Monetary Policy Report

February 2010

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 10 February 2010. The Report is available on the Riksbank's website, www.riksbank.se. From this address a printed version of the report can be ordered free of charge or the report can be downloaded as a PDF file.

To subscribe to the Monetary Policy Report, please contact the Riksbank.
E-mail: kontorsservicecenter@riksbank.se
Address: Sveriges Riksbank, SE-103 37 Stockholm, Sweden
Telephone: +46 8 787 00 00

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

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

Monetary policy in Sweden

MONETARY POLICY TARGET

According to the Sveriges Riksbank Act, the statutory objective of monetary policy is "to maintain price stability". The Riksbank has specified this objective in terms of an inflation target according to which the annual change in the consumer price index (CPI) is to be two per cent. The Riksbank has set a tolerance band around the target of plus/minus one percentage point. This band draws attention to the fact that it is beyond the powers of monetary policy to exactly attain the target all of the time. It also serves to underline that excessively large deviations are unacceptable if the target is to remain credible.

MONETARY POLICY STRATEGY[2]

- Monetary policy is guided by, in addition to CPI, various measures of "underlying inflation". However, there is no single measure of inflation that at all times indicates the proper stance of monetary policy.
- Monetary policy is normally focused on achieving the inflation target within two years. This is partly because monetary policy has an effect on economic developments after a time lag. The two-year horizon also gives the Riksbank scope to take into account real economic developments (GDP growth, unemployment, employment and so on).
- The Riksbank's monetary policy decisions routinely take into account changes in asset prices and other financial variables.
- The Riksbank's forecasts are based on the assumption that the repo rate will develop in such a way that monetary policy can be regarded as well-balanced. In the normal case, a well-balanced monetary policy means that inflation is close to the inflation target two years ahead without there being excessive fluctuations in inflation and the real economy. At the same time, it is important to point out that the level of output and employment in the long term is not affected by monetary policy but is governed by other factors such as technology and access to labour.
- Openness and clarity in monetary policy are prerequisites for the successful combination of credibility for the inflation target and a flexible application of the target in the short term.

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 how the different Executive Board members voted.

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.
- A press conference is held on the day following the monetary policy meeting.

---

2 A detailed description of the monetary policy strategy is available as a PDF file on the Riksbank's website www.riksbank.se under the heading Monetary policy/Price stability.

Contents

Monetary policy considerations – a summary

The Executive Board of the Riksbank has decided to leave the repo rate unchanged at 0.25 per cent. At the same time, the assessment now is that the upturn in economy activity rests on more solid ground and that there are therefore sound reasons for increasing the repo rate somewhat sooner than was assumed in December. The Executive Board expects that it will begin to raise the repo rate in the summer or early autumn.

Upturn in economic activity on more solid ground

The upturn in economic activity has become gradually more distinct. International growth has increased slightly. In Sweden, inflation has increased in recent months and the development of the labour market does not appear to be as weak as was previously estimated. At the same time, the situation on the financial markets has steadily improved.

Low interest rates and an expansionary fiscal policy have helped to promote a rapid recovery in household consumption. However, the picture of the recovery is divided. The development of the manufacturing industry is still lagging behind. When economic activity abroad picks up, the assessment is that the demand for Swedish products will increase and exports will rise. Relatively strong growth in GDP is therefore expected over the next few years.

The rate of GDP growth will increase in the period ahead, but it will take some time before the economy recovers from the severe downturn in connection with the crisis. The situation on the labour market will continue to deteriorate for a while, although it appears that unemployment will not be as high as was previously assumed. It is expected that the weak labour market will have a restraining effect on wage increases. This will help to reduce inflationary pressures in the period ahead.

Towards a more normal monetary policy

In order for inflation to reach the target of 2 per cent and to support the recovery of the economy, the interest rate needs to remain low. The Executive Board of the Riksbank has therefore decided to leave the repo rate unchanged at 0.25 per cent.

As a result of the crisis, the Riksbank has cut the repo rate to a historically-low level. The information received since December indicates a continued normalisation of the financial markets and a somewhat stronger development of the economy. All in all, this means that the risk of a major setback in the recovery of the economy has declined and that the upturn therefore rests on more solid ground. There may thus be a need to adjust monetary policy to more normal conditions somewhat sooner than was assumed in December. The current assessment of the Executive Board of the Riksbank is that the repo rate will be increased in the summer or early autumn. At the same time, the assessment now is that it will be possible to make the increases in the slightly longer term more gradually and the forecast for the repo rate in the longer term has therefore been adjusted downwards somewhat.

The repo rate affects mortgage rates, which are included in the consumer price index (CPI). When the repo rate is increased in the period ahead, the CPI will therefore increase quickly. Underlying inflation measured in terms of the CPIF (the CPI with a fixed mortgage rate) will on the other hand be stable at around 2 per cent at the end of the forecast period.

The future direction for monetary policy will depend, as always, on how economic developments abroad and in Sweden affect the prospects for inflation and economic activity in Sweden. If, for example, wage increases are higher or the krona is weaker than expected, it may be necessary to increase the repo rate more quickly. If, on the other hand, wages increase more slowly or the supply of labour is higher, monetary policy may need to be more expansionary than in the forecast.

CHAPTER 1 – The economic outlook and inflation prospects

Since summer last year, the signs of an economic recovery have gradually become clearer. The situation in the financial markets has gradually improved and is no longer expected to provide any obstacle to the economic upturn. However, the recovery is from a low level, and is still dependent on large economic policy stimulation measures.

The situation in the world economy is continuing to improve, with rising GDP growth and world trade. In Sweden, employment has been higher than expected, and unemployment is now not expected to be as high as was feared earlier. Despite the low level of resource utilisation, inflation has risen more than expected and underlying inflation is currently high. However, inflation is expected to fall during the forecast period as wages increase at a slower rate, productivity rises and the krona appreciates.

Monetary policy need to remain expansionary to attain the inflation target of 2 per cent and to support the recovery in the economy. The low repo rate and the Riksbank's fixed-interest rate loans to the banks contribute to this. The Riksbank's assessment is that it is appropriate to begin gradually adapting monetary policy to more normal circumstances during the second half of 2010. This entails beginning to raise the repo rate with effect from the summer or early autumn. It also entails the three fixed-interest rate loans granted in 2009 maturing at the end of June, end of August and beginning of October.

Compared with the forecast in December, the repo rate is now expected to increase slightly sooner, while in the longer term it will not be raised by as much. The slightly faster normalisation of monetary policy now is due to both new economic information received since December and the fact that the financial markets are functioning better, which means that the economic recovery is now on firmer ground.

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

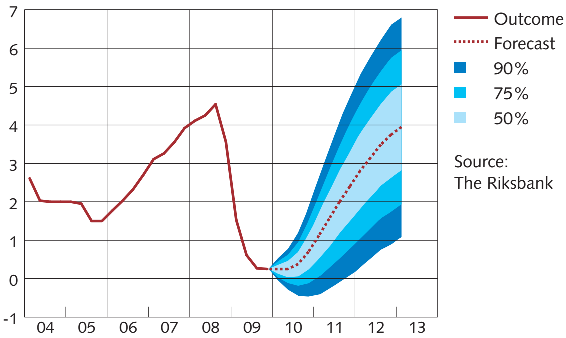


Figure 1:2. GDP with uncertainty bands
Annual percentage change, seasonally-adjusted data

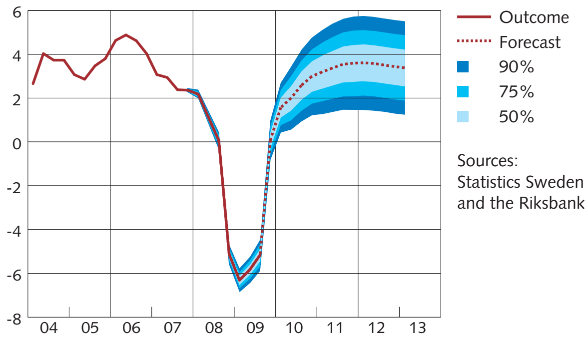


Figure 1:3. CPI with uncertainty bands
Annual percentage change

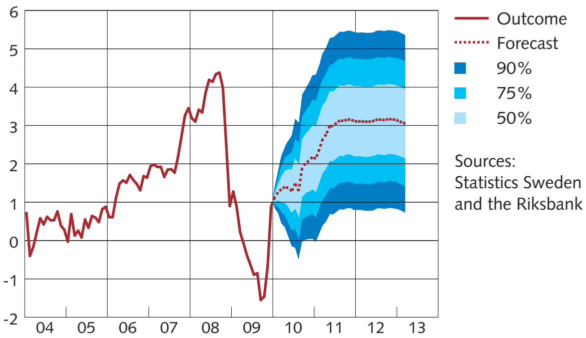
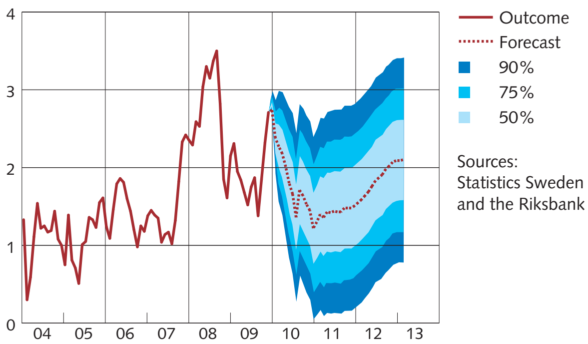
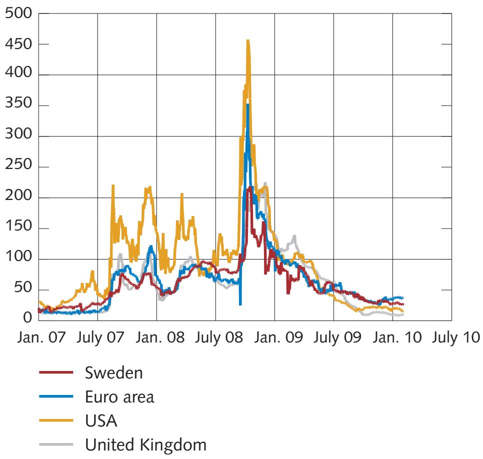


Figure 1:4. CPIF with uncertainty bands
Annual percentage change



Note. The uncertainty bands in the figures are based on historical forecast errors. See the article "Calculation method for uncertainty bands" in Monetary Policy Report 2007:1. The uncertainty band for the repo rate is based on the ability of risk-adjusted market rates to forecast the future repo rate. This uncertainty band does not take into account the fact that there may be a lower bound for the repo rate. There is also uncertainty over the outcomes for GDP, as the National Accounts figures are revised several years after the preliminary publication. Uncertainty regarding the CPI forecast is updated using the forecast errors for 2008. An error in the calculations has also been corrected. The uncertainty regarding the CPIF forecast is based on the Riksbank's forecast error for the CPIX 1999-2009 with an adjustment for the fact that the CPIF and the CPIX have varied to different degrees.

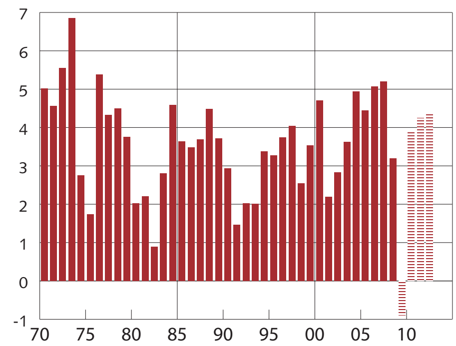
Figure 1:5. Difference between interbank rates and government bond rates (TED spread)
Basis points



Note. The spread is calculated as difference between the three-month interbank rate and the three-month treasury bill.

Sources: Reuters EcoWin and the Riksbank

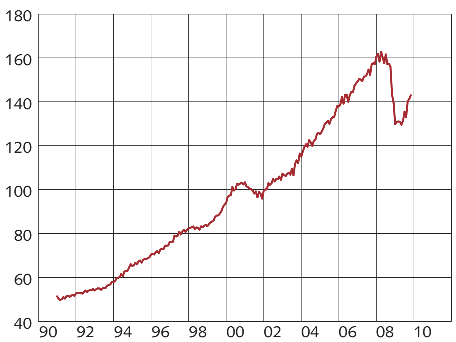
Figure 1:6. GDP-growth abroad
Annual percentage change



Note. Striped bars represent the Riksbank's forecast.

Sources: IMF and the Riksbank

Figure 1:7. World Trade Monitor Index
Index, 2000 = 100, seasonally adjusted data



Source: Netherlands Bureau for Economic Policy Analysis

■■ Financial markets no longer an obstacle to the recovery

The situation in the financial markets around the world is becoming increasingly stable and no longer appears to present any obstacle to the continued economic recovery. This is indicated, for instance, by the fact that various risk premiums on the interbank and credit markets have fallen. The TED spread is now down at roughly the same levels as noted in summer 2007 (see Figure 1:5). Activity in the financial markets has also increased. For example, companies' opportunities to obtain market funding have improved. Other signs of normalisation are that individual events have not resulted in any abnormal spreading to the global financial markets. This applies, for example, to when Dubai World defaulted on its payments and Greece had its credit rating downgraded. One potential problem for Sweden concerns developments in the Baltic countries. Loan losses there are increasing and the Riksbank is expecting them to peak during 2010. The Swedish banks' profitability is negatively affected by the loan losses. But they have increased their capital and will, according to the Riksbank's assessment, be able to cope with the strains (see Financial Stability Report 2009:2).

The recovery in economic activity that began in Asia last year has now spread to large parts of the world. However, resource utilisation in the world economy is still low. Growth is increasing now (see Figure 1:6 and Table A5), but the rate of the upturn varies from country to country. It is already strong in Asia and particularly in China, although it is more modest in the euro area. World trade fell heavily during the initial stage of the financial crisis, but it has risen in 2009 (see Figure 1:7). The comprehensive economic policy measures taken by governments and central banks have stimulated developments. But this will lead to rising public sector debt in many countries. There is a risk of a rapid rise in long-term interest rates in the countries where public sector finances have deteriorated the most. Measures will eventually be needed to correct budget deficits. This will probably have some restraining effect on GDP growth abroad at the end of the forecast period.

Many central banks have a difficult balancing act ahead of them. If they withdraw the support measures too soon there is a risk that this will slow down the recovery. But if the low interest rates and extraordinary measures are kept in place too long, imbalances may build up in the form of unsustainably high asset prices.

There may also be imbalances between countries. The low short-term interest rates and good access to liquidity in Europe and North America make it attractive to borrow in the short term to invest in countries with a high expected yield. This may have contributed to the recent large capital inflows to several growth economies. These inflows tend to push up asset prices – for instance, house prices and share prices – which has been the case in several Asian countries. At the same time, the experiences gained from the financial crisis over the past year and during the Asian crisis of the 1990s indicate that these flows can change direction abruptly, which creates a risk of substantial falls in asset prices in the future.

■■ Rising commodity prices reflect increased demand

The oil price fell by almost USD 100 per barrel during the autumn of 2008. The oil price has risen again since the beginning of 2009 (see Figure 1:8). This is mainly because the supply has declined, as OPEC cut its production quotas, but also because demand in the world economy has risen. During the forecast period, the oil price is expected to rise from the current approximately USD 75 per barrel to approximately USD 85 per barrel at the beginning of 2013. This is in line with the forward pricing in the oil market. Commodity prices, primarily metals, rose substantially in 2009 but are still significantly below the peak levels experienced in 2008 (see Figure 1:9). This primarily reflects a strong demand from countries outside the OECD.

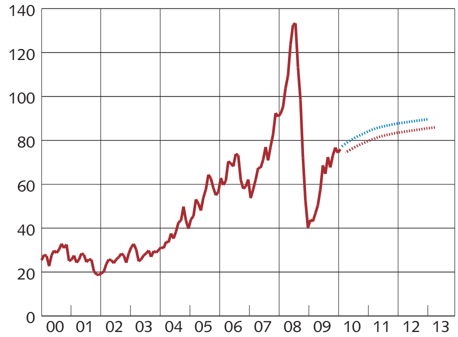
■■ US economy continuing to improve

The US economy grew more rapidly during the fourth quater of last year than was forecast in the December Monetary Policy Update. Growth is continuing, to reach around 3.5 per cent (calculated as an annual rate) during the first half of this year, but then will be slightly lower (see Figure 1:10). Several factors indicate that the recovery in the US economy is continuing. For one thing the financial markets have stabilised, and for another household wealth has improved as a result of rising house prices and share prices. The earlier large fall in employment has slowed down considerably and unemployment may now have peaked. In addition, new fiscal policy stimulation measures will contribute to better growth in 2010.

The US economy will also be stimulated by the record-low policy rate. Pricing in the futures market shows that the policy rate is expected to remain at its current level until autumn of this year. The total economic policy stimulation in recent years and during the forecast period is expected to be the largest in modern times. GDP growth is expected to be 3.5 per cent in 2010. Growth in the economy will then decline slightly as the positive effects of the fiscal policy measures wane (see Table A5).

The uncertainty in the forecast for the US economy remains substantial. On the one hand there is a risk that increasing payment problems among households will have greater negative effects on the banking sector than expected. It is also uncertain how serious the problems are in the construction sector for commercial properties. On the other hand, it cannot be ruled out that the turnaround on the labour market will have greater positive effects on household consumption than expected. It may also be the case that the decline in uncertainty on the financial markets leads to a greater increase in the propensity to

Figure 1:8. Oil price, Brent crude
USD per barrel

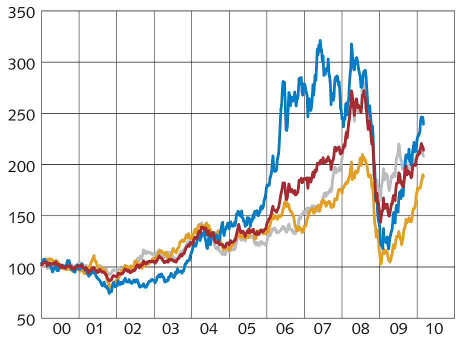


Oil price, outcome
Futures, average up to and including 4 February 2010
Futures, December

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

Sources: Intercontinental Exchange and the Riksbank

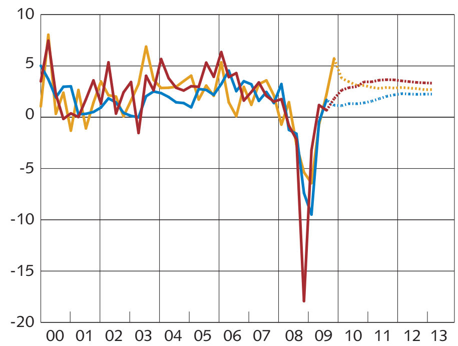
Figure 1:9. Commodity prices
Index 2000 = 100, USD



Total
Metals
Food
Other agricultural products

Source: The Economist

Figure 1:10. Development for GDP in different regions and countries
Quarterly changes in per cent calculated in annualised terms, seasonally-adjusted data

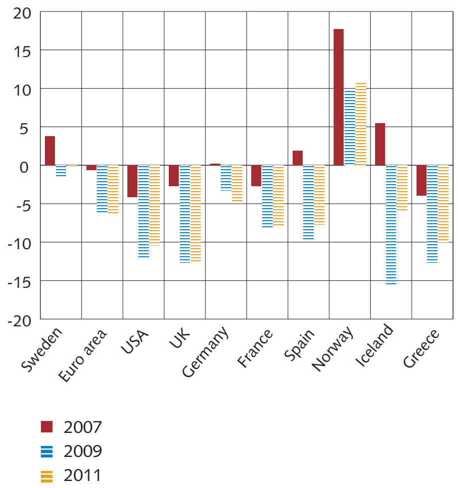


Sweden
Euro area
USA

Note. Broken lines represent the Riksbank's forecast.

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

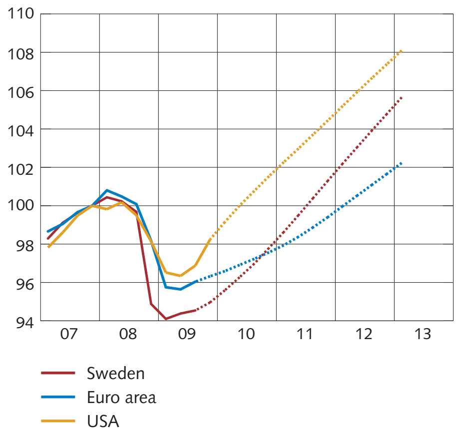
Figure 1:11. Public sector net lending
Percentage of GDP



Note. Sptriped bars represent forecasts. The forecast for Sweden is the Riksbank's forecast, while for other countries it is the OECD's forecast, December 2009.

Sources: OECD and the Riksbank

Figure 1:12. Comparison of recovery in Sweden, the euro area and USA
GDP-level, index 2007 quarter 4 = 100



Note. The quarter prior to the recession breaking out in the USA = 100. Broken lines represent the Riksbank's forecast.

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

consume than assumed. Moreover, there are risks slightly further ahead linked to the large public sector budget deficit. This is something the US government must manage with reduced public expenditure or higher taxes.

Further signs that developments are uncertain are the significant differences in the forecasters' assessments of how the US economy will develop. Some analysts expect developments to be worse than forecast in the Riksbank's main scenario, while others believe that it will be better. The deviation between the highest and lowest forecasts for GDP growth in "Consensus Forecasts" and the standard deviation for the various forecasters' assessments are relatively high, although both have fallen in recent months.

High oil prices have led to significant increases in inflation in both November and December. The low level of resource utilisation is, however, dampening underlying inflation. The assessment is that CPI inflation will be 2.3 per cent this year, 2.0 per cent in 2011 and 2.2 per cent in 2012 (see table A5).

■■ Tentative recovery in the euro area

GDP growth in the euro area will be weaker than assessed in the Monetary Policy Update in December. Weaker outcomes for industrial production, orders and the retail trade in the beginning of the fourth quarter of 2009 point to the recovery being slightly slower. In 2010, growth will be held back by the continued deterioration in the labour market. Corporate investment is also expected to be weak as a result of the low level of capacity utilisation. An increase in exports and public consumption will, on the other hand, contribute to growth in 2010. An improvement on the labour market from the beginning of 2011 will help to increase growth from 1.2 per cent in 2010 to 1.6 per cent in 2011. Growth is not expected to exceed 2 per cent until 2012 (see Figure 1:10 and Table A5).

There is great uncertainty in the forecast for the euro area, too. There is a risk that growth in the euro area will be lower than expected. One factor that indicates this is the growing concern about the public finances of certain euro countries (see Figure 1:11). When these countries have to manage a large public sector debt and, for instance, raise taxes, it will subdue growth during the forecast period. On the other hand, most of the indicators of the expectations of the companies and households have continued to improve, which should indicate higher growth. An overall assessment of recent developments has resulted in a somewhat lower growth forecast for the euro area than the forecast in December.

