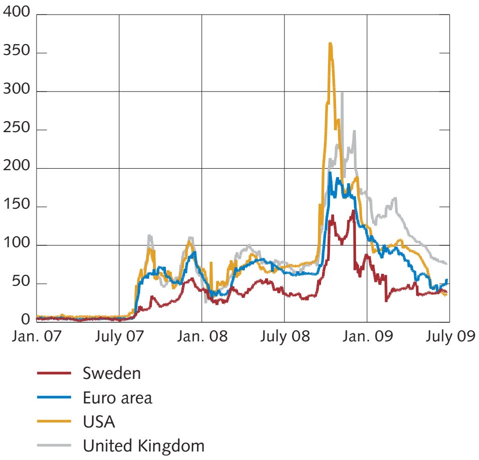
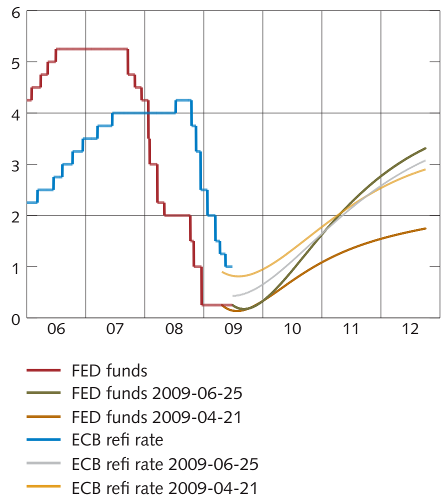
Figure 44. Difference between interbank rates and expected monetary policy (Basis spread)
Basis points



Note. Refers to the difference between the three-month interbank rate and the overnight index swap rate.

Sources: Reuters EcoWin and the Riksbank

Figure 45. 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, which is not always equivalent with the official policy rate.

Sources: Reuters Ecowin and the Riksbank

economies and to reduce the risk of deflation. However, the Federal Reserve's record-low policy rate with a target interval of 0-0.25 per cent has remained at the same level since December 2008. Forward rates show that market participants are expecting the policy rate in the United States to remain at this level for the remainder of 2009 and then to have been raised to 1 per cent during summer 2010 (see Figure 45).

The European Central Bank, ECB, has cut its policy rate by 25 basis points to 1 per cent since the Monetary Policy Update was published in April. Forward rates point to the market expecting the policy rate to be cut during the autumn and to once again be at 1 per cent in spring 2010 (see Figure 45). The Bank of England has not changed its policy rate of 0.5 per cent since March. Market pricing shows that a cut in the policy rate is conceivable during the autumn, but it will then be raised to 1 per cent in spring 2010.

The Riksbank cut the repo rate by 50 basis points to 0.5 per cent when the Monetary Policy Update was published in April. Now forward rates are indicating that the market is expecting the repo rate to remain in principle unchanged until the end of this year and then to gradually rise to 1 per cent in summer 2010 (see Figure 46). This means that market participants' monetary policy expectations are approximately the same as after the April monetary policy meeting.

■■ Central banks have purchased government and mortgage bonds and carried out other measures

With policy rates close to zero some central banks have chosen to conduct their monetary policy by means of other measures, such as purchases of government bonds and mortgage bonds. In March the Federal Reserve announced a plan to purchase government bonds in the secondary market with maturities of up to ten years, to a value of USD 300 billion. Government bond rate fell after the central bank's announcement, but since then long-term government bond rates have risen (see Figure 42). Just over half of the amount announced for the bond purchases remains to be used.

The ECB recently decided to purchase covered bonds to a value of EUR 60 billion. These bond purchases will be made in both the primary and secondary markets during a period of one year throughout the entire euro area, starting from July. The ECB has also lent EUR 442 billion at a fixed interest rate and with full allocation over one year. The amount lent corresponds to almost 5 per cent of one year's GDP in the euro area. Full allocation means that the lending volume is not determined in advance. As long as the borrowers (the banks) can supply collateral, there is no ceiling as to how much may be lent.

The British government has given the Bank of England a mandate to purchase securities up to GBP 150 billion, and the Bank has allocated GBP 125 of this to purchase securities with long maturities. Less than half of the funds remain to purchase bonds with long maturities, until the end of the summer. During the spring, the Bank of Japan extended its purchases of government bonds with long maturities. The Swiss central bank has also purchased government bonds and covered bonds. The Bank of Canada has announced that similar quantitative easing may be used to attain its inflation target. To summarise, central banks around the world are still conducting a very expansionary monetary policy with the aim of keeping down market rates.

