Monetary Policy Report

2008:3

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

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 to conduct.[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 this spring this takes the form of a report entitled "Material for assessing monetary policy". In the autum this takes the form of the Monetary Policy Report.

The Executive Board decided to adopt the Monetary Policy Report at its meeting on 22 October 2008. The Report is available on the Riksbank's website, www.riksbank.se. From this address a printed version of the report can be ordered free of charge or the report can be downloaded as a PDF file.

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

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

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Monetary policy considerations – a summary

The Executive Board of the Riksbank has decided to cut the repo rate by 0.5 percentage points to 3.75 per cent. It is assessed that over the coming six months the repo rate will need to be cut by a further 0.5 percentage points. The interest rate cuts are aimed at alleviating the effects of the financial crisis on the real economy and at the same time attaining the inflation target of 2 per cent.

Since mid-September the global financial crisis has worsened and it is now clearly affecting developments in Sweden. The crisis in the financial markets has led to higher loan costs for companies and households, lower capital wealth and increased uncertainty in general. Access to credit has declined. The assessment is that the financial crisis aggravates the ongoing economic downturn resulting in a weaker labour market and lower inflation.

To alleviate the effects of the financial crisis in the Swedish economy, the repo rate needs to be cut relatively substantially over a comparatively short period. The repo rate has been cut by one percentage point in the past fortnight and the assessment is that it needs to be cut further by 0.5 percentage points to 3.25 per cent during the coming six months. However, the effects of the lower repo rate will probably be less than usual. The reason is that the confidence crisis in the financial system has led to high risk premiums so that the normal link between short market rates and the repo rate has been broken. The Riksbank is regularly taking other measures to improve the functioning of the financial markets.

Resource utilisation is still slightly higher than normal, but will fall rapidly next year and then be slightly lower than normal. Inflation is high at present but expected to drop back quickly over the coming year. It will then rise slightly and be at the target level of 2 per cent in 2011.

The uncertainty in the assessments is unusually great this time. If the financial crisis intensifies, or if the effects on the real economy are more extensive, it may be necessary to cut the repo rate more than is assumed in the current assessment. However, if the exchange rate remains weak or if inflation remains high, a higher repo rate may be justified. The future direction for monetary policy will depend on how new information on economic developments abroad and in Sweden will affect the prospects for inflation and economic activity in Sweden.

The minutes from the Executive Board's monetary policy discussion will be published on 5 November. The next monetary policy meeting will be held on 16 December. The next Monetary Policy Report will be published on 11 February 2009.

The Executive Board of the Riksbank

CHAPTER 1 – The economic outlook and inflation prospects

Since mid-September the global financial turbulence has become a financial crisis that is now also clearly affecting developments in Sweden. This has led to higher loan costs for companies and households, lower capital wealth and increased uncertainty in general. In addition, access to credit has declined. The assessment is that the global financial crisis will reinforce the ongoing economic downturn with diminishing inflationary pressures as a result. To alleviate the economic effects of the crisis, the repo rate needs to be cut relatively substantially over a comparatively short period. However, the effects of the lower repo rate on households' and companies' borrowing costs will probably be less than usual. The reason is that the confidence crisis in the financial system has led to high risk premiums. This has led to a break in the normal correlation between short market rates and the repo rate. as the global financial crisis to some extent reduces the significance of the repo rate for the general public's loan costs and access to credit. In addition other measures are being taken to improve the functioning of the financial markets.

The repo rate is expected to be around 3.25 per cent in the middle of next year. This is 1.5 percentage points lower than the level of the repo rate at the beginning of October this year. Resource utilisation is still slightly higher than normal, but will fall rapidly next year and then be slightly lower than normal for a time. Inflation is high at present but expected to drop back quickly over the coming year. It will then rise slightly and be at the target level of 2 per cent in 2011.

The uncertainty in the assessments is unusually great on this occasion. If the financial crisis intensifies, or if the effects on the real economy are more extensive, it may be necessary to cut the repo rate more than is assumed in the current assessment. A continued weak exchange rate and high inflationary pressures could lead to a higher repo rate than in the main scenario.

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

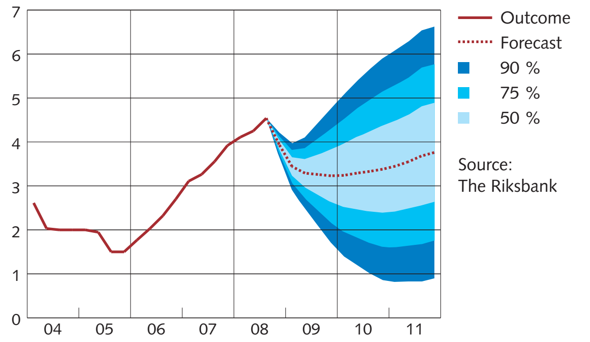


Figure 2. CPI with uncertainty bands
Annual percentage change

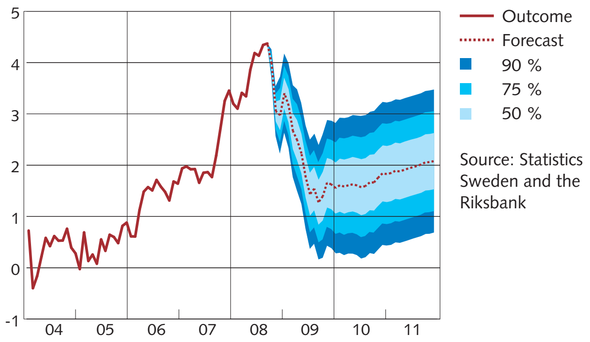
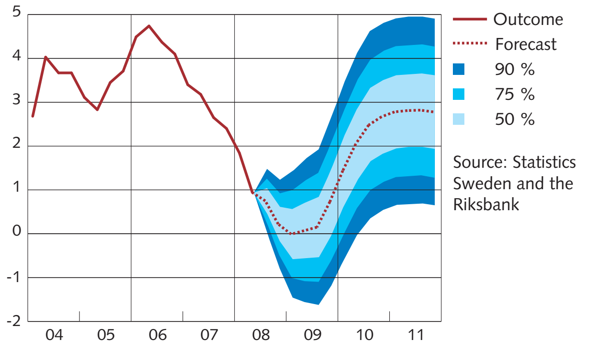


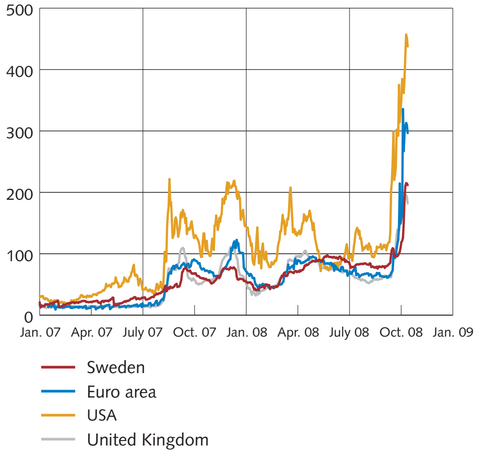
Figure 3. GDP with uncertainty bands
Annual percentage change, seasonally-adjusted data



Note. The uncertainty bands in figure 1-3 are based on historical forecast errors. See the article entitled "Calculation method for uncertainty bands" in MPR 2007:1.

The uncertainty interval for the repo rate is now broader. The interval is based on the ability of market rates to forecast the future repo rate. However, an adjustment must be made for risk premiums. Previously the risk premium was assumed to comprise the entire average forecasting error. Now the risk premium is estimated with the aid of a financial model for the yield curve. This means that the risk premium declines.

Figure 4. Difference between interbank rates and government bond rates (TED spread)
Basis points



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

Sources: Reuters EcoWin and the Riksbank.

■■ The crisis in the global financial system reaches Sweden

Many countries are currently in the midst of a financial crisis. The problems, which partly have their roots in the United States, have been built up over a long period of time but only became really serious in autumn 2007. Europe and Sweden appeared to be relatively spared from the crisis for a while. Although the problems in the housing and credit markets in the United States gave reason to believe there would be weaker economic growth throughout the world economy and that this would also have consequences for economic activity in Sweden. Sweden is a small open economy that is of course affected when global economic conditions deteriorate, and this naturally also applies to the Swedish banks. The Swedish banks have not been affected by large write-downs as a result of losses and they are solvent. However, they have suffered refinancing problems in the wake of the financial crisis. The measures taken by the Riksbank recently have aimed to increase access to credit and to ensure the markets function better.

Around the middle of September what was previously termed "anxiety" in the international financial markets changed into what may potentially become one of the largest financial crises we have witnessed in modern times. The triggering factor was that the US investment bank Lehman Brothers collapsed.[3] The uncertainty over which borrowers were creditworthy immediately increased. Access to credit has declined in the financial markets around the world and many parts of the financial markets have more or less ceased to function. Swedish companies have also suffered problems with refinancing and increasingly high refinancing costs as a result of this, quite regardless of whether their financial position has been good or not.

■■ Rising loan costs

One measure of the degree of uncertainty in the financial markets is the TED spread (see Figures 4 and 48). This shows the difference between the interest rate the banks charge on loans between one another on the interbank market and the interest rate on risk-free government securities. The TED spread rose substantially last autumn, primarily in the United States. The spread has also increased in other countries, such as the euro area, the United Kingdom and Sweden, but not as much as in the United States. Figure 4 also shows how drastically the situation has changed over the past month. For instance, this spread was slightly above 100 basis points, that is, 1 percentage point, in the United States in the summer. At the beginning of October it was around 450 basis points.

The increased uncertainty has led to banks experiencing higher financing costs. In addition, the banks have raised their loan rates further, that is, more than their borrowing costs have risen. All in all, this has led to rising loan costs for households and companies.

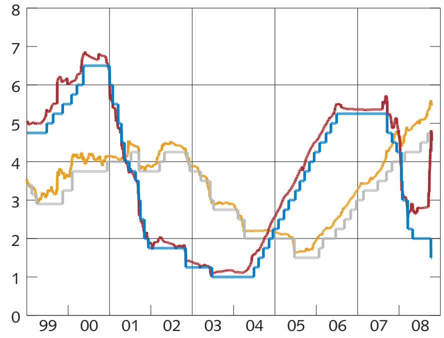
3 For a detailed description of the development of the crisis over the past two months, see the Box "The development of the financial crisis in September and October".

■■ Credit crunch

Changes in the Riksbank's repo rate will not solve the problems in the financial markets. This is illustrated in Figure 5. It is clear, for instance, that the Riksbank's cut in the repo rate at the beginning of October did not lead to a corresponding cut in the interbank rate. One can also compare the situation in the United States with that in Sweden. The central bank in the United States, the Federal Reserve, has cut its policy rate to 1.5 per cent. However, the interbank rate three months ahead is almost as high in the United States as in Sweden, despite the fact that the Federal Reserve's policy rate is almost 3 percentage points below the Riksbank's (see Figure 5). This illustrates the fact that the problems in the credit market are not primarily concerned with the level of the central banks' policy rates.

Another problem is that many companies and households perceive that it has become much more difficult to obtain loans, regardless of the interest rate. That is, there are clear signs of credit rationing. Given this, the Federal Reserve and the Riksbank, and also other central banks and governments around the world, have taken a number of different measures to improve the functioning of the financial markets and facilitate the supply of credit (see the Box "The development of the financial crisis in September and October").

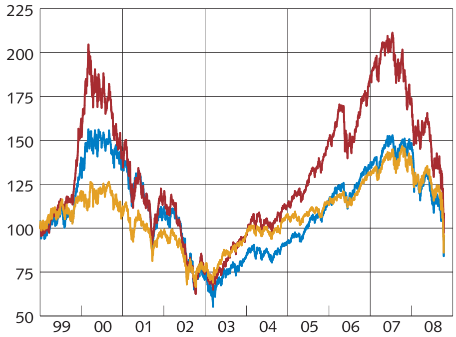
Figure 5. Policy rates and three-month interbank rates in the USA and Sweden
Per cent



Three-month interbank rate, USA
Fed funds
Three-month interbank rate, Sweden
Repo rate

Sources: Reuters EcoWin and the Riksbank

Figure 6. Stock market movements
Index, 04.01.99 = 100



Sweden (OMXS)
Euro area (Euro Stoxx)
USA (S&P 500)

Sources: Reuters EcoWin

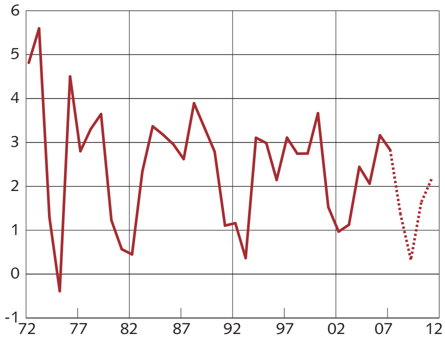
■■ Negative real economic consequences of the financial crisis

There has not been very much new data received on the macro economy since the financial anxiety intensified in mid-September. The statistics received have pointed in a negative direction (see Chapter 3). There are many indications that the developments in the real economy over the coming year will be very weak in Sweden and abroad. To alleviate the consequences of the ongoing financial crisis, a number of central banks, including the Riksbank, cut their policy rates by 0.50 percentage points on 8 October in a joint action.

The credit crunch, partly in the form of higher interest rates, has an immediate effect on households with loans at variable interest rates. This means that their consumption demand is dampened. Moreover, households considering buying a house become more cautious as the cost of financing the property has risen. This can lead to a fall in demand for housing and thus a fall in investment in housing. For companies the higher interest rates mean increased costs, which dampen their propensity to invest. In addition to financing costs for companies and households having risen, it may also be difficult on the whole to obtain loans, as the banks are finding it difficult to refinance themselves, particularly at longer maturities.

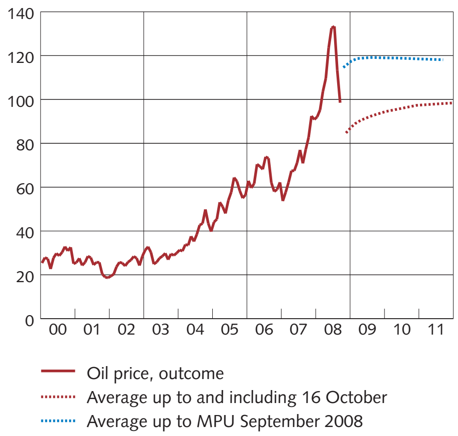
The financial crisis has reduced wealth among households with assets in the form of stock market equity. Since summer 2007, when the problems in the US subprime market began to become more evident, the stock market index has fallen substantially in the United States, Europe and Sweden (see Figure 6). In the United States there has also been a

Figure 7. GDP abroad
TCW-weighted, annual percentage change



Note. Broken lines represent the Riksbank's forecast.
Sources: National sources and the Riksbank

Figure 8. Oil price, Brent crude
USD per barrel, futures price



Note. Futures are calculated as a 15-day average. Outcomes represent monthly averages of spot prices.
Sources: Intercontinental Exchange and the Riksbank

substantial adjustment in the housing market and house prices have been falling for two years. House prices are also falling heavily in several European countries, such as Ireland, Spain and the United Kingdom. This means that household wealth has declined. Together with the slowdown in the labour market, it contributes to subduing consumption.

The financial crisis also affects the general sentiment. There is greater uncertainty than normal, which means that reactions to new information are exaggerated. This can be seen, for instance, in large rises and falls on the stock markets. During the second week in October, for example, the Stockholm stock exchange fell by around 21 per cent, only to rise by 11 per cent at the beginning of the following week. This uncertainty has a restraining effect on households' willingness to consume, for instance. Despite a good development in income, households may choose to hold back on their consumption and instead increase their saving if they feel great anxiety and uncertainty over future developments. The same applies to companies that may choose to postpone investment and new recruitment. Surveys in both the United States and the euro area also indicate that the banks have become more restrictive when granting loans.

■■ Crisis aggravates economic downturn

The assessment in the September Monetary Policy Update was that the financial anxiety would contribute to the downturn in economic activity in many countries. Now that the anxiety in the financial markets has significantly worsened, the assessment is that the economic downturn will be much deeper than was assessed in September. A comparison with earlier economic downturns shows that the decline abroad next year – in terms of GDP growth – can be expected to be at least as great as during the crises at the beginning of both the 1980s and 1990s (see Figure 7). However, the downturn will be slightly moderated by the sharp fall in oil and other commodity prices. Since September, for instance, the futures price of oil has fallen by around 20 per cent (se Figure 8). This means that the costs to households and companies have declined. In addition, monetary policy in many countries has become more expansionary, which should moderate the declin in economic activity.

The Riksbank's assessment in the current situation is that the measures taken mean that most acute crisis will diminish at the beginning of 2009 and that there will be some recovery towards the end of next year. However, there is great uncertainty with regard to determining when the recovery will occur. Experiences from earlier deep slumps show that the upturn may be powerful when it finally occurs (see Figure 7). On the other hand, there is also a risk that the effects of the financial crisis will be even more prolonged and profound than is expected in the main scenario. Chapter 2 describes an alternative scenario where international growth is assumed to be almost 1 percentage point lower in 2009 and 0.5 percentage points lower in 2010 than in the main scenario. This would mean that the central banks abroad cut their policy rates by just over 0.5

percentage points more than in the main scenario. In Sweden, the policy rate will be cut approximately 1 percentage point more than in the main scenario (see Table A8).

■■ Deeper downturn in the USA

The US economy has three years of low growth behind it. Next year growth is expected to be even lower than it has been in recent years. Household consumption will probably decline during the third quarter of this year, which will be the first time since 1991. Consumption is also expected to continue declining for a further two quarters. In 2009 the upturn in US household consumption will be negligible. Investment will continue to fall and will not provide a positive contribution to growth until the end of next year. In 2009 employment is expected to continue falling and unemployment to continue rising.

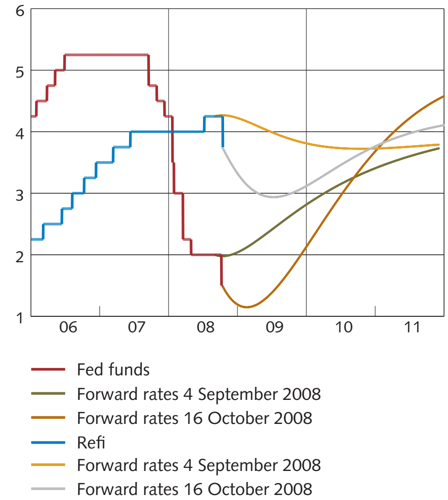
As already stated, the uncertainty over the coming developments is unusually great, but there are arguments in favour of a recovery in the period ahead. The policy rate is very low to start with and is expected to remain so in 2008 and 2009 according to monetary policy expectations (see Figure 9). As a result of the crisis in the financial system, interest rates have currently been pushed up considerably, particularly those for companies, and it is difficult to obtain loans. The US government has taken a number of measures to improve the functioning of the market, which should mean that the situation in the financial markets normalises. This makes it easier to take loans and interest rates fall. It also contributes to a recovery in the labour market, which means rising disposable incomes and reinforces consumer confidence. Towards the end of 2009 the situation in the housing market is also expected to have normalised and investments in housing to increase.

All in all, this means that GDP growth in the United States is expected to be 1.5 per cent in 2008, 0.3 per cent in 2009 and 2.3 per cent in 2010 (see Figure 10 and Table A4). Inflation is expected to fall substantially as a result of falling oil and energy prices and low activity in the economy. CPI inflation is expected to decline from 4.4 per cent this year to around 2 per cent in 2009 and 2010 (see Table A4).

■■ Europe hit by financial crisis

The financial crisis has recently hit Europe with full force. Government interventions have taken place to support several European banks. In the euro area GDP growth has been relatively strong for some years, but in September signs of a sudden slowdown could be detected. The GDP outcome for the second quarter showed a strong downward recoil after a temporarily strong start to the year. Most indications are now that the results for the third quarter will also be weak. There are many factors pointing towards a weak development in 2009, too, and the greater part of 2010, including rising interest rate costs and stricter loan terms for households and companies. Developments in the United Kingdom are similar.

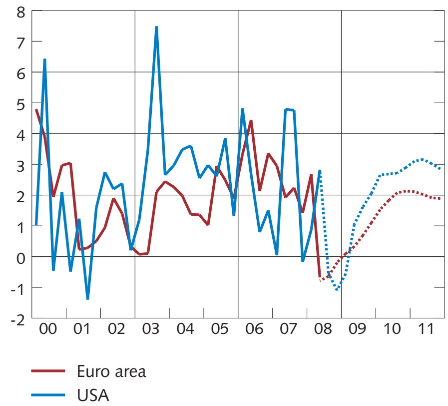
Figure 9. Monetary policy expectations in the euro area and the USA
Per cent



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

Sources: Reuters, EcoWin and the Riksbank

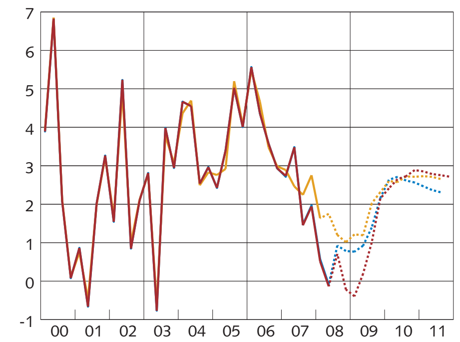
Figure 10. GDP for the USA and the euro area
Quarterly changes in per cent calculated in annualised terms, seasonally-adjusted data



Note. Broken lines represent the Riksbank's forecast.

