data, deviation from trend.

Sources: Employment Service and the Riksbank

Figure A26. Job finding rate - outcome and forecast
Per cent, seasonally-adjusted data



Note. The broken red line represents the forecast. The broken black line represents the 95% forecast interval.

Sources: Employment Service and the Riksbank

[52] The National Institute of Economic Research's report "Wage Formation in Sweden 2012" presents similar conclusions with regard to matching efficiency.

Appendix

- Tables
- Articles 2010-2012
- Interest rate decisions 2008-2012
- 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

	Q3 2012	Q4 2012	Q4 2013	Q4 2014	Q4 2015
Repo rate	1.5	1.2 (1.3)	1.3 (1.6)	1.9 (2.3)	2.6

Source: The Riksbank

Table 2. Inflation
Annual percentage change, annual average

	2011	2012	2013	2014	2015
CPI	3.0 (3.0)	0.9 (1.2)	0.7 (1.3)	2.4 (2.6)	2.7
CPIF	1.4 (1.4)	1.0 (1.1)	1.1 (1.6)	2.0 (2.0)	2.1
CPIF excl. energy	1.0 (1.0)	1.0 (1.1)	1.4 (1.5)	1.9 (2.0)	2.1
HICP	1.4 (1.4)	1.0 (1.1)	1.1 (1.5)	2.1 (2.0)	2.2

Note. The CPIF is the CPI with a fixed mortgage rate. HICP is an EU harmonised index of consumer prices.
Sources: Statistics Sweden and the Riksbank

Table 3. Summary of financial forecasts
Per cent, unless otherwise stated, annual average

	2011	2012	2013	2014	2015
Repo rate	1.8 (1.8)	1.5 (1.5)	1.2 (1.4)	1.7 (2.0)	2.3
10-year rate	2.7 (2.7)	1.7 (1.6)	2.0 (2.1)	3.1 (3.3)	3.9
Exchange rate, KIX-index, 18 Nov. 1992=100	107.6	106.0	103.4	103.3	103.3
Exchange rate, TCW-index, 18 Nov. 1992=100	122.3 (122.3)	120.8 (120.4)	116.8 (116.9)	117.2 (118.0)	117.8
General government net lending*	0.2 (0.1)	-0.1 (-0.2)	-0.3 (-0.5)	0.5 (0.5)	1.0

* Per cent of GDP
Sources: Statistics Sweden and the Riksbank

Table 4. International conditions

Annual percentage change, unless otherwise stated

GDP	2011	2012	2013	2014	2015
Euro area (0.14)	1.5 (1.5)	-0.4 (-0.4)	0.2 (0.5)	1.7 (1.9)	2.2
USA (0.19)	1.8 (1.8)	2.1 (2.3)	2.2 (2.4)	3.4 (3.2)	3.6
Japan (0.06)	-0.7 (-0.7)	2.3 (2.7)	1.3 (1.4)	1.1 (1.2)	1.0
BRIC-countries (0.26)	7.4 (7.5)	6.0 (6.5)	6.7 (7.0)	6.9 (7.3)	6.9
OECD (0.54)	1.9 (1.9)	1.4 (1.6)	1.7 (1.9)	2.6 (2.7)	2.8
KIX-weighted (0.79)	2.2	1.1	1.6	2.6	3.0
TCW-weighted (0.54)	1.3 (1.3)	0.4 (0.4)	0.9 (1.1)	2.0 (2.1)	2.4
World (1.00)	3.9 (3.9)	3.3 (3.5)	3.6 (3.8)	4.1 (4.3)	4.3

Note. The figures in parentheses in the left column indicate the global purchasing-power adjusted GDP-weights, according to the IMF, 2011.The BRIC countries are Brazil, Russia, India and China.