■■ Stronger stock markets

Since the April Monetary Policy Update was published, stock markets around the world have risen (see Figure 47). Government stimulation packages, positive information on stress tests of US banks and relatively strong forward-looking indicators and company reports have led investors to conclude that the fall in economic activity has come to a halt. This has meant that the willingness to invest in higher risk assets has increased, which has caused stock markets to rise. The Stockholm Stock Exchange has risen substantially recently, while volatility has declined (see Figure 5). Especially, the share prices of companies within the financial and energy sectors have increased.

■■ Large difference between short and long mortgage rates

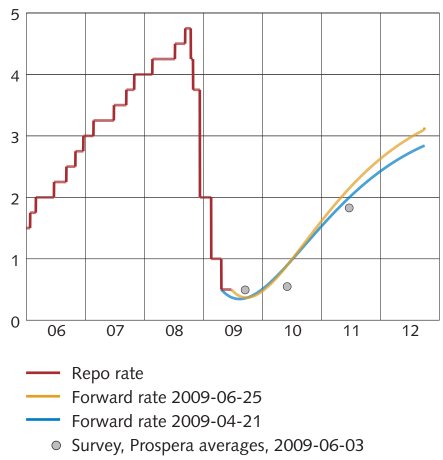
The Riksbank's interest rate cuts have had a full impact on households' variable mortgage rates during 2009. Since April the listed mortgage rates have remained relatively unchanged at a level below 2 per cent. On average, the difference between these mortgage rates and the repo rate has been around 140 basis points during the period April to the beginning of June (see Figure 48). Compared with the autumn's interest rate differences, households are facing a more normal pricing of mortgages, but the difference is still around 20 basis points higher than the historical average since 1996.

Long-term mortgage rates have risen since the Monetary Policy Update was published, which is linked to the fact that government bond rates for the corresponding maturities have also risen (see Figure 49). The difference between mortgage rates and government bond rates, what is known as the mortgage spread, has declined to on average around 115 basis points with effect from April (see Figure 50). This means that the mortgage spread has fallen compared with the final quarter of 2008. However, it is still higher than the average difference of around 85 basis points during the first six months of 2008, and it is much greater than in the period before the financial turbulence began in autumn 2007.

■■ House prices have stabilised

During the first quarter of 2009 house prices fell in relation to the same period in 2008 (see Figure 51). According to Statistics Sweden's figures for house prices and Mäklarstatistik (estate agents' figures),

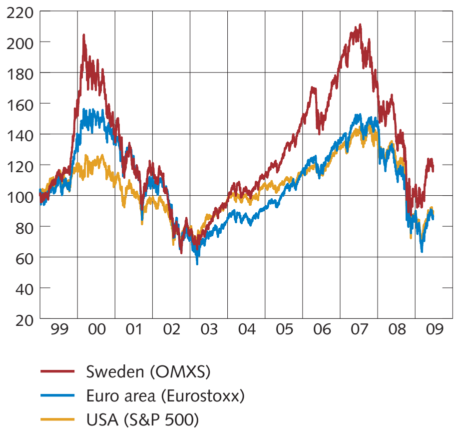
Figure 46. Monetary policy expectations in Sweden according to money market participants
Per cent



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

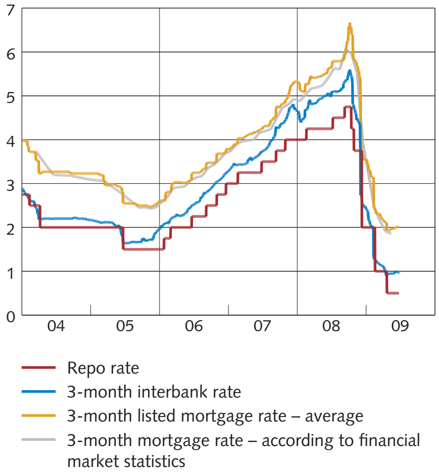
Sources: Reuters Ecowin, TNS Prospera and the Riksbank

Figure 47. Stock market movements
Index, 04.01.99 = 100



Source: Reuters EcoWin

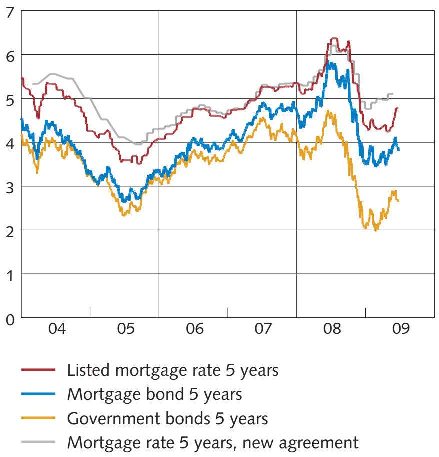
Figure 48. Short-term interest rates in Sweden
Per cent



Note. Refers to the average of the listed three month mortgage rate from banks and mortgage institutions and the monthly average for three month mortgage rates for new lending by the mortgage institutions. Listed mortgage rates are the interest rates published by Nordea, SBAB, SEB Spintab and Stadshypotek in the daily press and elsewhere.