Source: Eurostat, Bureau of Economic Analysis and the Riksbank

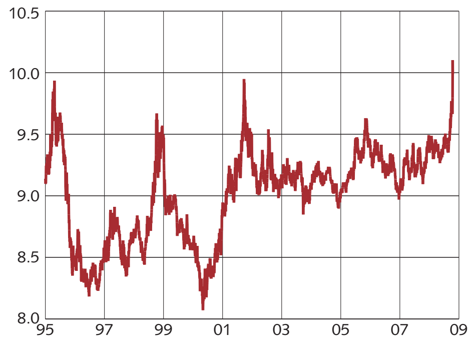
Figure 11. GDP
Quarterly changes in per cent calculated in annualised terms, seasonally-adjusted data



MPR 2008:3
MPU September 2008
MPR 2008:2

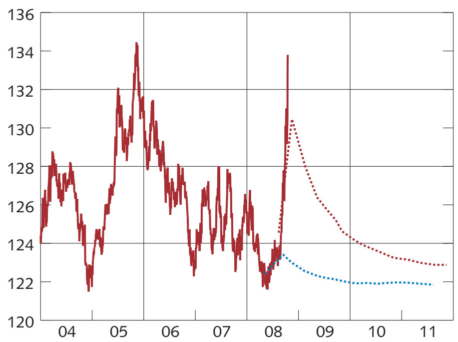
Note. Broken lines represent the Riksbank's forecast.
Source: Statistics Sweden and the Riksbank

Figure 12. Exchange rate movements
SEK per euro



Source: Reuters EcoWin

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



TCW index
MPR 2008:3
MPU September 2008

Note. Outcomes up to 16 October 2008 represent daily rates and forecasts refer to quarterly averages. Broken lines represent the Riksbank's forecast.
Source: The Riksbank

Growth in the euro area is expected to be around 2 per cent calculated as an annual rate with effect from the second half of 2010 (see Figure 10). One important condition for the recovery in the euro area is that the financial anxiety will decline next year, as a result of the rescue packages in both Europe and the United States. The turnaround in economic activity in the United States also stimulates exports. In addition, growth prospects in, for instance, China and India remain relatively good. Moreover, consumption is not affected as much as in the United States by the downturn in the housing market. House prices in the euro area have so far not fallen as much as in the United States. Nor do households in the euro area have as many loans. In addition, monetary policy is expected to become more expansionary in future and this will dampen the decline in economic activity (see Figure 9). The GDP forecasts for 2009 and 2010 are 0.1 and 1.4 per cent growth respectively.

Inflation in the euro area was 3.6 per cent in September. Inflation is expected to drop back in future as the effects of the earlier energy price increase decline at the same time as resource utilisation slows down. Households' inflation expectations have also fallen back since July. The forecasts for inflation in 2008 and 2009 are 3.4 per cent and 2 per cent respectively. Inflation will remain at roughly this level during the remainder of the forecast period (see Table A4).

■■ Growth still strong in China but slowdown in Japan

Growth has so far been held up relatively well in the Asian emerging economies despite the slowdown abroad. However, signs of a slowdown are now also visible in Asia, although this is from a starting position of high growth levels. In China growth fell from 12 per cent in 2007 to just over 10 per cent during the first half of this year. During the second half, growth continued to diminish and will be just over 9 per cent a year in 2008 and 2009. The slowdown is primarily due to lower exports growth. The Chinese government has also reacted quickly to the weaker demand from abroad and announced measures to stimulate domestic demand, for instance, public sector investment (infrastructure projects) and tax relief.

In Japan growth slowed down noticeably during the second quarter, when GDP fell by 3 per cent on an annual rate. Indicators point to continued weak demand in future. Japan is expected to grow by 0.3 per cent in 2009 and by around 1.5 per cent a year in the following years. Continued good economic growth in emerging economies in the region is expected to sustain exports. Private consumption is expected to continue to show weak development.

■■ The financial crisis aggravates the economic downturn in Sweden

Activity in the Swedish economy this year will be subdued this year and in particular next year by the effects of the financial crisis on international and domestic economic activity. In 2009 there will be largely no growth at all. After 2009 there will be a recovery in international growth, which means that GDP growth will show an upturn in Sweden, too (see Figure 11).

■■ Krona noticeably weaker

The krona has weakened against almost all of the larger currencies since September. It is unclear exactly what this weakening is due to, but in times of great anxiety, small countries' currencies are usually regarded as uncertain and they weaken. The krona weakened, for instance, after the crises in 1997-98 and after the terrorist actions in September 2001. This is clear, for instance, from the krona's position against the euro (see Figure 12). The weakening of the trade-weighted krona rate (the TCW index), which is largely assumed to be due to the current crisis, is expected to persist for the remainder of the year, until the most acute phase of the crisis is over (see Figure 13). After that the krona will return to more normal levels. From the end of this year until the end of 2009 the krona is expected to strengthen by around 5 per cent, measured in terms of the TCW index. After that a further weakening is expected of around 1 per cent until the end of 2010.

A weakening of the exchange rate usually has a positive effect on exports in Sweden. For example, it was the weakening that followed on from the decision to let the krona float that began the economic upturn following the crisis at the beginning of the 1990s. Then the krona weakening was much stronger (around 25 per cent) and more lasting than it is expected to be now. When economies abroad are hit by a large fall in demand at the same time, some of the positive growth effects of a weaker exchange rate do not materialise. But the weaker exchange rate will make imported goods more expensive and inflation will therefore be higher. There is a risk that the weak krona rate will be more prolonged than was assumed in the main scenario. The effects of such a development are reported in an alternative scenario in Chapter 2. In the alternative scenario, inflationary pressures increase and the repo rate becomes 0.2 percentage points higher than in the main scenario during 2009 (see Table A9).

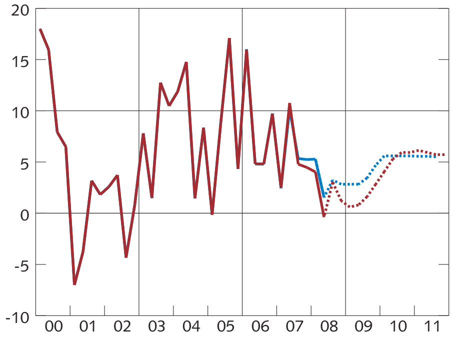
■■ Foreign trade slows down

Growth in exports will be very subdued next year, but will rise again in 2010 and then be the motor behind the upturn in Sweden (see Figure 14). The weaker krona rate and the weaker demand will contribute to dampening imports. After increasing by almost 10 per cent in 2007, imports are expected to be much weaker this year and in 2009. After that there will be a recovery in domestic demand as economic activity recovers, which will also affect imports (see Table A5).

■■ Household saving increasing

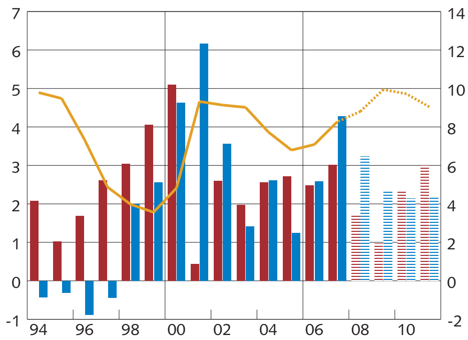
Higher interest rates and increased uncertainty over economic developments will contribute to households' saving increasing this year

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



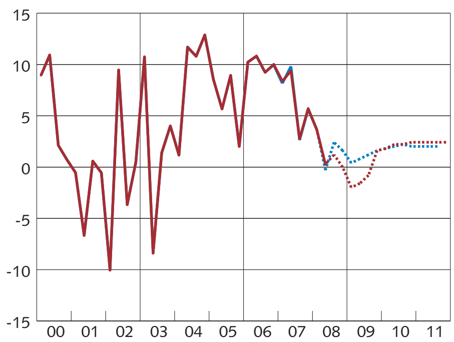
Note. Broken lines represent the Riksbank's forecast.
Source: Statistics Sweden and the Riksbank

Figure 15. Household's disposable incomes, consumption and saving ratio
Annual percentage change, fixed prices and percentage of disposable income



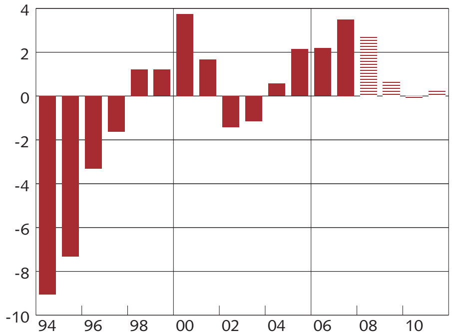
Note. Broken lines and striped bars represent the Riksbank's forecast.
Source: Statistics Sweden and the Riksbank

Figure 16. Fixed gross investment
Quarterly changes in per cent calculated in annualised terms, seasonally-adjusted data



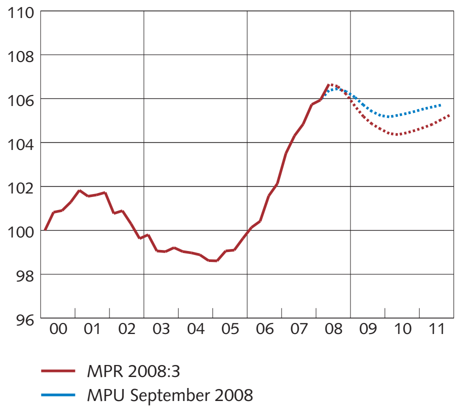
Note. Broken lines represent the Riksbank's forecast.
Source: Statistics Sweden and the Riksbank

Figure 17. General government net lending
Per cent of GDP



Note. Striped bars represent the Riksbank's forecast.
Source: Statistics Sweden and the Riksbank

Figure 18. Number of hours worked
Index, quarter 1 2000 = 100, seasonally-adjusted data



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

Figure 19. Labour force and number of employed
Thousands of persons, seasonally-adjusted data

Note. Broken lines represent the Riksbank's forecast. Pre-1993 data has been spliced by the Riksbank.
Source: Statistics Sweden and the Riksbank

and next year (see Figure 15). Sharply falling wealth in the wake of the stock market fall will also have a negative effect on consumption over the coming period. The crisis in the financial markets affects households directly through reduced asset values and higher mortgage rates, but also indirectly through the deterioration in the labour market situation which will result in lower employment. In addition, the possibility to finance consumption through loans has declined. When the situation in the financial markets gradually stabilises, it will lead to stronger growth in consumption in 2010 and 2011 (see Table A5).

■■ Rate of increase in investment falling heavily

Developments in investments are also affected by the credit crisis. Both business sector investment and housing investments are affected by higher interest rates and a tougher loan climate. The declining export market also affects developments, and during 2009 total investment is expected to fall (see Figure 16). However, public sector investment is expected to increase by a relatively large amount during the forecast period, which will to some extent compensate for the poor investment from the business sector. Public infrastructure investments that have already begun point, for instance, to public sector investment increasing by more than 6 per cent a year over the coming three years. In 2010 and 2011 total investment will recover somewhat, but these will still be low rates of increase compared with those in recent years.

■■ Fiscal policy will slow down the fall in demand

General government net lending, that is, government sector income minus expenditure, is high at present. Historically, fiscal policy usually becomes more expansionary during an economic downturn (see the Box "Fiscal policy: assumptions and forecasts"). This means that net lending will decline during the forecast period as economic activity slows down (see Figure 17). As resource utilisation is slightly lower than normal during the forecast period, the actual general government net lending is expected to be around zero during 2010 and 2011 (see Table 3). This can be regarded as normal given the surplus target of 1 per cent for general government net lending on average over an economic cycle.

■■ Weaker labour market

Despite the slowdown in GDP growth, the labour market was relatively strong during the first half of 2008. Both employment and the number of hours worked increased. But labour market indicators and outcomes point to their having peaked. In the third quarter the number of persons employed began to decline and unemployment has been rising since the spring. The effects of the financial crisis reinforce the expected economic downturn and thereby also the downturn in the labour market. The number of hours worked and the number of persons employed are expected to fall over the coming period. The labour market situation will improve in 2011 when GDP growth picks up (see Figures 18 and 19).

The economic downturn and the weaker labour market will contribute to the supply of labour diminishing slightly over the coming years (see Figure 19). The fact that supply is expected to develop in a relatively stable manner during the forecast period, despite the downturn, is explained by demographic developments and the measures taken by the government to stimulate supply.

As the number of employed is expected to fall more quickly than the number of persons in the labour force over the coming years, the percentage of persons who are unemployed will continue to increase up to 2010, when it is expected to be 7.6 per cent (see Figure 20). After this, unemployment will once again decline as economic activity recovers and demand for labour increases.

■■ Low labour productivity but falling cost pressures next year

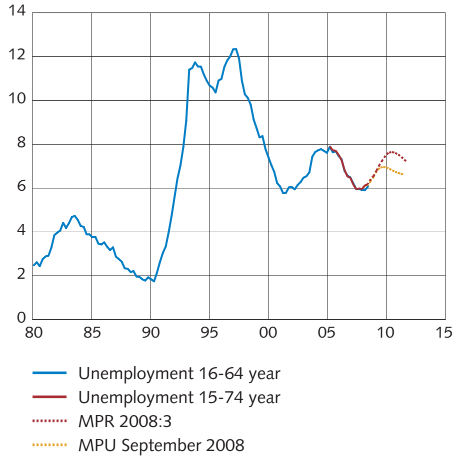
Labour productivity has fallen for five quarters in a row and is expected to decline by almost 1 per cent this year (see Figure 21). It is not common for productivity to actually fall. However, it is normal for the increase in labour productivity to decline during a slowdown in economic activity. As demand for the company's products declines, production is adjusted first, which leads to a decline in productivity growth. If the downturn in demand persists, the company will then also adjust its workforce. This means that the number of hours worked is adjusted to changes in economic activity at a later stage than production. As the economic downturn continues, it is therefore probable that labour productivity will recover. In 2009 productivity is expected to show a weak increase. It will continue to rise in 2010 and towards the end of the forecast period the rate of increase will be more normal and slightly above 2 per cent (see Table A7).

During 2009 wages are expected to increase by around 3.7 per cent, which is less than in 2008. In addition, the agreed wage levels for 2009 are expected to be slightly lower than those for this year. It is also partly because wage increases additional to the central agreement levels are expected to be moderate next year as a result of the deterioration in the labour market situation. In 2010 and 2011 wage increases will depend on the central wage agreements signed mainly in 2010. The outcomes of these agreements are expected to be slightly lower than those in 2007 as a result of a weaker labour market. Wage increases are expected to be roughly the same size during the remainder of the forecast period as in 2009 (see Table A7).

A number of changes will be made to employers' contributions in 2009. These include implementing a general reduction in the statutory employer's contribution of 1 percentage point, which was proposed in the autumn Budget Bill. The contribution to labour costs per hour from the change in employers' contributions is expected to be -0.1 percentage point in 2009.

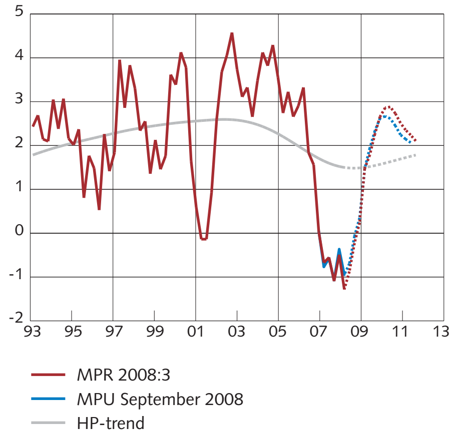
Labour costs per hour are expected to increase by just under 4 per cent in both 2009 and 2010. Despite this, the rate of increase for unit

Figure 20. Unemployed
Percentage of the labour force, seasonally-adjusted data



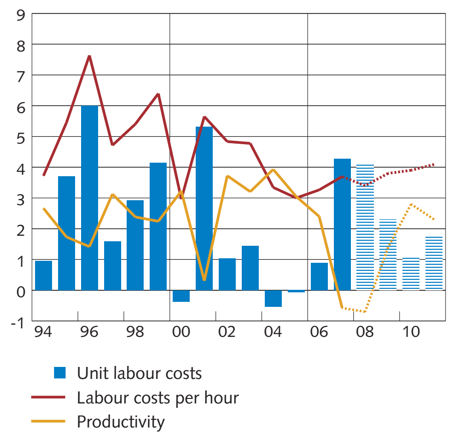
Note. Broken lines represent the Riksbank's forecast. Pre-1993 data has been spliced by the Riksbank.
Source: Statistics Sweden and the Riksbank

Figure 21. Actual and trend productivity growth in the economy as a whole
Annual percentage change, seasonally-adjusted data



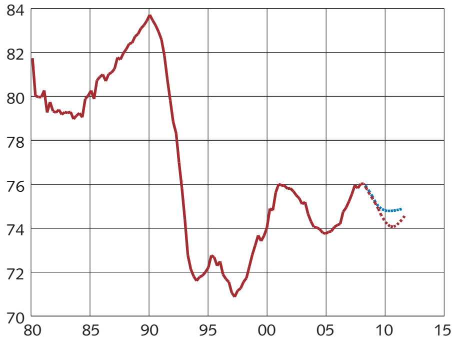
Note. Trend calculated using a Hodrick- Prescott filter. Broken lines represent the Riksbank's forecast.
Source: Statistics Sweden and the Riksbank

Figure 22. Unit labour costs for the economy as a whole
Annual percentage change



Note. Broken lines and striped bars represent the Riksbank's forecast.
Source: Statistics Sweden and the Riksbank

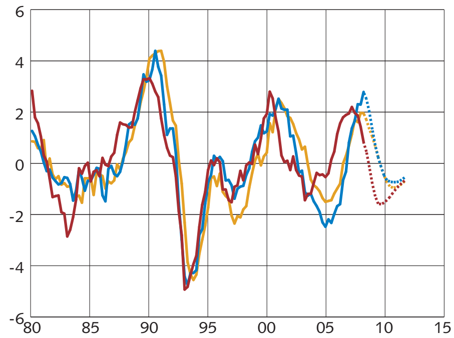
Figure 23. Employment rate
Employment as a percentage of the population,16-64 year, seasonally-adjusted data



Note. Broken lines represent the Riksbank's forecast.

Sources: Statistics Sweden and the Riksbank

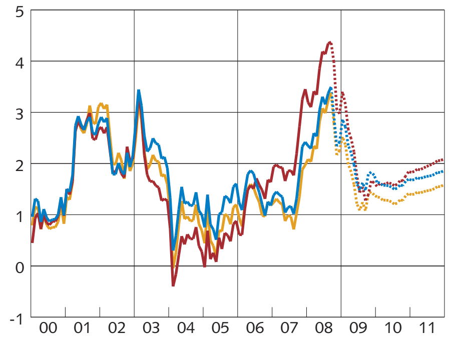
Figure 24. Estimated gaps
Percentage deviation from the HP trend



Note. See the glossary for a definition of HP filters. Broken lines represent the Riksbank's forecast.

Sources Statistics Sweden and the Riksbank

Figure 25. CPI, CPIF and CPIX
Annual percentage change



Note. Broken lines represent the Riksbank's forecast.

Source: Statistics Sweden and the Riksbank

labour costs will gradually fall and will be relatively low towards the end of the forecast period (see Figure 22). The explanation is that productivity is expected to increase.

■■ Resource utilisation slightly lower than normal in future

The Riksbank attaches a certain weight to stabilising resource utilisation, that is, developments in the real economy. In addition, resource utilisation affects future inflation. But there is no clean-cut measure of resource utilisation. The Riksbank uses a number of different indicators to assess how resource utilisation will develop in future given the economic climate. Developments in unemployment and the employment rate are examples of indicators of resource utilisation in the labour market. Unemployment will rise in the future and will peak in 2010 and then drop back somewhat towards the end of the forecast period (see Figure 20). The employment rate will decline and be at a lower level than in recent years also towards the end of the forecast period (see Figure 23).

Statistical measures can also provide an indication of resource utilisation. Figure 24 shows GDP, employment and the number of hours worked in relation to their long-term trends. According to these measures, resource utilisation will fall rapidly and be lower than normal over the coming years, but will rise again towards the end of the forecast period.

The overall picture of resource utilisation is that it is still slightly higher than normal, but that it will fall rapidly and will be slightly lower than normal over the coming years.

■■ Inflation is high but will soon decline

CPI inflation has risen rapidly over the past year and was 4.4 per cent in September. The last time inflation was this high was at the beginning of the 1990s. The high inflation rate is largely linked to rising energy and food prices. High cost pressures and high resource utilisation have also contributed to the trend rise in inflation in recent years. Households' interest expenditure has also increased at an ever faster pace. The CPI with a fixed interest rate (CPIF) is currently increasing more slowly than the CPI (see Figure 25).[4]

The rate of increase in energy and food prices has come to a halt recently (see Figure 78). Prices have continued to fall in the world market, including oil, food and metals (see Figures 8 and 79). World market prices for energy and other commodities are now at roughly the same level as a year ago. Inflation measured as the annual percentage change in the CPI will remain high for some time to come. However, as the rapid price increases in energy and food have come to a halt since the summer, inflation will drop back quickly next year.

Another important reason why inflation will fall in the future is a lower rate of increase in domestic cost pressures. Productivity will recover,

4 The CPI with a fixed interest rate is an alternative measure of inflation which is based on the CPI, where the interest rate index is held constant but where the entire change in the interest cost index arising from changes in the capital stock is still included. See the Box "The rate of increase in the CPIX will be below the CPI for a long time" in MPR 2008:2.

which is the main reason why the rate of increase in labour costs will be lower. A further reason for the expected fall in CPI inflation is that households' interest expenditure will increase more slowly during the forecast period.

Inflation measured as quarterly changes peaked in the second quarter and will be lower during the coming months, compared with earlier in the year (see Figure 26). CPI inflation is expected to be 3.7 per cent on average in 2008. After this the inflation rate will fall quickly to 2.1 per cent on average in 2009 and 1.7 per cent in 2010 to be around the target of 2 per cent in 2011 (see Figure 25 and Table A1).

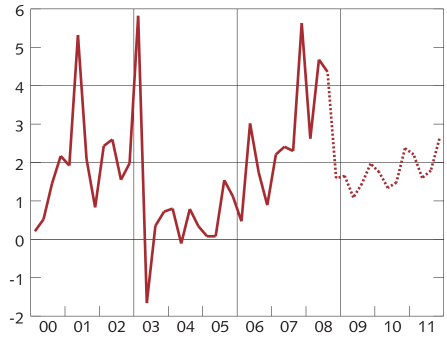
■■ Repo rate cut to alleviate the effects of the financial crisis

The Riksbank's forecasts are based on the repo rate being cut by a total of 1 percentage point in October; 0.5 percentage points on 8 October and the same amount on 22 October. After that the repo rate is expected to be cut by a further 0.5 percentage points. In the middle of 2009 the interest rate is thus expected to be around 3.25 per cent (see Figure 27). The assessment is thus that the repo rate needs to be cut by a relatively large amount during a comparatively short period of time. The purpose is to counteract the restraining effect the global financial crisis is having on economic developments in Sweden. There is, of course, a considerable amount of uncertainty in the assessment. If the financial crisis intensifies, or if the effects on the real economy are more extensive, it may be necessary to cut the repo rate more than is assumed in the current assessment.