As in previous assessments, the recovery is therefore expected to be tentative and to take place gradually. During the forecast period, growth will be significantly lower than in the United States, which fits historical patterns, and it will therefore take much longer for the euro area than for the United States to return to the volume of production that prevailed before the crisis (see Figure 1:12). A clear difference between these regions concerns the development of the labour market. In the United

States, employment will increase rapidly in the period ahead as companies recruit new staff again after having laid off staff during the crisis. In the euro area, companies have retained staff to a greater extent and will not therefore need to recruit new staff as quickly when demand and production increase.

Inflation bottomed out during the third quarter and reached positive figures in the fourth quarter of 2009. As in the assessment in December, the rate of inflation is expected to increase over the next few months as a result of rising energy prices. However, the continued low level of resource utilisation will dampen this increase. HICP inflation is expected to be just over 1 per cent in both 2010 and 2011. It is not until the second half of 2012 that inflation is expected to rise to just below 2 per cent (see Table A5).

■■ Varying rates of growth in Norway, Denmark and the UK

Growth is expected to increase in the United Kingdom, Norway and Denmark during the forecast period. It is assessed that stronger growth abroad, normalisation of the financial markets, increasing confidence in the future and the continuation of expansionary monetary policy will contribute to stronger growth. However, the rate of growth will vary from country to country. The rate will be lowest in Denmark, where growth will average almost 1.5 per cent per year in the period 2010 to 2012. Although a highly expansionary fiscal policy will boost growth this year, the recovery may be relatively weak as growth will be dampened as long as housing prices are falling.

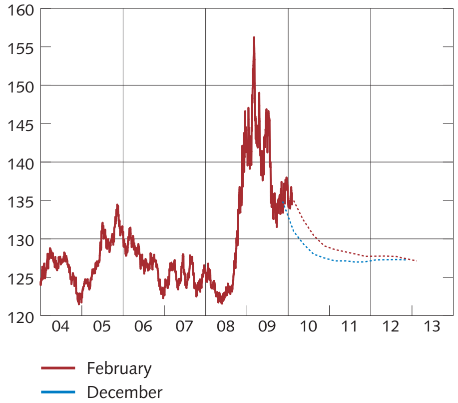
In the United Kingdom too, economic growth will be weak in 2010 but will subsequently reach just over 2 per cent per year. A contributing factor is the sharp depreciation of the pound last year, which will lead to increased exports and production. On the other hand, households need to repair their balance sheets and this together with future public budget cuts will dampen growth.

Growth will be strongest in Norway, and reach approximately 3 per cent per year in 2011 and 2012. Extensive measures to stimulate the economy and rising oil prices will help to increase economic activity in Norway.

■■ Development still strong in Asia

The strong developments in emerging economies in Asia, which experienced high growth in the second half of 2009, will continue in the period ahead. China's strong growth and high imports from the region have contributed to this development. However, the Chinese government is, of course, attempting to suppress a potential overheating of the economy in the country and this may have a negative impact on demand in the region. When global trade picks up, however, and growth increases in the West, this will benefit many of these countries which have traditionally been dependent on exports to the USA and Europe for their growth. As the economies grow, inflation will also increase in the region.

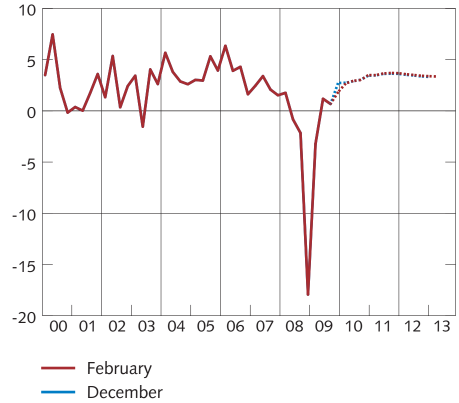
Figure 1:13. TCW-weighted exchange rate
Index, 18.11.92 = 100



Note. Outcome data are daily rates and forecasts are quarterly averages. Broken lines represent the Riksbank's forecast.

Source: The Riksbank

Figure 1:14. GDP
Quarterly changes in per cent calculated in annualised terms, seasonally-adjusted data



Note. Broken lines represent the Riksbank's forecast.

Sources: Statistics Sweden and the Riksbank

However, it is expected to be moderate during the forecast period.

Japan will also benefit from an increase in exports, above all to the rest of Asia, at the same time as domestic demand will be stimulated by the expansionary fiscal policy. Following a period of negative growth, GDP growth is expected to average 1.7 per cent per year during the forecast period (see Table A5). Inflationary pressures will remain weak and consumer prices will continue to fall in 2010.

■■ Krona will appreciate

During the initial stage of the financial crisis the Swedish krona weakened substantially (measured in terms of the trade-weighted exchange rate, the TCW index). It is not unusual that small currencies like the Swedish krona should weaken when there is turbulence on the financial markets. The assessment around a year ago was that the krona would gradually appreciate as the financial market normalised. This is also what has happened since summer 2009 (see Figure 1:13).

The Riksbank's assessment is that the krona will continue to strengthen in the period ahead. One factor in favour of this is that GDP growth in Sweden is expected to be higher than in many competing countries. However, the value of the Swedish krona has fluctuated widely in recent years. One thus cannot exclude the possibility of a weaker krona than assumed in the Riksbank's main scenario (see the alternative scenario with this possibility in Chapter 2).

■■ Upturn in Swedish economy now on firmer ground

GDP began to grow in spring 2009 (see Figure 1:14). So far it is mainly consumption and public sector investment that have contributed to the recovery. Household consumption has been stimulated by tax cuts and low interest rates. Retail trade sales have thus been maintained, while the export industry has been hard hit by the fall in world trade. This divide is also reflected in a rapid credit expansion in the household sector, at the same time as lending to companies is falling. The low interest rates have also contributed to an increase in demand for housing, which is illustrated by the rising house prices. However, the development of house prices is expected to be weaker in the period ahead, when the Riksbank begins raising the repo rate.

Sweden also has good conditions for continued strong domestic demand. Household income has developed well and households have a high level of saving. Households can therefore maintain consumption despite the weak labour market meaning that their income will grow more slowly over the coming years. In addition, public sector finances are comparatively good, which means that the need for fiscal policy restraint further ahead is less in Sweden than in many other countries (see Figure 1:11). Growth abroad is expected to rise during the forecast period and the demand for Swedish export goods will then increase. All in all, this means that activity in the Swedish economy will rise further. GDP is therefore expected to grow strongly over the coming years, by an average of around 3.5 per cent a year in 2011 and 2012 (see Figure 1:14 and Table A6).

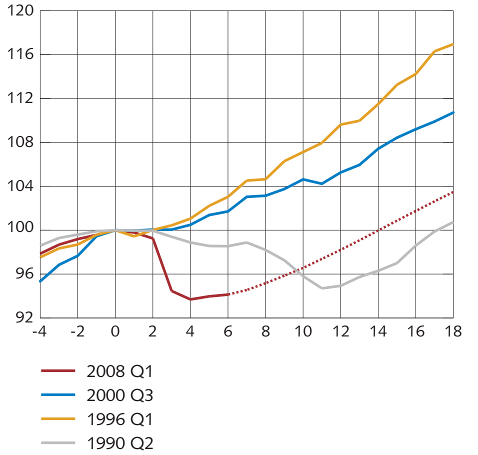
Sweden is thus expected to experience much faster growth than the euro area during the forecast period, which is in line with historical patterns, but this is also because the imbalances in Sweden are expected to be less than in many other parts of Europe. Above all, an initial situation with a high level of household saving and strong public sector finances is expected to lead to relatively strong growth in domestic demand. There is thus less need in Sweden for greater saving among households and in the public sector. Moreover, developments in the housing market have been quite different. Several European countries have long had very high housing investment and they will be much lower for some time to come as supply adjusts to demand. In Sweden the situation is the reverse. Housing investment has been low and housing shortages are prevalent in many municipalities.

Although GDP growth will rise in the future, it will not be until the middle of 2011 that GDP reaches the same level as prior to the crisis (see Figure 1:12). The fact that the recovery is taking so long is a consequence of the very deep downturn at the end of 2008 and at the beginning of 2009. This downturn in production was the largest in a single year in modern times. During the crisis in the 1990s GDP fell by around this much, but the difference is that GDP then fell over a number of years in a row (see Figure 1:15).

■■ Large margins in households' finances

There has been a relatively large increase in households' disposable incomes in recent years, but households have saved an increasingly large share of their incomes. Over the past year, household saving has reached historically-high levels (see Figure 1:16). It is natural that households should increase their saving when there is uncertainty over the future. One trend in the mortgage market is that an increasing number of households are choosing variable-interest rates on their mortgages (see Figure 1:17). When the Riksbank cut the repo rate at the end of 2008 and at the beginning of 2009, these households had more money to spend and could increase both their consumption and their saving. The less expansionary monetary policy during the coming period, with rising interest rates, will dampen households' disposable incomes. Although households' interest income will rise, their interest expenditure will rise even further. Consumption is nevertheless expected to grow, as households will choose to cut down on their saving as confidence in the Swedish economy improves. Household consumption is expected to increase by just over 2.5 per cent this year and by just over 2 per cent annually for the remainder of the forecast period (see Table A6).

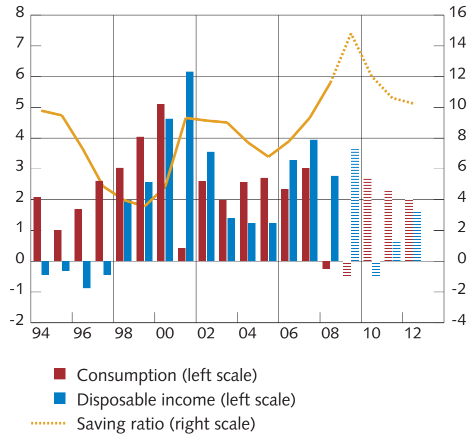
Figure 1:15. Comparison of recovery following various recessions, GDP Sweden
Index in the quarter preceding the beginning of the recession = 100



Note. Legends denote the quarter in which the index = 100. Broken lines represent the Riksbanks forecast. X-axis relates to quarters.

Sources: Statistics Sweden and the Riksbank

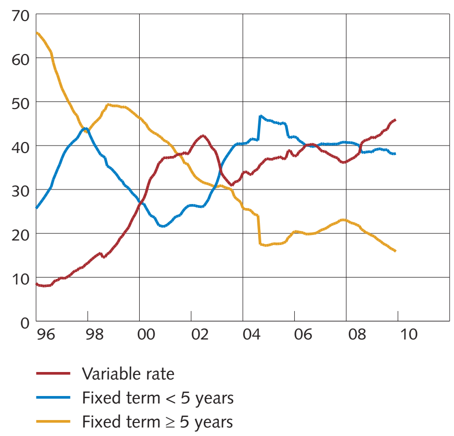
Figure 1:16. Households' consumption, disposable incomes and saving ratio
Annual percentage change, fixed prices and percentage of disposable income



Note. Broken lines and striped bars represent the Riksbank's forecast.

Sources: Statistics Sweden and the Riksbank

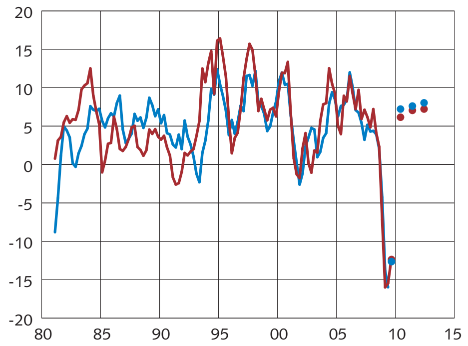
Figure 1:17. Households' fixed terms for mortgages
Percentage of loan stock



Note. Refers to original fixed term. Variable interest rate relates to loans with a fixed term of up to three months.

Sources: Statistics Sweden and the Riksbank

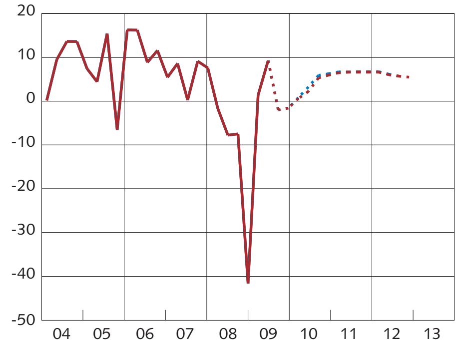
Figure 1:18. Swedish exports and world market for Swedish exports
Annual percentage change



Note. Dots represent the Riksbank's forecast for the whole year.

Sources: Statistics Sweden and the Riksbank

Figure 1:19. Gross fixed capital formation
Quarterly changes in per cent calculated in annualised terms, seasonally-adjusted data



Note. Seasonally adjusted by the Riksbank. Broken lines represent the Riksbank's forecast.

Sources: Statistics Sweden and the Riksbank

General government net lending will strengthen as economic activity strengthens

The Riksbank's fiscal policy forecasts are based on what can be regarded, in historical terms, as a normal development in fiscal policy over an economic cycle. General government net lending, which has been positive since 2004, has weakened considerably and is expected to be negative during both 2009 and 2010 (see Table A4). The main reason for this is that weak economic activity will reduce public revenues at the same time as expenditure will increase partly as a result of the rise in unemployment. However, compared with most other OECD countries, Sweden's public finances are very strong (see Figure 1:11).

As the economic situation improves, general government net lending will strengthen again. In 2012 public sector finances are expected to show a surplus of almost 1 per cent of GDP, which is the target for general government net lending over an economic cycle.

Swedish exports benefit from continuing recovery in world economy

Swedish exports have been hit hard by the global crisis and are expected to have fallen by a good 12 per cent in 2009. The reason for this is that the demand for Swedish export products, which largely consist of intermediate and investment goods, has fallen sharply. Increased growth abroad points to a recovery and to exports increasing in the coming years. Orders to the Swedish export industry also point to a positive outcome (see Figure 3:22). During the forecast period exports are expected to rise approximately in line with the import demand from Sweden's most important trading partners (see Figure 1:18).

Imports also fell heavily in 2009, but are now increasing strongly, which is partly an effect of companies reducing the rate of destocking. Imports are expected to continue increasing as a result of the increased domestic demand and exports. In 2011 and 2012 exports will increase more than imports, which means that net exports, which have provided a negative contribution to growth for several years, will increase and provide a positive contribution to GDP growth. The surplus on the current account will thus remain high (see Table A6).

Low investment need in coming years

The very low level of capacity utilisation in industry points to the need for investment remaining low in the future. At present there are no signs that industry will make any extensive investments to be able to extend its capacity over the coming year. Various measures of capacity utilisation all indicate that there is currently ample spare capacity among the industrial companies. This is also confirmed by the Riksbank's company interviews[3] where several companies state that they can increase

3 See "The Riksbank's company interviews in December 2009", which can be downloaded from the Riksbank's website under the heading Press & published/Reports.

production substantially without needing to make new investments in capital (machinery and plant) or recruiting more staff. In other areas of the business sector the need for investment is also considered low and business sector investment is thus expected to remain in principle unchanged in 2010.

Housing investment, on the other hand, is expected to rise slightly in 2010. The large construction companies have sold off almost all of their stocks of apartments, which built up during the crisis, and are now embarking on new projects. The situation will improve further in that it is now both cheaper and easier to fund investment in housing as the financial markets have improved. At the same time, the demand for new apartments is rising. Public sector investment increased rapidly last year as a result of the government's expansionary fiscal policy, but is now expected to rise at a slower rate. This year total investment is expected to increase by just over 1 per cent, but growth is expected to increase to just over 5 per cent a year in 2011 and 2012 (see Figure 1:19 and Table A6).

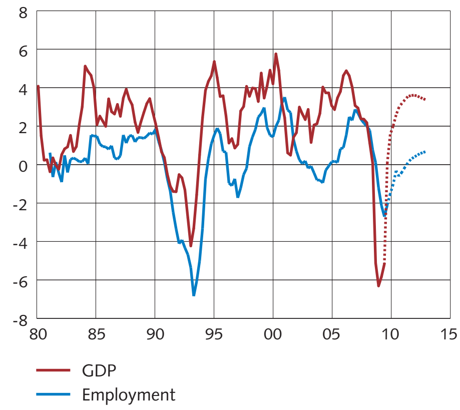
■■ Labour market less gloomy

The labour market is continuing to weaken, but the weakening is slowing down. There was a rapid deterioration in the labour market as a result of the sharp fall in production that hit the Swedish economy in autumn 2008. The division in the economy is also clearly visible in the Swedish labour market. Employment has primarily fallen in industry, while the service sector has shown more positive development.

Unemployment has risen by almost 3 percentage points since autumn 2008, and both employment and the number of hours worked have declined substantially. However, there are signs that the downswing is coming to a halt. The number of job vacancies is increasing and the number of redundancy notices is at a much lower level than it was a year ago. Despite substantial personnel cutbacks, companies have chosen not to fully adapt their personnel force to the very low demand. Many companies have instead chosen to carry on with the existing staff to a greater extent than during earlier recessions. Considering the steep decrease in GDP, a greater decrease in employment could have been expected on the basis of historical correlations (see Figure 1:20). One explanation could be that companies assess that demand will soon be restored. However, the low capacity utilisation is expected to lead to a greater need for rationalisation in companies and employment is expected to fall slightly further towards the end of 2010. As companies have chosen not to fully adapt their personnel forces to the weak demand situation, companies will be able to meet increased demand without needing to recruit new staff for quite a long time to come. Employment will not begin rising slowly until towards the beginning of 2011 (see Figure 1:21).

Both employment and the labour supply have been sustained more than was previously anticipated. During the coming period the low demand for labour is expected to mean that fewer persons seek to enter the labour force. The overall assessment is that the labour force will

Figure 1:20. GDP and employment
Annual percentage change, seasonally adjusted data



Note. Broken lines represent the Riksbank's forecast. Pre-2001 employment data has been spliced by the Riksbank.

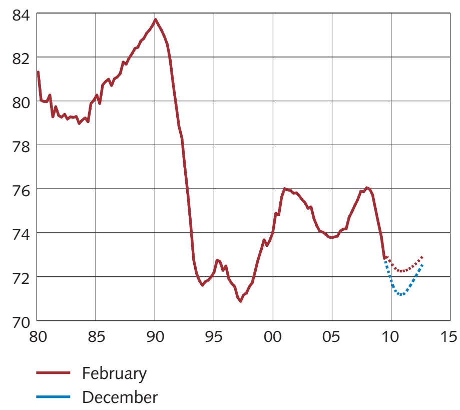
Sources: Statistics Sweden and the Riksbank

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

Note. Pre-1993 data has been spliced by the Riksbank. Broken lines represent the Riksbank's forecast, 15-74 year.

Sources: Statistics Sweden and the Riksbank

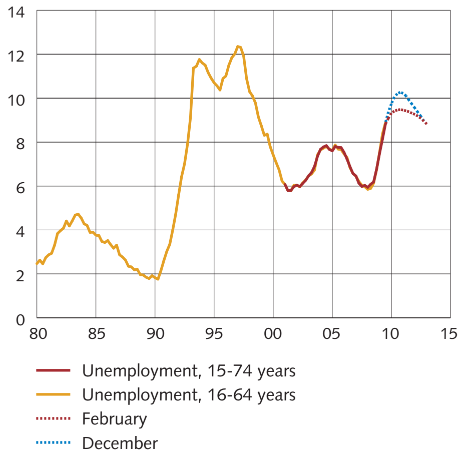
Figure 1:22. Employment rate
Employment as a percentage of the population, 16-64 year, seasonally-adjusted data



Note. Pre-1993 data has been spliced by the Riksbank. Broken lines represent the Riksbank's forecast.

Sources: Statistics Sweden and the Riksbank

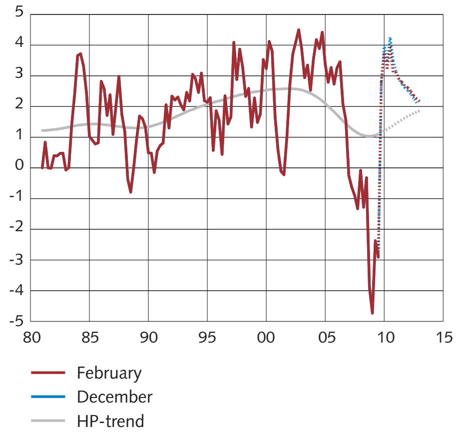
Figure 1:23. Unemployment
Percentage of the labour force, seasonally-adjusted data



Note. Pre-1993 data has been spliced by the Riksbank. Broken lines represent the Riksbank's forecast, 15-74 years.

Sources: Statistics Sweden and the Riksbank

Figure 1:24. Actual and trend productivity growth in the economy as a whole
Annual percentage change, seasonally-adjusted data



Note. Broken lines represent the Riksbank's forecast. Trend calculated using a Hodrick- Prescott filter.

Sources: Statistics Sweden and the Riksbank

decline up to the end of 2010, and then begin to grow again. This means that both the employment rate and labour force participation will be very low during the forecast period (see Figure 1:22).

Unemployment is expected to continue to rise and to peak at around 9.5 per cent of the labour force at the end of 2010 (see Figure 1:23). At the beginning of 2011 employment will increase again, and unemployment will fall slowly back to just below 9 per cent at the end of the forecast period.

■■ Low capacity utilisation gives scope for rising productivity

Labour productivity has fallen since 2007 and there are several factors that lie behind this fall. During 2007 and the first half of 2008 the Swedish economy was at the end of an economic upturn. Productivity growth is usually weak at such times. During the remainder of 2008 and 2009 there was a deep economic recession and it is then normal that productivity should decline, as company production adjusts more quickly than the personnel force. However, three years of negative productivity growth in a row is an unusually long period.

Productivity has fallen in all sectors, but the fall has been greatest in the manufacturing industry, which normally has the highest productivity growth. This is despite the manufacturing industry initially being quick to cut back on staffing in connection with the large fall in production during autumn 2008. The manufacturing industry currently has a very low level of capacity utilisation and companies will need to further downsize their workforces. As mentioned earlier, companies questioned in the Riksbank's company interviews state that they can increase production substantially without needing to recruit more staff. As production picks up speed, labour productivity is therefore expected to rise relatively quickly. Productivity is expected to grow by on average 3 per cent a year during the forecast period, which is clearly above the average since 1980 (see figure 1:24).

■■ Resource utilisation measured using different indicators

Monetary policy aims to hold inflation close to the inflation target of 2 per cent, at the same time as attaching importance to stabilising resource utilisation. However, there is no clear-cut method for measuring resource utilisation. The Riksbank uses a number of different indicators, statistical methods and model-based measures to assess both resource utilisation at present and how it will develop over the coming years. As resource utilisation is not directly measurable, the assessment is very uncertain, both with regard to the current situation and developments further ahead.

Common indicators of resource utilisation are the results of surveys putting direct questions to companies, for instance, on how they use their workforce and their capital. Another alternative is to compare production or employment with a trend, normal level. The Riksbank uses both of these approaches to assess resource utilisation in the economy.