Sources: Reuters EcoWin, Statistics Sweden and the Riksbank

Figure 49. Long-term mortgage rates in Sweden
Per cent



Note. Refers to the average of listed 5-year mortgage rates from banks and mortgage institutions, as well as 5-year mortgage rates for mortgage institutions' new agreements, according to the Riksbank's financial market statistics. Listed mortgage rates are the interest rates published by Nordea, SBAB, SEB Spintab and Stadshypotek in the daily press and elsewhere.

Sources: Reuters EcoWin, Statistics Sweden and the Riksbank

the fall in housing prices has declined during the spring. Prices rose by 1 per cent for both houses and tenant-owned apartments in April relative to March. House prices continued to rise by 2 per cent in May, compared with April, while prices of tenant-owned apartments remained unchanged.

■■ Bank lending increasing more slowly

Financial market statistics show that the rate of increase in lending to households, measured as an annual percentage change, has continued to diminish during 2009 (see Figure 52). The recent slowdown is primarily due to mortgages increasing more slowly. The reasons behind this may be stricter financing terms and the general slowdown in the housing market.

The rate of lending to companies slowed down last year and this trend has continued this year, which is linked to a large decline in investment. The financial crisis has led companies to believe that it has become more difficult to borrow. All in all, the available statistics point to a lower rate of increase in bank lending to companies, but it is difficult to see any broad credit tightening.

According to ALMI's loan indicator[4] for the second quarter, the banks are expecting lending to both companies and households to continue to increase. The indicator also shows that a majority of the banks state their loan terms are unchanged or have been tightened slightly compared with the first quarter. The National Institute of Economic Research's survey of credit and financing terms and the Riksbank's company survey indicate that companies' possibilities to obtain funding have improved slightly in recent months, although the possibilities for funding appear to be worse than before the crisis erupted.

■■ High lending to swedish banks but declining growth in money supply and monetary base

Since autumn 2008, the Riksbank has taken a number of measures to safeguard financial stability and to support the banks' credit granting. The Riksbank has lent both Swedish krona and US dollars to the Swedish banks, in all cases against collateral and at interest rates determined in an auction. As a result of this increased lending, the Riksbank's balance sheet has expanded substantially. From the beginning of September 2008 to the end of the year, the balance sheet total increased from almost SEK 200 billion to SEK 700 billion (see Figure 53). During 2009 the balance sheet has declined slightly, but it is still very large from an historical perspective.

With effect from April 2009 the monetary base in Sweden is defined as banknotes and coins in circulation, monetary policy counterparties' deposits in the Riksbank and claims on the Riksbank as

4 ALMI has carried out a quarterly survey called "Loan indicator" since September 2004. During the period 3-9 June it carried out telephone interviews with 150 randomly selected bank managers in Sweden. The results were presented by ALMI on 26 June.

a result of Riksbank Certificates that have been issued. This definition complies with the IMF's recommendations and is also used by the ECB. During autumn 2008 the Riksbank's monetary base increased substantially as the Riksbank lent out increasing large sums to the Swedish banks (see Figure 54). During 2009, however, the monetary base has declined slightly, but it is still more than twice as large as at the same time last year.

The rate of increase in money supply measure M2 has slowed down in 2009 and amounted to just under 9 per cent in May. The growth rate in the broadest money aggregate, M3, has continued to fall during the year. The slowdown in the growth rate is partly because the general public has reduced its holdings of the money market instruments with short maturities that are included in M3. However, in May the rate of increase in M3 increased slightly (see Figure 55).

■■ The krona remains weak, but has appreciated during the spring

Since the financial crisis worsened in September 2008 the Swedish krona has weakened substantially, while the foreign exchange market has been very volatile (see Figure 56). The worsened financial crisis and the global economic downturn during the autumn have led to a flight from smaller to larger currencies that are considered "safer" and more liquid.

At the beginning of 2009 the krona was around 17 per cent weaker in trade-weighted terms than six months previously. At most the TCW index amounted to over 156 at the beginning of March (a higher index means a weaker krona). Since then the krona has strengthened almost 6 per cent (see Figure 10). However, the day-to-day fluctuations have at times been substantial. For example, the krona tends to weaken tangibly when there is negative news regarding economic developments in the Baltic countries. The exchange rate was almost 1 per cent stronger in the second quarter of 2009 than was forecast in April.