A lower repo rate normally contributes to reducing households' and companies' loan costs, which stimulates demand. However, the financial crisis that has now arisen has to some extent meant that the usual link between the Riksbank's repo rate and the interest rates facing households and companies has been eliminated. The greatest problem in the financial markets today is not the repo rate level. Cutting the repo rate will therefore not solve all of the problems. But the repo rate cut will nevertheless be able to contribute to reducing interest rate costs for companies and households compared to what would otherwise have been the case.

As the measures being taken by central banks and governments now begin to have an effect on the financial system, the crisis will diminish. When the economy then recovers, the repo rate can approach a normal level again. At the end of 2011 the repo rate is expected to be just below 4 per cent. The real interest rate is then expected to be around 1.5 per cent (see Figure 28).

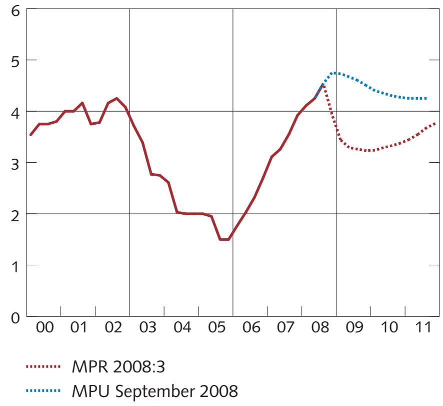
Figure 26. CPI
Quarterly changes in per cent calculated in annualised terms, seasonally-adjusted data



Note. Broken lines represent the Riksbank's forecast.

Sources: Statistics Sweden and the Riksbank

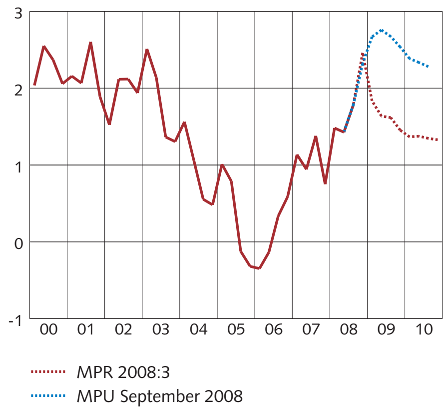
Figure 27. Repo rate
Per cent, quarterly averages



Note. Broken lines represent the Riksbank's forecast.

Source: The Riksbank

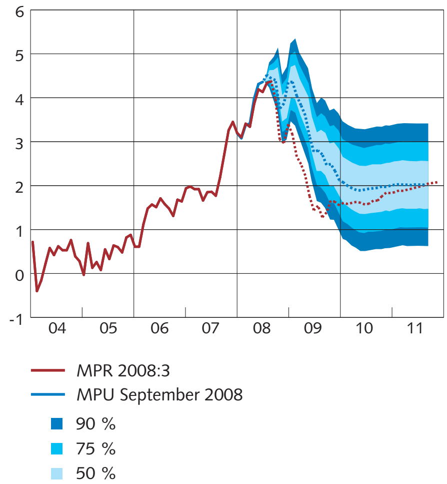
Figure 28. Real repo rate
Per cent, quarterly averages



Note. The real interest rate is calculated using the Riksbank's one-year inflation forecasts. Broken lines represent the Riksbank's forecast.

Source: The Riksbank

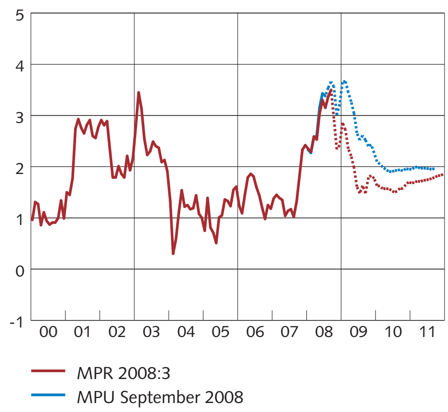
Figure 29. CPI
Annual percentage change



Note. The uncertainty bands refer to the intervals from the September Monitary Policy Update. (See note for Figures 1-3). Broken lines represent the Riksbank's forecast.

Source: Statistics Sweden and the Riksbank

Diagram 30. CPIF
Annual percentage change



Note: Broken lines represent the Riksbank's forecast

Source: Statistics Sweden and the Riksbank

This forecast compared with the previous forecast

Compared with the Monetary Policy Update published in September, most of the forecasts have been revised, particularly the forecasts for 2009. The fact that the revisions are substantial is illustrated in Figure 29. This shows that the new inflation forecast is partly outside of the earlier uncertainty interval. The revisions are primarily because the financial crisis has intensified and is now expected to aggravate an economic downturn. The size of the downward revisions in the forecasts for production and employment is limited to some extent by the significant fall in oil prices and other commodity prices and by the fact that monetary policy in many countries is expected to become more expansionary than was previously anticipated.

Main revisions to forecasts:

- GDP growth abroad (TCW-weighted) is expected to be 0.3 per cent in 2009 and 1.6 per cent in 2010. This is a downward adjustment of around 0.9 percentage points for 2009 and 0.5 percentage points for 2010 (see Table A4).
- The oil price is expected to be around USD 100/barrel on average during the forecast period, which reflects the forward pricing. This means that the forecast has been revised down by around USD 25/barrel in 2009 and 2010 (see Table 3).
- The trade-weighted krona exchange rate (TCW index) will according to the current forecast be around 2 per cent weaker on average in 2009 and 2010 than in the previous forecast (see Table 3).
- GDP growth (calendar-adjusted) in Sweden is expected to be 0.2 per cent in 2009, which is a downward adjustment of 0.7 percentage points to the previous forecast (see Table 3).
- Unemployment is expected to be around 7.6 per cent in 2010. This is an upward adjustment of around 0.7 percentage points (see Table 3).
- Unit labour costs are expected to increase by 4.2 per cent this year and 2.5 per cent next year. This means that the forecast for this year has been adjusted upwards by 0.5 percentage points, which is mainly due to lower productivity growth. The forecast for 2009 has been adjusted downwards by 0.5 percentage points. This is primarily a consequence of the general reduction in statutory employer's contributions (see Table A7).
- CPI inflation has been revised down throughout the whole forecast period. The largest downward revision is for 2009, when it is expected to be 2.1 per cent on average, which is 1.1 percentage points lower than in the previous forecast (see Figure 29, Figure 30 and Table 1).
- The repo rate path has been revised down by on average around 1.2 percentage points in 2009 and 2010. This means that the repo rate is expected to be on average 3.3 per cent both in 2009 and 2010 (see Figure 27 and Table A3).

Table 1. Inflation, annual average
Annual percentage change

	2007	2008	2009	2010	2011
CPI	2.2	3.7 (3.9)	2.1 (3.2)	1.6 (2.0)	2.0
CPIX	1.2	2.6 (2.9)	1.6 (2.6)	1.3 (1.7)	1.5
CPIX excl. energy	1.5	1.8 (1.9)	1.6 (2.0)	1.5 (1.9)	1.6
CPIF	1.5	2.8 (3.1)	2.0 (2.9)	1.6 (2.0)	1.8

Note. The assessment in the Monetary Policy Update in September 2008 is stated in parentheses. CPIX is CPI inflation excluding household mortgage interest expenditure and the direct effects of changes in indirect taxes and subsidies. CPIF is CPI with fixed interest rate.

Sources: Statistics Sweden and the Riksbank

Table 2. Inflation, 12-month average
Annual percentage change

	Dec. -07	Dec. -08	Dec. -09	Dec. -10	Dec. -11
CPI	3.5	3.0 (3.9)	1.6 (2.3)	1.8 (2.0)	2.1
CPIX	2.0	2.3 (3.1)	1.4 (2.0)	1.4 (1.7)	1.5
CPIX excl. energy	2.0	1.6 (1.7)	1.6 (2.0)	1.5 (1.9)	1.6
CPIF	2.4	2.4 (3.2)	1.8 (2.3)	1.7 (2.0)	1.8

Note. The assessment in the Monetary Policy Update in September 2008 is stated in parentheses. CPIX is CPI inflation excluding household mortgage interest expenditure and the direct effects of changes in indirect taxes and subsidies. CPIF is CPI with fixed interest rate.

Sources: Statistics Sweden and the Riksbank

Table 3. Key figures, annual average
Annual percentage change, unless otherwise specified

	2007	2008	2009	2010	2011
GDP, world	5.0 (4.9)	3.5 (3.9)	2.9 (3.8)	3.6 (4.4)	4.0
Crude oil price Brent, USD/barrel	73	105 (114)	92 (119)	96 (119)	98
Exchange rate, TCW-index, 18 Nov. 1992=100	125.2	125.5 (123.4)	126.1 (122.2)	123.7 (121.9)	123.0
Repo rate, per cent	3.5	4.2 (4.4)	3.3 (4.6)	3.3 (4.3)	3.6
General government net lending, percentage of GDP	3.5 (3.5)	2.7 (2.9)	0.7 (1.2)	-0.1 (0.6)	0.2
GDP	2.7 (2.7)	1.2 (1.4)	0.1 (0.8)	2.5 (2.6)	2.8
GDP, calender-adjusted	2.9 (2.9)	0.9 (1.1)	0.2 (0.9)	2.2 (2.3)	2.8
No. of employed, 15-74 years	2.5 (2.5)	1.2 (1.4)	-0.9 (-0.6)	-0.9 (-0.3)	-0.9
Unemployement*	6.1 (6.1)	6.2 (6.2)	6.9 (6.8)	7.6 (6.9)	7.4
Hourly wage in economy as a whole	3.3 (3.3)	4.2 (4.2)	3.7 (3.6)	3.5 (3.7)	3.8

* Percentage of labour force

Note. The assessment in the Monetary Policy Update in September 2008 is stated within the parentheses.

Sources: IMF, International Exchange, National Mediation Office, Statistics Sweden and the Riksbank

Table 4. Repo rate forecast
Per cent, quarterly average values

	Q2 -08	Q3 -08	Q4 -08	Q4 -09	Q4 -10	Q4 -11
Repo rate	4.25	4.54	3.9 (4.7)	3.2 (4.5)	3.4 (4.3)	3.8

Note. The assessment in the Monetary Policy Update in September 2008 is stated within the parentheses.

Source: The Riksbank

CHAPTER 2 – Alternative scenarios and risks

The uncertainty regarding future developments is this time unusually great. The duration of the financial crisis and its effects on the global economy will be of critical importance. It is not impossible that the negative effects on the financial markets and on economic activity will be even greater than is assumed in the main scenario. In such a case the Riksbank may need to cut the repo rate further. However, if the Swedish krona does not strengthen to the extent assumed in the main scenario, or if the international and domestic inflation rates decline at a slower rate than assumed in the main scenario, a higher repo rate may be warranted. These alternative scenarios for economic developments are analysed in this Chapter.

Forecasts of future economic developments are always uncertain. This is illustrated by uncertainty bands around the main scenario (see Figures 1-3 in Chapter 1). In this Chapter the Riksbank describes alternative scenarios that differ in various ways from the main scenario. One purpose is to highlight some factors of uncertainty that are considered particularly important at present. Another purpose is to illustrate more generally the interaction between monetary policy and economic developments.[5]

The results reported in this Chapter should be regarded as explanatory examples and illustrations. A large number of other alternative development paths are of course also possible, which, all in all, contribute to the uncertainty in the forecasts that is represented by the uncertainty interval.

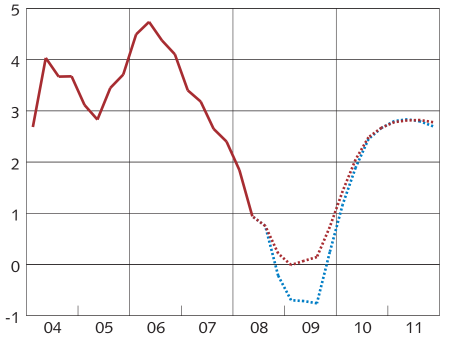
The first scenario assumes that problems in the financial markets will be more protracted and international growth even weaker than in the main scenario. The second scenario describes what might happen if the exchange rate is weaker than in the main scenario. The third scenario examines what might happen if the shocks behind the sharp rise in global inflation over the past year have more prolonged effects than assumed in the main scenario.

An important assumption in the alternative scenarios is that the Riksbank does not have full information from the start regarding the future economic developments implied by a particular scenario, but instead gradually becomes aware of this during the forecast period. This of course means that the Riksbank adjusts monetary policy more gradually than if all of the information was available immediately. This can be regarded as a reasonable description of the conditions for monetary policy.

In this context it is also important to point out that the repo rate paths shown here are mainly based on how the repo rate usually changes, that is, on average, when various shocks occur. The shaping of monetary policy in such scenarios as those reported below could, however, clearly deviate from the historical pattern of behaviour because the considerations of the Riksbank do not necessarily comply with a particular average historical pattern. When a monetary policy decision is to be

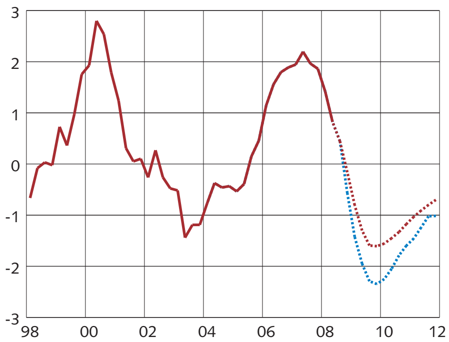
5 The alternative scenarios are produced with the aid of various models used by the Riksbank, primarily the general equilibrium model RAMSES. See, for instance, the box "RAMSES – a tool for monetary policy analysis" in Monetary Policy Report 2007:1 for a more detailed description.

Figure 31. GDP
Annual percentage change, seasonally-adjusted data



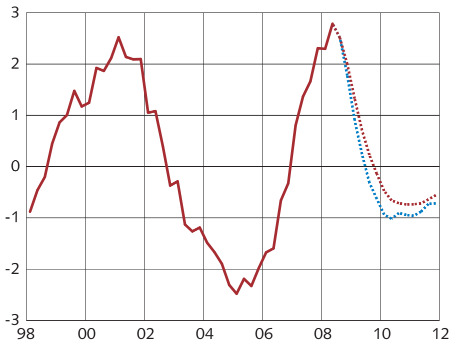
Note. Broken lines represent the Riksbank's forecast.
Sources: Statistics Sweden and the Riksbank

Figure 32. Production gap (GDP)
Percentage deviation from the HP trend



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

Figure 33. 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

taken, the situation is never exactly like a previous situation. If a situation similar to any of these alternative scenarios were to really occur, monetary policy could therefore deviate from what is described here, as it would also depend on the general circumstances. The alternative scenarios nevertheless provide some guidance regarding the likely effects on the repo rate of various alternative sequences of events for economic activity and inflation.

■■ Lower growth abroad and intensified financial crisis

Since the Monetary Policy Update was published in September, the problems in the global financial markets have worsened and the negative effects on economic developments abroad will probably become more noticeable. It is therefore assumed in the main scenario that international growth in 2009 and 2010 will be weaker than was assumed in the September Monetary Policy Update. However, it is not impossible that the financial problems will further intensify or that the contagion effects on the business cycle will be even greater and more long-lived than is assumed in the main scenario.

In this scenario, we therefore assume that growth abroad falls at the same time as the borrowing costs for households and companies in the world are higher.[6] The effects on households and companies are not merely that their costs for borrowing money increase. The distrust prevailing in the financial markets has also created difficulties for banks and other lenders to finance their lending, which in addition to higher interest rates on loans to companies and households also leads to stricter credit terms and the fact that certain projects cannot be financed at all.

More prolonged and profound effects from the financial crisis in the alternative scenario will lead to growth in foreign GDP being on average 0.8 percentage points lower in 2009 and 0.5 percentage points lower in 2010 than in the main scenario (see Table A8). To counteract the effects on international economic activity, central banks abroad cut their policy rates. During the period 2009-2011 policy rates abroad are on average 0.6 percentage points lower than in the main scenario (see Table A8). In the alternative scenario, inflation abroad is on average 0.2 percentage points lower during the forecast period (see Table A8).

The lower growth abroad leads to a decline in the demand for Swedish exports. Households and companies are also affected by the higher loan costs and they consume and invest less than in the main scenario during the first year of the forecast period. Weaker demand causes Swedish GDP to grow 0.7 percentage points slower than in the main scenario during 2009 (see Figure 31 and Table A8). The lower growth means that resource utilisation declines more rapidly than in the main scenario. In the alternative scenario, both the production gap and the hours gap decline in 2009-2010 compared to the corresponding gap in the main scenario (see Figures 32-33). The weaker economic activity

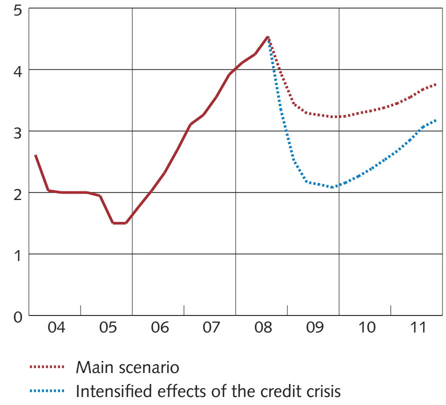
6 The credit spread is assumed to be 50 points higher than in the main scenario during four quarters. Then it slowly returns to the development assumed in the main scenario. Credit spreads here refer to the costs to households and companies of borrowing money compared to the level of the repo rate.

and lower price increases on imports also mean that Swedish inflation will be lower. In that both inflation and resource utilisation decline more rapidly than in the main scenario, there is justification for a more expansionary monetary policy and the repo rate is cut more quickly than in the main scenario (see Figure 34). In the alternative scenario the repo rate is on average approximately 1 percentage point lower than in the main scenario during 2009 and 2010. At the end of 2011 the interest rate is 0.5 percentage points lower than in the main scenario. The real interest rate falls compared with the main scenario and is at most 1 percentage point lower at the end of 2009 (see Figure 35 and Table A8) (see the box "The development of the real interest rate" in MPR 2008:2 for an analysis of the real interest rate concept). As the domestic repo rate is cut more aggressively in this alternative scenario than the policy rates abroad, the nominal exchange rate weakens, which counteracts the effects of lower prices in foreign currencies on Swedish imports (see Table A8). In 2010 inflation will on average be 0.2 percentage points lower than in the main scenario (see Figure 36 and Table A8).

■■ Weaker krona

In times of financial turbulence, the Swedish krona and currencies of other small countries are considered more risky than larger currencies and therefore they weaken in relation to the larger currencies. The current financial crisis is no exception. The krona exchange rate has varied substantially and, measured according to the TCW index, the krona has weakened by just over 4 per cent since the September Update. It is assumed in the main scenario that the acute financial crisis will calm down and that this means that the weakening of the Swedish krona will cease and during the forecast period the krona will strengthen by around 5 per cent in relation to the exchange rate in mid-October.

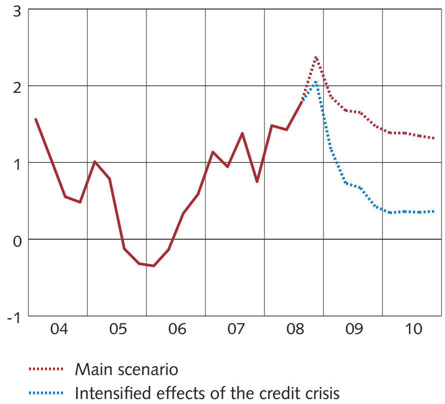
Figure 34. Repo rate
Per cent, quarterly averages



Note. Broken lines represent the Riksbank's forecast.

Source: The Riksbank

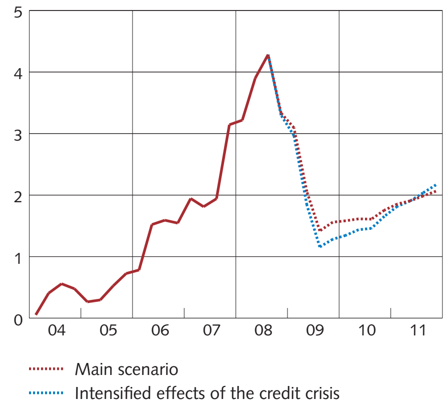
Figure 35. Real interest rate
Per cent, quarterly averages



Note. The real interest rate is calculated using the Riksbank's one-year inflation forecasts. Broken lines represent the Riksbank's forecast.

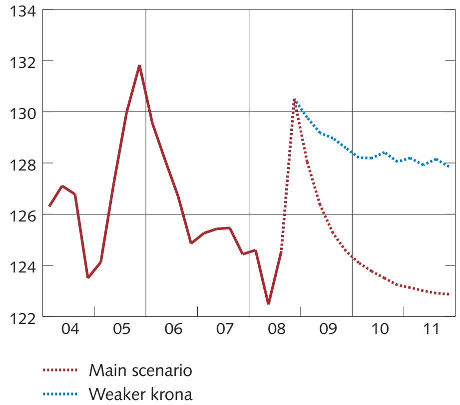
Source: The Riksbank

Figure 36. CPI
Annual percentage change



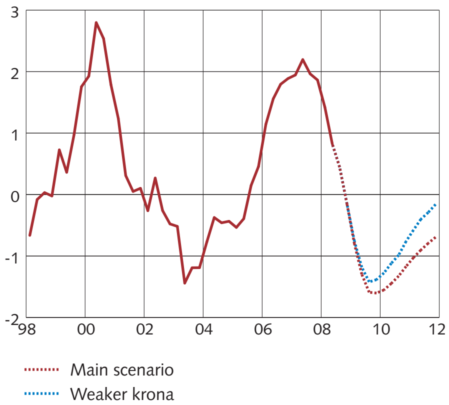
Note. Broken lines represent the Riksbank's forecast.
Sources: Statistics Sweden and the Riksbank

Figure 37. TCW-weighted exchange rate
Index, 18.11.92 = 100



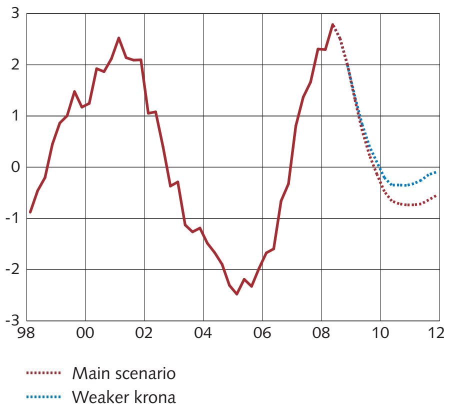
Note. Broken lines represent the Riksbank's forecast.
Source: The Riksbank

Figure 38. Production gap (GDP)
Percentage deviation from the HP trend



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

Figure 39. Labour market gap (Hours worked)
Percentage deviation from the HP trend



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

In the previous alternative scenario the krona weakened slightly in relation to the main scenario as a result of adjustments to more prolonged effects from the financial turbulence than was assumed in the main scenario. In this scenario it is instead assumed that the krona will weaken more permanently.[7] At the end of the forecast period the krona is approximately 4 per cent weaker than in the main scenario (see Figure 37 and Table A9).