CPI	2011	2012	2013	2014	2015
Euro area (HICP)	2.7 (2.7)	2.5 (2.5)	1.9 (1.8)	1.6 (1.6)	1.8
USA	3.2 (3.2)	2.2 (2.1)	2.0 (1.9)	1.9 (2.0)	2.4
Japan	-0.3 (-0.3)	0.0 (0.1)	0.1 (0.0)	0.9 (0.3)	0.6
KIX-weighted	3.2	2.6	2.3	2.2	2.3
TCW-weighted	2.6 (2.6)	2.1 (2.1)	1.8 (1.7)	1.7 (1.6)	1.9

	2011	2012	2013	2014	2015
Policy rates in the rest of the world, KIX-weighted	0.8	0.4	0.3	0.4	0.9
Policy rates in the rest of the world, TCW-weighted	0.8 (0.8)	0.3 (0.3)	0.3 (0.3)	0.4 (0.4)	0.9
Crude oil price, USD/barrel Brent	111 (111)	112 (113)	108 (110)	103 (104)	98
Swedish export market	5.4	1.5	3.9	7.0	8.2

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. The weights comprise the respective country´s share of Swedish export of goods. Policy rates in the rest of the world refer to a KIX and TCW weighted average of USA, the euro area, Norway and the United Kingdom.

Sources: Eurostat, IMF, Intercontinental Exchange, OECD and the Riksbank

Table 5. GDP by expenditure

Annual percentage change, unless otherwise stated

	2011	2012	2013	2014	2015
Private consumption	2.1 (2.0)	1.8 (1.7)	2.2 (1.8)	2.7 (2.4)	2.3
Public consumption	1.7 (1.8)	0.6 (0.9)	0.9 (1.0)	0.7 (0.7)	1.1
Gross fixed capital formation	6.7 (6.2)	3.7 (4.1)	2.7 (2.6)	5.2 (5.5)	5.1
Inventory investment*	0.4 (0.6)	-0.9 (-1.0)	0.1 (0.0)	0.0 (0.1)	0.0
Exports	7.1 (6.9)	-0.1 (1.3)	3.3 (3.9)	6.4 (6.5)	8.5
Imports	6.3 (6.3)	-0.3 (-0.2)	3.9 (3.8)	6.7 (6.8)	8.5
GDP	3.9 (3.9)	0.9 (1.5)	1.8 (1.9)	2.7 (2.8)	2.9
GDP, calendar-adjusted	3.9 (4.0)	1.2 (1.9)	1.8 (1.9)	2.8 (2.9)	2.7
Final domestic demand*	2.7 (2.6)	1.7 (1.8)	1.8 (1.6)	2.5 (2.4)	2.4
Net exports*	0.8 (0.7)	0.1 (0.7)	-0.1 (0.3)	0.3 (0.3)	0.5
Current account (NA), per cent of GDP	6.9 (7.0)	6.7 (7.2)	6.5 (7.2)	6.5 (7.2)	6.5

*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

	2011	2012	2013	2014	2015
Population, aged 16-64	0.3 (0.3)	0.1 (0.1)	0.2 (0.2)	0.2 (0.2)	0.2
Potential hours worked	0.7 (0.8)	0.5 (0.6)	0.4 (0.5)	0.4 (0.4)	0.4
GDP, calendar-adjusted	3.9 (4.0)	1.2 (1.9)	1.8 (1.9)	2.8 (2.9)	2.7
Number of hours worked, calendar-adjusted	2.2 (2.3)	0.4 (0.3)	0.4 (0.3)	0.9 (1.1)	0.7
Employed, aged 15-74	2.1 (2.1)	0.5 (0.4)	0.3 (0.4)	0.9 (1.1)	1.1
Labour force, aged 15-74	1.2 (1.2)	0.7 (0.5)	0.6 (0.5)	0.3 (0.3)	0.2
Unemployment, aged 15-74 *	7.5 (7.5)	7.7 (7.6)	7.9 (7.6)	7.4 (6.9)	6.5