■■ Interest rate differentials between European government bond rates have declined slightly

In autumn 2008 the uncertainty on the European financial market was further manifested in an increase in the differences between the rates for the different euro countries' government bonds. The difference in rates between, for example, ten-year German and Greek government bonds was relatively stable up to the beginning of 2008 and amounted at most to just over 0.3 percentage points (see Figure 57). At the beginning of February 2009 this difference had increased to almost 3 percentage points. Since mid-March interest rate differences have declined, but they remain at unusually high levels.

The fact that government bonds in some countries in the euro area are higher than others has been linked to concerns that

Figure 50. Mortgage spread
Basis points

Note. Refers to the difference between mortgage bonds rates and government bond rates, 5 year term.

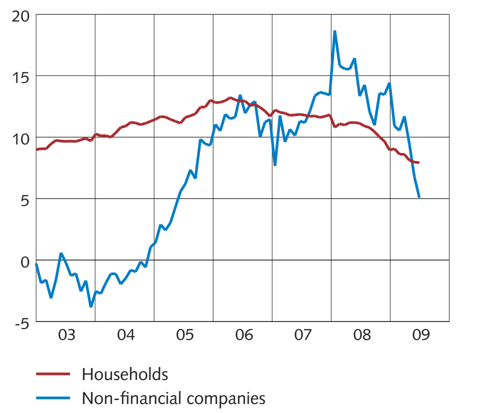
Source: The Riksbank

Figure 51. Housing prices
Annual percentage change

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

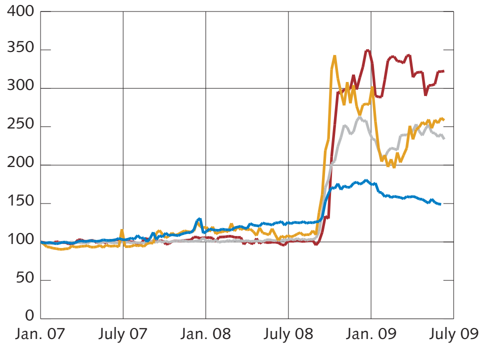
Source: Statistics Sweden

Figure 52. Lending to Swedish households and non-financial companies
Annual percentage change



Sources: Statistics Sweden The Riksbank

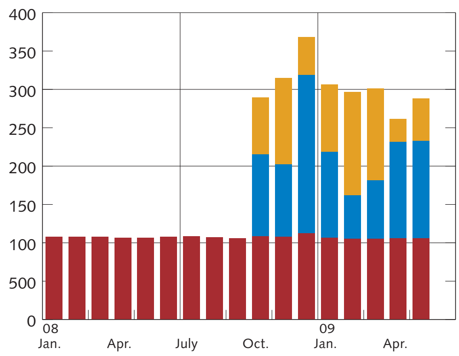
Figure 53. International comparison between central banks' balance sheet totals
Index, January 2007 = 100



Note. Weekly data until week 25.

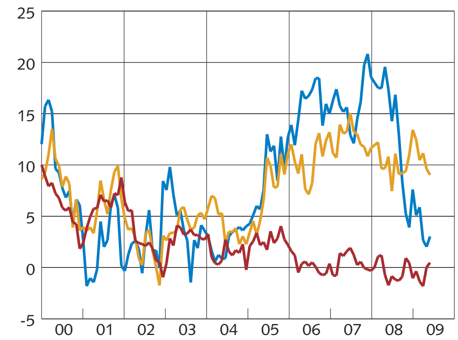
Sources: The respective central banks

Figure 54. Monetary base
Billion SEK



Source: The Riksbank

Figure 55. Money Supply
Annual percentage change



Sources: Statistics Sweden and the Riksbank

government budget deficits will increase in the future. The decline in differences since last winter is a sign that this concern has lessened somewhat. However, the difference between the Swedish and German ten-year bonds rates has not changed as much in 2009.

To summarise, developments in the financial markets point to some stabilisation having occurred and to expectations of a turnaround in the world economy. However, there is still a considerable amount of uncertainty.

■■ Some stabilisation in world trade

During the spring there have been signs that the heavy fall in world trade has come to an end and that there has also been some stabilisation here. The world trade monitor index, which measures the total export and import volumes in the world, fell heavily at the end of 2008 (see Figure 58). World trade has continued to fall this year but at a much slower rate. Another positive sign is that international prices of ship freights have risen substantially in recent months (see Figure 59). Statistics on foreign trade from countries in both Asia and the euro area also indicate that the downswing in exports has slowed down (see Figure 60).