A weaker exchange rate will lead to imports becoming more expensive in Swedish kronor, while exports will be cheaper for foreign buyers. Higher import prices will reduce the scope for consumption, which means that domestic consumption grows more slowly than in the main scenario, which weakens GDP growth. Exports, on the other hand, will increase, which will strengthen GDP growth. The total effect is that domestic GDP growth will be approximately 0.2 percentage points higher during the forecast period (see Table A9).

The more rapid growth means that both the production gap and the hours gap indicate that resources in the economy are being used more than in the main scenario (see Figures 38-39). Increased resource utilisation and stronger inflationary impulses from imports mean that inflationary pressures in the economy increase. To counteract a rise in the inflation rate, monetary policy needs to be tighter than in the main scenario. During 2009 and 2010, the repo rate will be 0.2 percentage points higher than in the main scenario (see Figure 40). CPI inflation will on average be 0.4 percentage points higher than in the main scenario (see Figure 41 and Table A9). The real repo rate will be lower than in the main scenario (see Figure 42). The repo rate path in this alternative scenario means that inflation deviates from target et the end of the forecast period. This is because the Riksbank does not know at the beginning of the scenario that the exchange rate will remain so weak; it only becomes aware of this over time.

7 Variations in the value of the krona are an important part of the repercussions in the economy following a shock. In this scenario we assume that the krona first weakens as a direct effect of factors affecting the functioning of the foreign exchange market.

■■ Continued high inflation abroad and in Sweden

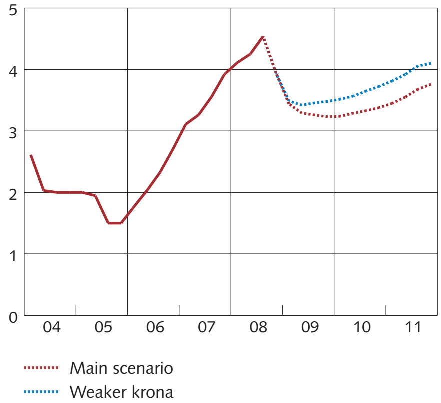
In the main scenario, inflation abroad is expected to decline relatively quickly at the end of 2008 and in the first half of 2009. At the end of 2009, the assessment is that inflation abroad will be around 2 per cent, which means that the inflation rate is halved over the coming year. The inflation rate abroad declines as a result of energy and commodity prices falling, and of the effects of the earlier rapid upturn in energy and commodity prices waning, at the same time as resource utilisation slows down when international economic activity weakens. Swedish inflation is affected by developments abroad and also by lower domestic inflationary pressures. The weaker economic activity reduces the risk of the rapid upturn in inflation over the past year spreading via higher nominal wage increases, at the same time as growth in labour productivity returns to more normal levels.

But there is also a risk that the inflation rate will decline at a slower rate than is assumed in the main scenario. This could be because the global prices of energy and commodities are higher than assumed in the main scenario, or because the indirect effects of earlier price increases are more prolonged, for instance, because foreign and domestic companies have had high costs for which they have not yet had time to compensate themselves.

The third alternative scenario therefore illustrates a development where inflation abroad is on average around 0.8 percentage points higher in 2009 and 0.3 percentage points higher in 2010 (see Table A10). However, GDP abroad develops in line with the main scenario. The central banks abroad react to the higher inflation and do not cut their policy rates as much as in the main scenario; on average the interest rates abroad are 0.5 percentage points higher in 2009 and 2010.

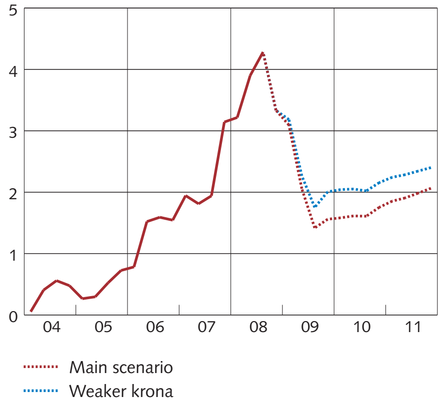
At the same time, it is assumed that Swedish companies will also raise their prices at a more rapid rate than is assumed in the main

Figure 40. Repo rate
Per cent, quarterly averages



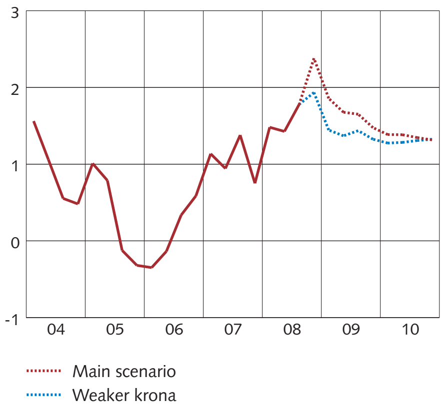
Note. Broken lines represent the Riksbank's forecast.
Source: The Riksbank

Figure 41. CPI
Annual percentage change



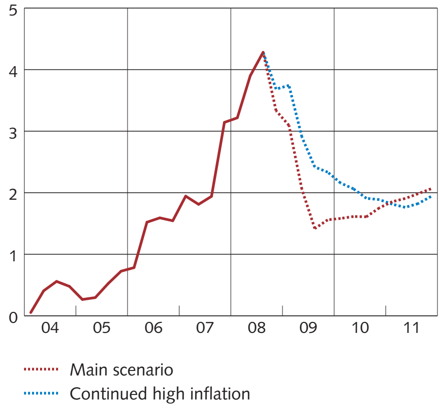
Note. Broken lines represent the Riksbank's forecast.
Sources: Statistics Sweden and the Riksbank

Figure 42. Real interest rate
Per cent, quarterly averages



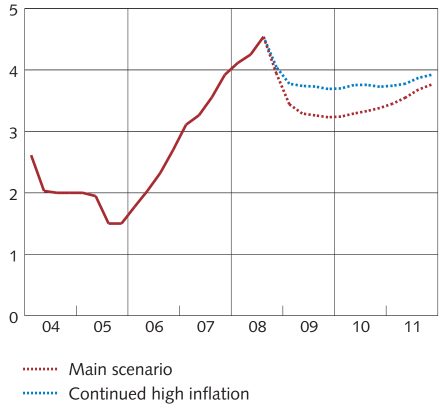
Note. The real interest rate is calculated using the Riksbank's one-year inflation forecasts. Broken lines represent the Riksbank's forecast.
Source: The Riksbank

Figure 43. CPI
Annual percentage change



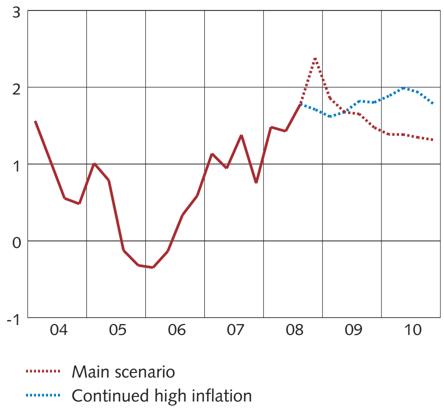
Note. Broken lines represent the Riksbank's forecast.
Sources: Statistics Sweden and the Riksbank

Figure 44. Repo rate
Per cent, quarterly averages



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

Figure 45. Real repo rate
Per cent, quarterly averages



Note. The real interest rate is calculated using the Riksbank's one-year inflation forecasts. Broken lines represent the Riksbank's forecast.
Sources: Statistics Sweden and the Riksbank

scenario. In total, the Swedish CPI therefore increases at the same rate as prices abroad during 2009 and 2010 (see Figure 43 and Table A10). Growth in domestic GDP is not appreciably affected as different effects counteract one another (Table A10). On the one hand, prices of imports increase at a faster rate in that inflation abroad is expected to be higher in the alternative scenario, while Swedish export products will be relatively cheaper. These effects could in themselves lead to larger net exports and higher GDP growth. However, domestic prices will also increase as a result of higher mark-ups in Sweden, which will reduce household consumption and domestic GDP growth. The Riksbank does not cut the interest rate as much as in the main scenario, on average the repo rate is 0.4 percentage points higher in 2009 and 2010 (see Figure 44 and Table A10). In this scenario the Riksbank is initially surprised by inflation being higher, the adjustment of the repo rate will not occur immediately so the real interest rate will fall (see Figure 45 and Table A10). The real interest rate gradually rises and in the middle of 2009 it is higher than in the main scenario.

CHAPTER 3 – The current economic situation

The crisis in the global financial markets has intensified since mid-September and the Swedish financial market has been significantly affected. Inflation remains high both in Sweden and abroad, which is primarily linked to earlier high rates of increase in energy and food prices. Since the September Update, however, the level of oil prices, food prices and other commodity prices has fallen. This, together with the financial crisis, led to changed expectations of monetary policy. Forward rates in Sweden have fallen since September and this has also been the case in the United States and the euro area. In a joint action on 8 October policy rates were cut by 0.5 basis points in the United States, the United Kingdom, the euro area, Canada, Switzerland and Sweden to alleviate the consequences of the ongoing global financial crisis.

Growth has slowed down both in Sweden and abroad. The Swedish economy showed zero growth during the second quarter. Newly-received indicators also point to continued weak activity. The resource utilisation in the economy is still judged to be slightly higher than normal, but slowing down. To summarise, the newly-received information indicates lower inflation and weaker economic growth next year, compared to the September Update.

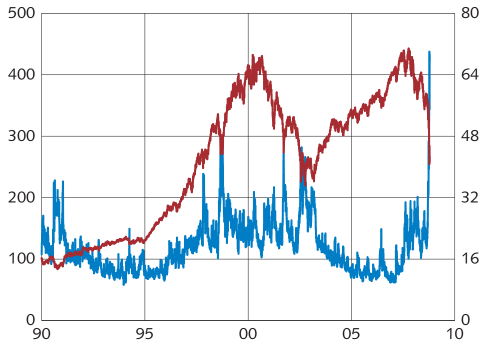
Escalated crisis in the financial markets

The global financial crisis intensified in mid-September, in connection with the problems in Lehman Brothers, the US investment bank, and the AIG insurance company. At the same time, the Swedish financial markets began to be increasingly affected by the crisis. Developments have since then been marked by a lack of trust and increasing anxiety in the financial markets, which has resulted in rising credit spreads, for instance. Many market have functioned poorly; pricing has been unclear and volatility high. Some markets, such as the market for mortgage bonds, have periodically more or less ceased functioning, which has made it difficult for the banks to refinance themselves through borrowing or by issuing new bonds. It has periodically been impossible for companies to finance themselves at longer periods than one month (see also the box "The development of the financial crisis during September and October").

Stock market rates have fallen heavily since the summer, in the United States, the euro area and Sweden in the wake of the deterioration in the financial markets (see Figure 6). The large stock market fall in recent months coincides with a sharp increase in the implied volatility of the stock markets (see Figure 46).

Government bond rates have fallen in the United States, Europe and Sweden (see the Figure 47) and rates on other types of bond have risen. Investors have chosen to increase their holdings of safe assets and to reduce their holdings of mortgage bonds and shares. Treasury bill rates have also fallen. In the United States, for instance, the 3-month rate has had a lowest point of 0.01 per cent. A similar development was imminent in Sweden, which was one reason why the Swedish National Debt Office decided to implement additional

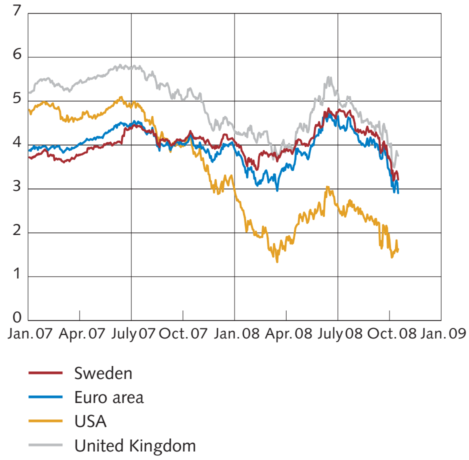
Figure 46. Stock market movements and implied volatility in the USA
Index, 1 January 1990 = 100 and per cent



Note: Index is S&P 500 and implied volatility is the VIX (volatility index) calculated on options of S&P 500.

Sources: Chicago Board Options Exchange and Standard & Poor's

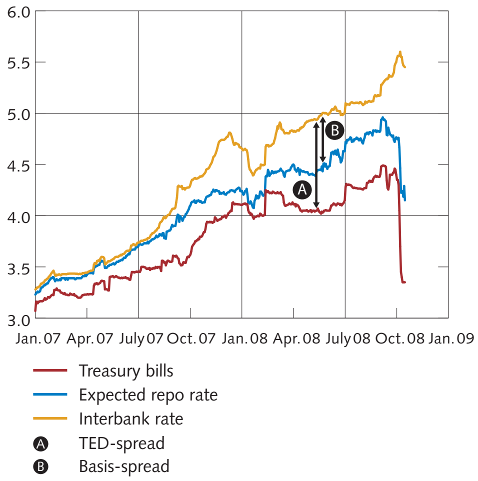
Figure 47. Two-year interest rates
Per cent



Note: Government bonds with approximately 2 years left to maturity.

Source: Reuters EcoWin

Figure 48. Basis spread and TED spread in Sweden
Per cent



Note. Three-month interbank rate, expected monetary policy three month ahead and three month treasury bills. Expected monetary policy is measured in terms of STINA swap, adjusted for expected deviation between the T/N rate and the repo rate.

Sources: Reuters EcoWin

issues of treasury bills to meet the demand for safe assets.

During the summer the difference between the interbank rate and the treasury bill rate, what is known as the TED spread, was relatively stable but at a high level (see Figures 4 and 48). Since the September monetary policy meeting, however, interbank rates have risen substantially, particularly in the United States, the euro area and the United Kingdom, but also in Sweden. At the same time, the treasury bill rate has fallen as a result of the increasing demand. The tomorrow-next rate (the forward rate on loans from tomorrow and one day forward) has on a couple of occasions exceeded the Riksbank's lending rate. The difference between the interbank rate and the expected repo rate, what is known as the basis spread, has also risen substantially since the beginning of September (see Figure 48). All of this indicates that the financial crisis has intensified, resulting in, for instance, rising refinancing costs for companies and households.

In the corporate finance market the credit spreads (the difference between corporate bonds and government bonds) have risen. This market has also functioned very poorly recently. It has periodically been almost impossible for companies to borrow money as banks and investors have reacted to the crisis by tightening credit.

■■ Lower monetary policy expectations in the USA, Europe and Sweden

In a joint action on 8 October the central banks in the United States, the United Kingdom, the euro area, Canada, Switzerland and Sweden cut their policy rates by 0.5 percentage points. The purpose was to alleviate the consequences of the ongoing financial crisis. The motive for lower interest rates was that the global financial crisis reinforced the ongoing slowdown in economic activity with diminishing inflationary pressures as a result.

The markets are now expecting a lower interest rate from the US central bank over the coming two years than they were at the beginning of September (see Figure 9). However, expectations three years ahead are slightly higher, at just over 4 per cent.

In the euro area monetary policy expectations have been revised down since the beginning of September. Signals of weaker growth together with the lower oil price and the financial turbulence have led the market to expect a policy rate of around 3 per cent one year ahead and just over 4 per cent towards the end of 2011 (see Figure 9).

In Sweden, too, expectations of monetary policy have been lowered. Forward rates are now indicating that the market is expecting a policy rate of just over 3 per cent one year ahead and around 3.75 per cent towards the end of 2011. Since the beginning of September expectations have fallen by more than 1 percentage point for one year ahead (see Figure 49).

■■ Krona weaker against both dollar and euro

The Swedish krona has weakened substantially against both the dollar and the euro since the beginning of September (see Figure 50). The fact that the krona is weakening during a period of financial turbulence and weak stock markets follows earlier patterns.

The dollar has strengthened against the euro by around 10 per cent during the same period. However, since June the dollar has strengthened around 20 per cent against the euro. A high correlation between the oil price and the dollar has been observed. Falling oil prices have coincided with a strengthening of the dollar.

The krona has weakened by around 9 per cent (measured in terms of the TCW index) since the beginning of September (see Figure 13).

■■ Rising mortgage interest rates in Sweden

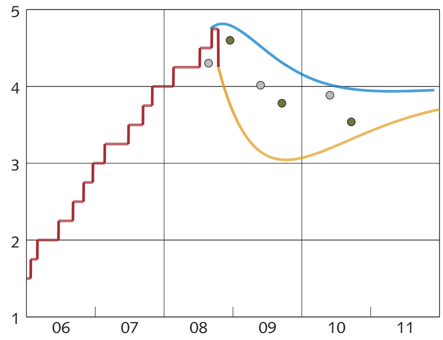
The floating mortgage rates that Swedish households have to pay had risen by around 0.8 percentage points from the beginning of September to the beginning of October, while the repo rate had only been raised by 0.25 percentage points. Rising refinancing costs for the banks had contributed to this tightening in addition to the change in monetary policy (see Figure 51). The Riksbank's interest rate cut of 0.5 percentage points on 8 October has only partly led to a reduction in floating mortgage rates. Floating rate mortgages were at around 0.7 percentage points higher in mid-October than they were at the beginning of September.

The 5-year mortgage rates have fallen slightly since the beginning of September. However, at the same time mortgage bond rates and government bond rates have fallen even further. Long-term mortgage rates are still at relatively high levels in relation to bond rates. There has thus been a relative tightening in relation to expected monetary policy also in the longer-term mortgage rates.

■■ Housing market cooling down

The rate of increase in house prices has slowed down (see Figure 52). The property price index for single-family dwellings rose by 4.5 per cent during the second quarter, compared with the corresponding quarter last year. The average rate of increase in this index was 10.4 per cent in 2007. House prices can also be measured in terms of the purchase price coefficient, which includes figures for up to the end of September. The annual rate of increase in this measure slowed down in September to 2.1 per cent. Between August and September house prices fell marginally according to the purchase price coefficients. According to estate agents' statistics up to the end of September, prices of tenant-owned apartments fell by 7 per cent, while prices of single-family dwellings had risen by 2 per cent, compared with the same month in 2007.

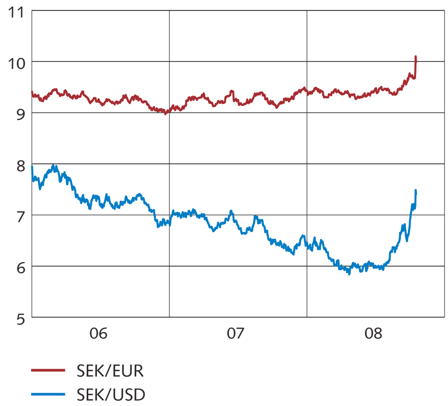
Figure 49. Monetary policy expectations in Sweden according to money market participants
Per cent



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

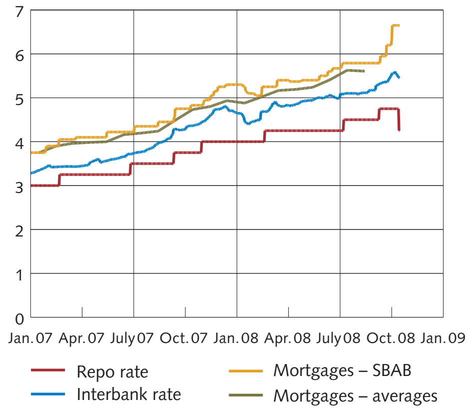
Sources: Reuters EcoWin, Prospera Research AB and the Riksbank

Figure 50. Exchange rates
SEK per euro and dollar



Source: Reuters EcoWin

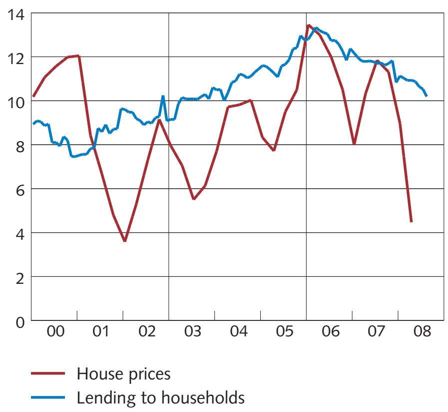
Figure 51. Interest rates in Sweden
Per cent



Note. Refers to the three month mortgage rate from SBAB, the three month interbank rate and the monthly average for three month mortgage rates for new lending by the mortgage institutions.

Sources: Reuters EcoWin, SBAB, Statistics Sweden and the Riksbank

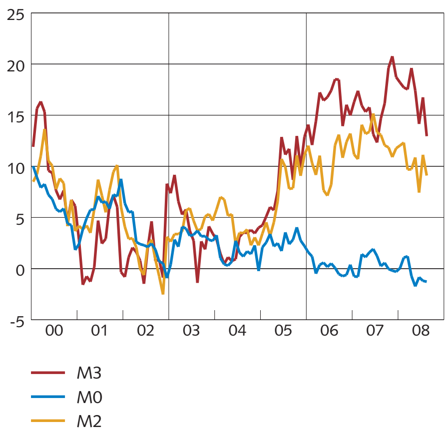
Figure 52. House prices and total lending to Swedish households
Annual percentage change



Note. Quarterly observations of house prices and monthly observations of lending to households.