■■ Low resource utilisation

The National Institute of Economic Research's Business Tendency Survey shows that the percentage of companies reporting a labour shortage is very low (see Figure 3:26). Capacity utilisation in the manufacturing industry has begun to rise, but there is still plenty of spare capacity (see Figure 3:20). Within the service industries a majority of companies state that they are not fully utilising their resources (see Figure 1:25). When asked what the main limiting factors to production were, a majority of the companies in almost all branches stated low demand. This picture is also confirmed by the Riksbank's company interviews.

The Riksbank has produced a measure that summarises information on resource utilisation from surveys and from labour market data. The aggregate measure of resource utilisation has been produced with the aid of principal component analysis. This is a method that produces the common component that explains most of the variation in a large amount of data. Figure 1:26 shows the results of one such analysis, where around thirty labour market and business tendency indicators have been used to extract a common component for resource utilisation. To make it possible to interpret the indicator, it has been standardised so that it is on average zero.[4] The indicator now has a value of around -1.5, which should be interpreted to mean that resource utilisation is very low in an historical perspective. If one compares this indicator with the GDP deviation from trend, it is clear that there is a large covariation.

The recent developments in the labour market, with rapidly rising unemployment and falling employment rates are also clear indications that resource utilisation in the labour market as a whole has fallen rapidly. The levels of production, employment and the number of hours worked are also low in relation to the estimated long-term trends (see Figure 1:27). All of these measures give a clear-cut picture of resource utilisation having fallen rapidly and currently being low. But it is difficult to determine exactly how low it is.

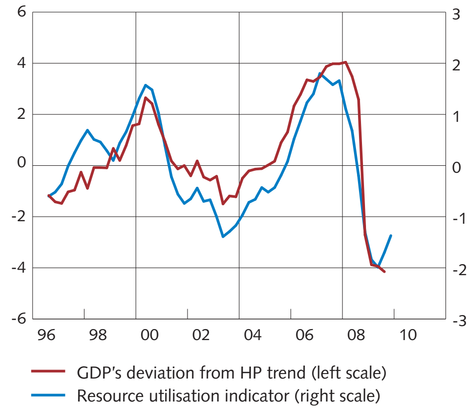
■■ Crisis expected to have long-lasting effects

The financial crisis is expected to have lasting effects which will reduce the long-term production level. Studies by, for instance, the OECD and the

Figure 1:25. Full utilisation of companies' resources, private service industries
Proportion of companies, per cent

Source: NIER

Figure 1:26. GDP's deviation from HP trend and resource utilisation indicator
Per cent and standard deviations



Note. See footnote 4 for a description of the resource utilisation indicator.

Sources: Statistics Sweden and the Riksbank

Figure 1:27. Estimated gaps
Percentage deviation from the HP trend

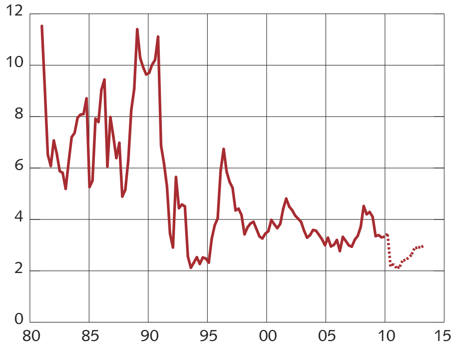
Note. These gaps should not necessarily be interpreted as the Riksbank's overall assesment of resource utilisation. Broken lines represent the Riksbank's forecast.

Sources: Statistics Sweden and the Riksbank

4 The variables included in the indicator are measured in different units, for example, net figures, per cent, and number of individuals. When the common component is calculated, all of the variables included are first normalised so that they have an average value of zero and a standard deviation of one. The common component is also normalised in this way. The level of this indicator is thus not directly interpretable, but it is clear that the most recent observations are very low from an historical perspective. The Riksbank is currently working on producing various indicators of resource utilisation, where this indicator forms part of the work. The work will be published at a later date.

5 The OECD calculates that the long-term production level in the OECD area will be approximately 3 per cent lower as a result of the current crisis (see the OECD's Economic Outlook, November 2009). The IMF's assessment is that the negative effects will be greater (see the IMF's World Economic Outlook, October 2009).

Figure 1:28. Nominal wages
Annual percentage change



Note. Refers to wages according to short-term salaries statistics from 1993 and according to wage and salary structure statistics previous to 1993. Broken lines represent the Riksbank's forecast.

Sources: National Mediation Office, Statistics Sweden and the Riksbank

IMF point to the long-term production level being negatively affected by financial crises.[5] This is linked, for instance, to the fact that investments will decline and labour is being laid off. It is normal for investment to fall in a recession, but in a financial crisis there are also funding problems, which make it both more expensive and more difficult for companies to gain access to capital. When companies are wound up, this may also lead to machinery being scrapped, which reduces the production potential in the medium term. In addition, a financial crisis can lead to fewer investments in research and development, which hampers technological progress. Apart from the lower investment, developments in the labour market are an important factor behind the lower long-term production level. There is a substantial risk that unemployment will be permanently at a higher rate, even though this was initially mostly due to a temporary deterioration in economic activity. If the crisis is also linked to a large restructuring in the business sector, for instance, if over-investment in property has led to the construction sector becoming too large, it will take time before the labour force adjusts to the new demand.

On the other hand, deep crises can lead to necessary structural changes coming sooner and to companies intensifying the work on making their operations more efficient, which can increase long-term production levels. Increased investment in the infrastructure, which is a common stabilisation policy measure, can also raise the long-term production level.

It is difficult to determine how much lower the long-term production level might become in Sweden as a result of the current financial crisis. The IMF also points to the way the economy functioned prior to the crisis being an important factor. If there are large imbalances prior to a crisis, then the negative effects tend to be greater. There do not appear to have been any large initial imbalances in Sweden. The Riksbank's assessment on the whole is that the long-term production level is between 2 and 4 per cent lower than prior to the crisis, which is in line with the OECD's analysis. The forecasts are very uncertain, however.

The Riksbank's overall assessment of resource utilisation is that it will remain lower than normal for the greater part of the forecast period. Compared with the assessment in December, the forecast for resource utilisation in the labour market is slightly higher. However, there may be a risk that resource utilisation will be even lower than in the assessment in the main scenario. An alternative scenario like this is described in Chapter 2.

■■ Weak labour market dampens wage increases

This year central wage agreements covering a large area of the labour market are due to be renegotiated. The divide in the economy is one factor that could complicate the negotiations. However, there are still several factors indicating that wage increases will be low in the future (see also the article "This year's wage bargaining is expected to result in low wage rises"). These include the weak labour market, the low company profits and a three-year period with falling productivity and relatively low expectations of wage increases and inflation among the social partners. During the forecast period wages are expected to increase by an average of 2.5 per cent a year, according to the short-term wage statistics (see Figure 1:28).

Labour costs per hour, which also include changed employers' contributions, are increasing approximately in step with wages, according to short-term wage statistics. In the same period, growth in productivity is expected to be around 3 per cent a year, which means that unit labour costs will fall (see Figure 1:29). However, there is a risk that wages will be higher than in the main scenario. One reason for this is that many wage-earners have held back their wage claims during the crisis and may therefore demand compensation in the coming wage negotiations (see the alternative scenario in Chapter 2).

■■ CPI inflation will rise during forecast period

CPI inflation has risen in recent months, and is expected to continue to rise in the period ahead (see Figure 1:30). One important reason for the rise in CPI inflation is that households' interest expenditure will cease falling and then rise as the repo rate is raised.

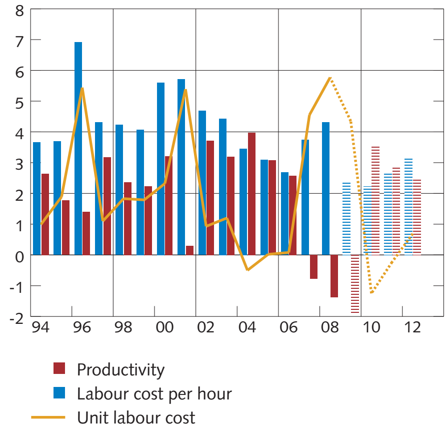
But CPIF inflation, which is not directly affected by changes in mortgage rates, has also risen in recent months (see Figure 1:31). This is primarily due to rising energy prices, but also due to weak productivity growth and a delayed impact from last year's exchange rate weakening.

In 2010 CPIF inflation is expected to fall as a result of companies' costs falling. The rate of wage increase will be relatively low, at the same time as productivity growth will accelerate, which means that companies' unit labour costs will fall (see Figure 1:29). Moreover, the krona is expected to gradually strengthen during the forecast period, which will make imports cheaper. A further reason why inflation should fall in 2010 is that rents are expected to increase relatively slowly. Electricity prices will rise during the year, but will then fall back to lower levels, in line with forward pricing on the electricity market. Oil prices will also rise over the coming years (see Figure 1:8). The CPIF will therefore increase more quickly than the CPIF excluding energy during 2010.

The rate of increase in the CPIF and the CPIF excluding energy will then rise from 2012 and onwards as economic activity strengthens and as company costs begin to rise again. At the end of the forecast period inflation measured in terms of the CPIF and the CPIF excluding energy is expected to be close to 2 per cent.

The assessment in the main scenario is that the recent upturn in CPIF inflation is temporary and that it will fall back in 2010. The factors holding back inflation in the coming period will be a stronger exchange rate, faster growth in productivity and moderate wage increases. However, the assessment is very uncertain and there is a risk that the recent upturn will not be temporary. Various measure of underlying inflation indicate that the upturn does not merely concern a few sub-groups in the CPI (see Figure 3:31). As the rate of price increase is rising among many goods and services, it may be a sign of a more prolonged rise in inflation. If the

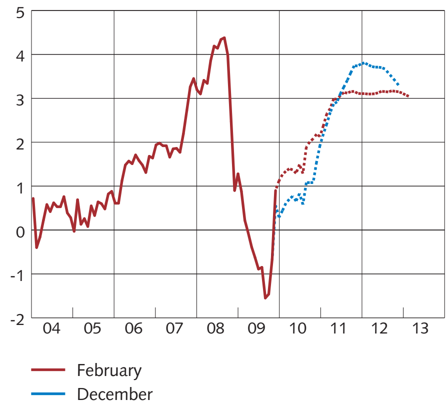
Figure 1:29. Unit labour costs for the economy as a whole
Annual percentage change



Note. Broken lines and striped bars represent the Riksbank's forecast.

Sources: Statistics Sweden and the Riksbank

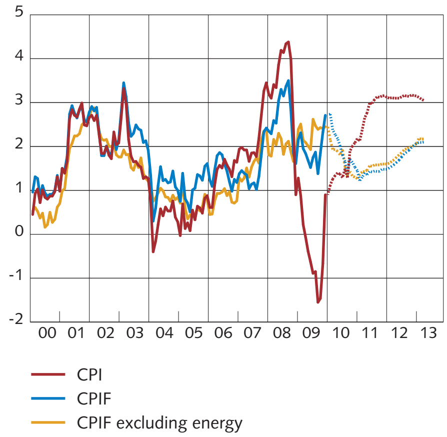
Figure 1:30. CPI
Annual percentage change



Note. Broken lines represent the Riksbank's forecast.

Sources: Statistics Sweden and the Riksbank

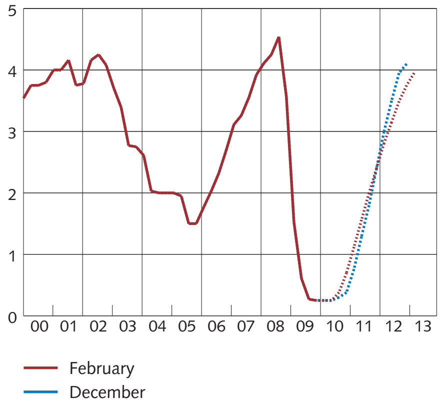
Figure 1:31. CPI, CPIF and CPIF excluding energy
Annual percentage change



Note. CPIF is CPI with fixed interest rate. Broken lines represent the Riksbank's forecast.

Sources: Statistics Sweden and the Riksbank

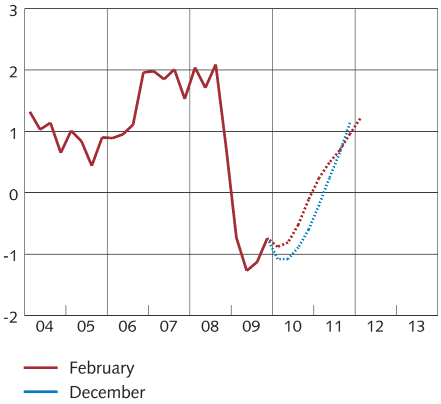
Figure 1:32. Repo rate
Per cent, quarterly averages



Note. Broken lines represent the Riksbank's forecast.

Source: The Riksbank

Figure 1:33. 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. Broken lines represent the Riksbank's forecast.

Source: The Riksbank

krona were to become weaker or wage increases higher than expected in the Riksbank's forecast, this could lead to higher inflation than in the Riksbank's main scenarios (see the alternative scenario in Chapter 2).

■■ Normalisation of monetary policy coming closer

Since summer last year, the signs of an economic recovery have gradually become clearer. The situation in the financial markets has gradually improved and is no longer expected to provide any obstacle to the economic upturn. Throughout this period the repo rate has remained unchanged at 0.25 per cent. Nor have the Riksbank's forecasts for the repo rate path changed since July 2009.

The growth forecasts have been adjusted upwards, but this has been from a very low level. There has been considerable uncertainty as to whether the recovery would last. The risk of not providing sufficient support to the recovery was considered to outweigh the risk of stimulating the economy for too long.

The assessment at the monetary policy meeting in December was that the low level of resource utilisation motivated a continued low repo rate and an unchanged repo rate path. However, on that occasion, no decision was taken to offer further fixed-interest rate loans to the banks.

The growth forecasts for abroad have been adjusted only marginally upwards. However, it is worth noting that growth in the US economy, the country where the crisis began, now appears to be picking up sooner than expected.

The growth prospects for Sweden appear the same as they did in December, but the development in employment has been stronger than expected. The better developments in the labour market are a sign that the economic recovery has attained more solid ground. However, the situation in the economy is divided; while consumption is increasing relatively rapidly, exports remain weak. This is also reflected in the fact that lending to households is increasing at a rapid rate, while lending to companies is decreasing. It is assumed in the forecast that this divide will gradually diminish as exports and business sector investment accelerate.

Inflation has risen to a level slightly higher than was expected during the fourth quarter of last year. Over the year inflation is expected to fall again, partly due to a stronger exchange rate. However, this assessment is uncertain and there is a risk that the recent upturn will be more lasting.

The forecast is based on wage formation functioning as well during the wage negotiations this year as it has done over the past fifteen years. During this period, wage formation has contributed to keeping inflation at a low and stable level at the same time as real wages and growth have developed well. The expectation is that this year's collective bargaining will contribute to continued positive economic development in Sweden, once the effects of the financial crisis have ebbed away.

In order for inflation to reach the target level of 2 per cent and to support the recovery of the economy, the interest rate needs to remain low. This justifies keeping the repo rate unchanged at 0.25 per cent for a further period of time. Subsequently, the repo rate may need to be raised somewhat sooner than was assessed in December (see Figure 1:32). This is due to new information taking the form of a slightly higher international growth rate, stronger employment and higher inflation, among other developments, but also due to the improved functioning of the financial markets. At the same time, the assessment now is that the increases in the repo rate may occur more gradually and the forecast for the repo rate in the longer term has therefore been adjusted downwards slightly.[6]

The real repo rate has been revised upwards, but will remain negative during 2010 (see Figure 1:33). Two years of negative real interest rates is highly unusual in a historical perspective.[7]

Part of the monetary policy stimulation, which the Riksbank considered necessary to counteract the financial crisis and safeguard the inflation target, entailed the loans to the Swedish banking system. At present, the Riksbank is lending out SEK 370 billion to the banks in the form of loans with original maturities of up to 12 months. SEK 295 billion of these loans are at a fixed interest rate. The fixed-interest rate loans are thought to have lowered interest rates to households and companies and thus contributed to the low repo rate having the intended effect.

The Riksbank's assessment is that it is appropriate to begin normalising monetary policy during the second half of 2010. This entails beginning to raise the repo rate with effect from the summer or early autumn. It also entails the three fixed-interest rate loans granted in 2009 maturing at the end of June, end of August and beginning of October. The slightly faster normalisation of monetary policy now is due to both new economic information received since December and the fact that the financial markets are functioning better, which means that the economic recovery is now on firmer ground.

6 For a discussion of the repo rate in the long term, see the article "What is a normal repo rate?" in this report.

7 See B. Lagervall "Real interest rates in Sweden", Economic commentary no. 5, Sveriges Riksbank.

Main revisions to forecasts since the December 2009 Update

- The forecast for GDP abroad has been revised upwards marginally, compared with December. The largest revision is for growth in the United States in 2010.
- The forecast for GDP growth in Sweden has been revised down marginally for the last quarter of 2009 but is roughly unchanged for the remainder of the forecast period. The downward revision in the short term is mainly due to an unexpectedly weak outcome for indicators of production and foreign trade
- Employment is now expected to be higher and unemployment to be lower than was forecast in December. The outcomes for employment in November and December have not been as low as expected
- The krona exchange rate has been weaker than expected. The level for the exchange rate is now expected to be weaker both in 2010 and 2011, compared with the forecast made in December.
- Electricity prices have risen sharply since December and are expected to be higher over the coming months. After that, electricity prices will fall again and at the end of the forecast period are expected to be at the same level as forecast in December.
- The forecast for CPIF inflation has been revised upwards during 2010. This is partly due to higher electricity prices and a weaker krona.
- The forecast for CPI inflation has been revised down somewhat towards the end of the forecast period. The repo rate is not expected to rise as quickly in 2012, which means that households' interest expenditure in the CPI will not rise as quickly.
- The repo rate path has been adjusted upwards during the second half of 2010 and the first half of 2011, but has been adjusted down for 2012.

CHAPTER 2 – Alternative scenarios and risks

There are increasing signs that the financial crisis is gradually becoming a severe downturn of the more traditional kind. It is expected that unemployment will continue to rise during the year. Given the weak labour market, the forecast presupposes that the approaching round of collective bargaining will lead to moderate wage increases. However, it cannot be ruled out that wage increases will be higher than estimated by the Riksbank and there is thus a risk that this could lead to higher inflation. If this proves to be the case, the Riksbank may need to increase the repo rate more rapidly and the recovery from the recession will be slower. If, on the other hand, wage increases are lower than estimated by the Riksbank inflation will also be lower and in this case the repo rate would be increased at a slower rate. Another source of uncertainty in the forecast is the assessment of resource utilisation on the labour market. If the potential supply of labour is greater than estimated by the Riksbank, GDP growth will be higher and inflation will be lower. This will make it possible to set the repo rate a lower level than in the main scenario. The forecast predicts that the krona will continue to strengthen, which will contribute to the low level of inflation. If, however, the exchange rate weakens once again this will lead to higher inflation. It will then be necessary to increase the repo rate more rapidly than indicated in the forecast.

There are therefore a number of circumstances that could change the future course of economic development and thus justify a different direction for monetary policy than the one expected in the main scenario. In this Chapter, the Riksbank presents four alternative scenarios for the development of the economy that differ from the main scenario. The aim is to highlight the uncertainty that prevails regarding development in the period ahead and the risks that are regarded as being particularly important at the moment. There are of course a number of other uncertainties which together are reflected in the uncertainty intervals around the forecast illustrated in Figures 1.1-1.4 in Chapter 1.

An important assumption in the forecast is that the round of collective bargaining will lead to moderate wage increases. The division of the Swedish economy – with much stronger development in the retail and service sectors than in the export-dependent industrial sector – entails a risk that the wage agreements will be at levels that hinder the recovery in the manufacturing industry.

In the first alternative scenario, it is assumed that the round of collective bargaining results in signficantly higher wages than predicted in the main scenario. The higher wages lead to a slower recovery of employment and production and to higher inflation and an increased repo rate.

The second alternative assumes, on the contrary, that wages increase more slowly than in the main scenario. In this scenario, inflation is lower and the Riksbank waits longer to increase the repo than in the main scenario.

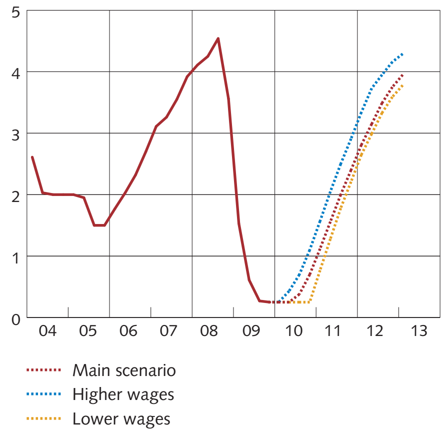
The third alternative scenario describes what would happen if it turns out that the Riksbank has underestimated the potential supply of labour in the economy and has thus overestimated resource utilisation in the economy. In this case, GDP growth will be higher and inflation will be lower, which leads to a lower repo rate.

In the fourth alternative scenario, the development of the exchange rate is weaker than in the main scenario. Inflation will then be higher as the prices of imported goods will increase more rapidly. In order to

Figure 2:1. Hourly labour cost
Annual percentage change

Note. Broken lines represent the Riksbank's forecast.
Sources: Statistics Sweden and the Riksbank

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



Note. Broken lines represent the Riksbank's forecast.
Source: The Riksbank

Figure 2:3. CPIF
Annual percentage change

Note. Broken lines represent the Riksbank's forecast.
Sources: Statistics Sweden and the Riksbank

counteract inflation becoming too high, the Riksbank will need to increase the repo rate more than indicated in the main scenario.

Finally, the effects of two alternative courses of action for monetary policy are described. In a first scenario, the repo rate is increased more rapidly than in the forecast in the period 2010-2011. In the second scenario, the repo rate is instead reduced to zero and is thereafter kept at a level 0.25 percentage points below the main scenario's repo rate path for approximately one year before it gradually approaches the level in the main scenario's repo rate path.

Alternative scenarios for economic development

■■ More rapid wage development may lead to lower employment

Last year companies and representatives of the employees tested new ways of handling the effects of a substantial fall in production. The so-called crisis agreements in the manufacturing industry are an example of this. They may have helped to limit the increase in unemployment. It is expected that the weak situation on the labour market will contribute to keeping the rate of wage increases relatively low over the next few years. However, it is uncertain what wage agreements will emerge from this year's round of collective bargaining and what effects these will have on the development of employment. The social partners are taking widely differing positions in the negotiations. The employees justify their wage demands by saying, among other things, that they should be compensated for the limited wage increases they accepted in the agreements entered into in 2009. The employers, on the other hand, claim that there is no scope at all in the immediate future for wage increases in the trade union agreements.