■■ Signs of improvement in Asia

There are signs that the downturn in Asia's growth economies bottomed out during the fourth quarter of 2008. Extensive fiscal policy investments have been made in several countries and these now appear to be providing results, particularly in China. Retail sales and fixed gross investment have increased at a faster rate in April and May there than in previous months. The increase in Chinese industrial production in May was the highest since October 2008. The purchasing managers' index fell slightly in May compared with April, but is nevertheless at the next highest level since May 2008.

In China, South Korea and India GDP growth was positive and higher during the first quarter of 2009 than in the fourth quarter of 2008. The decline in industrial production compared with the beginning of last year has slowed down in several of the countries (see Figure 61). Exports to China from other countries in the region have also risen. In Japan GDP fell heavily during the first quarter of 2009. The decline amounted to a good 14 per cent, calculated as an annual rate. The main reasons for the fall were weak exports and private investment. However, the most recent statistics indicate that the fall in exports has slowed down.

■■ Indications that the fall in the us economy has slowed down

GDP growth between the fourth quarter of last year and the first quarter of this year was -5.5 per cent when calculated as an annual rate, which was in line with the forecast in the April Monetary Policy Update. Household consumption rose after two quarters with large falls. On the other hand, investments, public sector consumption and stocks contributed to a decline in demand. In April household consumption fell, despite tax cuts and increased transfers contributing to a significant increase in households' disposable income (see Figure 62).

Sales of existing homes rose both in April and May, while sales of new homes have been relatively unchanged in recent months. There may have been some stabilisation in sales as the level was around the same as at the end of last year. The number of months taken to sell both new and old homes fell in May, but it still takes longer time than normal. According to the Case-Shiller index, house prices have now fallen by around 30 per cent since the peak in summer 2006.

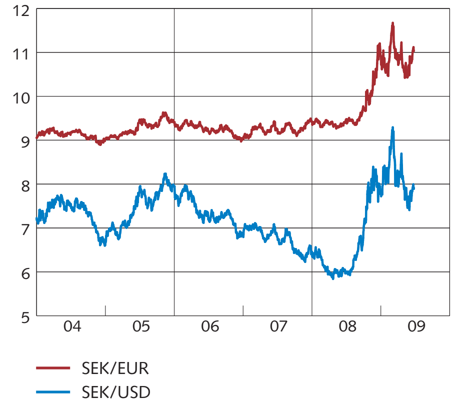
The labour market has continued to weaken, although the decline in employment slowed down in both April and May. However, when compared with the same month last year the fall was substantial (see Figure 62). Unemployment has risen and was just over 9 per cent in May, which can be compared with 5 per cent last spring. The rising unemployment has contributed to a worsening in households' payment problems. In the first quarter of this year the percentage of households experiencing problems in paying their mortgages was the highest measured since statistics began to be kept in 1991. The figure was close to 8 per cent, which can be compared with around 1.5 per cent prior to the start of the decline in the housing market. During the first quarter, the number of hours worked fell in nonfarm private sector by 9 per cent when calculated on an average annual rate, and productivity rose by 1.6 per cent in the first quarter compared with the previous quarter. This means that productivity has been stronger than during previous recessions. To summarise, a number of indicators point to the fall in the US economy having slowed down. Both consumer confidence and companies' expectations improved during the spring (see Figure 63).

■■ Historically weak first quarter in the Euro area

The assessment in April was that the first quarter of this year would show the largest fall in GDP and that the pace of the fall would then slow down. Although the outcome during the first quarter was clearly weaker than anticipated, otherwise the assessment of developments in GDP still stands. Companies have now adjusted their stocks levels to the weaker demand. The negative contribution to GDP growth from stocks in the first quarter is expected to cease in the second quarter. Forward-looking indicators and also some published statistical outcomes point to a cautious stabilisation of economic activity in April and May.

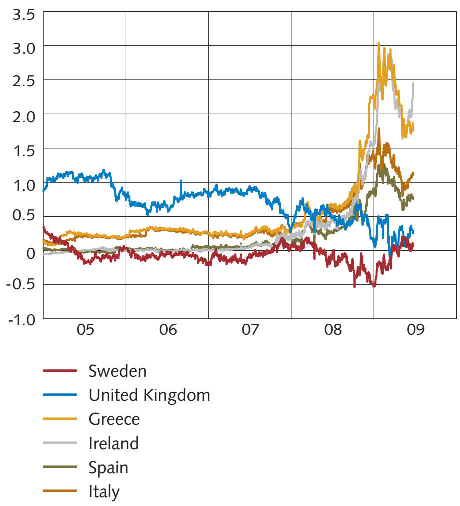
GDP in the euro area fell by 9.7 per cent calculated on an annual rate in the first quarter of this year. Compared with the same quarter in 2008, GDP declined by 4.8 per cent (see Figure 64). At the same time, the figures for GDP outcome during the second half of 2008 have been revised down. Companies reduced their stocks