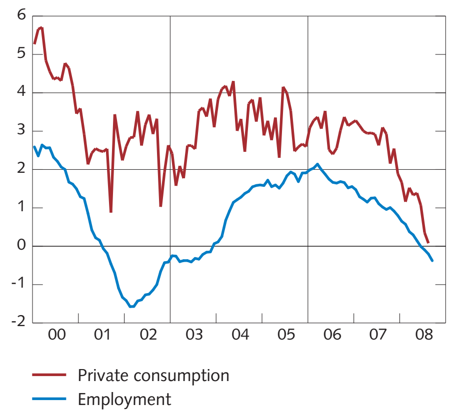
Sources: Statistics Sweden and the Riksbank

Figure 53. Money supply
Annual percentage change



Sources: Statistics Sweden and the Riksbank

Figure 54. Employment and private consumption in the USA
Annual percentage change



Note. Employment according to employer survey (non-farm payrolls).

Sources: Bureau of Labor Statistics and US Department of commerce

■■ Declining growth in money supply

The growth rate in the general public's holdings of banknotes and coins, M0, and in M2, which also includes households' and companies' bank deposits, declined slightly in August. The growth rate in the broadest money supply aggregate M3, which also includes the general public's shares in money market funds and debt securities, also declined (see Figure 53). One explanation is that savings in these forms have declined over the year as the result of a financial crisis.

The rate of increase in the banks' lending to households has slowed down in recent years, but is still high measured as an annual rate (see Figure 52). In August it increased by just over 10 per cent, compared with the same month last year. New lending to households for housing purposes har fallen in recent months. In August the figure for new lending was 44 per cent lower than in the same month last year. The rate of increase in lending to companies has slowed down, from over 15 per cent at the beginning of the year to around 11 per cent in August.

■■ Increased financial turbulence dampens growth in USA

GDP growth in the United States continued to be relatively strong during the second quarter, according to revised preliminary statistics. GDP growth was 2.8 per cent, calculated at an annual rate (see Figure 10). This outcome was stronger than the first preliminary outcome. Household consumption was stimulated by the tax cheques sent out to households in May and June and increased by almost 2 per cent when calculated as an annual rate. Exports grew by just over 13 per cent when calculated on an annual rate, stimulated by the earlier weakening of the dollar and substantial demand from emerging markets.

However, the recent statistics indicate that economic activity in the United States has slowed down. The financial crisis has increased in strength recently and share prices have fallen, which will affect the US economy in the coming period.

The labour market has continued to deteriorate. Employment fell by 84,000 jobs in August and 159,000 jobs in September (see Figure 54). An increasing number of employees are being forced to go from full-time employment to part-time employment and the number of hours worked is falling more rapidly than employment. Unemployment amounted to 6.1 per cent in September, which is an increase compared with last summer. A large part of the increase in recent months is somewhat surprisingly due to an increase in the labour supply despite weak economic activity, but the increase is also due to more people having lost their jobs. However, the number of applications for unemployment benefit declined during the first two weeks of October.

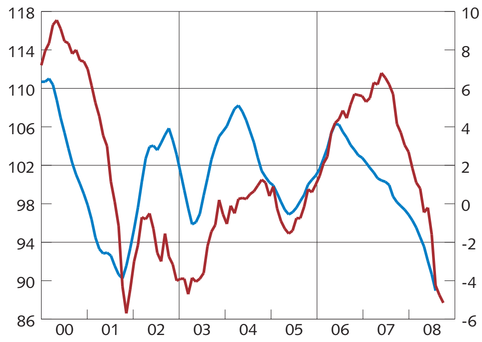
The weak labour market has contributed to diminishing households' consumption. In July, household consumption expenditure fell by 0.5 per cent, compared with June, and in August it was unchanged. During these two months disposable incomes fell as a result of a decline in the payment of tax cheques. In September retail trade sales fell in relation to August by 1.2 per cent in nominal terms. However, the fact that the oil price has been falling in recent months has had a positive effect on the scope for consumption.

Developments in the housing market are still weak. Residential construction fell by 6 per cent in September compared with August and it is still taking a long time to sell property. Property sales declined in August and house prices fell in July. Lending to households fell by 0.3 per cent in August compared with July, which is the largest downturn during an individual month in 10 years. The confidence index for the housing market fell in October to the lowest level measured since it was introduced in 1985. However, stocks of unsold new housing have declined rapidly since autumn 2006. Stocks of unsold new properties in relation to the total number of households in August were well below the historical average since 1963. Housing market statistics, in terms of what is known as pending home sales, indicate an increase in property sales in September.

Sentiment remains weak among both households and companies. The purchasing managers' index for the manufacturing industry fell substantially in September to 43.5, which is the lowest level since September 2001. In August it stood at 49.9. Various regional confidence indicators for companies fell dramatically in October. Industrial production fell in September by 2.8 per cent, compared with August. However, the purchasing managers' index for the services sector rose to 52.1 in September, that is, well above the limit indicating positive growth. Sentiment among households fell substantially in October.

Profits in the business sector fell in the second quarter by more than 10 per cent, calculated as an annual rate, compared with the first quarter. This was the fourth quarter in a row that profits fell. Profits as a share of GDP are still at a relatively high level, despite the fall, seen in a long-term perspective. Labour productivity rose in the second quarter by just over 4 per cent, compared with the first quarter and calculated as an annual rate. The strong productivity growth can be a sign of the high level of flexibility in the US economy. Companies are quick to cut back on labour when demand declines. Over the past four quarters the number of hours worked has fallen, at the same time as production has increased.

Figure 55. Economic indicators in the euro area
Index, December 2005 = 100, respective annual percentage change



European Commission Economic Sentiment (left scale)
OECD Composite Leading Indicators (right scale)

Sources: European Commission and OECD

■■ Continued weak growth in the euro area

In the euro area, too, growth during the coming period will be affected by the deterioration in the financial markets. As yet, however, not many statistics on the macro economy have been received for the period following the intensified financial crisis.

Interest costs for households and companies in the euro area have increased. More stringent credit terms have been reported for both households and companies, and the ECB's July survey, which was published at the beginning of August, showed stricter lending requirements for the fourth quarter in a row. Lending to non-financial companies in the euro area remains strong, although the rate of increase has slowed down since last high. The annual rate of increase in lending to households fell in August to 3.9 per cent, which is the lowest rate of increase since statistics began to be gathered in 1999.

GDP in the euro area fell by 0.7 per cent calculated on an annual rate during the second quarter (see Figure 10). Growth was negative in the larger countries Germany, France and Italy and only slightly positive in Spain. The main falls during the second quarter were in investment and private consumption. Investment, which increased rapidly during the first quarter, fell during the second quarter. Both exports and imports declined.

The continued decline in survey-based indicators in the euro area points to falling GDP during the third quarter (see Figure 55). Retail trade sales rose slightly in August compared with July. However, this was due to a rebound in Germany after a very weak result in the previous month. Sales declined in the other parts of the euro area. Industrial production rose in August compared with July, but this came after several months of falling production. Industrial production is expected to drop back in the future. In Germany, a strong industrial sector provided a positive contribution to growth until the end of the second quarter. But this now appears to be changing.

Despite the slowdown in economic activity, employment has continued to rise, although the rate of increase has slowed down. Employment rose by 0.2 per cent in the second quarter compared with the first quarter. Unlike the United States, labour productivity in the euro area fell by around 1.4 per cent calculated as an annual rate in the second quarter, compared with the first quarter. Of the larger countries in the euro area, only Spain is showing a clear deterioration in the labour market situation. However, the purchasing managers' index in September indicated a decline in employment in the euro area in the coming period. Unemployment rose slightly to 7.5 per cent in August from 7.4 per cent in July. The labour market is expected to weaken during the remainder of the year.

■■ Lower growth also in remainder of Europe

In the United Kingdom growth continued to slow down during the second quarter. GDP remained unchanged during the second quarter compared with the first quarter. Industrial production fell by 0.6 per cent in August compared with July. This was the fourth month in a row that industrial production fell. The British industrial purchasing managers' index fell heavily in September. The purchasing managers' index for the service industry also weakened significantly and is now at the lowest level measured since July 1996. The latest labour market statistics show a rapid deterioration in the labour market situation. At the same time, the number of applications for unemployment benefit has risen substantially up to the end of August. The fall in house prices continued in September. Prices have fallen by around 12 per cent compared with the same month last year. However, the retail trade increased by 1.2 per cent in August compared with July.

In Norway, GDP rose by 2.4 per cent during the second quarter, compared with the first quarter and calculated as an annual average. For the year 2008 as a whole, a growth rate of 2.5 per cent is expected. The labour market remains strong, but is expected to weaken during the remainder of 2008. The number of persons unemployed has begun to rise. A severe fall in the purchasing managers' index during the summer and autumn indicates a slowdown in economic activity.

During the final quarter of 2007 and the first quarter of 2008 GDP fell in Denmark. However, during the second quarter GDP in Denmark rose by 1.6 per cent calculated on an annual rate.

■■ Declining but still good growth in Asia during the second quarter

GDP in China increased by 10.1 per cent during the second quarter, compared with the corresponding quarter last year. India had a growth rate of 7.9 per cent during the second quarter compared with the corresponding quarter in 2007. In Japan, GDP rose by 0.8 per cent in the second quarter, compared with the corresponding quarter in 2007. Compared with the first quarter, however, GDP fell by 3 per cent in Japan, calculated as an annual rate. Household consumption, investment and exports all fell in relation to the first quarter. According to the Tankan survey for September, Japanese companies' assessment of the prevailing and future business climate deteriorated. For instance, assessments of future profits and investment plans were revised down since the previous survey in June.

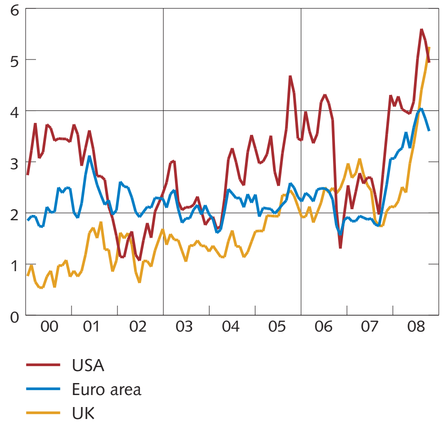
■■ High but falling inflation abroad

Inflation abroad is high, although there are signs that it has peaked. In the United States, inflation fell in September. The CPI was 4.9 per cent higher compared with the same month last year, while the rate of increase in the CPI adjusted for energy and food was 2.5 per cent (see Figures 56 and 57). Heavily falling oil prices in August and September slowed down inflation.

The annual rate of increase in the HICP for the euro area fell to 3.6 per cent in September. Energy prices in the HICP fell between September and August. Inflation excluding energy, food, alcohol and tobacco had risen to 1.9 per cent in September (see Figure 58). If only energy and non-processed foods are excluded, inflation was 2.5 per cent in September, which is higher than one year ago but roughly the same rate as in the spring.

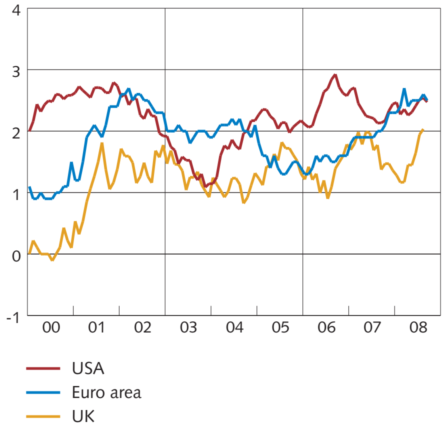
In the United Kingdom the annual rate of increase in the HICP was 5.2 per cent in September, which is an increase compared with

Figure 56. CPI
Annual percentage change



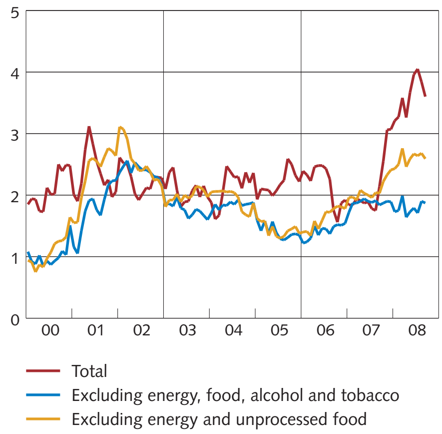
Source: Bureau of Labor Statistics, Eurostat and Office for National Statistics

Figure 57. CPI excluding energy and food
Annual percentage change



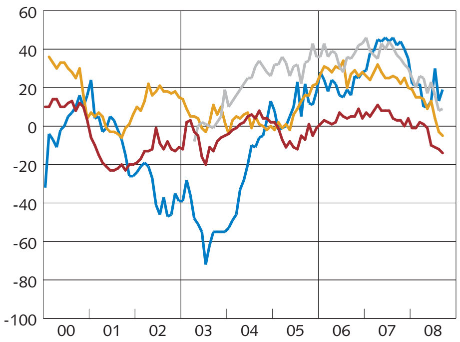
Sources: Bureau of Labor Statistics, Eurostat and OECD

Figure 58. HICP for the Euro area
Annual percentage change



Source: Eurostat

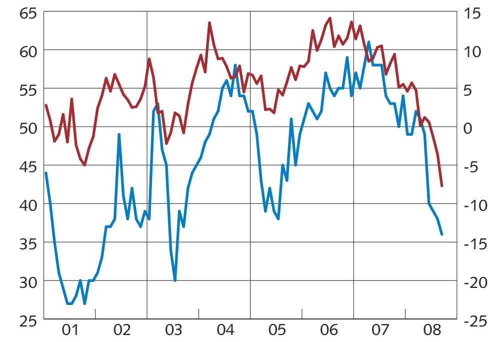
Figure 59. Confidence indicators in the business sector
Seasonally adjusted net figures, monthly observations



Manufacturing industry
Construction industry
Retail trade
Private service industries

Source: National Institute of Economic Research

Figure 60. Purchasing managers' index and confidence indicator for the manufacturing industry.
Seasonally-adjusted index and net figures



Purchasing managers' index (left scale)
Confidence indicator (right scale)

Note. An index over 50 means growth, below 50 means a decline. Net figures refer to the share of companies who have stated a positive development minus those who have stated deterioration.

Sources: National Institute of Economic Research and Swedbank

Figure 61. Retail sales and household consumption
Annual percentage change

Households' total consumption
Households' consumption of retail goods
Retail sales

Note. Non-calendar-adjusted data. For quarter 3 2008, only July and August has been used for retail sales.

Source: Statistics Sweden

last spring. Even when adjusted for energy and food prices the HICP has risen in recent months, from 1.2 per cent last spring to 2.2 per cent in September.

In Japan the annual rate of increase in the CPI was 2.1 per cent in August. When adjusted for food and energy prices, the CPI remained unchanged on an annual basis. Inflation in China has fallen back in recent months and amounted to 4.9 per cent in August.

The total inflation rate among Sweden's most important trade partners (TCW-weighted CPI) is expected to be on average 3.5 per cent this year, which is 0.1 percentage points lower than in the assessment made in September. In 2007 the corresponding figure was 2 per cent.

■■ Weak Swedish GDP growth expected in coming quarters

At the monetary policy meeting in September only a preliminary version of the Swedish National Accounts for the second quarter was available. A new version of the National Accounts has been published since then, which also showed zero GDP growth in the second quarter. There have been some revisions made among the expenditure components of demand. These are primarily foreign trade and services, where outcomes for both exports and imports have been revised down substantially. Public sector consumption has been revised upwards. Compared with the same period in the previous year, GDP growth was 0.6 per cent (calendar-adjusted).

For the third quarter business tendency data are available up to the end of September, and some monthly outcomes up to the end of August. According to the National Institute of Economic Research's Business Tendency Survey, the situation in the Swedish economy is "much weaker than normal". Households are the most pessimistic, which also appears to have been the case earlier in the year. Now almost all parts of the business sector are contributing to the decline (see Figure 59). The purchasing managers' index has also fallen substantially (see Figure 60). The Riksbank's company survey supports the picture of economic activity in the business sector having deteriorated over the past quarter (see the Box "The Riksbank's company survey: rapid slowdown and widespread pessimism"). Industrial production and orders for July and August were still weak in a longer-term perspective but strong in relation to the Riksbank's GDP forecast for the third quarter. However, weaker developments are expected for the remainder of the year.

The GDP forecasts for the third and fourth quarters were revised down in the September Monetary Policy Update compared with the assessment made in July. Indicators and statistics have so far been on the whole slightly weaker than expected in the Update, and the assessment for the third quarter is therefore revised down slightly. The forecast for growth in the fourth quarter has also been revised down as a consequence of the financial crisis. During the third quarter GDP growth rate is expected to become 0.7 per cent expressed as an annual rate. During the fourth quarter, GDP is then expected to fall by 0.2 per cent on an annual rate. Compared with the same period last year, a calendar-adjusted growth rate of 0.8 per cent is expected in the third quarter and of 0.2 per cent in the fourth quarter.

■■ Growth in household consumption slows down

Growth in household consumption has gradually slowed down over the past year, but the slowdown has not been as marked as for GDP, which is the normal cyclical pattern (see Figure 61). The most evident slowdown has been in purchases of cars, which are now falling substantially. Car sales are normally very cyclically sensitive. Fuel consumption also declined during the second quarter of this year. Poorer prospects of economic activity, together with high energy prices, have contributed to the decline in purchases of cars and fuel. Consumption of retail trade goods has also slowed down, while consumption of services increased at roughly the same rate as in the past four years.

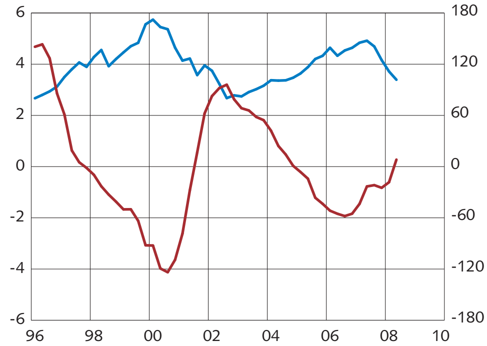
Several factors have contributed to a slowdown in consumption growth. High energy and food prices, together with rising interest expenditure, have undermined households' purchasing power, despite the fact that households' incomes have increased relatively strongly in nominal terms. In addition, households' financial wealth has declined as a result of falling stock market rates, while the price increase on housing has been dampened (see Figure 62). The Consumer Tendency Survey clearly shows that households have become more pessimistic regarding economic developments in Sweden as a whole and their own finances (see Figure 63).

The available indicators point to a continued slowdown in consumption growth. Employment is expected to begin to fall. According to the Consumer Tendency Survey for September households continue to have a much more negative view of the economic situation than normal (see Figure 63). In August the retail trade turnover increased by 2.9 per cent compared with August 2007, which can be compared with an average annual rate of increase in 2007 of almost 6 per cent. Compared with the assessment in the September Monetary Policy update, the indicators received have been slightly weaker than expected, while the financial crisis has intensified. The consumption forecast for the remainder of the year has therefore been revised down.

■■ Falling housing investment

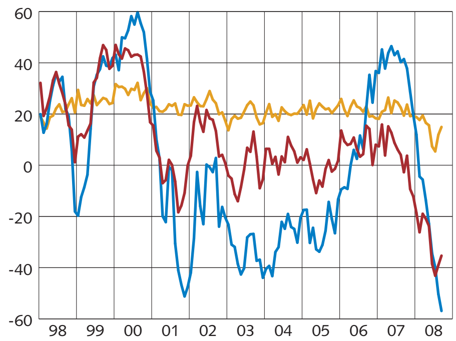
In recent quarters growth in investment has slowed down. Gross investment remained largely unchanged during the second quarter compared with the first quarter. When broken down into sectors, developments differ significantly (see Figure 64). Public sector investment has shown very strong growth over the year with a

Figure 62. Household saving/Household financial wealth and saving
Per cent of disposable income



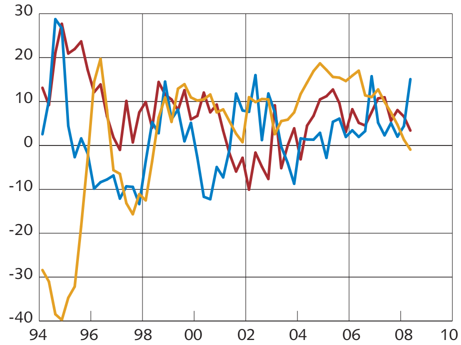
Note. Four-quarter moving average.
Source: Statistics Sweden

Figure 63. Households expectations for the future
Net figures



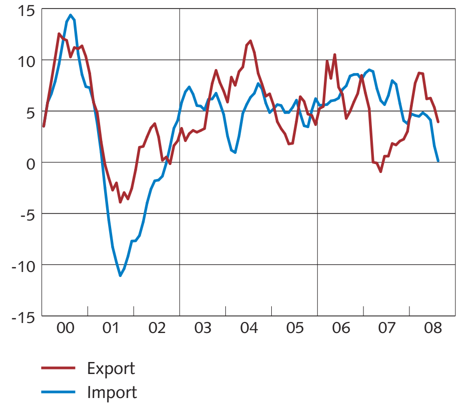
Note. Unemployment is defined here as the percentage of households that believe unemployment will fall minus the percentage who believe that unemployment will rise.
Source: National Institute of Economic Research

Figure 64. Gross fixed capital formation
Annual percentage change



Source: Statistics Sweden

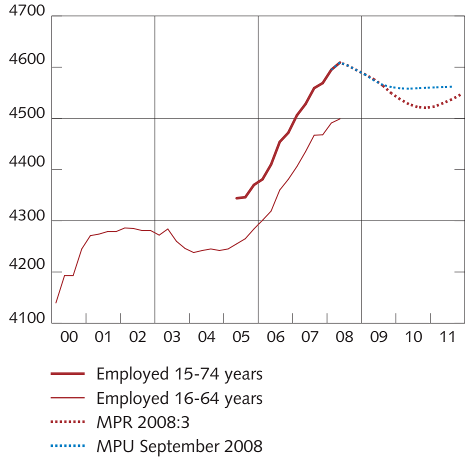
Figure 65. Foreign trade with goods in fixed prices
Annual percentage change, seasonally-adjusted data



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

Sources: Statistics Sweden and the Riksbank

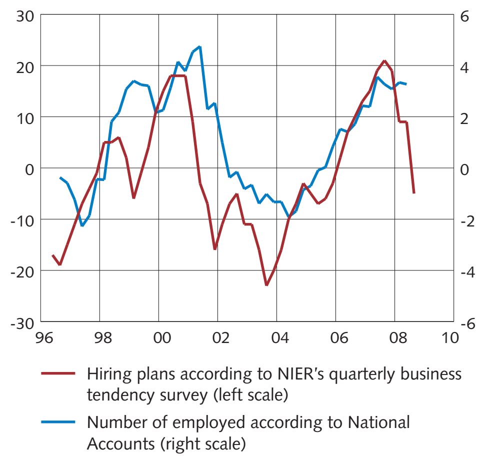
Figure 66. Number of employed
Thousands, seasonally-adjusted data



Note. Broken lines represent the Riksbank's forecast.