In the scenario "Higher Wages" it is assumed that the trade unions push through demands for longer-term agreements with relatively high wage increases. Collective bargaining thus results in agreements that provide wage increases that are approximately one per cent higher in the period 2010-2011 than assumed in the forecast. One of the effects of these wage increases is that GDP and employment will increase at a slower rate during the forecast period. The higher rate of wage increases entails higher costs for the companies, which means that they will need to set higher prices. When inflationary pressures increase, the Riksbank will in turn need to increase the repo rate in order to prevent inflation deviating too far from the target of 2 per cent. Nominal labour costs will increase by an average of 0.7 percentage points more quickly than in the main scenario (see Figure 2:1 and table A9). On average during the forecast period, the repo rate will 0.4 percentage points higher than in the main scenario (see Figure 2:2 and Table A9). CPIF inflation will on average be 0.2 percentage points higher per year during the forecast period (see Figure 2:3 and Table A9). The higher repo rate will in part counteract the increase in inflation caused by the higher growth of wages, but also entails a tightening effect that will reduce GDP growth and employment. In the scenario, resource utilisation measured in terms of the labour market gap hits bottom in mid-2011, approximately one year later than in the main scenario. When calculating the labour market gap it is assumed that the fall in the number of hours worked is partly due to a lower trend growth in hours worked. At the end of the forecast period, resource utilisation measured in this way is one per cent lower than in the main scenario (see Figure 2:4).

■■ Low wage increases lead to lower inflation and a lower repo rate

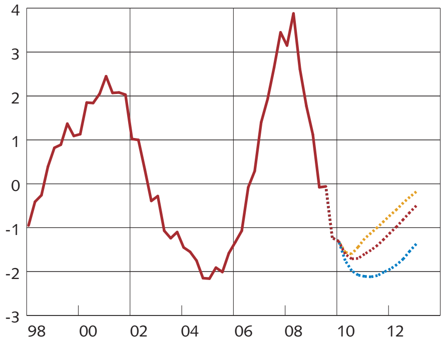
The difficult situation on the labour market, with high unemployment and relatively few vacancies, may however have a stronger restraining effect on the collective bargaining process than assumed in the main scenario. In the alternative scenario "Lower Wages" the social partners enter into agreements that mean that the rate of wage increases a couple of years ahead will be at a lower level than in the main scenario. In this scenario, the nominal wages will be approximately half a percentage point lower in 2011 compared to the main scenario (see Figure 2:1 and Table A10). Lower wages dampen inflation, which leads the Riksbank to keep the repo rate at 0.25 per cent for longer than is assumed in the main scenario (see Figures 2:3 and 2:2). All-in-all, this leads to higher resource utilisation and stronger growth than in the main scenario (see Figure 2:4).

■■ Higher long-term labour supply

The Swedish labour market has been hit hard by the severe recession. Unemployment has risen by over 3 percentage points since the recession began and approximately 130 000 jobs have been lost. However, many analysts, including the Riksbank, had expected even higher unemployment and a greater fall in employment. If the very sharp fall in GDP is taken into account, the changes in unemployment and employment have been more limited than in previous recessions. The number of people who have left the labour force has also been surprisingly low. These deviations from historical patterns can be interpreted in different ways, which increases the degree of uncertainty associated with assessing resource utilisation. This alternative scenario describes how developments on the labour market may justify a different assessment of resource utilisation in the economy than that in the main scenario and the consequences such an assessment would have for the Riksbank's forecast and the monetary policy considerations.

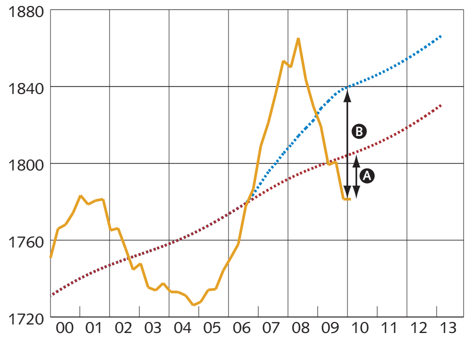
One measure of resource utilisation on the labour market is the labour market gap; that is the percentage deviation of the actual number of hours worked from the trend level. The trend level is the number of working hours that is determined by structural factors and is not dependent on monetary policy. In practice, determining this trend level is difficult and the assessment of the size of the labour market gap is

Figure 2:4. Labour market gap (hours worked)
Percentage deviation from the HP trend



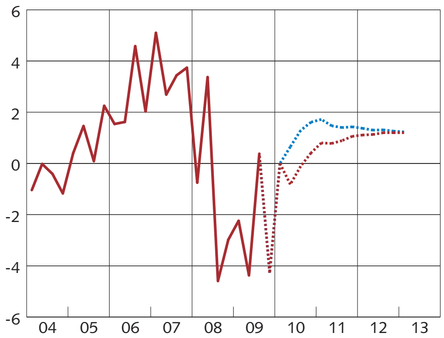
Note. Broken lines represent the Riksbank's forecast.
Sources: Statistics Sweden and the Riksbank

Figure 2:5. Hours worked and trend
Millions of hours per quarter, seasonally adjusted data



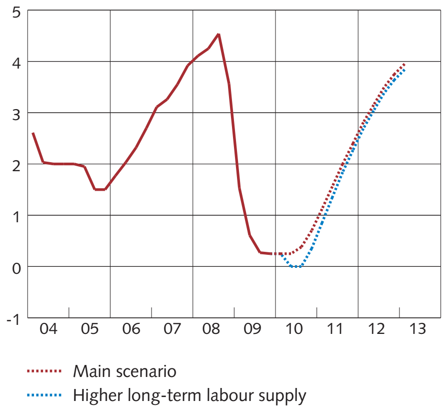
Note. The last two observations for hours worked refer to the Riksbank's forecast.
Sources: Statistics Sweden and the Riksbank

Figure 2:6. Hours worked
Quarterly changes in per cent calculated in annualised terms, seasonally adjusted data



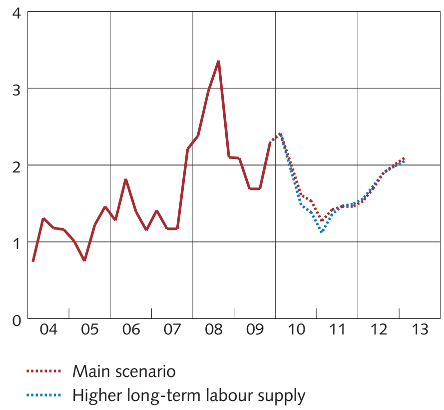
Note. Broken lines represent the Riksbank's forecast.
Sources: Statistics Sweden and the Riksbank

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



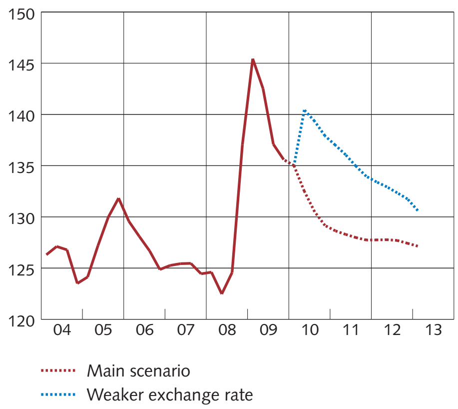
Note. Broken lines represent the Riksbank's forecast.
Source: The Riksbank

Figure 2:8. CPIF
Annual percentage change



Note. Broken lines represent the Riksbank's forecast.
Sources: Statistics Sweden and the Riksbank

Figure 2:9. Exchange rate, TCW
Index, 18.11.1992 = 100



Note. Broken lines represent the Riksbank's forecast.
Source: The Riksbank

therefore highly uncertain. As it has proven to be particularly difficult to assess the situation on the Swedish labour market during this recession, uncertainty regarding the size of the labour market gap is also unusually high.

In the main scenario, the assessment of the labour market gap during the first quarter of 2010 is that it will be -1.3 per cent. This assessment is linked to the assessment of the trend level for the number of working hours, which is shown as the broken red line in Figure 2:5. The alternative scenario is instead based on the assumption that the trend level is approximately 2 per cent higher, which means that it is estimated that the labour market gap in the first quarter of 2010 will be -3.3 per cent. The alternative scenario's assumption regarding the trend level for the number of hours worked is shown as the broken blue line in Figure 2:5.

A labour market gap that is more negative in the initial position means that more unutilised resources are available on the labour market. This has a restraining effect on the development of wages, which in turn stimulates the companies' demand for labour. In the alternative scenario, the number of hours worked increases more rapidly than in the main scenario, above all in 2010 and 2011 (see Figure 2:6 and Table A11).

A slower rate of wage increases also entails lower cost pressures and greater scope to pursue an expansionary monetary policy. In the alternative scenario, the repo rate is cut to zero per cent during the second quarter of 2010 and then lies below the repo rate path of the main scenario throughout the forecast horizon (Figure 2:7). Thanks to the lower repo rate inflation, measured in terms of the CPIF, is brought back to the target of 2 per cent towards the end of 2012 (see Figure 2:8). In the alternative scenario it is assumed that there are no obstacles to reducing the repo rate to zero. Another possible monetary policy that could achieve approximately the same results in the economy would be to keep the repo rate unchanged at 0.25 percentage points for a longer period of time.

■■ Weaker exchange rate

The value of the Swedish krona has fluctuated widely in recent years. Between the first quarter of 2008 and the first quarter of 2009, the value of the krona fell by 17 per cent. Since then the value of the krona has increased by 9 per cent. The forecast predicts that the krona will continue to strengthen, which will contribute to the low rate of inflation over the next few years. However, it can not be ruled out that the krona will weaken again.

In this alternative scenario, the krona initially weakens but subsequently strengthens again without fully returning to the exchange rate forecast in the main scenario (see Figure 2:9). In the scenario, it is assumed that the exchange rate weakens because of a weaker interest on the part of investors in holding assets denominated in Swedish krona. Both the real and the nominal exchange rate weaken in the short term as a result of this development. In the long term, however, the real exchange rate will return to the same equilibrium rate that applied prior to the shock. The value that the nominal exchange rate will move towards depends on how swedish prices change during the adjustment to the shock.

A weaker exchange rate makes imports more expensive when calculated in SEK, which reduces the scope for domestic consumption. At the same time, Swedish exports become cheaper for foreign buyers, which leads to an increase in exports. The overall effect is that GDP grows more rapidly, while resource utilisation increases (see table A12 and Figure 2:10). Increased resource utilisation and more rapid increases in import prices mean that inflation measured in terms of the CPIF increases (see Figure 2:11 and Table A12). To counteract inflation becoming too high, monetary policy must be tighter than in the main scenario. In this case, the Riksbank would begin raising the repo rate already in the second quarter of this year. On average during the forecast period, the repo rate will 0.4 percentage points higher than in the main scenario (see Figure 2:12 and Table A4). The extent to which the Riksbank reacts to an unexpected change in the nominal exchange rate depends on how lasting such a change is deemed to be. In the alternative scenario, the Riksbank expects the exchange rate to continue to be weak and that this will entail the companies increasing their prices more than if the weakening of the exchange rate is expected to be temporary.

Alternative scenarios for the repo rate

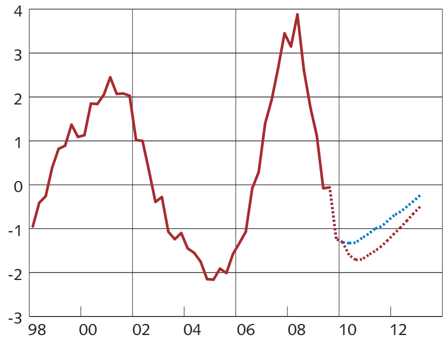
This section describes how the development of the economy could be affected if the Riksbank were to conduct a different monetary policy than the one assumed in the main scenario.

In the first scenario, the Riksbank conducts a less expansionary monetary policy by increasing the repo rate by 0.25 percentage points in February and subsequently setting the repo rate 0.25 percentage points above the repo rate path in the main scenario for a further four quarters (see Figure 2:13). From the second quarter 2011, the repo rate gradually approaches the repo rate path in the main scenario.

As the repo-rate is initially higher, household consumption will be lower and the companies will be more restrictive in their investments than in the main scenario. This will dampen GDP growth and resource utilisation will fall further from an already low level (se Figure 2:14 and Table A13). The lower production level will reduce the demand for capital and labour and both real and nominal wages will therefore be lower. This will in turn reduce the companies' costs and inflation will be lower than in the main scenario (see Figure 2:15). In 2011, CPIF inflation will be just above 1 per cent.

The second scenario describes the effects of a more expansionary monetary policy in which the repo rate deviates downwards from the level in the main scenario to the same extent as it was set higher in the previous scenario. In this scenario, the Riksbank reduces the repo rate to zero in February and then sets the repo rate 0.25 percentage points lower than the level in the main scenario for a further four quarters. From the second quarter of 2011, the repo rate gradually approaches the repo rate path in the main scenario (see Figure 2:13).

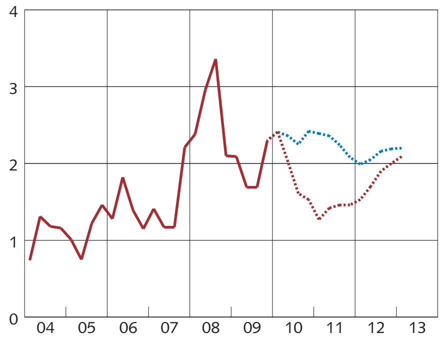
Figure 2:10. Labour market gap (hours worked)
Percentage deviation from the HP trend



Main scenario
Weaker exchange rate

Note. Broken lines represent the Riksbank's forecast.
Sources: Statistics Sweden and the Riksbank

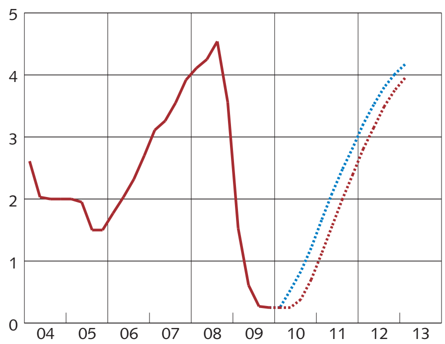
Figure 2:11. CPIF
Annual percentage change



Main scenario
Weaker exchange rate

Note. Broken lines represent the Riksbank's forecast.
Sources: Statistics Sweden and the Riksbank

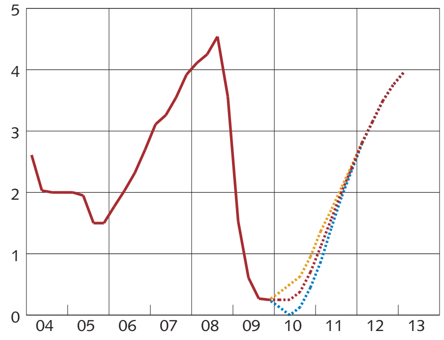
Figure 2:12. Repo rate
Per cent, quarterly averages



Main scenario
Weaker exchange rate

Note. Broken lines represent the Riksbank's forecast.
Source: The Riksbank

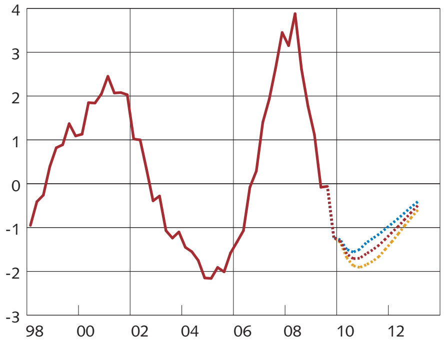
Figure 2:13. Repo rate assumptions
Per cent, quarterly averages



Main scenario
Lower interest rate
Higher interest rate

Note. Broken lines represent the Riksbank's forecast.
Source: The Riksbank

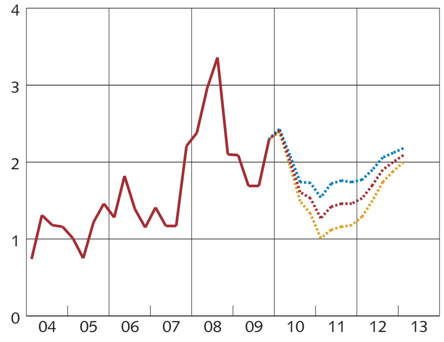
Figure 2:14. Labour market gap (hours worked)
Percentage deviation from the HP trend



Main scenario
Lower interest rate
Higher interest rate

Note. Broken lines represent the Riksbank's forecast.
Sources: Statistics Sweden and the Riksbank

Figure 2:15. CPIF
Annual percentage change



Main scenario
Lower interest rate
Higher interest rate

Note. Broken lines represent the Riksbank's forecast.
Sources: Statistics Sweden and the Riksbank

The lower level of the repo-rate path compared with the main scenario stimulates household consumption and corporate investment. The resulting increase in domestic demand will lead to somewhat more rapid growth in production. This will also lead to improvements in the production gap and the labour market gap (see Figure 2:14 and Table A14), which will increase the demand for capital and labour. This in turn will lead to higher production costs that the companies will pass on to the consumers. CPIF inflation will therefore be an average of 0.2 percentage points higher than in the main scenario (see Figure 2:15). However, it is not only higher factor prices for capital and labour that will contribute to the higher level of inflation. The lower repo rate will also lead to a weakening of the exchange rate compared to the main scenario which will also lead to higher inflationary pressures via higher import prices.

The two repo rate scenarios are intended to illustrate what may happen if the Riksbank sets the repo rate higher or lower than in the main scenario. Whether or not the repo rate levels set in these scenarios would lead to a better or worse development of the economy than that portrayed in the main scenario is not a simple question to answer. The Riksbank conducts what is known as flexible inflation targeting. This means that the Riksbank attempts to stabilise inflation around the inflation target at the same time as the importance of stabilising resource utilisation is taken into account.

As a basis for the assessment of what constitutes a well-balanced monetary policy, the Riksbank needs to calculate specific measures of resource utilisation. As mentioned above, there are several different methods of calculating resource utilisation and a great deal of uncertainty about how well these capture actual resource utilisation (see the discussion in Chapter 1). A particular problem at the moment is that the financial crisis may have reduced potential production so that resource utilisation in the economy is higher for a given level of production. However, it is difficult to assess how potential GDP will be affected by various structural changes or disruption in the economy. One example of this is given above in the alternative scenario "Higher long-term labour supply".

Another complicating circumstance is that it is difficult to know how economic agents and the financial markets function when the interest rate is very low.[8] According to the Riksbank's analyses, it appears that the very low repo rate has not led to any problems as yet, but there is also a high degree of uncertainty here. Some central banks, for example the Bank of England, have therefore chosen to maintain a certain margin to the zero interest rate. Other central banks, for example the Bank of Japan, have reduced their policy rates to levels very close to zero.

In the monetary policy decision, the Riksbank also needs to take into account the risks associated with, for example, exaggerated lending and rapid increases in housing prices. It is difficult to put a figure on these risks in the forecasting work. It is often a question of risks relating to events that are very unlikely to happen but, if they did happen, would have major negative consequences.

8 See M. Beechey and H. Elmér, "The lower limit of the Riksbank's repo rate" Economic Commentaries No. 11 2009, Sveriges riksbank.

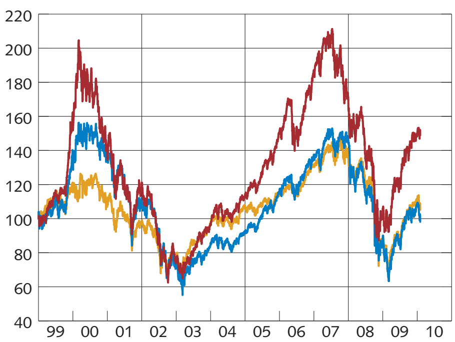
CHAPTER 3 – The current economic situation

The international economic recovery is continuing. Growth is once again positive in most countries and world trade is increasing again. However, central banks and governments are still conducting policies that entail major policy stimulus measures. There are, for example, large volumes of outstanding loans from central banks to the banking system. Several central banks have also continued their purchases of financial assets. In addition, governments in a range of countries have implemented reform programmes of various types in order to stimulate the recovery. However, how great the effects will be when these measures are gradually phased out is still an open question. In Sweden, there are signs that production is continuing to recover. New information also indicates that the situation on the Swedish labour market will not deteriorate much more. Inflation in Sweden has been slightly higher than expected. All in all, recent information indicates that the development of GDP in Sweden has been somewhat weaker than forecast in December. However, the labour market is not expected to weaken to the extent forecast in December and inflation is expected to be slightly higher in the short term.

The financial markets are functioning well, but with continuing government support

It is hard to define what a normal situation on the financial markets is, but, in most countries, spreads of different types are now back to the levels that prevailed before the financial turmoil began in the autumn of 2007 (see Figure 1:5). Companies are also finding it easier to find funding on the market compared to the situation last spring. The central banks are still supporting the situation by providing extraordinary loans and purchasing financial assets. Several central banks have now announced that some of these measures will be phased out during the spring.

Figure 3:1. Stock market movements
Index, 4-1-1999 = 100



Källa: Reuters EcoWin

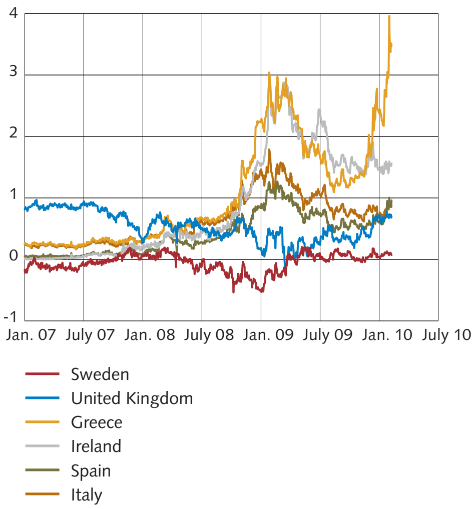
Stock market trends still positive

Stock markets continued to rise in the autumn of 2009 (see Figure 3:1). This trend was partly driven by signals from the central banks indicating that interest rates would continue to be low, and partly by statistics that indicate that economic activity will improve in the period ahead. Since mid-January this upward trend on the stock markets has been broken. Overall, however, the stock markets have changed only marginally since December. Over the last year, the Stockholm Stock Exchange has risen by over 50 per cent at the same time that volatility has declined to the levels that prevailed prior to the financial crisis.

Government bond rates remain historically low

US and European government bond rates have fallen since the turn of the year. The net change from December to January is, however, small. These falling interest rates can partly be explained by the fact that recent macroeconomic statistics have been somewhat weaker than expected by the market participants. The spread between the government bond rates of different European countries decreased during the spring and summer of 2009, but during the autumn the focus once again turned to countries with large central government debts. In December, several credit rating agencies reduced their credit

Figure 3:2. Government bonds in various euro countries (difference compared to Germany)
Percentage points



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

Source: Reuters EcoWin

ratings for Greece. This led to a substantial increase in the spread between Greek and German 10-year government bonds (see Figure 3:2). Portugal, Spain and the UK have also experienced increasing bond-rate spreads relative to Germany. The spread between a Swedish and a German 10-year government bond is comparatively very small, which reflects the high level of confidence in Sweden's central government finances.