Figure 56. Exchange rates
SEK per euro and dollar



Source: Reuters EcoWin

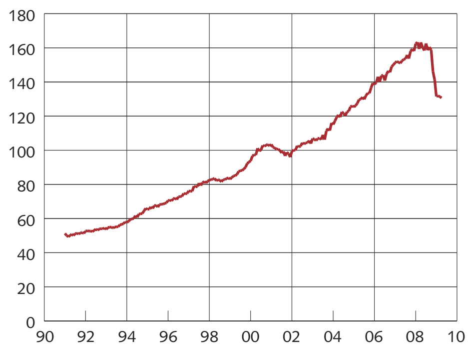
Figure 57. This spread between German government bonds and bonds issued by various countries
Percentage points



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

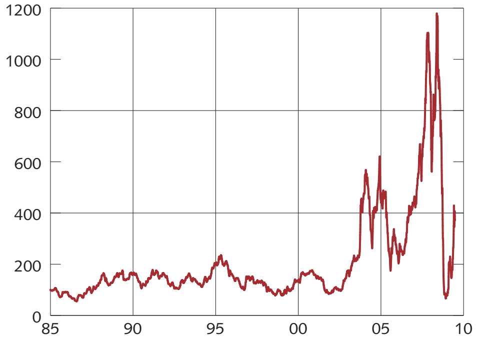
Source: Reuters EcoWin

Figure 58. World Trade Monitor Index
Index 2000 = 100, seasonally adjusted data



Source: Netherlands Bureau for Economic Policy Analysis

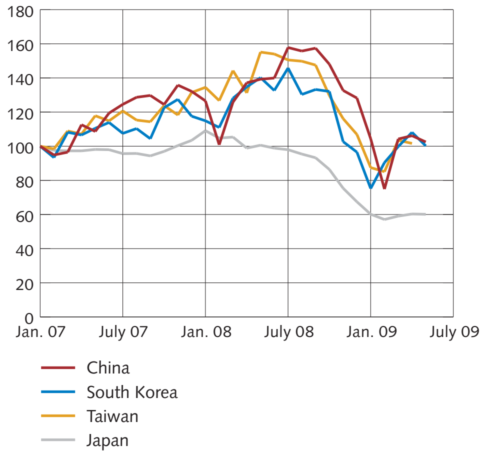
Figure 59. Transport costs indicator
Baltic Dry Index, 1985 = 100



Note. The Baltic Dry Index measures the price of transporting commodities by sea.

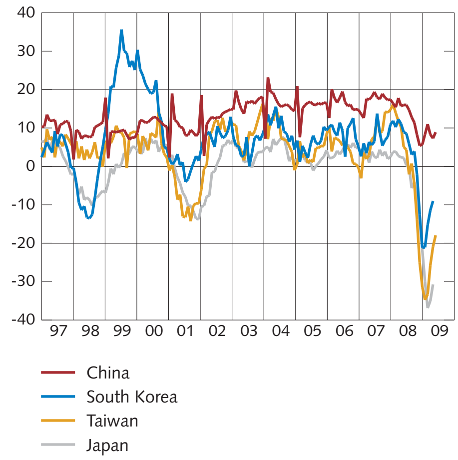
Source: Reuters EcoWin

Figure 60. Exports in Asia
Index January 2007 = 100, USD current prices



Sources: National sources

Figure 61. Industrial production in Asia
Annual percentage change



Sources: National sources

substantially, and this accounted for almost half of the fall in demand. Sharply falling exports and investments also contributed to the deep recession. The decline in consumption has been slowed down by a rise in car sales and by employment so far having been maintained relatively well in the euro area as a whole.

The aggregate purchasing managers' index rose in June, for the fourth month in a row. The largest upturn has been noted for manufacturing in recent months (see Figure 65). The upturn was subdued slightly in June, compared with earlier, and in the services sector the index fell slightly. Although the index is still at a level indicating shrinking production, the outcomes indicate that the largest GDP downturn has passed. The European Commission's Eurobarometer survey also supports this assumption. However, this has shown an upturn although the upturn has not been as large as that in the purchasing managers' index. The aggregate sentiment and confidence indicator for the euro countries, the ESI, also continued to rise in May compared with April. It was primarily a clear improvement in confidence in the retail trade that contributed to this.

The apparently improved demand led to some stabilisation in industrial production in March, but the decline continued in April (see Figure 66). In Germany, which was hit hard by the downturn in global manufacturing activity, the steep fall in orders to the manufacturing industry has come to a halt and an upturn has occurred in March and April. However, the large decline in orders in previous months is expected to burden industrial production even in the coming months. According to the European Commission's Eurobarometer, capacity utilisation is expected to be around 70 per cent during the second quarter, which is the lowest level ever measured (see Figure 67).