Sources: Statistics Sweden and the Riksbank

Figure 67. Hiring plans and number of employed in the business sector
Balance and annual percentage change



Note. Hiring plans weighted by the Riksbank. The balance is defined as the difference between the proportion of firms reporting a wish to increase the number of employees and the proportion of forms reporting a wish to reduce numbers.

Sources: National Institute of Economics research and Statistics Sweden

growth rate in the second quarter of over 15 per cent compared with the corresponding period last year. It is primarily investment in the infrastructure that is increasing at a rapid rate. Business sector investment is still increasing at a relatively high rate, although a clear slowdown has occurred compared with growth in 2007. Housing investment, which during the period 2004-2006 showed annual rates well above 10 per cent a year, began to slow down during 2007. During the second quarter of 2008 housing investment provided a negative contribution to investment growth for the first time since 1998. It was new construction that led to the negative contribution. Investment in rebuilding still showed a relatively rapid increase during the second quarter. New construction of single-family dwellings and multiple-family dwellings fell by just over five per cent during the second quarter, compared with the corresponding period last year. The forecast for total investment growth during the last two quarters of the year has been adjusted downwards in relation to the September forecast.

■■ Slowdown in foreign trade

The monthly statistics for foreign trade in goods up to the end of August indicate a slowdown in both exports and imports during the third quarter compared with the third quarter of 2007 (see Figure 65). The outcome for total exports in the National Accounts for the second quarter was weaker than expected. Trade in services slowed down significantly during the second quarter. In recent years, annual growth rates of close to 10 per cent have been reported with regard to both exports and imports of services. During the second quarter of the year, the annual rate of increase was much lower. The forecast for exports and imports is revised down slightly this year compared with the September Update.

■■ Stronger growth than expected in public sector consumption

During the first and second quarters of 2008 public sector consumption fell in relation to the previous quarter. However, consumption was stronger than was reported in the preliminary version of the National Accounts. According to Statistics Sweden the revision is primarily a result of a more complete base being used in the calculations compared to the preliminary version in August. For the full year 2008 growth is now expected to be 0.3 per cent, compared with -0.7 per cent in the September Monetary Policy Update.

■■ Public finances strong but weakening

General government net lending is high from an historical perspective (see Figure 17). The monthly outcome for the central government budget up to the end of August indicates continuing large surpluses. A weaker labour market and lower capital gains taxes as a result of falling stock market rates and lower corporate profits will subdue incomes. Compared with September, the forecast for general government net lending as a share of GDP is being revised down for 2008.

■■ Labour market weakening

Employment, which had developed strongly during the first half of the year despite the slowdown in production, has now begun to fall (see Figure 66). The number of persons employed (aged 15-74) according to the labour survey increased by 44,000 persons, or 1.0 per cent, compared with the same period last year. During the same period the number of persons in the labour force has increased by 63,000, or 1.3 per cent, which means that the number of persons unemployed has increased by 19,000 (see Figures 19 and 20). All in all, employment declined in the third quarter, compared with the previous quarter, for the first time since the end of 2004. This is a slightly weaker development than forecast in the Monetary Policy Update.

Compared with the preliminary version of the National Accounts, Statistics Sweden has revised up the number of hours worked during the second quarter of 2008. Thus, the figures for average hours worked have been stronger than assessed in September.

Labour market indicators are showing clearer signs of a weakening in the labour market. According to the Business Tendency Survey, the sentiment indicator for the business sector has declined. Companies' plans for the coming months indicate a decline in the number of employees (see Figure 67). Statistics Sweden's economic data on job vacancies show that recruitment activity has declined up to the end of the second quarter. The shortage of labour in the private sector declined from the second quarter of 2008, according to the National Institute of Economic Research's Business Tendency Survey (see Figure 68). Statistics from the Employment Service show that the number of new vacancies registered continued to fall in September. The number of redundancies has shown a rapid increase recently (see Figure 69). Almost 8,000 persons were given notice of redundancy during September. And new weekly statistics indicate that the number of redundancy notices will be even greater in October.

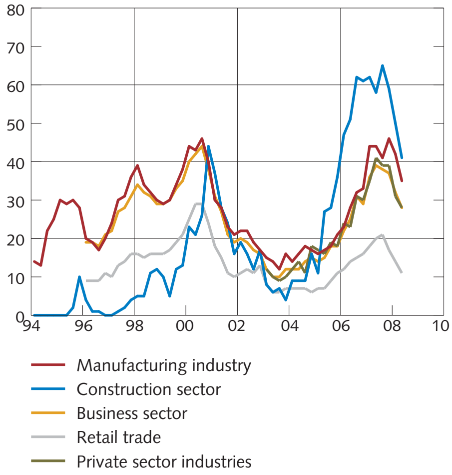
All in all, the labour survey outcome and labour market indicators point to a clear weakening in the labour market. Given this, the forecasts for the final quarter of 2008 regarding labour and employment have been revised down and unemployment is expected to be higher than forecast in the Monetary Policy Update.

The forecast for the number of hours worked is revised downwards for the coming quarters. However, as a result of Statistics Sweden's upward revision of the first two quarters, the whole-year forecast for the number of hours worked in 2008 is adjusted upwards from 1.6 to 1.7 per cent average annual growth.

■■ Lower productivity also in 2008

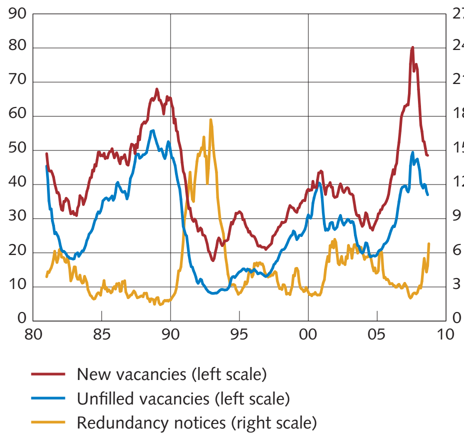
Productivity has fallen five quarters in a row, expressed as an annual

Figure 68. Proportion of firms reporting a shortage of labour
Per cent, seasonally-adjusted data



Source: National Institute of Economic Research

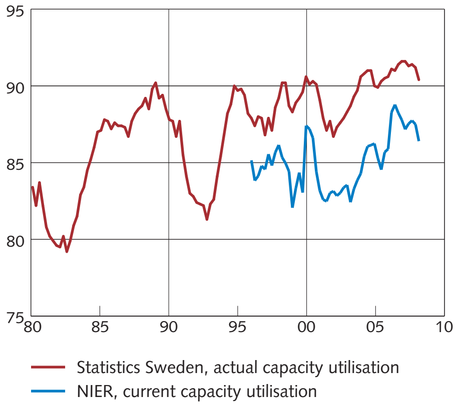
Figure 69. New and unfilled vacant jobs and redundancy notices
Thousands, seasonally adjusted data



Note. Three-month moving average. Unfilled vacancies refers to positions with a duration of more than ten days.

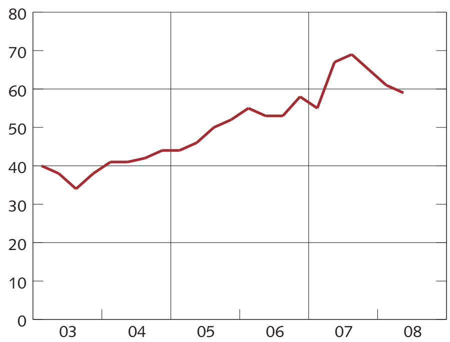
Source: Employment Service

Figure 70. Capital utilisation in industry
Per cent, seasonally-adjusted data



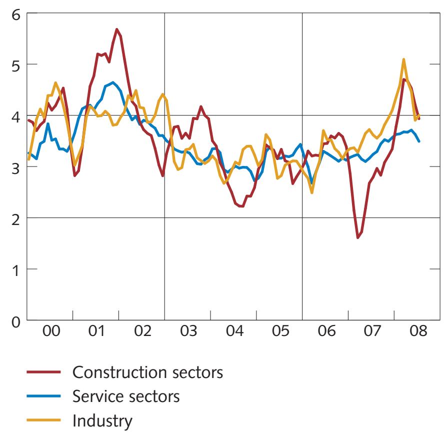
Sources: National Institute of Economic Research and Statistics Sweden

Figure 71. Full utilisation of companies' resources, private service industries
Proportion of companies



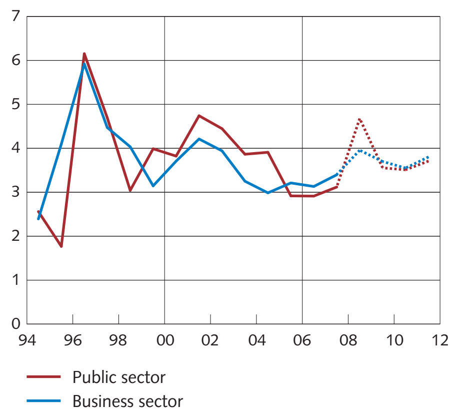
Source: National Institute of Economic Research

Figure 72. Wages in the business sector
Annual percentage change



Note. Three-month moving average.
Sources: National Mediation Office and the Riksbank.

Figure 73. Wages
Annual percentage change



Note. Broken lines represent the Riksbank's forecast.
Sources: National Mediation Office and the Riksbank.

percentage change. This is an unusually long period of falling productivity. In 2007 productivity declined by 0.6 per cent (see Figure 21). During the first half of 2008 productivity has continued to decline. In the most recent version of the National Accounts the figures for productivity during the first half of the year were revised down further. However, the indicators for GDP and the number of persons employed point to a slight increase in productivity over the coming quarters, compared with the previous quarters. But the annual rate of change in productivity is expected to remain negative for 2008 as a whole. Productivity growth is not expected to return to its trend level until some point in 2009. All in all, this means that the forecast for the annual rate of increase in labour activity for 2008 is revised down by 0.2 percentage points to -0.7 per cent.

■■ Falling resource utilisation

Resource utilisation is still assessed to be higher than normal but to be falling. As it is not entirely clear how resource utilisation is best measured, a number of different indicators are studied.

The percentage of companies responding that they have a labour shortage is one indicator of resource utilisation. The shortage of labour has declined since 2007, but was still at a high level during the second quarter (see Figure 68). The labour shortage was still considerable in the construction and manufacturing industries. The employment rate, that is, the share of the population that is employed, is another indicator of resource utilisation, as is the percentage of the work force that is unemployed. The employment rate has risen substantially since 2005 but has now levelled out and is expected to fall in the coming quarters (see Figure 23). Roughly the same picture is shown by developments in unemployment, which has begun to rise (see Figure 20). The labour market situation can thus be regarded as relatively strong as yet, while there are clear signs of a weakening.

Other indicators of resource utilisation, such as capacity utilisation in industry and the percentage of companies in the service sectors that fully utilise their resources also point to a high, but falling, resource utilisation since the end of 2007 (see Figures 70 and 71). At the same time, an increasing number of companies are now reporting insufficient demand as the factor limiting production increases, which is a turnaround compared with 2007.

An analysis of how GDP, employment and the number of hours worked deviate from their long-term trends can also provide an indication of the level of resource utilisation. However, the methods for determining these long-term trends are based on different assumptions with varying subjectivity, and should therefore be interpreted with caution. Figure 24 shows different gaps calculated with the aid of an HP filter. According to these measures, resource utilisation in the labour market remains high, but is now about to decline. However, the GDP gap has been declining for some time now and is only slightly positive.

■■ Higher rate of wage increase in 2008 than in 2007

Wages in the economy as a whole rose preliminarily by 3.3 per cent, according to the short-term wage statistics from the National Mediation Office (see Figures 72 and 73).

During the first seven months of the year, wages throughout the economy as a whole have increased by an average of 4.0 per cent. One important factor behind the higher rate of wage increase is that the agreed wage increases this year are higher than those last year. The centrally-agreed wage increases in the economy as a whole were around 2.6 per cent last year, while this year they amount to just over 3.2 per cent, according to the National Mediation Office's statistics. Despite the lack of retroactive payments in this year's wage statistics compared with those in 2007, the wage increases in addition to the central agreements have so far been higher in the economy as a whole than they were last year. However, wage increases in addition to the central agreements are expected to gradually decline over the coming period. All in all, wages are expected to increase by 4.2 per cent this year.

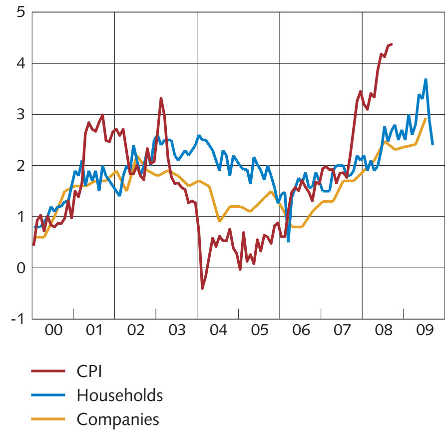
■■ Lower employer's contributions lead to slower rate of increase in total labour costs

According to the National Accounts, hourly wages increased by 4.7 per cent during the first half of this year, compared with the same period last year, which is almost 1.5 percentage points higher than the rate of increase last year. Hourly wages are expected to increase by 4.5 per cent during the remainder of the year, which gives an annual average of 4.6 per cent. The wage statistics in the National Accounts are more comprehensive than the statistics from the National Mediation Office and also include bonuses and other wage benefits.

Labour costs per hour, which also include employer's contributions, have so far this year increased by 3.4 per cent. The negative contribution from employer's contributions can be partly explained by the fact that the ITP premium in the agreed pension insurances for white-collar workers in the business sector has been reduced in 2008. The Government's policies, with for instance measures that have halved employer's contributions and self-employed persons' social security contributions for 18-24 year olds and abolished self-employed persons' social security contributions for certain older employees contribute to the fall in employer's contributions.

All in all, labour costs per hour are expected to increase by 3.4 per cent this year, which entails a negative contribution from employer's contributions of around 1.3 percentage points. At the same time, labour productivity is expected to fall by 0.8 per cent on average in 2008. This means that labour costs per unit produced are expected to increase by 4.2 per cent this year, which is approximately 0.5 percentage points higher than the assessment in the Monetary Policy Update and approximately as many as in 2007 (see Figure 22).

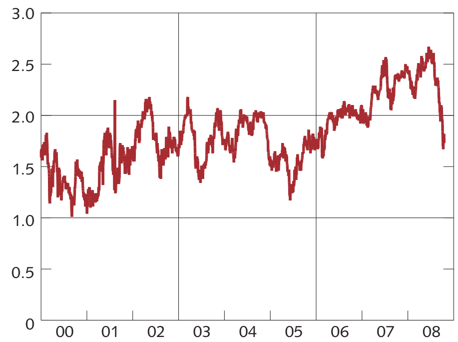
Figure 74. Actual inflation (CPI) and households' and companies' expectations of inflation one year ahead
Annual percentage change



Note. The curves for inflation expectations have been shifted ahead 12 months.

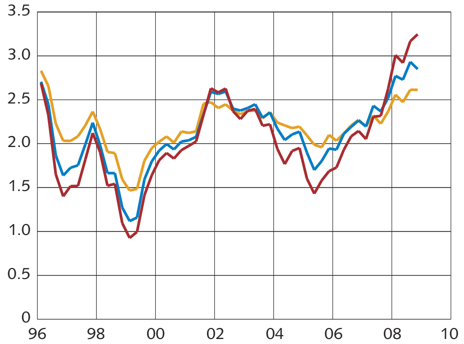
Source: National Institute of Economic Research and Statistics Sweden

Figure 75. The difference between nominal and real five-year rates (break-even inflation)
Percentage points



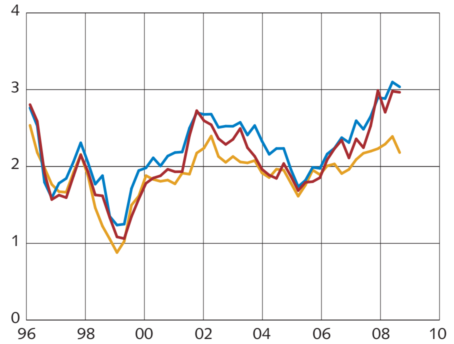
Source: The Riksbank

Figure 76. All agents' expectation of inflation one, two and five years ahead
Annual percentage change



Source: Prospera Research AB

Figure 77. Different agents' expectation of inflation two years ahead
Annual percentage change



Source: Prospera Research AB

Figure 78. Food, energy and mortgage costs in the CPI
Annual percentage change

Note: The weight of CPI of the respective components is given in brackets.
Source: Statistics Sweden

■■ Lower inflation expectations

Households' inflation expectations one year ahead, as they are measured in the National Institute of Economic Research's Consumer Tendency Survey, have fallen heavily in recent months. Expectations were at 2.4 per cent in September, which is a fall from 2.9 per cent in August and from 3.7 per cent in July (see Figure 74). Breakeven inflation, that is, the difference between the rates on nominal and real bonds with the same time to maturity, has also fallen recently (see Figure 75). Break-even inflation calculated on 5-year rates is currently just below 2 per cent. As a result of the current crisis in the financial markets, however, this type of measure must be interpreted with caution.

Prospera's survey of inflation expectations that was published on 8 October showed that expectations are still at a high level (see Figure 76). However, expectations for two years ahead had fallen slightly in the most recent survey. Two years ahead, money market participants are expecting inflation to be 2.2 per cent, which is a downward revision from 2.4 per cent in the previous survey made in June (see Figure 77). However, purchasing managers and social partners are still expecting inflation to be around 3 per cent two years ahead.

■■ Continued high inflation in Sweden

Since the Monetary Policy Update was published in September, the outcome for the CPI in August and September has been published. In connection with the publication of the CPI for August, Statistics Sweden published revised figures for CPI inflation for the months January to July next year. These figures showed that CPI inflation was slightly lower than in the earlier estimates. However, the annual rate of increase in the CPI is still high and amounted to 4.4 per cent in September (see figure 29). The last time inflation was this high was at the beginning of the 1990s.

Energy and food prices have risen substantially over the past year (see Figure 78). Energy prices in the CPI (fuel and electricity) were just over 18 per cent higher in September than in the same month last year. The corresponding rate of increase for food prices was just under 8 per cent in September. It is rising prices in the world market during this period that lie behind the high rates of increase in energy and food prices paid by consumers (see Figures 8 and 79).

Households' interest expenditure has risen substantially and in September it was just over 20 per cent higher than in the same month last year (see Figure 78). Inflation measured in terms of the CPIF, where mortgage rates are held constant, amounted to 3.5 per cent (see Figure 30).

Oil prices have fallen in the world market during the autumn. Futures prices, which from the bases for the forecast, were on average just over 20 per cent lower per barrel than in the September Monetary Policy Update during the first half of October (see Figure 8). Spot prices have fallen even further and are now around 35 per cent lower than at the beginning of September. However, the krona has weakened against the dollar by around 10 per cent during the corresponding period and the spot price expressed in kronor is therefore only around 25 per cent lower now than at the beginning of September. The futures prices for electricity have also fallen since the beginning of September.

Other commodity prices have also fallen recently. Food and metal prices have fallen by around 20 per cent on the world market since the beginning of September (see Figure 79). As the krona has weakened against the dollar, however, the downturn calculated in Swedish kronor is not as large. When expressed in Swedish kronor, food prices in the world market have fallen by just over 10 per cent since the beginning of September.

The prices of other goods and services in the CPI are still increasing relatively slowly (see Figure 80). When adjusted for household mortgage expenditure, energy and food, which together comprise around 30 per cent of the CPI, the annual rate of increase in the CPI was only 0.5 per cent in September.

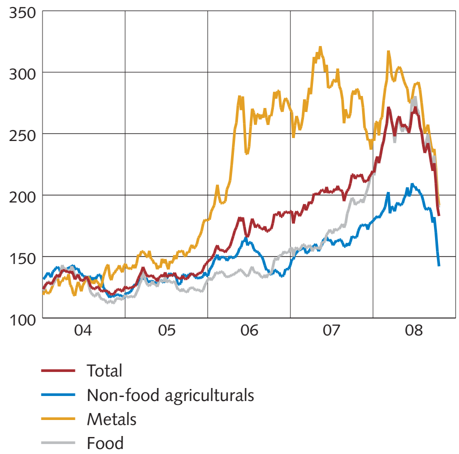
■■ Expected break in trend rise in inflation in Sweden

Inflation has shown a rising trend in Sweden in recent years, which coincides with a rise in resource utilisation and cost pressures in Sweden and abroad. The increases in energy and food prices are thus partly linked to high growth in the world economy.

The Riksbank monitors a number of alternative measures of inflation. The aim of these measures is to try to distinguish the common trend change in the general level of prices. A common method is to remove a number of goods and services from the CPI, whose prices vary considerably due to factors that are often assessed as temporary. Oil products, electricity and certain foods belong to this category. It is also common to calculate underlying inflation by using various statistical methods that eliminate or reduce the significance of certain products whose prices vary the most. Figure 80 presents different measures of underlying inflation. These have shown an upward trend since the middle of 2005. This coincides with increased resource utilisation and rising domestic cost pressures. The indirect effects of the high energy prices also affect the measures of inflation that do not include energy prices.

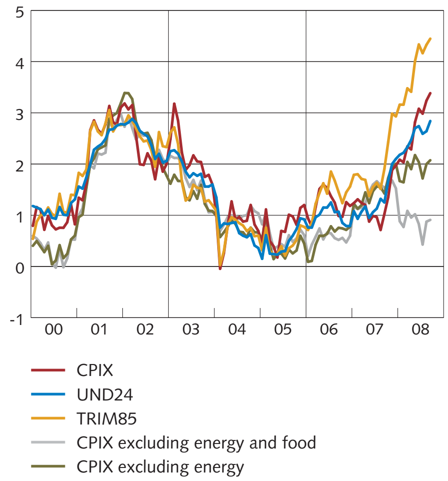
Compared with the assessment in the Monetary Policy Update, CPI inflation is now expected to be slightly lower over the coming months (see Figure 29). One reason for this is the lower energy prices. Statistics Sweden's downward revision of the outcomes for earlier months during the year also means that the CPI forecast will be lower during the remainder of the year than in the previous assessment. The inflation rate reached its highest level in September but is expected to fall over the coming months. CPI inflation is expected to be 3.0 per cent in December this year.