■■ Central banks are expected to raise interest rates during the autumn

Most central banks have kept their policy rates unchanged since December (see Figure 3:3). The message in many cases is that the policy rates will be low for some time to come - a message that the market participants now have more confidence in than previously. Ever since December 2008, the US central bank, the Federal Reserve, has had a policy rate with a target interval of 0-0.25 per cent. Market pricing shows that the Federal Reserve is expected to begin increasing its policy rate during the autumn. Forward rates indicate that the ECB will increase the refi rate from 1.00 per cent around the turn of the year, but it is difficult to interpret market pricing when the overnight rate is today lower than the refi rate.[9] According to surveys of the market participants, the expectations are that the ECB will increase the refi rate during the autumn. Market pricing also indicates that it is expected that the Bank of England will increase its policy rate from 0.5 per cent after the summer.

The Riksbank's repo rate has been 0.25 per cent since July 2009. In recent months, the market's expectations regarding when repo rate increases will be made have moved forward in time, partly as a result of the Riksbank's message in connection with the monetary policy decision in December. The forward rates indicate that the market believes that a first repo rate increase will be made in July 2010, and surveys of the market participants support these expectations (see Figure 3:3). The Riksbank's forecast for the repo rate means that increases will begin to be made during the summer or early autumn.

The Australian and Norwegian central banks have increased their policy rates from the lowest levels by 0.75 percentage points to 3.75 per cent and by 0.50 percentage points to 1.75 per cent respectively (see Figure 3:4). These increases were due to the fact that economic prospects have improved in these countries. The impact of the financial crisis in Australia and Norway was also relatively limited compared with many other countries.

9 Normally, central banks influence the overnight rate by changing the policy rate. The level of these two rates is then roughly the same. However, over the past year the overnight rate has been much lower than the policy rate in the euro area. This because the ECB's euro loans to banks have led to a considerable surplus of liquidity in the banking system which is pushing down the overnight rate.

■■ Central banks are beginning to phase out unconventional measures

Low policy rates have forced several central banks to handle the effects of the financial crisis on the economy by taking unconventional measures.[10] These measures have aimed, among other things, to boost the provision of credit and contribute to lower interest rate levels for companies and households. Some central banks, such as the Bank of England, the Federal Reserve and the ECB, have purchased government bonds and/or mortgage bonds. Several central banks, including the Riksbank, have lent money to credit institutions. In recent months, however, an increasing number of central banks have begun to announce that certain extraordinary measures will be phased out. The phase-out of these measures is, however, not yet reflected in the central banks' balance sheets which, on the contrary, are continuing to grow somewhat (see Figure 3:5).

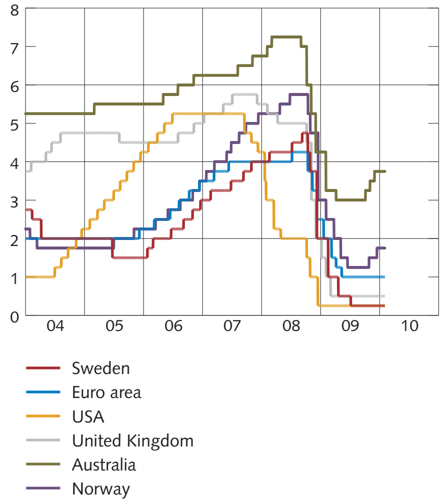
The Riksbank's extraordinary lending to Swedish banks amounted at the beginning of February to SEK 369 billion. The lending volume includes three 12-month loans at a fixed interest rate totalling SEK 295 billion. The aim of these loans was to ensure that monetary policy had the intended effect by making it easier for the banks to lower the interest rates they offered to households and companies. These fixed–rate loans have reduced the participation of the banks in the Riksbank's programme of regular auctions for SEK loans at variable interest rates.

The assessment of the Federal Reserve is that the purchase of government bonds and mortgage bonds will be phased out during the first quarter of 2010. Most of the forms of special liquidity assistance set up during the financial crisis, as well as the swap facilities arranged with other central banks for USD loans, also ended on 1 February. The Federal Reserve has also discussed a deposit facility with a maturity of 1 to 6 months in order to draw in the surplus of dollars from the banking system.

The ECB has continued to support the provision of credit in the euro area by awarding the banks new 12-month, fixed-rate loans. Loans of almost EUR 100 billion were made in December and total lending amounts to almost EUR 620 billion. The ECB's step-by-step purchase of covered bonds for EUR 60 billion in euro is expected to continue until 30 June 2010. The aim of these purchases has been to improve liquidity on the market for interest-bearing securities and to create better credit conditions.

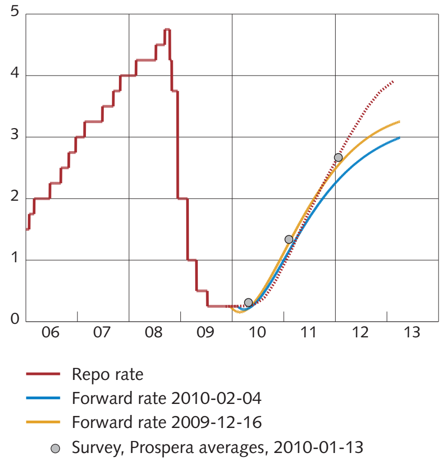
China's central bank increased the requirement governing the bank's reserves by 0.5 percentage points in January. The aim was to reduce the risk of economic overheating. The reserve requirement for some financial institutions was increased by a further 0.5 percentage points in order to reduce the growth of lending. The Chinese central bank has also increased its interest rate for one-year loans.

Figure 3:3. Policy rates
Per cent



Source: Reuters EcoWin

Figure 3:4. Monetary policy expectations in Sweden according to money market participants
Per cent

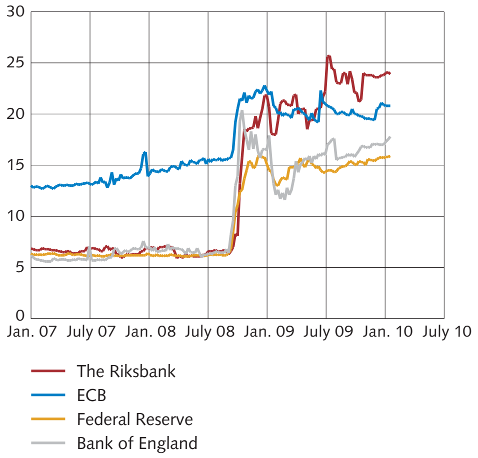


Note. Forward rates have been adjusted for risk premiums and describe the expected overnight rate. Broken lines represent the Riksbank's forecast.

Sources: Reuters Ecowin, TNS SIFO Prospera and the Riksbank

10 See also the article "The phase–out of unconventional measures" in the Monetary Policy Report of October 2009.

Figure 3:5. Central banks' balance sheet totals
Percent of GDP



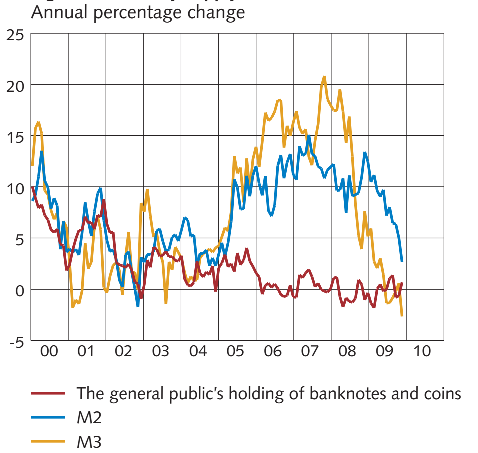
Sources: Bureau of Economic Analysis, Eurostat, Office for National Statistics, Statistics Sweden and the respective central banks

Figure 3:6. Housing prices
Annual percentage change

Note. Quarterly observations of property price index and monthly observations of the mean value of the purchase price coefficient (Purchase price/Taxation value).

Source: Statistics Sweden

Figure 3:7. Money supply
Annual percentage change



Sources: Statistics Sweden and the Riksbank

■■ Housing prices in Sweden have recovered

Housing prices in Sweden have recovered from the fall in the autumn of 2008. The fall in mortgage rates and the improved economic outlook have contributed to the increase in prices. According to the purchase price coefficient in Statistic Sweden's survey of housing prices, house prices increased by 8 per cent in December 2009 (see Figure 3:6). This picture is confirmed by statistics from estate agents which also show that the prices of tenant-owned apartments have increased.

■■ The monetary base is still large

The monetary base continued to increase during the second half of 2009, mainly as a result of the Riksbank's SEK loans at a fixed-interest rate. The monetary base is now more than four times larger than it was before the financial crisis began, but the money supply has not increased to the same extent. The larger monetary base is a result of the extraordinary measures taken by the Riksbank to safeguard financial stability and to ensure that monetary policy has the desired effects.

The money supply measured in terms of the banknotes and coins in circulation was relatively unchanged in 2009. At the same time, the rate of increase in the M2 measure of the money supply continued to decline and in November amounted to just over 2.5 per cent (see Figure 3:7). The rate of growth in the broadest measure of the money supply, M3, fell by almost 3 per cent in December compared to the same period in the previous year. One reason why M3 fell during almost all of last year is that the public reduced its holdings of short-term money market instruments in order to purchase other assets such as shares.

■■ Small changes in the value of the krona

The financial crisis led to a high degree of volatility on the foreign exchange market and a substantial weakening of the krona. The foreign exchange market stabilised in 2009 as measures were taken to counteract the recession and the stock markets recovered. The stabilisation of the financial markets has helped to strengthen the krona. The fact that concern about economic developments in the Baltic countries is receding also tends to strengthen the krona.

In trade weighted terms (the TCW index), the krona has strengthened slightly since December (see Figure 1:13). Concern about the ability of Greece to manage its central government debt has led the euro to weaken against several other currencies, including the krona, since December. However, the krona is still weak against the euro compared to the period before the crisis (see Figure 3:8).

■■ The global economy continues to recover

Clear signs of a recovery throughout the global economy are now emerging. However, the strength of the recovery varies from region to region. Global trade continues to increase (see Figure 1:7). This increase is mainly due to strong growth in Asia. Trade statistics from China show that there was strong growth in both exports and imports in December, which meant that December was the first month of 2009 in which exports increased compared with the corresponding month last year (see Figure 3:9). China's economy grew by 8.7 per cent in 2009. Statistics from India show that the economy grew by almost 8 per cent, calculated as an annual rate, during the third quarter of 2009. In Japan, exports and industrial production are beginning to recover after having fallen sharply in early 2009.

■■ Increasing demand and possible stabilisation of the labour market in the USA

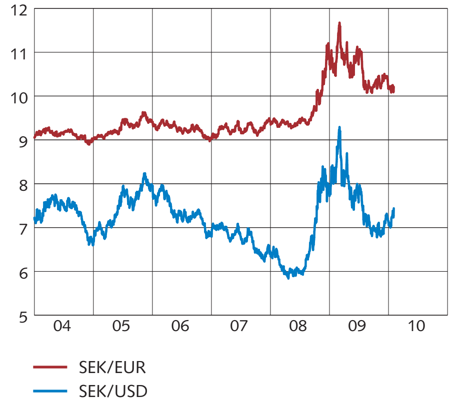
The information received since the forecast in December shows that household demand in the United States increased more than expected at the end of last year. In December, it was expected that the growth in household consumption would be substantially dampened in the fourth quarter by the phase-out of the support programme for the purchase of new cars. The slump in car sales and in total consumption following the completion of the programme was, however, smaller than expected and consumption increased in both November and December.

Although consumer confidence has increased in recent months, it is still at a low level in historical terms. One explanation may be that unemployment has risen to the highest level since the early 1980s. According to the purchasing managers' index for the manufacturing industry, the companies' expectations improved in January (see Figure 3:10). Since the spring of 2009, there has been a rapid improvement in exports (see Figure 3:11).

The situation on the US labour market has improved somewhat as the fall in employment has slowed down while the increase in unemployment seems to have levelled out (see Figure 3:12). The number of hours worked increased in the fourth quarter by 1 per cent calculated as an annual rate, while production increased by just over 6 per cent calculated as an annual rate.

Following an earlier stabilisation of the housing market, there are now some signs of a downturn. The sale and construction of housing declined in December. It is difficult to determine whether this downturn is due to temporary effects or not. The rapid adjustment that has taken place following previous over-investment has meant that the stock of new, unsold housing has fallen to the lowest level since the early 1970s. The time that it takes to sell housing decreased significantly last year, although there was a slight increase again in December. Housing prices continued to increase in November. An increasing number of households can once again afford to buy a house or flat. The explanation for this is that housing prices have fallen by around 30 per cent since they peaked in the summer of 2006, according to the Case-Shiller index, and that long-term mortgage rates remain at very low levels. The effects of the government subsidy programme for the purchase of housing, which has been prolonged, should also be taken into account.

Figure 3:8. Exchange rates
SEK per euro and dollar

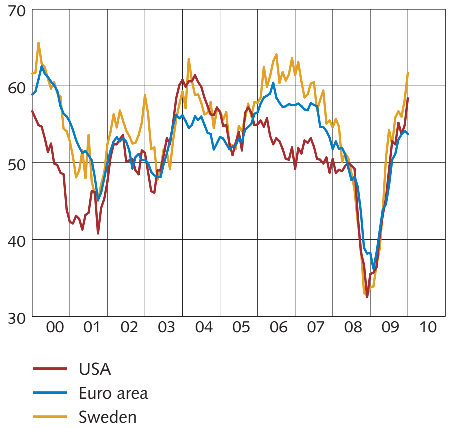


Source: Reuters EcoWin

Figure 3:9. Chinese export and import
Annual precentage change

Source: National Bureau of Statistics of China

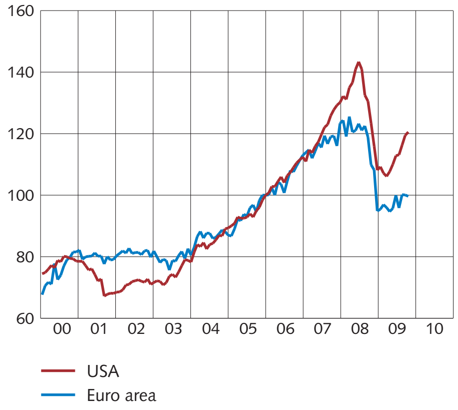
Figure 3:10. Purchasing mangarer's index
Index, over 50 indicates growth



Note. Refers to manufacturing industry in the United States and Sweden and weighted average of service sector and manufacturing industry in the euro area.

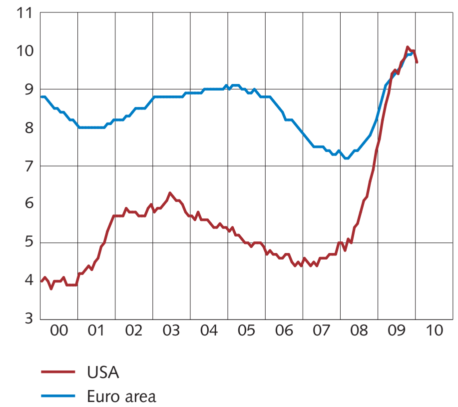
Sources: Institute for Supply Management, Markit Economics and Swedbank

Figure 3:11. Exports
Index, january 2006 = 100, seasonally adjusted data



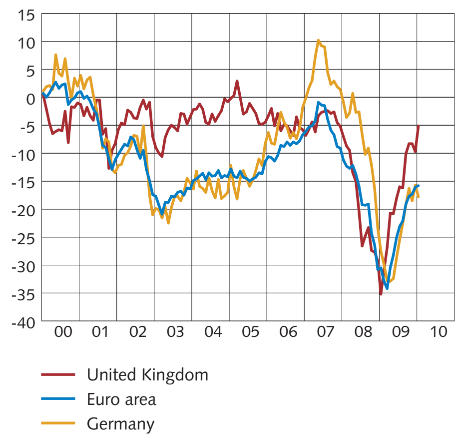
Sources: Bureau of Economic Analysis and Eurostat

Figure 3:12. Unemployment
Percentage of the labour force



Sources: Bureau of Labor Statistics and Eurostat

Figure 3:13. Households confidence indicators
Net values



Source: European Commission

Mixed development in the euro area

There was a clear improvement in the indicators of household and company expectations in the euro area during the autumn. However, the aggregate purchasing managers' index for the manufacturing and service sectors fell in January Prior to this, the index had risen for eight consecutive months and it is still well above the level that shows increasing production (see Figure 3:10). The European Commission's Business Survey for December and January indicates greater optimism.

Although most of the confidence indicators in the euro area have continued to improve, a lot of the other statistics indicate that development was weaker in the fourth quarter of 2009. The steady increase in industrial production that had continued since May 2009 was interrupted in October when industrial production fell somewhat compared to the previous month, but then increased again in November. New orders, which had increased since April 2009, also fell in October by over 2 per cent but then began to increase again in November. Growth in the retail sector remains weak. In November, sales fell by 1.2 per cent compared to the previous month, which was the largest fall since October 2008. In December, retail sales were unchanged. The continued weakening of the labour market is expected to dampen private consumption over the next few months too.

Exports from the euro area have recovered somewhat since they hit bottom in early 2009. This recovery has been very uneven, however (see Figure 3:11). The labour market in the euro area has continued to deteriorate. Employment fell in the third quarter at the same rate as in the second quarter. Unemployment increased to 10 per cent in November, which is the highest level measured to date in the euro area (see Figure 3:12).

The annual rate of increase in the banks' lending to households continued to rise to 1.3 per cent in December. However, the lending rate to companies fell for the fourth consecutive month. The ECB's Bank Lending Survey from the end of January shows that the banks continued to tighten their loan terms during the fourth quarter, but to a lesser extent than during the previous quarter.

Production stagnant in the UK

Although the companies' confidence in the future has increased in the UK since the beginning of 2009, there are till no signs of an increase in industrial production. The level of production has remained largely unchanged since early 2009. The situation of the households has, however, developed more positively. Retail sector sales have increased somewhat and unemployment has stabilised around 8 per cent in recent months. Increasing housing prices and stock market values have led to an increase in wealth, which has probably contributed to the increasing optimism of the households (see Figure 3:13). However, public finances have deteriorated significantly and it is estimated that the budget deficit in 2009 amounted to almost 13 per cent of GDP.

■■ Rapid recovery in Norway but slower in Denmark

In the same way as the downturn was relatively mild in the case of Norway, the recovery has also been more distinct than in most other countries. This can partly be explained by a highly expansionary fiscal policy in the form of increased public consumption and labour market policy measures. Unemployment has increased only marginally to just over 3 per cent. Household confidence in the future has increased sharply since the beginning of last year, although it has become somewhat more subdued in recent months. Both share prices and housing prices have increased rapidly since the start of 2009.

In addition to the effects of the financial crisis, the Danish economy has also been hampered by a substantial fall in housing prices and construction investments. Industrial production has also fallen significantly and, unlike the situation in most other countries, there are no signs of a stabilisation. Unemployment has continued to increase and amounted to approximately 4.5 per cent in November. Household optimism has declined recently but is still high in an historical perspective. However, retail sales in the fourth quarter indicate that the propensity to consume is still weak.

■■ Long way to go in the Baltic countries

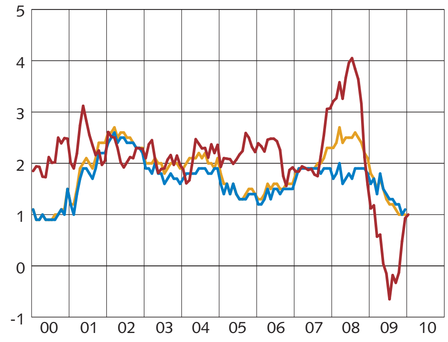
In the Baltic countries, most of the indications are that the downturn has bottomed out and that the situation is beginning to stabilise. Industrial production and exports strengthened at the end of last year, while domestic demand continued to be weak. Unemployment has continued to rise to historically high levels at the same time as retail sales have not improved. The optimism of the households also remains low in Latvia and Lithuania, but it has recovered in Estonia in line with the situation in the Nordic countries.

■■ Inflation increasing abroad

Rising commodity prices have contributed to the increase in inflation in many countries (see Figure 1:8 and 1:9). Inflation continues to increase in Asia and has now returned to positive figures in many countries. In Japan, however, inflationary pressures are still low. In December, CPI inflation in the USA rose to 2.7 per cent. Underlying CPI inflation, adjusted for food and energy prices, increased to 1.8 per cent. The inflation rate in the euro area was 1.0 per cent in January, which was an increase compared with the figure of 0.9 per cent in December (see Figure 3:14). The rate of increase in HICP excluding foods, energy, alcohol and tobacco fell during the autumn, but increased to 1.1. per cent in December.

CPI inflation has also risen in the rest of Europe. In the UK, Norway and Denmark, inflation increased in the fourth quarter. In December, inflation in Denmark was slightly above 1 per cent, while in the UK and Norway it was 2.9 per cent and 2.4 per cent respectively. The rate of increase in the CPI excluding foods and energy is approximately the same as for the total CPI in all three countries.

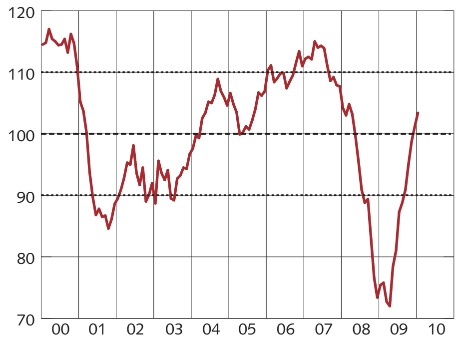
Figure 3:14. HICP for the Euro area
Annual percentage change



Total
Excluding energy, food, alcohol and tobacco
Excluding energy and unprocessed food

Source: Eurostat

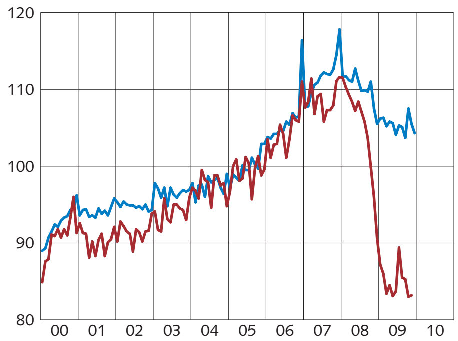
Figure 3:15. The Economic Tendency Indicator
Index, mean = 100, standard deviation = 10



The Economic Tendency Indicator
Mean +/- one standard deviation

Source: National Institute of Economic Research

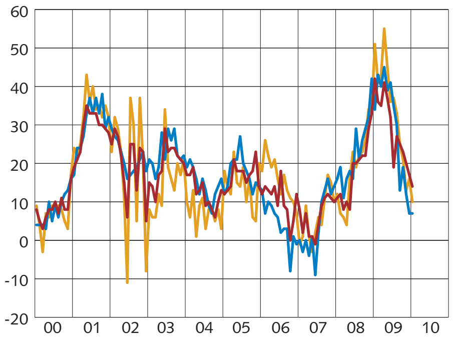
Figure 3:16. Industrial production and the production of services
Index, 2005 = 100, seasonally adjusted data



Industrial production
Production of services

Source: Statistics Sweden

Figure 3:17. Assessments of stocks of finished goods
Seasonally adjusted net values

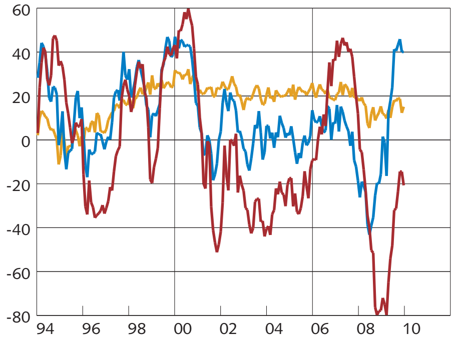


Manufacturing industry
Input goods industry
Investment products industry

Note. Higher net figures entail greater dissatisfaction with too high stocks.