* Per cent of 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

	2011	2012	2013	2014	2015
Hourly wage, NMO	2.4 (2.5)	3.2 (3.1)	3.1 (3.3)	3.4 (3.4)	3.7
Hourly wage, NA	3.4 (3.3)	3.3 (3.4)	3.4 (3.5)	3.7 (3.7)	4.0
Employer's contribution*	-0.2 (-0.2)	0.1 (0.1)	0.0 (0.0)	0.0 (0.0)	0.0
Hourly labour cost, NA	3.2 (3.1)	3.4 (3.5)	3.4 (3.5)	3.7 (3.7)	4.0
Productivity	1.7 (1.7)	0.8 (1.5)	1.5 (1.6)	1.9 (1.8)	1.9
Unit labour cost	1.5 (1.4)	2.6 (1.9)	1.9 (1.9)	1.8 (1.9)	2.0

* 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 8. Alternative scenario: higher growth in Sweden – higher productivity
Annual percentage change, unless otherwise stated, annual average

	2013	2014	2015
GDP	2.2 (1.8)	3.6 (2.8)	3.1 (2.7)
CPIF	1.1 (1.1)	1.8 (2.0)	2.0 (2.1)
Hours gap, per cent	-0.7 (-0.7)	-0.4 (-0.1)	0.3 (0.2)
Unemployment, aged 15-74*	8.0 (7.9)	7.3 (7.4)	6.3 (6.5)
Repo rate, per cent	1.1 (1.2)	1.2 (1.7)	1.8 (2.3)
CPI	0.5 (0.7)	1.8 (2.4)	2.6 (2.7)

* 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 8-14.

Sources: Statistics Sweden and the Riksbank

Table 9. Alternative scenario: higher growth in Sweden – higher domestic demand
Annual percentage change, unless otherwise stated, annual average

	2013	2014	2015
GDP	2.2 (1.8)	3.6 (2.8)	3.1 (2.7)
CPIF	1.3 (1.1)	2.2 (2.0)	2.1 (2.1)
Hours gap, per cent	-0.4 (-0.7)	0.3 (-0.1)	0.4 (0.2)
Unemployment, 15-74* years	7.8 (7.9)	7.0 (7.4)	6.4 (6.5)
Repo rate, per cent	1.4 (1.2)	2.2 (1.7)	2.9 (2.3)
CPI	1.0 (0.7)	2.9 (2.4)	2.9 (2.7)

Table 10. Alternative scenario: stronger krona – normal impact
Annual percentage change, unless otherwise stated, annual average

	2013	2014	2015
Exchange rate, KIX-index, 18 Nov. 1992=100	99.9 (103.4)	102.2 (103.3)	102.7 (103.3)
CPIF	0.8 (1.1)	1.9 (2.0)	2.1 (2.1)
Hours gap, per cent	-1.0 (-0.7)	-0.3 (-0.1)	0.0 (0.2)
Unemployment, 15-74* years	8.0 (7.9)	7.5 (7.4)	6.7 (6.5)
Repo rate, per cent	0.8 (1.2)	1.4 (1.7)	2.4 (2.3)
CPI	0.0 (0.7)	2.3 (2.4)	3.0 (2.7)

Table 11. Alternative scenario: stronger krona – rapid impact
Annual percentage change, unless otherwise stated, annual average

	2013	2014	2015
Exchange rate, KIX-index, 18 Nov. 1992=100	99.9 (103.4)	102.2 (103.3)	102.7 (103.3)
CPIF	0.6 (1.1)	1.9 (2.0)	2.1 (2.1)
Hours gap, per cent	-1.1 (-0.7)	-0.4 (-0.1)	0.0 (0.2)
Unemployment, 15-74* years	8.1 (7.9)	7.6 (7.4)	6.8 (6.5)
Repo rate, per cent	0.7 (1.2)	1.3 (1.7)	2.4 (2.3)
CPI	-0.3 (0.7)	2.4 (2.4)	3.1 (2.7)

Table 12. Alternative scenario: stronger krona – slow impact
Annual percentage change, unless otherwise stated, annual average