Figure 79. Commodity prices
USD, index, year 2000=100



Source: The Economist

Figure 80. Different measures of underlying inflation
Annual percentage change



Sources: Statistics Sweden and the Riksbank

The development of the financial crisis in September and October

The global financial anxiety intensified significantly in mid-September. After Lehman Brothers' filed for bankruptcy, the financial crisis escalated and affected the entire European bank system. None of the five US investment banks that existed at the start of the year still remains. Many financial markets more or less ceased functioning altogether. Extensive measures have now been taken in many countries in the form of higher deposit guarantees, the introduction of bank guarantees and – in some countries – capital injections to the banks affected. Central banks all over the world have also taken measures to facilitate the supply of credit and improve the functioning of the financial markets.

Crisis escalates in the United States

At the end of August, it became increasingly apparent that the US mortgage institutions Fannie Mae and Freddie Mac were having difficulties financing their operations. Rumours of credit losses in banks and financial institutions were also increasingly rife. Speculations regarding if and how the US government would inject capital into the mortgage institutions were answered on 7 September. On this date, the Federal Housing Finance Agency, a government authority, took over the two mortgage institutions by implementing conservatorship. This measure meant in effect that the US government took over Fannie Mae's and Freddie Mac's debts of approximately USD 5 400 billion.

Soon after the problems at the mortgage institutions became acute, the US investment bank Lehman Brothers was forced to apply for bankruptcy protection. This time, the US government was not as willing to provide financial guarantees as it was when JP Morgan acquired Bear Stearns in the spring. The investment bank Merrill Lynch had previously been one of the candidates to take over Lehman Brothers, but was instead acquired itself by Bank of America. Lehman Brothers' bankruptcy made it evident to the financial market agents that even the largest financial institutions could fall. This realisation meant that the great uncertainty that had previously prevailed on the financial markets developed into a serious crisis of confidence among the agents. This confidence crisis became apparent not only in the United States, but also on the European markets. This resulted in a massive demand for government securities in various countries and an unwillingness on the part of international investors and banks to invest at all in securities with a credit risk. One effect was that all financing globally become increasingly short-term and that long-term financing almost entirely disappeared.

8 Bear Stearns was acquired by JP Morgan following liquidity problems in late March 2008. Lehman Brothers has gone bankrupt and Merrill Lynch was bought out by Bank of America in September. The other two investment banks, Goldman Sachs and Morgan Stanley, have been converted into regular banks, a transformation that entails stricter supervision and reduced earning capacity according to observers.

9 In Europe, the Benelux bank Fortis, the German mortgage institution Hypo Real Estate, Bradford & Bringley in the UK and the Icelandic banks Kaupthing, Landesbanki and Glitnir are examples of institutions that have undergone some form of restructuring.

Central bank measures to increase liquidity in the banking system

By mid-September, it was clear that the financing problems were very worrying in a large part of the banking system in the United States as well as in the banking system in Europe. As there was widespread uncertainty about who would become insolvent next, few market players dared to enter into anything longer than overnight loan agreements. The US central bank, the Federal Reserve, therefore took measures to facilitate lending in the banking system. The volumes in existing lending programmes were increased and a broader range of securities were accepted as collateral for loans from the Federal Reserve. Central banks around the world have since extended various types of loan programme in their own currencies and in US dollars with the aim of contributing to the supply of credit and facilitating the return to more normal conditions.

The great demand for overnight loans has periodically led to very high overnight rates, while the interest rate for government bonds has fallen drastically (so-called "flight to quality" among investors). The US government rate with a term of 3 months has, at its lowest, been close to zero per cent. The problems have become particularly apparent on the market for mortgage bonds.

The financial crisis has tangible effects in Sweden

In the wake of the global effects from the Lehman bankruptcy, the financial markets in Sweden were also clearly affected. In mid-September the Swedish National Debt Office, after consultation with the Riksbank, decided on measures to ease the functioning of the Swedish money and bond markets. An extra SEK 150 billion in additional issues of treasury bills would be issued to meet the increased demand for government securities. The National Debt Office has invested the funds from these extra issues in mortgage securities through so-called reversed repo transactions. In this way, the liquidity situation of the banks has been further facilitated as they have been able to offload illiquid mortgage securities.

A large increase in credit spreads also affected the Swedish markets. The difference in the interest rates for mortgage bonds and treasury bonds in Sweden has, at its highest, risen to 1.7 – 2.0 percentage points. Prior to the financial crisis, the difference in this mortgage spread was 0.2 – 0.4 percentage points. Aside from the mortgage institutions, companies outside the financial sector have also found it increasingly difficult to finance their operations on the capital markets. The companies have, to a greater extent than usual, been forced to use their more expensive credit facilities at the banks.

The Riksbank, other Swedish authorities and the Government have taken a number of measures to improve the functioning of the financial markets. The most short-term market, that for credit during the day and overnight, has however continued to function all along in Sweden. The aim of measures taken by the Riksbank has been to facilitate the banks' financing in the slightly longer term. The measures include making the collateral requirements for loans from the Riksbank more generous and offering loans in Swedish kronor with terms of three and six months in order to make financing available at longer terms than are presently available on the market. In cooperation with the Federal Reserve, the Riksbank has also attempted to mitigate the general shortage of financing in US dollars that has also affected Swedish market participants. Loans in both kronor and dollars have been granted against collateral. The loan conditions have been set in auctions in which the banks have submitted bids for how much they want to borrow and at what interest rate. In all of the cases, a minimum interest rate has been set by the Riksbank before the auction to ensure that the loan conditions will be reasonable.

All in all, the Riksbank has lent SEK 180 billion in loans with three and six months maturities, and USD 27 billion (approximately SEK 200 billion with an assumed SEK/USD exchange rate = 7.5) in loans with one and three month maturities. The interest rates for these loans have been higher than the prevailing policy rates in Sweden and the United States respectively. The loans in kronor have created surplus liquidity on the overnight market. The Riksbank has handled this by borrowing from the banks either via daily so-called fine-tuning operations (borrowing overnight) at the repo rate minus 0.10 percentage points, or by issuing Riksbank Certificates at the repo rate. The lending from the Riksbank has thus taken place at an interest rate higher than the rate that the banks receive on their investments in the Riksbank. As a result of the increased lending and borrowing, the Riksbank's balance sheet total will have more than doubled from approximately SEK 190 billion at the beginning of September to over SEK 500 billion at the end of October.

The measures taken by the Riksbank and the Swedish National Debt Office have together meant that the Swedish authorities have lent approximately SEK 480 billion against collateral in mortgage bonds and other securities. This sum can be compared, for example, to the outstanding stock of covered bonds in Sweden, which at the end of August was estimated to be approximately SEK 1,000 billion.

In addition, the Riksbank has on one occasion provided special liquidity assistance to one bank, Kaupthing Bank Sverige AB. This measure was also aimed at safeguarding financial stability in Sweden and maintaining confidence in the Swedish banking system.

At an extraordinary monetary policy meeting held on 8 October, the Executive Board of the Riksbank decided to cut the repo rate by 0.5 percentage points to 4.25 per cent. This decision was part of a joint action in which several central banks reduced their policy rates. The aim was to mitigate the impact of the financial crisis on production and employment.

The Swedish Government has also presented proposals for a stability plan with measures to improve market functioning and measures to enable action to be taken if the situation in the financial system were to deteriorate. The proposal will be discussed in the Riksdag (the Swedish Parliament) within the next few days.

Table B1. Measures taken by Swedish authorities in the autumn of 2008 to combat the financial crisis

18 September	The Swedish National Debt Office announces that after consultation with the Riksbank it has decided to issue a large volume of short-term treasury bills. The money from the extra auctions will be loaned in the form of so-called reverse repos with mortgage securities as collateral. Two issues of SEK 25 billion each are announced for 19 September and 23 September, and further issues are signalled. It is estimated that the total issued volume will be a maximum of SEK 150 billion.
22 September	The Riksbank decides to increase credit facilities in the RIX payment system. The permitted percentage of covered bonds from an institution with close links to the counterparty concerned that can be used as collateral in the system is increased from 25 per cent to 75 per cent.
24 September	The Riksbank announces together with several other central banks that it will set up temporary mutual currency arrangements (swap facilities) with the Federal Reserve with the aim of dealing with the strained situation on the markets for short-term borrowing in US dollars. These arrangements mean that the Riksbank and the Federal Reserve have agreed on a swap facility amounting to USD 10 billion.
29 September	The Riksbank announces a new loan facility in USD. Two auctions, on 1 October and 22 October, are announced. The Riksbank and the Federal Reserve have also agreed to increase the previous swap facility to USD 30 billion.
1 October	The auction for USD 7 billion with a term of one month is fully subscribed.
2 October	The Riksbank sets up a loan facility in kronor with the aim of increasing access to longer-term loans. A first auction is announced for 6 October comprising SEK 60 billion for loans with terms of three months and against collateral. A further auction for loans with terms of three months but without a fixed amount is announced for 27 October 2008.
6 October	The Government decides to increase the deposit guarantee for current accounts from SEK 250,000 to SEK 500,000. The deposit guarantee is also extended to cover all types of deposit in accounts irrespective of whether the savings are fixed or can be withdrawn freely.
6 October	The Riksbank announces that it has decided to lend more money to the banks. The sum in the auction on 6 October is increased from SEK 60 billion to SEK 100 billion. The auction, which is held later the same day, is over-subscribed. A further auction is also announced for 8 October comprising SEK 100 billion with a term of six months.
8 October	The Riksbank cuts the repo rate from 4.75 per cent to 4.25 per cent.
8 October	The Riksbank once again changes the collateral requirements for credit in the RIX system. The permitted percentage of covered bonds from an institution with close links to the counterparty concerned that can be used as collateral in the system is increased from 75 per cent to 100 per cent. At the same time, it is also decided to lower the minimum credit rating requirement for longer-term securities pledged as collateral.
8 October	The Riksbank provides special liquidity assistance with a loan of up to SEK 5 billion to Kaupthing Bank Sverige AB.
8 October	The Riksbank's kronor auction of SEK 100 billion is not fully-subscribed. SEK 66.5 billion is loaned with a term of six months.
9 October	Finansinspektionen (the Swedish Financial Supervisory Authority) announces that it is prepared to change the regulations governing the calculation of the discount rate for life insurance companies. The aim is to make it possible for the life insurance companies to increase their investments in mortgage bonds.

10 October	The Riksbank decides to issue Riksbank Certificates, beginning on 14 October. The Riksbank Certificates will have a term of seven days and be issued at the repo rate. The aim is to create an additional way of drawing in the surplus liquidity in the banking system that the Riksbank's SEK loans at terms of three and six months have created and to provide the banks with a further instrument for managing liquidity.
13 October	The Riksbank announces that it will auction off an additional USD 10 billion on 15 October and SEK 80 billion on 16 October. Both loans will have a term of three months.
14 October	The first issue of Riksbank Certificates is conducted. The issue is not fully subscribed. Of the announced SEK 164 billion in Riksbank Certificates, SEK 55 billion is subscribed.
15 October	The Riksbank's dollar auction is over-subscribed. USD 10 billion is loaned, against collateral, for three months.
16 October	The Riksbank's kronor auction of SEK 80 billion is not fully-subscribed. SEK 13.5 billion is loaned, against collateral, for three months.
16 October	Finansinspektionen changes the regulations governing the calculation of the discount rate for, primarily, the insurance allocations of the life insurance companies and occupational pension funds. The change aims to stimulate an increased supply of interest-bearing securities with long maturities.
20 October	The Government presents a stability plan to safeguard the stability of the financial system. The plan includes a guarantee programme of a maximum of SEK 1,500 billion to support the medium-term financing of the banks and mortgage institutions and a stability fund to deal with any future solvency problems in Swedish institutions, to which the Government intends to allocate SEK 15 billion. A special stability fee will be charged to all credit institutions in Sweden. The aim is that the stability fund – together with the deposit guarantee fund – will amount to an average of 2.5 per cent of GDP within 15 years.
21 October	The Swedish National Debt Office issues treasury bills to a value of SEK 5 billion and has now in total issued treasury bills to a value of around SEK 100 billion within the framework of the programme announced on 18 September.
21 October	The second issue of Riksbank Certificates is conducted. The issue is not fully-subscribed. Of the announced SEK 177 billion in Riksbank Certificates, around 42 per cent, or SEK 74.2 billion, is subscribed.
22 October	The Riksbank's dollar auction for USD 10 billion is over-subscribed.
22 October	The Riksbank notifies that the earlier-announced auction for three-month loans on 27 October will cover SEK 80 billion.

Fiscal policy: assumptions and forecasts

In order to produce the most probable forecast for the development of the Swedish economy, the Riksbank also produces forecasts for fiscal policy. Fiscal policy is assumed to follow historical patterns and to act through automatic stabilisers as well as discretionary contracyclical policy. Another important consideration is that it is assumed that the target for public finances (the financial balance), a surplus of 1 per cent of GDP on average over an economic cycle, will be achieved in the long term. Different fiscal policy measures have, however, different effects on demand, supply and inflation.

What role does fiscal policy play in the Riksbank's assessment of economic development? There are several different explicit objectives for economic policy: that price stability should be maintained [10], that the financial balance over an economic cycle should average 1 per cent of GDP and so on. These objectives are set by the Riksdag (the Swedish parliament). The forecasts that the Riksbank produces for the development of the Swedish economy relate to the most probable trends and developments, that is the assumptions on which the forecasts are based must be realistic. The Riksbank assumes therefore that fiscal policy follows historical patterns and that the surplus target will be met. However, various fiscal policy measures affect the economy in different ways, which in turn affects the Riksbank's assessment of the development of inflation. This box addresses the assumptions that the Riksbank makes about fiscal policy and its macroeconomic effects.

What is fiscal policy?

Fiscal policy affects total demand and production via the public sector's income and expenditure and via a range of legislation and regulations. By means of adjustments in various instruments, factors such as consumption, investments, employment, wages and prices are affected. On the income side, the various fiscal policy instruments include different tax rates for labour and capital. Instruments on the expenditure side include various transfers to households and companies, public consumption and investments. The aim of fiscal policy measures may be to promote stability, to redistribute wealth or to allocate resources in the economy in a certain way. This box focuses on fiscal policy as a means of promoting stability. [11]

The budget effects of fiscal policy decisions to alter tax rates or benefit levels in, for example, the unemployment insurance scheme, is that income and expenditure in the public sector are changed. Changes of this type are referred to as discretionary fiscal policy. Discretionary fiscal policy in Sweden has on average followed a contracyclical pattern with

10 The objective has been defined by the Riksbank such that CPI inflation should increase by 2 per cent per year.

11 For a further description of fiscal policy, see the 2008 report of the Swedish Fiscal Policy Council or the NIER's conceptual framework for fiscal policy, Special Study no. 16 March 2008.

the aim of stabilising the economic cycle.[12] When demand and production in the economy have been low, political decisions have been made that have increased expenditure and reduced tax revenues in order to increase demand and production, a so-called Keynesian fiscal policy.

Public income and expenditure may, however, be altered for several other reasons.[13] If demand or production increases in the economy, public income increases mainly as a result of increases in tax revenues as the tax bases, for example the wage sum and household consumption, expand. At the same time, public expenditure falls as the higher production increases employment and reduces unemployment. This leads to lower expenditure for unemployment. The opposite occurs in the event of a slowdown in the economy. These are the so-called automatic stabilisers that mitigate the impact of an economic slowdown on incomes in the private sector. However, long-term trends, such as demographic trends, also affect the income and expenditure of the public sector. Fluctuations in asset prices may have a significant effect on the financial balance.[14] Some tax revenues in Sweden are volatile and fall significantly in the event of an economic downturn, for example revenues from taxes on companies and capital. These taxes are linked to the companies operating profits and to price trends on the share and property markets.

The effects of fiscal policy on supply and demand[15]

The effects of discretionary fiscal policy on the real economy are highly uncertain and vary depending on the instrument concerned. According to various studies,[16] the short-term effects of a reduction in public saving on GDP are generally positive and potentially great when resource utilisation is low. The effects are estimated to be greater for increases in expenditure than for tax changes. This relates partly to the fact that public expenditure, e.g. public consumption and investments, has a lower import content than other items in the balance of resources. Tax reductions for households usually lead to an increase in private consumption, but this has a higher import content than public consumption. In addition, the households normally save a part of the tax cuts. This leads to a less direct effect on domestic demand compared to public consumption and investments. The Riksbank constantly assesses how various discretionary fiscal policy decisions and proposals affect demand, supply and inflation in the short and medium term.

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12 G .Hjelm (2007) "Aktiv finanspolitik i Sverige och OECD 1980-2004: pro- eller kontracyklisk?" Internal Memo, NIER, J. Galí, & R.Perotti (2003) "Fiscal policy and monetary integration in Europe", CEPR Discussion Paper no. 3933, and H. Ohlsson & A. Vredin (1996) "Political cycles and cyclical policies", Scandinavian Journal of Economics, 98 no. 2.

13 In the text and the analysis it is the consolidated public sector that is referred to, that is the total of the municipalities, the old-age pension system and the state sector.

14 For references see R. Boije (2004), "The general government structural balance", Sveriges Riksbank's Economic Review, no. 1.

15 Some measures are also expected to affect the long-term, sustainable level of employment and production. Tax reductions that stimulate the supply of labour can therefore also contribute to higher production and lower inflation.

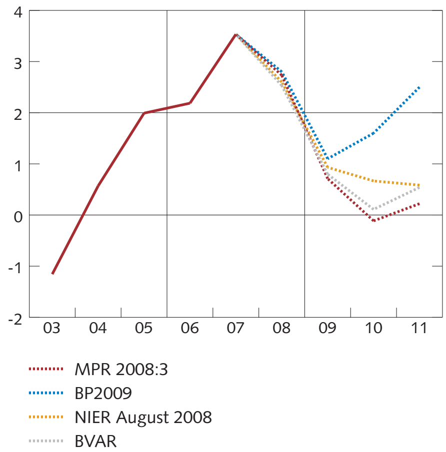
16 For an overview see R. Hemming, M. Kell, & S. Mahfouz, (2002), "The effectiveness of fiscal policy in stimulating economic activity- A Review of the Literature". IMF Working Paper no. 208 and chapter 5 "Fiscal policy as a countercyclical tool" in IMF (2008), World Economic Outlook, October, IMF, Washington.

How does the Riksbank make forecasts for fiscal policy?

In order to forecast the development of the economy, the Riksbank produces a forecast for fiscal policy based on historical patterns. This covers both discretionary decisions and automatic stabilisers. The discretionary policy includes proposals that are presented by the government in the spring and autumn budget bills, as well as proposals at the municipal level. However, these proposals usually only apply to the current and following year. A zero assumption for discretionary fiscal policy in the longer term is not a realistic assumption, in part because the historical mean value for discretionary measures is positive. In practice, discretionary decisions on expenditure increases or tax reductions are required so that the financial balance, given the Swedish regulations, does not increase over time. The Riksbank's forecast is thus based not only on announced or decided measures, but also on an assessment of the normal extent of such measures.

Nowadays, fiscal policy is also governed by regulations that cover the expenditure ceiling, the budget process and balanced-budget requirements for the municipalities, as well as the surplus target for public finances which stipulates that the surplus should be 1 per cent of GDP over an economic cycle. If the assessment is that the financial balance will be higher or lower than 1 per cent of GDP for an extended period of time, the Government must take steps to reach the target.

Figure B1. Financial balance in the public sector, forecasts
Percentage of GDP



Note: Broken lines represent the Riksbank's forecasts.

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

Historical patterns in fiscal policy

The difference between the public sector's income and expenditure, the financial balance, is thus affected by the direction of discretionary fiscal policy and by the automatic stabilisers. One way of studying the link between the financial balance and the real economy is to use a time-series model. Such a model describes the normal link between fiscal policy and macroeconomic developments. Given the forecasts made for macro-variables, the Riksbank uses a Bayesian VAR-model as a comparative norm to assess the size of the balance in the period ahead.[17] In Figure B1, the yellow line shows the Bayesian VAR model's forecast for the public financial balance based on the Riksbank's forecasts for the other variables included in the model. The historical link between the financial balance and the other variables indicates a decline in the balance in the

17 The Bayesian Vector Autoregressive model has been estimated using data for the period 1950-2007 (annual data). The model includes GDP, unemployment, the financial balance as a percentage of GDP and market capitalisation. GDP and market capitalisation are modelled in the first differences of logarithmed values, relative unemployment (ILO definition) in the first differences and the financial balance relative to GDP is modelled in the levels. The Bayesian VAR models include subjective judgements or experience by using so-called priors. One prior is that the financial balance in the long term is believed to be in line with the surplus target of 1 per cent of GDP. Prior views are then updated using the data in the estimates.

period ahead, even though there is a slight recovery in 2011. However, the decline starts from a high level in 2007. The red line shows the Riksbank's forecast for the financial balance given the macro picture and the assumptions concerning discretionary fiscal policy. In 2008 and 2009, the financial balance will decline according to the Riksbank's forecast, as is normal in such an economic situation according to the Bayesian VAR model. In 2010 and 2011, it is the Riksbank's assessment that the financial balance will be lower then the Bayesian VAR model's forecast due to a somewhat more expansionary fiscal model than normal. The main reason for this assessment is the assumption that the aim of fiscal policy will be to reach the target of a surplus of 1 per cent of GDP over an economic cycle more quickly.

Comparison with other forecasters

Figure B1 also shows the August forecast of the National Institute of Economic Research (NIER) and the government's forecast in the budget bill for 2009 (BP2009). The three forecasts for the financial balance are based on different macroeconomic forecasts and assumptions. For 2008 and 2009, the differences in the forecasts are only marginal. In August, the NIER did not have access to the budget bill for 2009, but its assumptions regarding discretionary fiscal policy were close to the figures presented in the bill. For 2010 and 2011, the differences in the forecasts are greater. The government assumes that the regulations will remain unchanged and that the surplus will therefore grow in line with the trend. Many items of expenditure, for example, remain nominally unchanged. The Riksbank and the NIER assume that additional discretionary fiscal policy decisions will be made in these years, although these will differ in scope. In August, the NIER's forecast for GDP and employment was much more optimistic than the Riksbank's current forecast, which also means of course that the NIER's forecast for the financial balance was higher.