Source: National Institute of Economic Research

Figure 3:18. Households' expectations for the future
Net figures

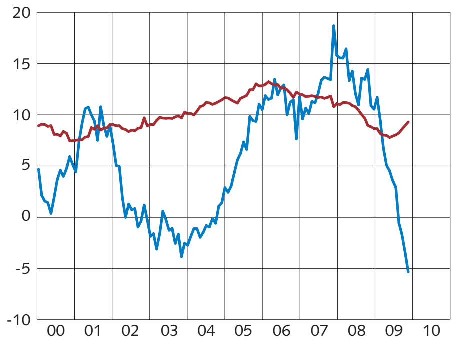


Unemployment
Swedish economy
Own economy

Note. Unemployment is defined here as the percentage of households that believe unemployment will fall minus the percentage who believe that unemployment will rise.

Source: National Institute of Economic Research

Figure 3:19. Bank lending to companies and households
Annual precentage change



Households
Companies

Sources: Statistics Sweden and the Riksbank

■■ Continuing recovery in Sweden

The indicators for GDP growth at the end of 2009 and the beginning of 2010 suggest that the recovery in Swedish economy is continuing. The Tendency Surveys of the National Institute of Economic Research and the purchasing managers' index for the manufacturing industry have continued upwards in recent months (see Figures 3:10 and 3:15). These indicators suggest that the perception of the economic situation is now somewhat more optimistic than show by historical averages. It is, however, difficult to draw any firm conclusions from the levels of the indicators. The results may be due to the fact that the companies are responding to questions about whether the situation has improved compared to the previous three-month period. Even if the companies now believe that the situation is better than it was three months ago, this should be seen against the background of the exceptionally difficult situation last year. In the Tendency Survey for the fourth quarter of 2009, the companies stated that demand was still weak. The Riksbank's company interviews,[11] which provide the opportunity to ask more detailed questions, support the view that although the situation has improved since things were at their worst, one can by no means say that were are experiencing a rapid recovery.

The outcomes for industrial production and the production of services up to an including November indicate subdued development and do not really live up to the picture painted by certain confidence indicators (see Figure 3:16). The manufacturing industry has been hit much harder than the service sector, which is also confirmed by the situation on the labour market.

The companies' assessment of their stocks of finished products is now approaching what can be considered normal levels in an historical perspective (see Figure 3:17). In the spring of 2009, the companies' view was instead that stocks were notably too high. This was also reflected by the historically-high negative impact of changes in stock levels on the growth of demand earlier in 2009. The development of stocks is expected to make a positive contribution to GDP growth over the next few quarters.

GDP growth in the fourth quarter of 2009 is expected to reach 1.8 per cent calculated as an annual rate, which is somewhat weaker than the forecast in December. The information available for the first quarter of 2010 indicates that the recovery will continue more or less in line with the forecast in December. In the first quarter of 2010, GDP growth is expected to be 2.6 per cent, calculated as an annual rate (see Figure 1:14).

■■ Household consumption increasing once again

The overall level of household consumption fell in 2009 compared with 2008 (see Table A6). Viewed on a quarterly basis, however, consumption

11 See also the document "The Riksbank's company interviews in December 2009", on the Riksbank's website under the heading Press & published/Reports.

began to increase during the first quarter of last year and it is expected that it continued to increase up to the end of the fourth quarter (according to the Riksbank's seasonal adjustment). However, the level of consumption in the third quarter of last year was still lower than in the same period in the preceding year as consumption fell dramatically in the third quarter of 2008. It is expected that consumption began to increase at the beginning of the fourth quarter of 2009, even when calculated as an annual percentage change.

It is estimated that the households' real disposable incomes increased by over 3 per cent in 2009, partly as a result of tax cuts and historically low interest rates (see Figure 1:17). The development of household consumption has thus been weak despite this. This means that the households have saved an increasing proportion of their disposable incomes. This is probably linked to the uncertainty about the development of the economy in the period ahead that has prevailed among households.

It is expected that household consumption will continue to rise in the period ahead. There are many indications of this. According to the Consumer Tendency Survey of the National Institute of Economic Research, the households became increasingly optimistic in the autumn of 2009 about their own finances and the Swedish economy. There is also a steady decline in the number of people who believe that unemployment will increase in the period ahead (see Figure 3:18).

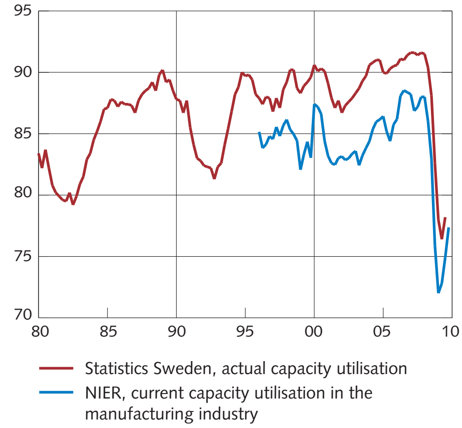
■■ Household borrowing still increasing

Lending to households increased by over 9 per cent in December compared to the corresponding period last year (see Figure 3:19). The rate of growth is thus slightly above the level in the corresponding period in 2008. The debts of the households are also continuing to increase in relation to their disposable incomes. Since the mid-1990s, the average fixed term for mortgage rates has become shorter (see Figure 1:17). The percentage of mortgages taken out at a variable-rate (up to three months) has increased from slightly less than 10 per cent in 1996 to over 45 per cent in December 2009. The shorter fixed terms together with a higher debt ratio means that household finances are more quickly affected by changes in interest rates.

■■ Public finances somewhat better than expected

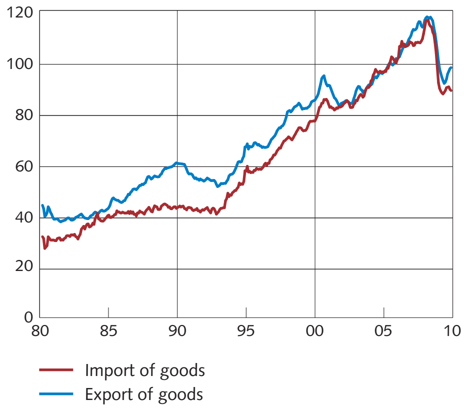
Since the forecast in December, new information has become available in the form of the budget balance for December and preliminary monthly outcomes for the general government budget for December. All in all, this new information indicates that central government net lending has weakened somewhat less than the Riksbank expected given the development of the economy as a whole. The reason why the weakening of public finances is not as great as would normally be the case is that there is a declining trend for expenditure relating to sickness and ill-

Figure 3:20. Capital utilisation in industry
Per cent, seasonally adjusted data



Sources: National Institute of Economic Research and Statistics Sweden

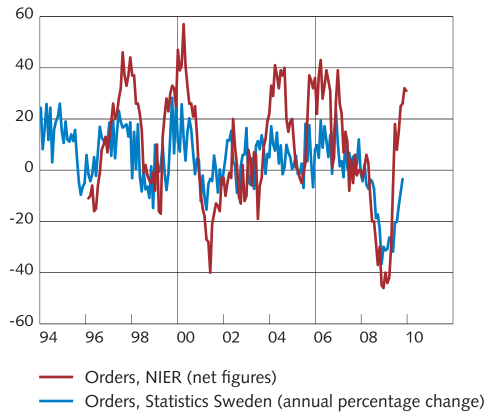
Figure 3:21. Foreign trade with goods
Index, 2005 = 100, seasonally adjusted data



Note. Three-month moving averages. Fixed prices calculated by the Riksbank.

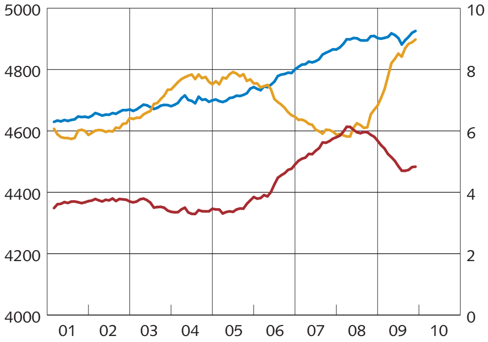
Sources: Statistics Sweden and the Riksbank

Figure 3:22. New export orders
Net figures and annual percentage change



Sources: National Institute of Economic Research and Statistics Sweden

Figure 3:23.Employment rate, labour force and unemployment
Thousands and percentage of labour force, aged 15-74, seasonally adjusted data

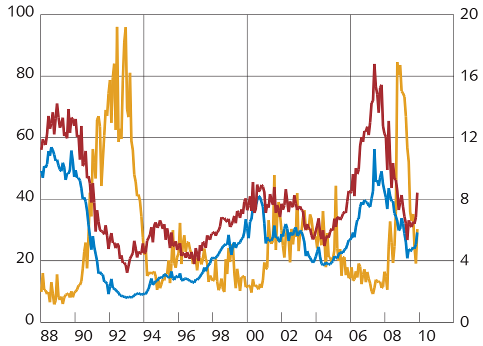


Employment (left scale)
Labour force (left scale)
Unemployment rate (right scale)

Note. Three-month moving averages.

Sources: Statistics Sweden and the Riksbank

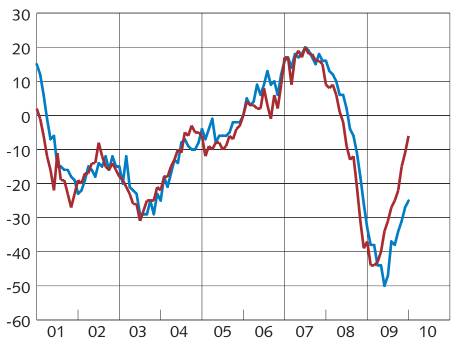
Figure 3:24.New and unfilled vacant jobs and redundancy notices
Thousands, seasonally adjusted data



New vacancies (left scale)
Unfilled vacancies (left scale)
Redundancy notices (right scale)

Source: Employment service and the Riksbank

Figure 3:25. Employees in the business sector, expectations and outcome
Net figures, seasonally adjusted



Expectations
Outcome

Sources: National Institute of Economic Research

health. The forecast for net lending for 2009 is -1.5 per cent of GDP, which is an upward revision from the figure of -1.9 per cent in December.

■■ Investments will fall for a further few quarters

It is estimated that the fall in investments totalled almost 14 per cent in 2009. Capacity utilisation in the manufacturing industry is still very low in an historical perspective (see Figure 3:20). Information gathered in the course of the Riksbank's company interviews also reveals that very few companies are planning any substantial investments in the period ahead. This indicates that business-sector investments will not increase for several quarters. Public investments, on the other hand, have increased in recent quarters. Several major infrastructure projects are currently underway and this is helping to maintain the level of investment. There are also signs that the construction of housing is beginning to recover. The ROT programme, which provides tax deductions for repair and renovation work, has also made a positive contribution here. The forecast for December still applies. It is estimated that investments will have fallen by approximately 2 per cent calculated as an annual rate in both the final quarter of 2009 and the first quarter of 2010.

■■ Bank lending to companies has continued to decline

Lending to companies followed a negative trend throughout almost all of 2009 (see Figure 3:19). The reasons for this may include those that normally apply in a recession: that banks refuse to give loans with reference to the economic climate and that companies have no need of new investments. In ALMI Företagspartners' loan indicator for December, the assessment of the bank managers was that lending to companies will remain relatively unchanged over the next quarter. The loan indicator shows that it is still difficult for both existing and new customers to get loans. The results of the Riksbank's company interviews indicate that the companies are now finding it easier to find funding but that the situation can still not be regarded as normal.

■■ Foreign trade is beginning to recover

In December, information was available about the third quarter of 2009 which showed that the dramatic fall in imports and exports that had taken place earlier in the year had slowed down. However, monthly statistics for the export of goods show that these exports fell unexpectedly sharply in November and December. The increase in imports of goods had also slowed down (see Figure 3:21). Indicators of export orders, however, indicate a positive development in the period ahead (see Figure 3:22). This also applies to groups of goods for which the outcomes have been weak in recent months. The assessment is that total exports increased in the fourth quarter of 2009, but at a somewhat slower rate than predicted in the forecast in December. This is mainly because of the weak monthly outcomes for the export of goods. Exports are expected to continue to increase in the first quarter of 2010. The forecast for imports has been revised upwards slightly for the final quarter of 2009 and the first quarter of 2010 compared to the forecast in December. One factor that explains the relatively strong imports is that the companies are expected to reduce the size of their stocks. A large part of the stocks consists of imported goods.

■■ Stabilisation of the situation on the labour market

The substantial fall in GDP that hit the Swedish economy in the autumn of 2008 led to a rapid deterioration of the situation on the labour market. Employment fell sharply at the same time as unemployment increased. It was mainly the industrial sector that accounted for the deterioration in 2009, while the service sector managed better. The latest statistics indicate, however, that the previous sharp decline in employment is levelling out. For example, employment increased slightly in the fourth quarter compared with the preceding quarter. Compared with the corresponding period last year, the number of persons employed (aged 15-74) fell by 100 000, or 2.1 per cent, according to the labour survey. At the same time, however, the number of individuals in the labour force increased by over 20 000, or 0.4 per cent, which means that the number of persons unemployed increased by 116 000 (see Figure 3:23). In relation to the assessment made in December, employment has increased more than expected, while the number of those unemployed is fewer than expected.

The indicators for the situation on the labour market have recently shown signs that the deterioration has slowed down. The number of redundancy notices has fallen at the same time as the number of new job vacancies has begun to increase (see Figure 3:24). The Business Tendency Survey of the National Institute of Economic Research also shows that fewer and fewer companies are planning to make further staff cuts (see Figure 3:25). However, the percentage of companies that report a shortage of labour is still very low in an historical perspective (see Figure 3:26).

All in all, the outcomes and indicators show that the deterioration of the labour market has not been as bad as expected. The forecasts for labour and employment have therefore been revised upwards compared to those in December and the current assessment is that unemployment will not increase as much. The forecast for hours work, on the other hand, has been revised downwards slightly as the outcomes have been weaker than expected.

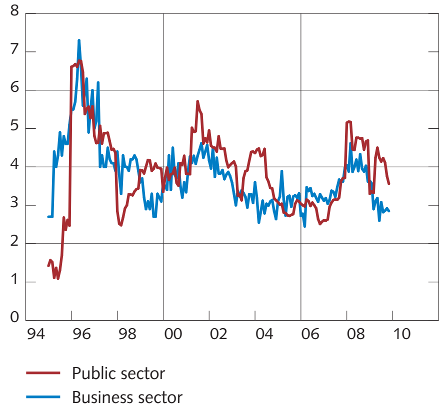
■■ Rate of wage increases has declined since the autumn of 2008

Since the forecast in December, new preliminary wage outcomes based on short-term wage statistics from the National Mediation Office have been published for October and November. Wages in the economy as a whole increased preliminarily by 3.1 per cent in November, expressed in terms of the annual percentage change. It is estimated that the definitive rate of wage increases in 2009 in the economy as a whole was 3.4 per cent.

Figure 3:26. Proportion of firms reporting a shortage of labour
Per cent, seasonally adjusted data

Source: National Institute of Economic Research

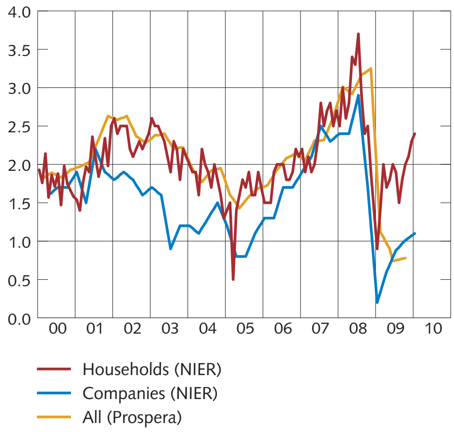
Figure 3:27. Wages
Annual percentage change



Note. Preliminary outcomes for the last 12 months which are usually revised upwards.

Sources: National Mediation Office and the Riksbank

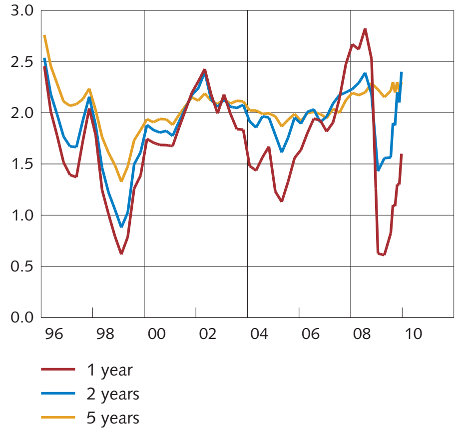
Figure 3:28. Expectations of inflation one year ahead
Per cent



Note. Household figures are monthly, others quarterly.

Sources: National Institute of Economic Research and TNS SIFO Prospera

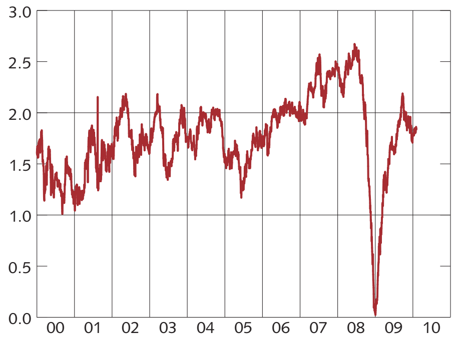
Figure 3:29. Money market players' expectations of inflation
Per cent



Note. Monthly survey from September 2007. Quarterly surveys prior to this.

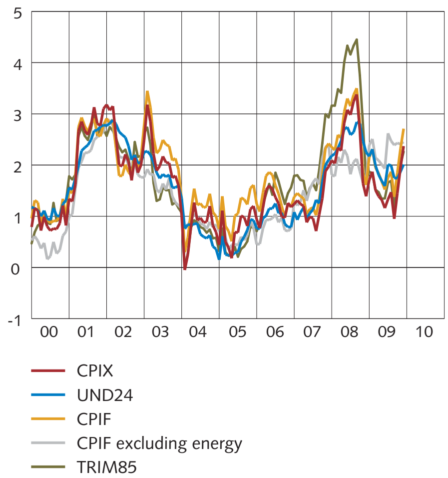
Source: TNS SIFO Prospera

Figure 3:30. The difference between nominal and real five-year rates (break-even inflation)
Percentage points



Source: The Riksbank

Figure 3:31. Different measures of underlying inflation
Annual percentage change



Note. TRIM85 and UND24 are calculated on the basis of CPI divided into around 70 subgroups. UND24 is weighted and adjusted for the historical standard deviation. In TRIM85 the 7.5 per cent most positive and negative yearly price changes each month have been excluded.

Sources: Statistics Sweden and the Riksbank

The assessment is that that wage increases in the trade union agreements in 2009 averaged 3.0 per cent. This means that wage drift, that is wage increases over and above the levels in the trade union agreements, was unusually low.

The rate of wage increases in the public sector during the first 11 months of 2009 was, preliminarily, 3.9 per cent, compared to 3.1 per cent in the private sector. The rate of wage increases has declined since the autumn of 2008, above all in the private sector (see Figure 3:27). The level of wage increases in trade union agreements is also approximately 3.0 per cent for the first quarter of this year, which means that it is assessed that wages will increase at around the same rate as last year in this period too.

■■ The high rate of growth in unit labour costs is slowing down

According to the assessment in the National Accounts, hourly wages in the economy as a whole increased by 2.8 per cent in 2009, which is slightly less than the rate of growth of hourly wages reported in the short-term wage statistics. It is assessed that the growth of labour costs per hour will be approximately 0.5 per cent lower than the increase in hourly wages in 2009, which can partly be explained by the reductions of the statutory employers' contributions that were implemented at the beginning of 2009.

The fact that labour productivity has declined over a long period of time has helped to maintain the level of unit labour costs. Unit labour costs increased by approximately 5.1 per cent during the third quarter of 2009, which was the sixth consecutive quarter with a rate of increase of over 5 per cent. It is assessed that the rate of growth in unit labour costs slowed down significantly in the fourth quarter and that this will continue in the first quarter of 2010. Labour productivity is expected to recover in the period ahead, which will help to dampen the rate of increase in unit labour costs.

■■ Slight increase in inflation expectations

The households' inflation expectations one year ahead rose from 2.3 per cent in December to 2.4 per cent in January, according to the National Institute of Economic Research's Consumer Tendency Survey (see Figure 3:28). The Prospera survey of money market participants in January showed that inflation expectations were slightly higher than in the previous survey (see Figure 3:29). Inflation expectations one year ahead are 1.6 per cent, while at two and five years ahead they have increased to 2.4 per cent and 2.3 per cent respectively.

A rough measure of the fixed-income market's long-term inflation expectations is break-even inflation, that is, the difference between nominal and real bond rates with the same maturity. However, break-even inflation should be interpreted with a great degree of caution as the measure also includes risk compensation for uncertainty regarding inflation in the future. Break-even inflation calculated on interest rates with a five-year maturity in Sweden is currently almost 2 per cent (see Figure 3:30).

■■ CPI inflation is increasing again

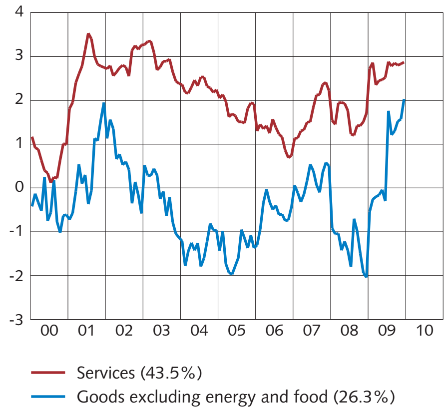
In December, CPI inflation increased by 0.9 per cent compared with the same month last year (see Figure 1:30). The causes of the increase in the CPI include the fact that mortgage costs are not now falling as sharply as earlier in the year and that energy prices have risen rapidly. Inflation measured in terms of the CPIF, where mortgage rates are held constant, amounted to 2.7 per cent in December (see Figure 1:31). The CPIF excluding energy, where the effects of changes in energy prices are also excluded, increased by 2.5 per cent in December. The broad upturn in inflation is clearly illustrated by various measures of underlying inflation and the two measures TRIM85 and UND24 are now increasing (see Figure 3:31). Underlying inflation measured in terms of the CPIF excluding energy, however, is expected to fall in 2010 as a result of the strengthening of the exchange rate and the fall in unit labour costs.