	2013	2014	2015
Exchange rate, KIX-index, 18 Nov. 1992=100	99.9 (103.4)	102.2 (103.3)	102.7 (103.3)
CPIF	0.9 (1.1)	1.9 (2.0)	2.1 (2.1)
Hours gap, per cent	-0.9 (-0.7)	-0.3 (-0.1)	0.1 (0.2)
Unemployment, 15-74* years	8.0 (7.9)	7.4 (7.4)	6.6 (6.5)
Repo rate, per cent	1.0 (1.2)	1.5 (1.7)	2.3 (2.3)
CPI	0.3 (0.7)	2.3 (2.4)	2.9 (2.7)

Table 13. Alternative scenario: lower repo rate
Annual percentage change, unless otherwise stated, annual average

	2012	2013	2014	2015
Repo rate, per cent	1.4 (1.5)	1.0 (1.2)	1.7 (1.7)	2.4 (2.3)
Hours gap, per cent	-0.6 (-0.6)	-0.5 (-0.7)	0.0 (-0.1)	0.3 (0.2)
Unemployment, 15-74* years	7.7 (7.7)	7.8 (7.9)	7.2 (7.4)	6.4 (6.5)
CPI	0.9 (0.9)	0.7 (0.7)	2.7 (2.4)	2.8 (2.7)
CPIF	1.0 (1.0)	1.2 (1.1)	2.1 (2.0)	2.1 (2.1)

Table 14. Alternative scenario: higher repo rate
Annual percentage change, unless otherwise stated, annual average

	2012	2013	2014	2015
Repo rate, per cent	1.5 (1.5)	1.4 (1.2)	1.7 (1.7)	2.3 (2.3)
Hours gap, per cent	-0.6 (-0.6)	-0.8 (-0.7)	-0.3 (-0.1)	0.1 (0.2)
Unemployment, 15-74* years	7.7 (7.7)	8.0 (7.9)	7.5 (7.4)	6.7 (6.5)
CPI	1.0 (0.9)	0.7 (0.7)	2.1 (2.4)	2.6 (2.7)
CPIF	1.0 (1.0)	1.0 (1.1)	1.9 (2.0)	2.1 (2.1)

Articles 2010-2012[53]

2010

2010 February What is a normal level for the repo rate?
2010 February This year's wage bargaining is expected to result in low wage rises
2010 July Great need to strengthen public finances
2010 July Effects of a fall in housing prices
2010 July What form does the recovery of productivity usually take?
2010 July The CPI and measures of underlying inflation
2010 October Why higher growth in Sweden than in the eurozone and the United States?
2010 October Basel III – tougher rules for banks
2010 October The repo rate path and monetary policy expectations according to implied forward rates
2010 October The driving forces behind trends in the economy can be analysed using a production function

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?

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

Interest rate decisions 2008-2012[54]

Date of meeting	Decision (percentage points)	Repo rate (per cent)	Monetary Policy Report
2008			
12 February	+0.25	4.25	2008:1
22 April	0	4.25	Monetary Policy Update
2 July	+0.25	4.50	2008:2
3 September	+0.25	4.75	Monetary Policy Update
8 October	-0.50	4.25	*Extra meeting, no report*
22 October	-0.50	3.75	2008:3
3 December	-1.75	2.00	Monetary Policy Update
2009			
10 February	-1.00	1.00	February 2009
20 April	-0.50	0.50	Monetary Policy Update
1 July	-0.25	0.25	April 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

[54] 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, i.e. 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 expenditure 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 of a flow or a stock and is not adjusted for changes in value caused by inflation. See also Fixed prices.

ECB: The European Central Bank.

EFSF: European Financial Stability Facility. A rescue fund set up to safeguard financial stability in Europe by offering financial support to euro-area countries.

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, such as EFSF.

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

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 around approximately 85% of Swedish export market. The weights are determined by the respective country's share of Swedish exports of goods.

FED: The central bank of the United States.

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

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.

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.

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

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 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.

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.

Sub-prime loan: Mortgages granted to households with low or non-verifiable incomes.

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

TCW index: Total competiveness weighted. An index for the Swedish krona's exchange rate.

TCW-weighted: An aggregate of, for instance, GDP, the CPI or exchange rates in 20 countries that are important to Sweden's international transactions. TCW weights are constant.

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 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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