The Riksbank's company survey: rapid slowdown and widespread pessimism

The companies report that the business climate deteriorated further during the summer. Responses to the questions concerning production, sales and order intake are now more negative than in the previous survey in May. The weaker economic situation is also an important reason why fewer companies than previously plan to increase their prices in the future. Most of the companies state that capital costs have risen in the most recent quarter,and a third believe that there is less access to external financing. Higher commodity prices for, for example, oil, metals and food have over the last 12 months led to increasing costs for the companies and have affected the general price level. The companies' responses indicate that the commodity price increases in general have had a relatively rapid impact on their sales prices. This in turn may indicate that the greatest effects on prices have already occurred at this stage and that the recent rapid fall in oil and commodity prices will soon have a dampening effect on sales prices.

The Riksbank conducts a company survey ahead of every Monetary Policy Report and 61 companies were interviewed in the period 27 August to 30 September. The main purpose of the survey is to obtain in-depth information on how the companies view the current economic situation in Sweden and how they intend act on the basis of the present conditions.

More widespread economic slowdown during the summer

A turnaround in the view of the economic situation occurred during the summer in above all the retail trade and the private service sector. In the industrial sector, the assessment already in May had been overwhelmingly "Poor". A majority of the construction companies still characterised the economic situation as "Good" in September.

A majority of the companies believed that the economic situation will be poorer in six months. This change in view is also reflected in the perception of the development of production, sales and order intake over the most recent quarter. Compared to the previous survey in May, the view of these factors has become much more pessimistic. The weaker economic situation has also led the companies to revise their investment plans downwards, and a majority of the companies now reported that planned investments, for example in higher capacity, have been postponed.

Restrictions in the companies' financing

As a result of the unrest on the financial markets, the companies were asked about external financing and interest expenditure. External financing refers to access to loans via the companies' normal bank contacts or other financing via, for example, bond issues. When asked directly how access to external financing has changed in the most recent quarter, approximately 30 per cent of the companies responded that access has become more restricted, while the remainder of the companies reported that there has been no change. It was stated, for instance, that borrowing on the market for corporate bonds has become considerably more expensive and that this form of borrowing has in principle come to a halt. It was also mentioned that it takes longer to get the loans approved by the banks and that in some cases it has been necessary to contact banks other than the company's regular bank to get a loan. It should be noted that the Riksbank's survey is primarily conducted among large and medium-sized companies that in most cases are relatively well-established. The survey does not therefore illustrate the situation for small companies. The situation on the credit market also deteriorated rapidly in September and the effects of this are only partly reflected in the survey.

Rapid impact of commodity price increases

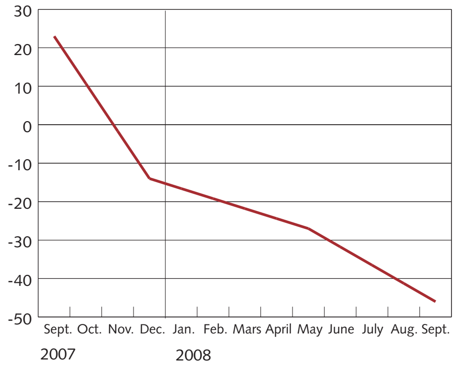
An important question for the assessment of the development of inflation in the period ahead is how rapid and how great the impact of rising costs will be on the companies' sales prices (and ultimately on consumer prices). The companies reported that, over the last 12 months, the costs that have increased most have related to various commodity prices. The companies have often referred to these price increases as one of the reasons for increasing their own prices. Among the commodity prices, it is mainly the prices of oil, steel and food that are mentioned in the interviews.

The oil price affects the costs of the companies in different ways. One effect is an increase in transport costs when petrol and diesel prices rise. Another effect is that oil is used as an input good in production processes (for example in plastics), which increases production costs. In most cases, companies have signed agreements with transport companies that include fuel clauses, which mean that increases in fuel costs immediately lead to increased costs for the companies that buy transport services. One conclusion that can be drawn from the survey is that the higher petrol and diesel prices have a relatively rapid impact on the companies' transport costs. How much the increased transport costs affect the companies' own prices is a more difficult question to analyse. For the majority of the companies, input goods and wages are the predominant cost items and transport constitutes a smaller proportion.

In the industries that manufacture different types of plastic material, it appears that the rising prices for crude oil have had a relatively rapid impact on the prices charged to other companies. This is because the companies that the Riksbank has interviewed state that delivery times for the various types of plastic material that are used by other industries or consumers are often short. The costs for various plastic products for the different companies in the industrial, construction and retail sectors vary widely, but in general do not appear to be considerable. An overall assessment is that products that are affected by the price of crude oil have a relatively rapid impact on the companies' costs, primarily via transport and oil-related input goods. It is more difficult to assess how quickly the companies' themselves change the prices they charge to consumers. A possible conclusion is that most of these price increases have already been implemented, as a majority of the companies state that they intend to increase their prices to a lesser extent in the year ahead compared to the preceding year[18] (see Figure B2). The oil price has fallen significantly in recent weeks. According to this analysis, it may therefor be assumed that the companies' sales prices will fall relatively rapidly in the period ahead.

For the industrial and construction sectors, it is the prices of various metals, mainly steel, that have led to significant cost increases. Several companies talked about the difficulty of passing on cost increases by increasing the prices they charge to other companies or consumers, but there were also examples of companies that have succeed in passing on these increases in full. A decisive factor in this respect is the level of demand for the company's products, hence an economic slowdown may make it more difficult for a company to increase its sales prices. The prices of metals have also fallen significantly on the world market in recent weeks however, and this will also affect the companies' pricing.

Figure B2. Companies' planned price increases
Net balance



Note. In this case net figures refer to the balance between the share of companies (weighted in terms of number of employees) responding that they intend to raise prices more compared to those responding that they intend to raise prices less over the coming 12 months.

Source: The Riksbank

Food prices stabilising

For the food industry and retail sector, increasing prices for various foods on the world market have led to increased costs that have ultimately also led to higher consumer prices. As the purchase prices of the suppliers increased in 2007, prices for retailers were also increased as various commodity clauses came into effect. Prices were also increased, however, in the negotiations on future prices. Increases in international food prices culminated earlier this year, and prices have fallen since then. The retailers' negotiations with their suppliers on future food prices began after the summer. These may result in lower price levels for the consumers. How much lower depends, among other things, on the relative negotiating strengths of the suppliers and the retailers and on how other costs for items such as transport and wages develop.

Slower increase in wage costs

Another important issue is how the companies' pricing will be affected by the high level of inflation and whether this in turn will also affect other costs, for example wage costs. When asked directly about their assessment of the future development of wage costs, a majority of the companies responded that wage costs will increase slightly less next year than during this year. An important factor behind this view is that wage drift is expected to decline. This in turn mainly relates to the fact that the companies expect the situation on the labour market to worsen, but also to the fact that the companies will become more cost conscious and adopt a more restrictive attitude to wage increases over and above the central agreements.

18 The question and its three alternative responses are worded as follows: How will you change your sales prices in the year ahead (twelve months) compared to the preceding year? Increase more than previously/As much as previously/Increase less than previously.

Appendix

- Tables
- Outline of articles published 2006–2008
- Earlier interest rate decisions
- Glossary

Tables

The figures in parentheses show the forecast in the previous Monetary Policy Update (September 2008).

Table A1. Inflation, annual average
Annual percentage change

	2007	2008	2009	2010	2011
CPI	2.2	3.7 (3.9)	2.1 (3.2)	1.6 (2.0)	2.0
CPIX	1.2	2.6 (2.9)	1.6 (2.6)	1.3 (1.7)	1.5
CPIX excl. energy	1.5	1.8 (1.9)	1.6 (2.0)	1.5 (1.9)	1.6
CPIF	1.5	2.8 (3.1)	2.0 (2.9)	1.6 (2.0)	1.8

Note. The assessment in the Monetary Policy Update in September 2008 is stated in parentheses. CPIX is CPI inflation excluding household mortgage interest expenditure and the direct effects of changes in indirect taxes and subsidies. CPIF is CPI with fixed interest rate.
Sources: Statistics Sweden and the Riksbank

Table A2. Inflation, 12-month average
Annual percentage change

	Dec. -07	Dec. -08	Dec. -09	Dec. -10	Dec. -11
CPI	3.5	3.0 (3.9)	1.6 (2.3)	1.8 (2.0)	2.1
CPIX	2.0	2.3 (3.1)	1.4 (2.0)	1.4 (1.7)	1.5
CPIX excl. energy	2.0	1.6 (1.7)	1.6 (2.0)	1.5 (1.9)	1.6
CPIF	2.4	2.4 (3.2)	1.8 (2.3)	1.7 (2.0)	1.8

Note. The assessment in the Monetary Policy Update in September 2008 is stated in parentheses. CPIX is CPI inflation excluding household mortgage interest expenditure and the direct effects of changes in indirect taxes and subsidies. CPIF is CPI with fixed interest rate.
Sources: Statistics Sweden and the Riksbank

Table A3. Summary of financial forecasts, annual average
Per cent, unless otherwise specified

	2007	2008	2009	2010	2011
Repo rate	3.5	4.2 (4.4)	3.3 (4.6)	3.3 (4.3)	3.6
10-year rate	4.2	4.0 (4.2)	4.0 (4.6)	4.5 (4.8)	4.8
Exchange rate, TCW-index, 18 November 1992 = 100	125.2	125.5 (123.4)	126.1 (122.2)	123.7 (121.9)	123.0
General government net lending*	3.5 (3.5)	2.7 (2.9)	0.7 (1.2)	-0.1 (0.6)	0.2

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

Table A4. International conditions
Annual percentage change, unless otherwise specified

GDP	2007	2008	2009	2010	2011
USA	2.0 (2.0)	1.5 (1.5)	0.3 (1.6)	2.3 (3.0)	3.0
Japan	2.0 (2.0)	0.6 (0.9)	0.3 (1.0)	1.3 (1.6)	1.6
Euro area	2.6 (2.6)	1.1 (1.3)	0.1 (0.9)	1.4 (1.9)	2.0
OECD	2.6 (2.6)	1.5 (1.7)	0.6 (1.6)	2.1 (2.6)	2.6
TCW-weighted	2.8 (2.7)	1.4 (1.6)	0.3 (1.2)	1.6 (2.1)	2.2
World	5.0 (4.9)	3.6 (3.9)	2.9 (3.8)	3.7 (4.4)	4.0

CPI	2007	2008	2009	2010	2011
USA	2.9	4.4 (4.1)	1.9 (2.7)	2.0 (2.2)	2.2
Japan	0.0	1.6 (1.4)	0.8 (1.0)	0.5 (0.5)	0.5
Euro area (HICP)	2.1	3.4 (3.7)	2.0 (2.7)	2.1 (2.3)	2.1
OECD	2.4	3.9 (3.6)	2.2 (2.6)	2.1 (2.2)	2.1
TCW-weighted	2.0	3.5 (3.6)	2.0 (2.5)	2.0 (2.1)	2.0

	2007	2008	2009	2010	2011
Crude oil price, USD/barrel Brent	73	105 (114)	92 (119)	96 (119)	98
Swedish export market growth	4.0 (4.0)	2.2 (3.9)	1.5 (3.5)	3.8 (5.9)	6.1

Note. Market growth for Swedish exports refers to growth in imports of goods for around 70 per cent of the countries that are recipients of Swedish exports. The forecast is weighted together on the basis of each country's share of Swedish export of goods.
Sources: IMF, Intercontinental Exchange, OECD and the Riksbank

Table A5. GDP by expenditure
Annual percentage change, unless otherwise specified

	2007	2008	2009	2010	2011
Private consumption	3.0 (3.0)	1.7 (1.8)	1.0 (1.7)	2.4 (3.0)	3.0
Public consumption	1.1 (1.1)	0.3 (-0.7)	0.5 (0.7)	1.3 (1.2)	1.0
Gross fixed capital formation	8.0 (8.0)	3.5 (3.6)	-0.5 (1.2)	1.8 (2.1)	2.3
Inventory investment*	0.7 (0.7)	0.0 (0.1)	-0.2 (-0.3)	0.1 (0.1)	0.1
Exports	6.0 (6.0)	4.0 (5.0)	1.2 (2.9)	4.4 (5.5)	5.9
Imports	9.6 (9.6)	5.2 (6.0)	1.6 (3.6)	3.9 (5.5)	5.5
GDP	2.7 (2.7)	1.2 (1.4)	0.1 (0.8)	2.5 (2.6)	2.8
GDP, calender-adjusted	2.9 (2.9)	0.9 (1.1)	0.2 (0.9)	2.2 (2.3)	2.8

*Contribution to GDP growth, percentage points
Note. The figures show actual growth rates that have not been calendar-adjusted, unless otherwise stated.
Sources: Statistics Sweden and the Riksbank

Table A6. Production and employment
Annual percentage change, unless otherwise stated

	2007	2008	2009	2010	2011
Population, aged 16-64	0.9 (0.9)	0.8 (0.8)	0.4 (0.4)	0.2 (0.2)	0.0
GDP, calendar-adjusted	2.9 (2.9)	0.9 (1.1)	0.2 (0.9)	2.2 (2.3)	2.8
Number of hours worked, calendar-adjusted	3.5 (3.5)	1.7 (1.6)	-1.2 (-0.6)	-0.6 (-0.3)	0.5
Employed, aged 15-74	2.5 (2.5)	1.2 (1.4)	-0.9 (-0.6)	-0.9 (-0.3)	0.2
Labour force, aged 15-74	1.5 (1.5)	1.2 (1.4)	-0.1 (0.1)	-0.2 (-0.2)	0.0
Unemployment*	6.1 (6.1)	6.2 (6.2)	6.9 (6.8)	7.6 (6.9)	7.4
Labour market programmes*	1.8 (1.8)	1.6 (1.6)	1.9 (1.8)	1.9 (1.9)	1.9

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

Table A7. Wages and unit labour cost for the economy as a whole
Annual percentage change, unless otherwise specified, calendar-adjusted data

	2007	2008	2009	2010	2011
Hourly wage, NM	3.3 (3.3)	4.2 (4.2)	3.7 (3.6)	3.5 (3.7)	3.8
Hourly wage, NA	3.3 (3.3)	4.6 (4.4)	3.9 (3.9)	3.8 (4.0)	4.0
Employer's contributions*	0.4 (0.4)	-1.3 (-1.2)	-0.1 (0.7)	0.1 (0.1)	0.1
Hourly labour cost, NA	3.7 (3.7)	3.4 (3.2)	3.8 (4.6)	3.9 (4.0)	4.1
Productivity	-0.6 (-0.6)	-0.7 (-0.5)	1.4 (1.5)	2.8 (2.6)	2.3
Unit labour cost	4.3 (4.3)	4.1 (3.7)	2.3 (3.0)	1.1 (1.4)	1.8

* 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. Due to rounding the contributions may not add up.
Sources: National Mediation Office, Statistics Sweden and the Riksbank

Table A8. Scenario with intensified effects of the credit crisis, annual average
Annual percentage change, unless otherwise specified

	2007	2008	2009	2010	2011
CPI	2.2	3.7 (3.7)	1.8 (2.1)	1.5 (1.6)	2.0 (2.0)
GDP, calendar-adjusted	2.9	0.8 (0.9)	-0.5 (0.2)	2.0 (2.2)	2.8 (2.8)
Repo rate, per cent	3.5	4.1 (4.2)	2.2 (3.3)	2.3 (3.3)	2.9 (3.6)
Real repo rate, per cent	1.1	1.7 (1.8)	0.8 (1.7)	0.4 (1.4)	
Exchange rate, TCW-index, 18 Nov 1992 = 100	125.2	125.6 (125.5)	127.4 (126.1)	124.9 (123.7)	123.7 (123.0)
TCW-weighted interest rate, per cent	4.3	3.9 (4.0)	2.5 (3.0)	2.7 (3.5)	3.6 (4.2)
TCW-weighted CPI	2.0	3.5 (3.5)	1.8 (2.0)	1.7 (2.0)	1.9 (2.0)
TCW-weighted GDP	2.8	1.3 (1.4)	-0.5 (0.3)	1.1 (1.6)	2.1 (2.2)

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

Table A9. Scenario with weaker krona, annual average
Annual percentage change, unless otherwise specified

	2007	2008	2009	2010	2011
CPI	2.2	3.7 (3.7)	2.3 (2.1)	2.1 (1.6)	2.3 (2.0)
GDP, calendar-adjusted	2.9	0.9 (0.9)	0.4 (0.2)	2.4 (2.2)	2.9 (2.8)
Repo rate, per cent	3.5	4.2 (4.2)	3.5 (3.3)	3.6 (3.3)	4.0 (3.6)
Real repo rate, per cent	1.1	1.7 (1.8)	1.4 (1.7)	1.3 (1.4)	
Exchange rate, TCW-index, 18 Nov 1992 = 100	125.2	125.5 (125.5)	129.1 (126.1)	128.2 (123.7)	128.0 (123.0)

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

Table A10. Scenario with continued high inflation, annual average
Annual percentage change, unless otherwise specified

	2007	2008	2009	2010	2011
CPI	2.2	3.8 (3.7)	2.9 (2.1)	2.0 (1.6)	1.8 (2.0)
GDP, calendar-adjusted	2.9	0.9 (0.9)	0.2 (0.2)	2.2 (2.2)	3.0 (2.8)
Repo rate, per cent	3.5	4.2 (4.2)	3.7 (3.3)	3.7 (3.3)	3.8 (3.6)
Real repo rate, per cent	1.1	1.6 (1.8)	1.7 (1.7)	1.9 (1.4)	
Exchange rate, TCW-index, 18 Nov 1992 = 100	125.2	125.6 (125.5)	126.6 (126.1)	124.1 (123.7)	123.0 (123.0)
TCW-weighted interest rate, per cent	4.3	4.0 (4.0)	3.5 (3.0)	3.9 (3.5)	4.5 (4.2)
TCW-weighted CPI	2.0	3.6 (3.5)	2.8 (2.0)	2.4 (2.0)	2.1 (2.0)
TCW-weighted GDP	2.8	1.4 (1.4)	0.3 (0.3)	1.6 (1.6)	2.1 (2.2)

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

Outline of boxes published 2006-2008[19]

2006

2006:1 The path of the krona and inflation
2006:1 Material for assessing monetary policy 2003-2005
2006:1 Uncertainty regarding future interest rate movements
2006:2 Monetary policy in Sweden
2006:2 What is a normal level for the reporate?
2006:2 Resource utilisation, costs and inflation
2006:3 Monetary policy in Sweden
2006:3 The 2007 wage bargaining round
2006:3 Perspectives on the quantity of unutilised resources in the labour market
2006:3 Inflation indicators

2007

2007:1 RAMSES – a tool for monetary policy analysis
2007:1 Riksbank to publish its own forecast for the repo rate
2007:1 Material for assessing monetary policy 2004-2006
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
2007:2 The effects of the abolition of property tax on housing prices and inflation
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

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
2004			
5 February	2.50	-0.25	no report
31 March	2.00	-0.50	2004:1
28 April	2.00	0	no report
27 May	2.00	0	2004:2
23 June	2.00	0	no report
19 August	2.00	0	no report
13 October	2.00	0	2004:3
8 December	2.00	0	2004:4
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

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, which 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.

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, which 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: The prices of bonds, shares and property.

Basis spread: Shows the difference between the three-month interbank rate and the expected policy rate.

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

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

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

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

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

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

CPIX: A measure of underlying inflation. Calculated on a monthly basis by Statistics Sweden as the CPI excluding household mortgage interest expenditure and the direct effects of changes in indirect taxes and subsidies.

Credit spread: Refers to the difference between different types of interest rates on securities with the same time to maturity but different credit risks.

Currency swap: An agreement to buy a currency at the current rate and to sell the same currency back at a specified exchange rate on a specific day in the future.

Current prices: The current price expresses the nominal value and is not adjusted for changes in value such as inflation.

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 growth: Intended as a measure of the growth in those markets (countries) to which Swedish goods and services are exported. See also the note to Table A2.

FED: The Federal Reserve Bank of the United States.

Fed funds: 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: The financial markets comprise the equity market, the money market, the bond market and the foreign exchange market.

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.

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.

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 removed.

ILO: The ILO (International Labour Organization) is the UN body focusing on employment and working life.

Implied forward rates: If there are no market-listed forward rates it is possible to calculate what are known as implied forward rates on the basis of ordinary interest rates with different terms. See also Forward rate.

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

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

Investment bank: A bank that issues and sells financial assets. They also give financial advice to their customers and trade on their own behalf.

Labour costs: The total cost of labour per hours worked according to the National Accounts, i.e. the sum of wages, 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 policy: The measures taken by the Riksbank in order to maintain the value of money.

Money market: The market for interest bearing securities with a time to maturity less than one year.

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

Money market instruments: Securities traded in the money market.

MPR: Monetary Policy Report.

MPU: Monetary Policy Update

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

Policy rate: The interest rates set by central banks for monetary policy purposes. In Sweden these are the repo rate, the lending rate and the deposit rate. The repo rate is the most important interest rate.

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 the number of hours worked.

Purchase price coefficient: The purchase price of a property in relation to its assessed 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: The European Central Bank's policy rate.

Repo rate: The Riksbank's 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 on a high-risk investment that an investor requires as compensation for risk.

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

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

Spot market 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: STINA (Stockholm Tomnext Interbank Average) is an interest rate derivative contract where two parties exchange a fixed interest rate fl ow 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.

Subprime mortgages: 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, based on competitive weighting.

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

TED spread (Treasury/euro-dollar spread): States the difference between the interbank rate on a particular maturity and the corresponding rate on a treasury bill.

Total Competitiveness Weights (TCW) exchange rate: The Swedish krona's exchange rate measured against a basket of other currencies, where the weighting is determined primarily by the amount of trade we have with each of the respective countries.

Underlying inflation: A measure of inflation that in some way excludes or attributes 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 per unit produced.

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

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