Retail trade turnover rose by 0.2 per cent in April, compared with March. In the same month, car sales increased by almost 4 per cent. Car sales have been stimulated by the fact that several countries, including Germany, have introduced what is known as a scrap premium to those buying a new car. There were also some signs of stabilisation in exports in March. However, exports fell again in April.

As a result of the weak economic developments, unemployment in the euro area continued to rise during the spring, and was at 9.2 per cent in April. This is the highest level measured since September 1999. Spain accounts for a large share of the upturn and had the highest unemployment percentage – 18.1 per cent – of the euro area countries. When economic activity was at its peak in 2007, unemployment was at its lowest level just below 8 per cent. Employment in the euro area fell by 0.8 per cent in the first quarter, compared with the fourth quarter of 2008.

Bank lending to the private sector in the euro area continued to slow down in April. Now it is also possible to see a clear slowdown in lending to companies. The annual rate of increase in lending to companies fell to just over 5 per cent. Lending to households has fallen over a longer period of time and in April lending was in principle unchanged compared to the corresponding period in the previous year.

The ECB's Bank Lending Survey from April shows that the banks continued to tighten their loan terms for companies and households during the first quarter of this year. The primary explanation was a deterioration in economic prospects. However, the percentage of banks stating that they had tightened loan terms fell compared with the previous quarter. The survey points to banks expecting to tighten loan terms even during the second quarter of this year, but to a lesser extent than during the first quarter.

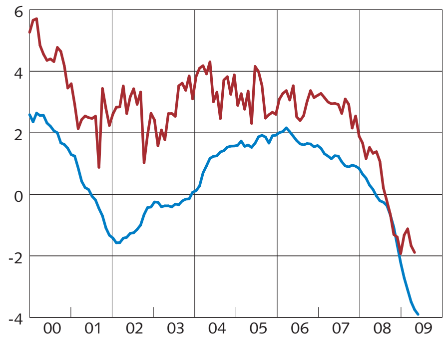
■■ Mixed signals in the rest of Europe

In the United Kingdom GDP fell by a good 7 per cent during the first quarter of 2009, when calculated as an annual rate. This was a larger fall than during the fourth quarter of last year. However, confidence indicators point to both companies and households having become more optimistic in recent months. For example, the purchasing managers' index for industry rose to 45.3 in May (see Figure 68). Industrial production also rose slightly in April relative to March. This was the first increase since February 2008. Moreover, there are some positive signs regarding the situation for households. Retail sales rose in the spring, but fell back slightly in May compared with the previous month. House prices have stabilised and have recently risen slightly.

In Norway GDP fell by almost 2 per cent during the first quarter of 2009, when calculated as an annual rate. The Norwegian economy has shown stronger development than most other industrial nations over the past few quarters. One explanation is that economic activity in sectors linked to the production of oil and natural gas has been relatively good. This has been reflected in both industrial production and retail sales, which are only slightly lower than one year ago. Employment has slowed down somewhat in recent months, but is nevertheless higher than one year ago. Unemployment was 2.6 per cent in May, which is a low level in historical terms.

Denmark's GDP fell by just over 7 per cent in the fourth quarter of last year, when calculated as an annual rate. As in most other countries, both companies and households have recently become slightly more optimistic with regard to the future. However, other statistics point to a continued weak development. Both industrial production and retail sales have fallen heavily over the past year, although industrial production rose in April. Exports rose slightly in March, but are much lower than they were one year ago. Unemployment is still relatively low, but has risen rapidly and was 3.3 per cent in April.

Figure 62. Employment and private consumption in the United States
Annual percentage change

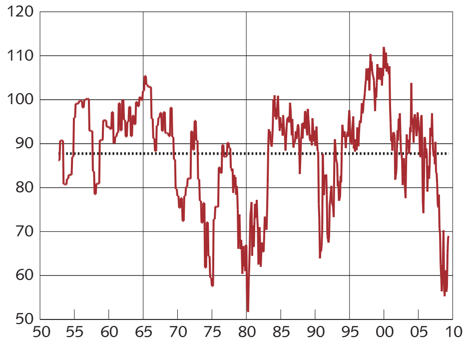


Private consumption
Employment

Note. Employment according to employer survey (nonfarm payrolls).