The outcomes for all the measures of inflation were unexpectedly high compared with the latest forecast. This was partly because electricity prices increased more rapidly than expected and partly because the prices of foods and other goods excluding energy increased more than expected. The delayed impact of the previously weak krona and the high rate of increase in unit labour costs are probably contributing factors in holding up the underlying inflation rate.

Goods prices (excluding energy and foods) increased by 2 per cent in December 2009 compared to December 2008. This is high in an historical perspective (see Figure 3:32). The rate of change in the producer prices of durable goods slowed down, however, in November, and December, which is probably because the stronger krona is now having an impact on producer prices (see Figure 3:33). Producer prices for durable goods rose sharply in late 2008 and early 2009 when the krona weakened. Up to the summer of 2009 this did not have an impact on goods prices in the CPI, but subsequently the increase in these prices has accelerated. The annual rate of increase in service prices also increased somewhat in December to 2.9 per cent from a level of 2.8 per cent in November.

Energy prices have risen in the past few months. In December, energy prices to the consumer increased by 5.4 per cent measured in terms of the annual percentage change. This was more than predicted in the December forecast. In December, the annual rate of change in prices was 16.2 per cent for oil products (heating oil and fuels) and -4.2 per cent for electricity. Although electricity prices increased sharply in December they are still falling measured in terms of the annual percentage change following the price falls in the course of 2009. The forward prices for electricity that are used in the forecast are in the short term considerably higher than in December. The rising energy prices have not yet made their full impact on the consumer prices and the annual rate of increase in prices is expected to accelerate in the period ahead. However, electricity

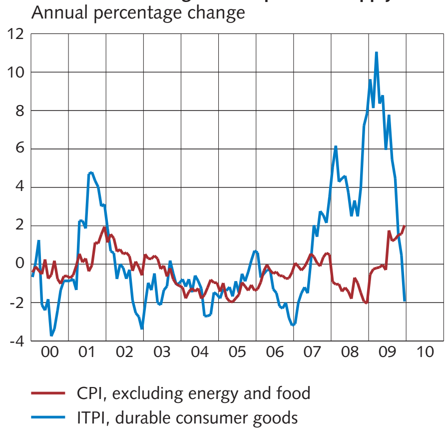
Figure 3:32. Prices of goods and services in the CPI
Annual percentage change



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

Source: Statistics Sweden

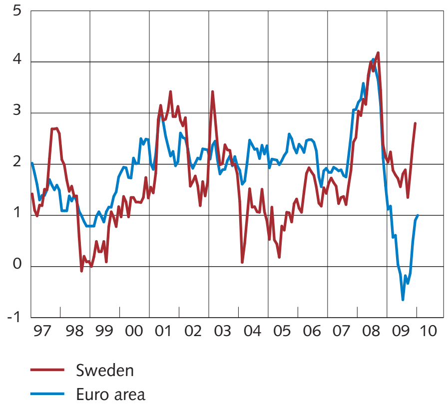
Figure 3:33. Goods prices in CPI and producer prices of durable consumer goods for producer supply
Annual percentage change



Note. ITPI weighs together the import price index and the domestic market price index within the system for the producer price index.

Source: Statistics Sweden

Figure 3:34. HICP in Sweden and in the euro area
Annual percentage change



Sources: Eurostat and Statistics Sweden

prices are expected to fall in the period ahead in line with pricing on the forward market.

CPI inflation is expected to continue to rise over the next few months due to higher interest rate costs (see Figure 1:30). In contrast to the CPI, however, the rate of increase in both the CPIF and the CPIF excluding energy will fall over the next few months, mainly because of a lower rate of increase in rents and the prices of goods. The CPI is expected to increase more rapidly in the months ahead than assessed in December, measured as the annual percentage change. The same applies to both the CPIF and the CPIF excluding energy.

In December, the HICP increased by 2.8 per cent measured as the annual percentage change and it is expected to increase by an average of 1.8 per cent during the first quarter of 2010 (see Figure 3:34). The HICP is a harmonised consumer price index that is used within the EU and is similar in composition to the CPIF. Recently, HICP inflation has been higher in Sweden than in the euro area. This is mainly because the krona has weakened against the euro. Unit labour costs have also increased more rapidly in Sweden than in the euro area in recent years, which has probably also contributed to the difference in HICP inflation between Sweden and the euro area. In the period ahead, the gap between the levels of HICP inflation in Sweden and the euro area is expected to shrink as the krona strengthens.

What is a normal level for the repo rate?

As a consequence of the financial crisis, the level of the repo rate has been abnormally low for some time. A higher repo rate level can be expected in the future and, against this background, warrants revisiting the question of which repo rate level can be considered normal. A previous article in the Riksbank's Inflation Report 2006:2 concluded that a normal level for the long-run repo rate was probably in the interval of 3.5 to 5 per cent. An updated analysis indicates that it is less likely that the long-run normal repo rate level lies in the upper range of this interval. Based on this analysis, a reasonable assessment of the level of the repo rate in the long run is likely to lie between 3.5–4.5 per cent.

Normal long-run repo rate level in the light of historical growth levels

In the article "What is a normal level for the repo rate?" in the Inflation Report 2006:2, the history of economic growth and interest rates in Sweden and other countries was examined in order to determine what may be considered a normal long-run level for the repo rate. A normal long-run repo rate is one that can be expected to prevail in a normal economic climate.

The repo rate is a nominal interest rate that can be divided into two components, the real interest rate and expected inflation. Economic theory suggests a close long-term connection between the real interest rate and growth in the economy over the long run. Households typically wish to smooth out their consumption over time. A higher rate of economic growth, which brings with it expectations of higher future levels of income and consumption, entices households to bring forward some consumption to today and save less. As a consequence, households demand a higher real rate of return on their savings as compensation for postponing consumption. With higher rates of economic growth, higher real interest rates are neaded to establish a balance between the supply of savings and the demand for investment funding.[12]

The average rate of growth in the economy over a longer period of time can thus give an idea of what the long-run normal real interest rate may be. Table B1 illustrates the average rate of growth of GDP per capita for Sweden and for a group of OECD countries. The picture revealed by Table B1 is that average growth in GDP per capita has fallen somewhat, both in Sweden and internationally, since publication of the article in 2006. With inflation expectations that, under normal circumstances, correspond with the Riksbank's inflation target of two per cent, historical real GDP growth in Sweden and abroad indicates a normal long-run repo rate of 3.9–4.4 per cent.

12 It is often also assumed that households attach less importance to the future in their consumption. Such a tendency leads to a marginally higher real interest rate.

Table B1. Growth in real GDP per capita in Sweden and a selection of OECD countries
Per cent

	1960-2005	1998-2005	1998-2008
Sweden	2.3	2.8	2.4
International*	2.1	2.2	1.9

* Unweighted average for Australia, Canada, Germany, New Zealand, Sweden, Great Britain and the United States.

Source: The World Bank

Long-run normal repo rate in the light of historical interest rate levels

Another way to assess a reasonable level of the repo rate in the long run is to consider historical averages of the repo rate itself or other similar interest rates. On any given occasion, the repo rate will probably deviate from its long-run normal level, particularly following adjustment to the economic cycle, but, over a longer period of time, its average level should correspond to the level experienced during normal economic activity. A study analysing the development of the short-term real interest rate since the mid-1800s concludes that the last fifty years make up the longest relevant reference period and that a long-run normal level for the short-term real interest rate lies at around 2 per cent.[13]

In recent decades, several changes have occurred in the conditions for monetary policy, making it highly probable that the long-run normal repo rate level has also changed over time. The article published in 2006 notes that the period since 1998 is particularly interesting as, by this point, the credibility of the current monetary policy regime had become fully established. Table B2 shows that the average real interest rate for three-month treasury bills in Sweden remains the same in the period 1998–2005 as compared with the longer period since 1960. However, when the years 2006–2008 are included, the average decreases somewhat, both in Sweden and internationally.

Table B2. Nominal and real three-month interest rates for government bonds in Sweden and internationally
Per cent

	1960-2005	1998-2005	1998-2008
Nominal 3- month interest rate			
Sweden	7.4	3.3	3.3
International*	7.2	4.2	4.4
Real 3-month interest rate			
Sweden	2.2	2.2	1.9
International*	2.8	2.4	2.2

* Unweighted average for Australia, Canada, Germany, New Zealand, Sweden, the United Kingdom and the United States.

Sources: OECD and Reuters EcoWin

13 Lagerwall, B. (2008), "Real interest rates in Sweden", Economic commentary 2008:5, Sveriges Riksbank.

What do market participants consider to be the long-run normal level of the repo rate?

Alongside historical data illustrating the development of economic growth and interest rate levels over time, forward-looking information from financial markets can shed light on investors' perceptions of the long-run normal level of the repo rate. Below are presented the opinions of financial market participants concerning the level of the long-term normal interest rate, as far as this can be discerned from the results of surveys and the market pricing of debt securities.

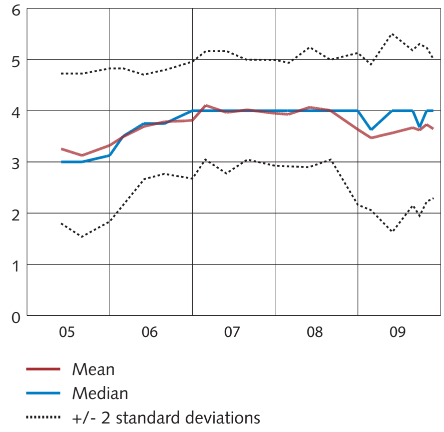
Each quarter since June 2005, Prospera has surveyed a selection of participants in the Swedish financial markets about their expectations of the level of the repo rate two and five years in the future. Expectations of the level of the repo rate after five years should provide a strong indication of the level of the long-run repo rate level that market participants consider to be normal. Figure B1 shows that market participants' expectations of the future nominal repo rate level varied between 3 and 4 per cent during the period from June 2005 to December 2009. Focussing upon the most recent survey, individual participants' expectations of the nominal repo rate level in five years time are centered around a level of 4 per cent (see Figure B2).

Market participants are also invited to provide an opinion on the level of inflation in two and five years respectively, which in conjunction with nominal repo rate expectations can be used to infer expectations regarding the real repo rate. According to the most recent survey, market participants' expectations of the real repo rate are gathered around 2 per cent.

Expectations of long-run normal repo rate levels according to the pricing of government debt securities

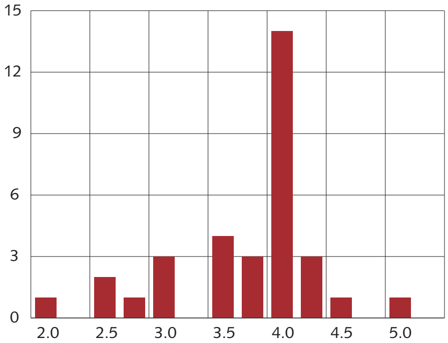
Another method of studying the market's expectations of long-run normal repo rate levels is via the yield curve of government debt securities. Nominal and real debt securities are issued for maturities of between 3 months and 30 years, and the yield curve summarises the manner in which interest rates vary by maturity at any particular point in time. With the aid of a yield curve, forward rates can then be calculated for any horizon. Forward rates consist of two components – an expected future (short-term) interest rate and a risk premium. Risk premia are typically positive. Consequently, forward rates at a long horizon provide an upper limit to the market's future expectations of short-term interest rates, such as the repo rate. Thus, a review of historical yield curves allows time series of market expectations of the repo rate to be created. Figure B3 shows the time series of 5-year forward rates implied by Swedish government bond yields from 1997. Assuming that five years is a sufficiently long period of time for the economy to return to a normal level of activity,

Figure B1. Market agents' expectations of the level of the nominal repo rate in 5 years
Survey responses between June 2005 and end of December 2009, per cent



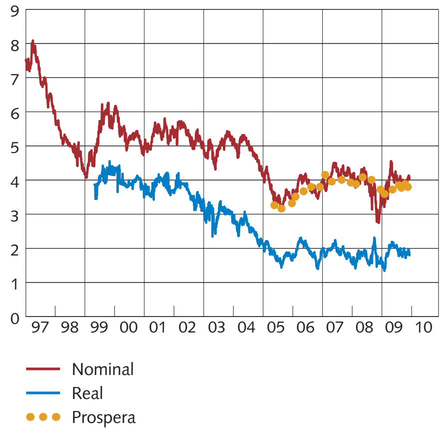
Sources: TNS SIFO Prospera and the Riksbank

Figure B2. Distribution of market agents' expectations of the level of the nominal repo rate in 5 years.
Survey responses since December 2009



Sources: TNS SIFO Prospera and the Riksbank

Figure B3. Nominal and real 5 year forward rates
Per cent



Sources: TNS SIFO Prospera and the Riksbank

Figure B3 can be interpreted as an upper limit for market expectations of the long-run normal repo rate level.[14]

Figure B3 shows that nominal forward rates declined noticeably between 1997 and 2006. The decrease occurring during the first years was probably due to the ongoing decrease in inflation expectations. The expected real interest rate also declined. Since 2005, the 5-year forward rate has varied around 4 per cent. The corresponding five-year ahead real forward rate derived from inflation-indexed government bonds has varied around 2 per cent over the same period.

All in all, the information based on Prospera's surveys and the pricing of government debt securities shows that in recent years market participants' expectations of the long-run normal nominal repo rate lie between 3.5 and 4 per cent, while their expectations of the long-run real repo rate are close to 2 per cent.

Conclusions

This revised update of the Swedish and international statistics forming the basis of the 2006 article on the long-run normal level of the repo rate gives cause for a marginal downwards adjustment of some relevant average growth rates and interest rate levels. Information from financial markets provides estimates of the long-run normal repo rate that are in line with, or slightly lower than, calculations based on growth rates and historical interest rate levels. Based on this analysis, a reasonable assessment of the level of the long-run repo rate is in the interval 3.5–4.5 per cent.

14 The result shown in Figure 3 is based on calculations made by the Riksbank. A zero-coupon curve has been estimated for both nominal and real government securities (eight nominal and five real). For the nominal curve, Svensson's extension of a Nelson-Siegel model with 6 parameters has been estimated. The real curve has been estimated using a similar functional form with 4 parameters.

This year's wage bargaining is expected to result in low wage rises

The relatively high wage agreements resulting from 2007's round of wage bargaining brought with them a slower downwards adjustment of wages in parts of the economy than would otherwise have been justified by the rapidly deteriorating situation on the labour market prevailing since the autumn of 2008. Wage agreements in several sectors turned out to be badly suited to later developments on the labour market. This primarily applies to areas of the manufacturing industry where many local crisis agreements were therefore signed during 2009. This year, wage agreements will be renegotiated for a large part of the labour market. One factor that may complicate this round of wage bargaining is the fact that there are now greater differences between the labour market situations in different sectors than there have been in several previous rounds of wage bargaining. What significance will this division of the Swedish economy have for such factors as the leading role of the Industrial Agreement in wage bargaining? Another issue which may be relevant, considering the result of the previous round of wage bargaining, is the possibility of creating greater flexibility in the new wage agreements. All in all, this year's wage bargaining is expected to result in historically low wage increases.

Slow adjustment of wages to the situation on the labour market since the autumn of 2008

The autumn of 2008 was characterised by instability on the financial markets and severe falls in production across large areas of the global economy. In Sweden, industrial production declined sharply, but activity also decreased significantly in other sectors such as construction and transport. The situation on the labour market deteriorated rapidly and, from the autumn of 2008, a wave of redundancy notices swept the country. Between September 2008 and September 2009, a total of 163 000 individuals received redundancy notices.

The deterioration of the labour market was also noticeable in wage formation. The rate of wage increases in the Swedish economy declined from 4.3 per cent in 2008 to a preliminary figure of 3.4 per cent for 2009. The relatively high wage agreements signed during 2007, when the labour market developed relatively strongly, brought with them a slower downwards adjustment of wages than could otherwise have been justified by the rapidly deteriorating situation on the labour market. The adjustment of wages has primarily taken place through the reduction of wage increases over and above the levels of the sectoral/industry-wide agreements[15] (often designated as wage drift or errors and omissions). Between 2008 and 2009, wage drift decreased by 0.6 percentage points, from over 1.0 per cent to a preliminary figure of just over 0.4 per cent. The Riksbank's company interviews conducted in 2009 also confirm this view, as the respondents often stated the amount of wage drift as "non-existent" or "marginal". The main part of wage adjustment has

15 The term sectoral/industry-wide agreements, as used here, refers to a collective agreement between a union and a federation – for example, IF Metall and Teknikföretagen.

probably taken place through no or very low wage increases in local wage formation. However, it has also taken place by other means. For example, in some areas of manufacturing industry, employees have received compensation in the form of paid leave instead of wage increases, which has contributed towards the low wage increases recently experienced in this sector.

Many local crisis agreements were signed in the manufacturing industry during 2009

The Swedish manufacturing industry was impacted particularly severely by the major global economic slowdown. The levels of the sectoral/industry-wide agreements signed during 2007 for areas of manufacturing industry were poorly suited to the rapidly depleted labour market. In order to reduce the number of lay-offs, at the beginning of March 2009, parties within areas of manufacturing industry reached a temporary framework agreement, the Framework Agreement for Lay-offs and Training. The framework agreement, which applies for no longer than until the end of March this year, provides the manufacturing sector with the possibility of concluding local agreements permitting wage decreases of no more than 20 per cent and decreased working hours without lower limit. According to a survey conducted by Teknikföretagen, an employers' organisation in the engineering industry, almost 400 of the organisation's affiliated companies have signed local agreements in line with the framework agreement.[16] These local agreements, often designated crisis agreements, affect a total of approximately 50 000 employees within the engineering industry. The result of the survey indicates that working hours in the affected companies decreased by an average of 18 per cent, while wage costs decreased by an average of 13 per cent. The average duration of these agreements is just above six months.

Similar crisis agreements have been concluded within other areas of manufacturing industry, such as the steel and metalworking industry, the chemical industry and the mining industry, with an estimated total of 100 000 employees being affected by agreements of this type. According to employers, crisis agreements have meant that over 10 000 employees have avoided redundancy.

Just above 550 wage agreements are to be renegotiated in 2010

This year, just above 550 collective wage agreements will be renegotiated by Swedish labour market parties. These negotiations will cover just above 3.3 million wage earners or approximately 4 out of 5 wage earners in Sweden. Table B3 provides an overview of the extent of the collective bargaining this year and next year. The largest portion of the agreements expires on 31 March of this year.

16 Teknikföretagen's survey is a sample survey of 660 of their 3 000 affiliated companies. The result of the survey is presented on Teknikföretagen's website.

Table B3. Wage agreements expiring during 2010 and 2011 – an overview

Expiry date	Sector/industry /group	Number of employees	Number of central agreements
31 March 2010	Manufacturing, construction (blue-collar), commerce (blue-collar), municipal sector	2 075 000	300
30 April 2010	Commerce (hourly), hotel and restaurant, staffing, transport, construction (hourly), service and media companies	366 000	120
31 May 2010	Manufacturing, property, municipalities, transport	123 000	55
30 June 2010	Almega, community care services, other care	56 000	26
31 August 2010	Postal distribution	1 000	6
30 September 2010	Government, Almega, personal assistants	321 000	27
30 November 2010	Service companies	6 000	3
31 December 2010	Banking, insurance, shipping, press distribution, surveillance and security	109 000	14
	Collective agreements	3 057 000	551
	Application agreements	260 000	---
	Total	3 317 000	551
2011	Transport, the Church, nurses	300 000	40

Note. An application agreement is an agreement signed between an employees' organisation and a single company that is not a member of an employer confederation.

Source: National Mediation Office

Lower demands now, compared with the previous wage bargaining round

During 2007, approximately 500 wage agreements were renegotiated for approximately 3 million wage earners in the Swedish labour market. At the end of 2006 and start of 2007, when many employee organisations presented their demands and wage negotiations for a relatively large part of the labour market were underway, the Swedish economy was characterised by a gradual improvement of economic activity and strong growth in employment. From Q1 2006 until Q1 2007, the number of people employed increased by 2.5 per cent, which entailed a rapid improvement of labour market conditions. The relatively high level of economic activity and strong labour market had an impact on the level of the demands. For example, during the autumn of 2006, the Swedish Trade Union Confederation (LO) recommended its members to request SEK 825 per month in wage increases, or at least 3.9 per cent, in a one-year agreement with the employer organisations. LO's joint demands also included a gender equality frame of SEK 205 per month. The parties in the engineering industry were the first to conclude an agreement in mid-March 2007, in which IF Metall received approximately 85 per cent of their demands. The level of this three-year agreement became normative for other labour market sectors. According to the calculations of the National Mediation Office, the average level of sectoral/industry-wide agreements in the economy as a whole amounted to 3.0 per cent per year for the period 1 April 2007 – 31 March 2010.[17] Wage drift can also be added to this.

Collective bargaining is now taking place in a situation in which the labour market is weak, corporate profits are low and the productivity of the Swedish economy has declined over an extended period of time. Furthermore, according to Prospera's most recent survey, the social partners have relatively low expectations regarding future wage increases. Consequently, it is perhaps not so remarkable that demands are lower now than they were in the previous round of wage bargaining. At the start of November 2009, LO-affiliated trade unions presented their joint demands for the wage bargaining rounds. The LO affiliates demand year-long agreements for wage increases of 2.6 percent, with a minimum figure of SEK 620 per month. The affiliates also demand wage supplements for low-wage earners equivalent to SEK 125 per month for sectors with an average monthly wage of less than SEK 21 300. The Confederation of Swedish Enterprise has made calculations of 180 sectors in which LO affiliates are included. According to these calculations, the minimum wage increase in krona, wage supplements for low-wage earners and other demands entail an average cost of 3.2 per cent. To this can be added costs for proposed changes to general employment conditions and collective insurance schemes, as well as wage increases above and beyond negotiated levels.

Several conceivable reasons for tensions in the wage bargaining rounds

There are several conceivable reasons for the tensions between the parties in this year's rounds of wage bargaining. One reason is that the manoeuvres regarding agreement levels so far indicate that the parties are taking widely differing standpoints in negotiation. LO's demands can be seen in the light of the Confederation of Swedish Industry's previous offer of zero wage increases in the sectoral/industry-wide agreements for the agreement year 2010. Considering the weak situation on the labour market, it may be reasonable to believe that the employee organisations will receive less than the 85 per cent of demands they received in the last round of wage bargaining.

17 During 2008, approximately 60 collective wage agreements were concluded, covering approximately 570 000 employees. The main part of these agreements run for three years and expire during 2011. A majority of the agreements were concluded during the first six months of 2008, i.e. before the outbreak of the financial crisis and the economic downturn, which also reflects a level of contractual wage increases of approximately 3 per cent per year in several sectors. Groups/industries affected by these agreements include nurses, teachers, parts of the transport sector and personnel in the Church of Sweden. During 2009, approximately 30 new collective wage agreements were concluded, covering approximately 105 000 employees. Major sectors for 2009 were banking and insurance. The duration of these agreements is 1 to 2 years, with the level of wage increases for many agreements being approximately 2 per cent per year. However, the design of these agreements involves difficulties in estimating the levels.

Different areas of the economy have also been affected to varying degrees by the financial crisis, which may create tensions in wage formation. For example, in this wage bargaining round, there are greater differences in the labour market situation within different sectors than there have been in several of the previous wage bargaining rounds. Above all, the labour market situation is clearly weakest within the manufacturing sector. The question is thus whether the Industrial Agreement will also take a wage leadership role in the wage bargaining rounds, a role that has been very important during the most recent agreement periods. If, for example, areas of the economy that are less exposed to competition conclude agreements for significantly higher levels than the manufacturing sector, tensions may become an integral part of wage formation. If wage agreements for the various sectors are instead concluded at approximately the same, relatively high level, structural transformation will be hastened, entailing the risk of a relatively rapid shrinkage of the manufacturing sector.

The parties may also wish to increase the flexibility of the agreements, considering that the levels of the most recent three-year agreements in many sectors were so poorly suited to the situation on the labour market. One approach would be to conclude shorter agreements, such as one-year agreements rather than the three years which has been the standard since 1995. Another variant would be to conclude three-year agreements, but instead increase the possibility of cancelling the agreements. For example, the number of cancellation opportunities could increase from the standard of recent years of either zero or one to possibly two opportunities. A third variation may be to conclude open agreements. This would entail a guaranteed level of wage increases for a longer period of time, determined at union level, with the local parties subsequently determining the allocation of the guaranteed wage increase across the agreement years.[18] Finally, a fourth variant would be, quite simply, to reduce the proportion of wage increases determined at union level and, instead, transfer a larger share of wage formation to the local parties. The parties also currently appear to be taking fairly divergent stances as regards the construction of the approaching wage agreements.

Figure B4. Total wage increases and wage increases agreed at union level in Sweden during the period Q1 1993–Q4 2012
Annual percentage change

Note. Broken lines represent the Riksbank's forecast. The statistics for union-level agreements for the economy as a whole are composed of traditional agreements, minimum wage agreements, default rates of wage increases and agreements without specific figures. Agreements without specific figures have been assigned a value of zero.

Sources: National Mediation Office, Statistics Sweden and the Riksbank

Historically lower wage increases ahead

During the period 2010–2012, wages in the Swedish economy are expected to increase by an average of just over 2.5 per cent. This assessment is based on a number of different factors, such as developments on the labour market, corporate profits and current inflation expectations. Since 1998, the union-agreed wage increases have constituted approximately 50 to 80 per cent of the total wage increases in Sweden (see Figure B4). If we assume that this circumstance will continue to prevail during the period 2010-2012, the Riksbank's forecast

18 Two examples of open agreements are the agreement between Försäkringsbranschens Arbetsgivareorganisation (FAO) and Facket för försäkring och finans (FTF) (The employer and employee organisations in the insurance industry), concluded in March 2009, and the agreement between Bankinstitutens Arbetsgivareorganisation (BAO) and the Financial Sector Union of Sweden, concluded in May 2009.

of approximately 2.5 per cent amount to between 1.4 and 2.0 per cent, according to statistics from the National Mediation Office.

Wage forecast important for employment and inflation forecasts

The wage forecast forms an important component in the Riksbank's assessment of the future development of inflation and employment. Even if the wage forecasts are primarily based upon economic factors, levels of agreements often provide guidance on the future development of total wages. Agreement levels often provide guidance on the development of total wages in future. At present, when only a few agreements have been concluded for the approaching years, the wage forecast is thus based, to a higher degree, on assessments of the rest of the economy, such as, for example, the labour market situation. If the rounds of wage bargaining lead to wage increases clearly diverging from the Riksbank's forecast, either upwards or downwards, this may have consequences for monetary policy (see Chapter 2 – Alternative scenarios and risks).

Appendix

- Tables
- Outline of articles published 2007–2009
- Earlier interest rate decisions
- Glossary

Tables

The figures in parentheses show the forecast in the previous Monetary Policy Update (December 2009).

Table A1. Repo rate forecast
Per cent, quarterly average values

	Q4 2009	Q1 2010	Q2 2010	Q1 2011	Q1 2012	Q1 2013
Repo rate	0.25	0.25 (0.25)	0.25 (0.25)	1.1 (0.8)	2.8 (3.0)	4.0

Source: The Riksbank

Table A2. Inflation, annual average
Annual percentage change

	2009	2010	2011	2012
CPI	-0.3	1.6 (0.8)	2.9 (3.0)	3.1 (3.6)
CPIF	1.9	1.9 (1.2)	1.4 (1.5)	1.8 (1.9)
CPIF excl. energy	2.3	1.7 (1.3)	1.5 (1.4)	1.9 (1.8)
HICP	1.9	1.8 (1.1)	1.3 (1.4)	1.7 (1.9)

Note. CPIF is CPI with a fixed mortgage rate. HICP a an EU harmonised index of consumer prices which does not include household mortgage costs.
Sources: Statistics Sweden and the Riksbank

Table A3. Inflation, 12-month average
Annual percentage change

	Mar. -09	Mar. -10	Mar. -11	Mar. -12	Mar. -13
CPI	0.2	1.3 (0.6)	2.6 (1.5)	3.1 (3.8)	3.0
CPIF	1.9	2.3 (1.5)	1.4 (1.4)	1.6 (1.8)	2.1
CPIF excl. energy	2.1	1.9 (1.5)	1.4 (1.3)	1.7 (1.7)	2.2
HICP	1.9	2.2 (1.4)	1.2 (1.3)	1.5 (1.7)	2.0

Note. CPIF is CPI with a fixed mortgage rate. HICP a an EU harmonised index of consumer prices which does not include household mortgage costs.
Sources: Statistics Sweden and the Riksbank

Table A4. Summary of financial forecasts
Annual average, per cent, unless otherwise specified

	2009	2010	2011	2012
Repo rate	0.7 (0.7)	0.4 (0.3)	1.8 (1.6)	3.3 (3.6)
10-year rate	3.3 (3.2)	3.6 (3.7)	4.1 (4.2)	4.6 (4.7)
Exchange rate, TCW-index, 1992-11-18=100	140.2 (140.0)	131.8 (129.0)	128.2 (127.1)	127.7 (127.3)
General government net lending*	-1.5 (-1.9)	-1.5 (-2.2)	-0.1 (-0.8)	0.7 (0.5)

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

Table A5. International conditions
Annual percentage change, unless otherwise specified

GDP	2009	2010	2011	2012
Euro area	-3.9 (-3.9)	1.2 (1.3)	1.6 (1.7)	2.2 (2.3)
USA	-2.4 (-2.6)	3.5 (2.4)	3.0 (3.3)	2.8 (2.7)
Japan	-5.3 (-5.9)	1.3 (0.8)	2.0 (2.0)	1.8 (1.8)
OECD	-3.4 (-3.5)	2.3 (1.9)	2.6 (2.7)	2.7 (2.6)
TCW-weighted	-3.7 (-3.7)	1.4 (1.4)	2.0 (2.1)	2.2 (2.3)
World	-0.9 (-0.9)	3.9 (3.4)	4.2 (4.2)	4.4 (4.3)

CPI	2009	2010	2011	2012
Euro area (HICP)	0.3	1.2 (1.2)	1.3 (1.4)	1.7 (1.8)
USA	-0.3	2.3 (1.9)	2.0 (2.0)	2.2 (2.2)
Japan	-1.3	-0.9 (-0.9)	0.0 (0.0)	0.5 (0.5)
TCW-weighted	0.5(0.5)	1.3 (1.3)	1.4 (1.5)	1.8 (1.9)

	2009	2010	2011	2012
Crude oil price, USD/barrel Brent	62 (62)	77 (81)	82 (87)	85 (89)
Swedish export market	-12.7 (-14.5)	7.2 (6.9)	7.7 (7.9)	8.1 (8.2)

Note. The Swedish export market index is calculated as a weighted average of the imports of the 15 countries which are the largest recipients of Swedish exports. They receive approximately 70 per cent of Swedish exports. The weight assigned to a country it is share of Swedish exports of goods.
Sources: Eurostat, IMF, Intercontinental Exchange, OECD and the Riksbank

Table A6. GDP by expenditure
Annual percentage change, unless otherwise specified

	2009	2010	2011	2012
Private consumption	-0.5 (-0.5)	2.7 (2.8)	2.3 (2.2)	2.0 (2.1)
Public consumption	2.7 (2.7)	1.6 (1.6)	0.6 (0.6)	0.6 (1.1)
Gross fixed capital formation	-13.9 (-13.9)	1.5 (1.7)	5.2 (5.6)	5.9 (6.6)
Inventory investment*	-1.7 (-1.7)	1.1 (1.1)	0.5 (0.5)	0.0 (0.1)
Exports	-12.4 (-12.3)	6.2 (6.3)	7.1 (7.0)	7.3 (7.8)
Imports	-13.1 (-13.1)	8.8 (8.6)	6.4 (6.4)	6.5 (7.0)
GDP	-4.5 (-4.5)	2.5 (2.7)	3.4 (3.4)	3.1 (3.5)
GDP, calendar-adjusted	-4.4 (-4.3)	2.3 (2.5)	3.4 (3.4)	3.5 (3.5)
Final figure for domestic demand*	-2.2 (-2.2)	2.0 (2.1)	2.2 (2.2)	2.2 (2.5)
Net exports*	-0.6 (-0.5)	-0.7 (-0.5)	0.8 (0.7)	0.9 (0.9)
Current account (NA), per cent of GDP	7.2 (7.3)	6.3 (6.5)	6.6 (6.8)	7.1 (7.2)

*Contribution to GDP growth, percentage points
Note. The forecast for actual (non-calendar adjusted) GDP growth has been revised down for 2012. This is because, in the previous forecast for 2012, the Riksbank used an inaccurate calculation factor to take into account the difference in the number of working days between 2011 and 2012. However, this does not affect the analysis, which is based on seasonally-adjusted and calendar-adjusted data. 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 A7. Production and employment
Annual percentage change, unless otherwise stated

	2009	2010	2011	2012
Population, aged 16-64	0.7 (0.6)	0.5 (0.3)	0.2 (0.2)	0.0 (-0.1)
GDP, calendar-adjusted	-4.4 (-4.3)	2.3 (2.5)	3.4 (3.4)	3.5 (3.5)
Number of hours worked, calendar-adjusted	-2.5 (-2.5)	-1.2 (-1.3)	0.5 (0.6)	1.1 (1.2)
Employed, aged 15-74	-2.0 (-2.2)	-0.9 (-2.1)	0.0 (-0.1)	0.5 (1.1)
Labour force, aged 15-74	0.2 (0.1)	0.3 (-0.3)	-0.1 (-0.1)	0.2 (0.3)
Unemployment, aged 15-74*	8.4 (8.5)	9.4 (10.1)	9.4 (10.0)	9.1 (9.3)

* Per cent of the labour force
Sources: Employment Service, Statistics Sweden and the Riksbank

Table A8. Wages and unit labour cost for the economy as a whole
Annual percentage change, calendar-adjusted data

	2009	2010	2011	2012
Hourly wage, NMO	3.4 (3.4)	2.4 (2.2)	2.4 (2.3)	2.8 (2.8)
Hourly wage, NA	2.8 (3.3)	2.3 (2.2)	2.6 (2.5)	3.1 (3.1)
Employer's contribution*	-0.3 (-0.5)	-0.1 (-0.1)	0.1 (0.1)	0.1 (0.1)
Hourly labour cost, NA	2.4 (2.8)	2.2 (2.1)	2.6 (2.6)	3.1 (3.1)
Productivity	-1.9 (-1.9)	3.5 (3.8)	2.9 (2.8)	2.4 (2.3)
Unit labour cost	4.4 (4.8)	-1.3 (-1.6)	-0.2 (-0.3)	0.7 (0.8)

* 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 A9. Alternative scenario with higher wages, annual average
Annual percentage change, unless otherwise specified

	2009	2010	2011	2012
Repo rate, per cent	0.7 (0.7)	0.6 (0.4)	2.3 (1.8)	3.8 (3.3)
CPIF	1.9 (1.9)	2.1 (1.9)	1.7 (1.4)	1.9 (1.8)
GDP, calendar adjusted	-4.4 (-4.4)	1.7 (2.3)	2.3 (3.4)	2.7 (3.5)
Number of hours worked, calendar adjusted	-2.5 (-2.5)	-1.8 (-1.2)	-0.8 (0.5)	0.2 (1.1)
Productivity	-1.9 (-1.9)	3.5 (3.5)	3.1 (2.9)	2.5 (2.4)
Hourly labour cost	2.4 (2.4)	3.1 (2.2)	3.4 (2.6)	3.4 (3.1)
Exchange rate, TCW-index, 1992-11-18=100	140.2 (140.2)	131.2 (131.8)	126.2 (128.2)	125.4 (127.7)
Real repo rate, per cent	-1.0 (-1.0)	-0.3 (-0.6)	1.2 (0.6)	

Note. The main scenario's forecast in brackets.
Sources: Statistics Sweden and the Riksbank

Table A10. Alternative scenario with lower wages, annual average
Annual percentage change, unless otherwise specified

	2009	2010	2011	2012
Repo rate, per cent	0.7 (0.7)	0.3 (0.4)	1.5 (1.8)	3.1 (3.3)
CPIF	1.9 (1.9)	1.7 (1.9)	1.3 (1.4)	1.7 (1.8)
GDP, calendar adjusted	-4.4 (-4.4)	2.6 (2.3)	4.1 (3.4)	3.7 (3.5)
Number of hours worked, calendar adjusted	-2.5 (-2.5)	-0.9 (-1.2)	1.3 (0.5)	1.2 (1.1)
Productivity	-1.9 (-1.9)	3.4 (3.5)	2.8 (2.9)	2.5 (2.4)
Hourly labour cost	2.4 (2.4)	1.8 (2.2)	2.2 (2.6)	3.1 (3.1)
Exchange rate, TCW-index, 1992-11-18=100	140.2 (140.2)	132.1 (131.8)	129.4 (128.2)	128.5 (127.7)
Real repo rate, per cent	-1.0 (-1.0)	-0.8 (-0.6)	0.3 (0.6)	

Note. The main scenario's forecast in brackets.
Sources: Statistics Sweden and the Riksbank

Table A11. Alternative scenario with higher long-term labour supply, annual average
Annual percentage change, unless otherwise specified

	2009	2010	2011	2012
Repo rate, per cent	0.7 (0.7)	0.2 (0.4)	1.6 (1.8)	3.2 (3.3)
CPIF	1.9 (1.9)	1.8 (1.9)	1.4 (1.4)	1.8 (1.8)
GDP, calendar adjusted	-4.4 (-4.4)	2.6 (2.3)	4.0 (3.4)	3.6 (3.5)
Number of hours worked, calendar adjusted	-2.5 (-2.5)	-0.7 (-1.2)	1.5 (0.5)	1.4 (1.1)
Hourly labour cost	2.4 (2.4)	2.1 (2.2)	2.5 (2.6)	3.1 (3.1)
Exchange rate, TCW-index, 1992-11-18=100	140.2 (140.2)	132.4 (131.8)	129.6 (128.2)	128.7 (127.7)
Real repo rate, per cent	-1.0 (-1.0)	-0.9 (-0.6)	0.4 (0.6)	

Note. The main scenario's forecast in brackets.
Sources: Statistics Sweden and the Riksbank

Table A12. Alternative scenario with weaker exchange rate, annual average
Annual percentage change, unless otherwise specified

	2009	2010	2011	2012
Repo rate, per cent	0.7 (0.7)	0.7 (0.4)	2.3 (1.8)	3.6 (3.3)
CPIF	1.9 (1.9)	2.4 (1.9)	2.3 (1.4)	2.1 (1.8)
GDP, calendar adjusted	-4.4 (-4.4)	2.6 (2.3)	3.8 (3.4)	3.6 (3.5)
Number of hours worked, calendar adjusted	-2.5 (-2.5)	-0.9 (-1.2)	0.8 (0.5)	1.0 (1.1)
Hourly labour cost	2.4 (2.4)	2.3 (2.2)	3.3 (2.6)	3.2 (3.1)
Exchange rate, TCW-index, 1992-11-18=100	140.2 (140.2)	138.2 (131.8)	135.5 (128.2)	132.6 (127.7)
Real repo rate, per cent	-1.0 (-1.0)	-0.5 (-0.6)	1.6 (0.6)	

Note. The main scenario's forecast in brackets.
Sources: Statistics Sweden and the Riksbank

Table A13. Alternative scenario with higher repo rate, annual average
Annual percentage change, unless otherwise specified

	2009	2010	2011	2012
Repo rate, per cent	0.7 (0.7)	0.6 (0.4)	1.9 (1.8)	3.3 (3.3)
CPIF	1.9 (1.9)	1.8 (1.9)	1.1 (1.4)	1.6 (1.8)
GDP, calendar adjusted	-4.4 (-4.4)	2.2 (2.3)	3.3 (3.4)	3.6 (3.5)
Labour market gap, per cent	-0.1 (-0.1)	-1.7 (-1.6)	-1.7 (-1.4)	-1.0 (-0.9)

Note. The labour market gap refers to the deviation in the number hours worked from the HP trend. The main scenario's forecast in brackets.
Sources: Statistics Sweden and the Riksbank

Table A14. Alternative scenario with lower repo rate, annual average
Annual percentage change, unless otherwise specified

	2009	2010	2011	2012
Repo rate, per cent	0.7 (0.7)	0.2 (0.4)	1.6 (1.8)	3.3 (3.3)
CPIF	1.9 (1.9)	2.0 (1.9)	1.7 (1.4)	2.0 (1.8)
GDP, calendar adjusted	-4.4 (-4.4)	2.4 (2.3)	3.6 (3.4)	3.5 (3.5)
Labour market gap, per cent	-0.1 (-0.1)	-1.5 (-1.6)	-1.2 (-1.4)	-0.7 (-0.9)

Note. The labour market gap refers to the deviation in the number hours worked from the HP trend. The main scenario's forecast in brackets.
Sources: Statistics Sweden and the Riksbank

Outline of boxes published 2007-2009[19]

2007

2007:1	Riksbank to publish its own forecast for the repo rate
2007:1	Material for assessing monetary policy 2004-2006
2007:1	Calculation method for uncertainty bands
2007:1	RAMSES – a tool for monetary policy analysis
2007:2	The effects of the abolition of property tax on housing prices and inflation
2007:2	Wage bargaining round indicates higher rates of wage increase
2007:2	Productivity drivers
2007:2	The matching of supply and demand in the labour market
2007:3	Households' inflation expectations
2007:3	The Riksbank's company survey
2007:3	Some lessons learned from earlier financial crises

2008

2008:1	Energy prices and Swedish inflation
2008:1	Rising food prices
2008:1	The Riksbank's company survey
2008:2	The rate of increase in the CPIX will be below the CPI for a long time
2008:2	How are measures of underlying inflation used in monetary policy analysis?
2008:2	The development of the real interest rate
2008:2	The Riksbank's company survey: economic activity slowing down and costs rising
2008:3	The development of the financial crisis in September and October
2008:3	Fiscal policy: assumptions and forecasts
2008:3	The Riksbank's company survey: rapid slowdown and widespread pessimism

2009

2009 February	Monetary policy alternatives in times of financial crisis and concern over deflation
2009 February	The financial crisis and the effects of monetary policy
2009 February	The recent weakening of the krona
2009 February	The Riksbank's company interviews in December 2008–January 2009
2009 July	Monetary policy when the interest rate is close to zero
2009 July	Differences in financial structure and crisis measures in various countries
2009 July	Global imbalances, saving and demand in the wake of the crisis
2009 July	The Riksbank's company interviews in May 2009
2009 October	Evaluating different monetary policy alternatives
2009 October	Unconventional measures and the risk of inflation
2009 October	Exit strategies for unconventional measures
2009 October	House prices in Sweden

19 A list of the boxes published since 1993 can be found on our website www.riksbank.se.

Earlier interest rate decisions[20]

Date of meeting	Repo rate (per cent)	Decision (percentage points)	Monetary Policy Report
2005			
27 January	2.00	0	no report
14 March	2.00	0	2005:1
28 April	2.00	0	no report
20 June	1.50	-0.50	2005:2
23 August	1.50	0	no report
19 October	1.50	0	2005:3
1 December	1.50	0	2005:4
2006			
19 January	1.75	+0.25	no report
22 February	2.00	+0.25	2006:1
27 April	2.00	0	no report
19 June	2.25	+0.25	2006:2
29 August	2.50	+0.25	no report
25 October	2.75	+0.25	2006:3
14 December	3.00	+0.25	no report
2007			
14 February	3.25	+0.25	2007:1
29 March	3.25	0	no report
3 May	3.25	0	no report
19 June	3.50	+0.25	2007:2
6 September	3.75	+0.25	no report
29 October	4.00	+0.25	2007:3
18 December	4.00	0	Monetary Policy Update
2008			
12 February	4.25	+0.25	2008:1
22 April	4.25	0	Monetary Policy Update
2 July	4.5	+0.25	2008:2
3 September	4.75	+0.25	Monetary Policy Update
8 October	4.25	-0.50	no report
22 October	3.75	-0.50	2008:3
3 December	2.00	-1.75	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	0.25	0	Monetary Policy Update
21 October	0.25	0	October 2009
15 December	0.25	0	Monetary Policy Update

20 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. Calendaradjustment 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 surveys.

CPI: The consumer price index, CPI, 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 and is not adjusted for changes in value caused by inflation. See also Fixed prices.

ECB: The European Central Bank.

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. Calculated by weighing together imports in the 15 countries which receive the major part of Swedish exports. Approximately 70% of Swedish exports are to these countries. The weights are determined by the respective country's share of Swedish exports of goods.

FED: The Federal Reserve Bank of the United States.

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

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.

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.

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.

Labour costs: The total cost of labour according to the National Accounts, i.e. 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.

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

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

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

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

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

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

Shortage rates: The proportion of firms reporting a shortage of staff.

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

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

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

STINA: Stockholm Tomnext 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: An index for the Swedish krona's exchange rate.

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

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.

Unit labour cost: Labour cost (see definition) per unit produced.

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

Sveriges Riksbank
SE-103 37 Stockholm

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

SVERIGES
RIKSBANK

PRODUCTION: SVERIGES RIKSBANK. PRINT: JERNSTRÖM OFFSET AB
ISSN 1654-1030