Sources: Bureau of Labor Statistics and US Department of Commerce

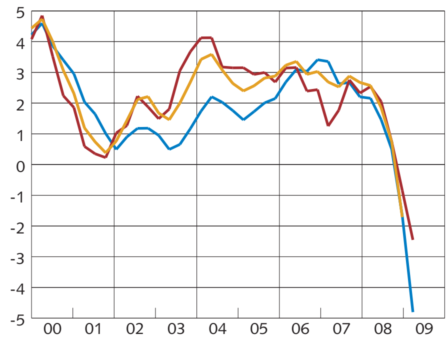
Figure 63. Consumer confidence in the USA, (University of Michigan Consumer Sentiment Index)
Index, December 1964 = 100



Consumer confidence
Mean 1952- June 2009

Source: University of Michigan

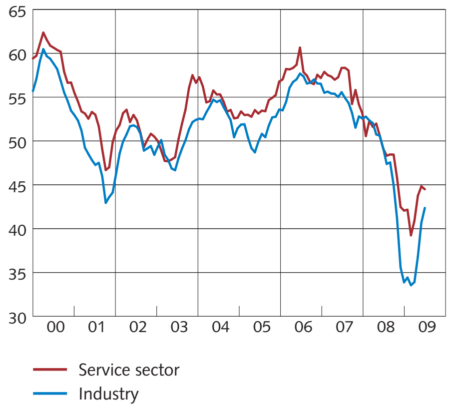
Figure 64. GDP
Annual percentage change



USA
Euro area
OECD

Sources: Bureau of Economic Analysis, Eurostat and OECD

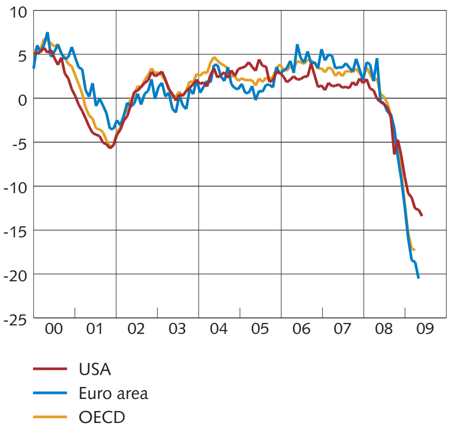
Figure 65. Purchasing managers' index in the euro area
Index, seasonally adjusted data



Note. An index over 50 means growth, below 50 means a decline.

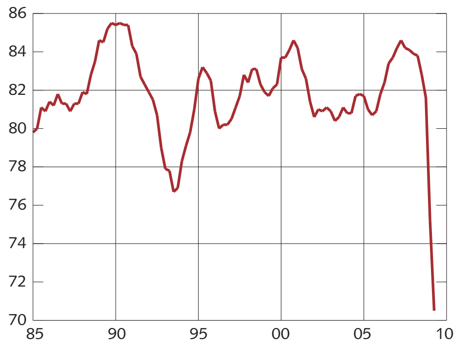
Source: Markit Economics

Figure 66. Industrial production
Annual percentage change



Sources: Eurostat, Federal Reserve and OECD

Figure 67. Capacity utilisation in the manufacturing industry in the euro area
Per cent



Source: European Commission

Many of the economies in eastern Europe showed very heavy falls in GDP during the first quarter. Industrial production and exports have also developed very weakly during the spring. In Russia GDP fell by 9.5 per cent in the first quarter of 2009, compared with the same period in the previous year. Industrial production rose by 8.1 per cent in April compared with the previous month. However, exports fell by more than 46 per cent in April compared with the same period one year earlier. GDP in all three Baltic countries fell by more than 10 per cent in the first quarter, compared with the same period last year. The fall was largest in Latvia, where GDP fell by 18 per cent, which was mainly due to a strong weakening in domestic demand. Poland was one of few countries in eastern Europe where GDP rose during the first quarter compared with the previous quarter. Following upturns during the previous three months, however, industrial production fell in May relative to April.

■■ Commodity prices have begun to rise again…

Oil prices have fallen heavily over the past twelve months, but are now beginning to rise again. The oil price was almost USD 60 per barrel in May, which was an increase of almost 15 per cent on the previous month. When compared with the same period last year, however, oil prices have fallen by around 45 per cent (see Figure 8). Forward prices for oil have risen since April and are now expected to be around 15 per cent higher on average during the forecast period (see Figure 8). Commodity prices (metals, foods and other agricultural products) have also risen in recent months (see Figure 69). The increase in commodity prices could be due to signs that economic activity is improving.

■■…but inflation abroad has continued to fall

In the United States the inflation rate has fallen since the end of 2008 and was -1.3 per cent in May (see Figure 70). What is known as underlying CPI inflation, adjusted for energy and food prices, was 1.8 per cent in May (see Figure 71). HICP inflation in the euro area fell to 0.0 per cent in May (see Figure 70). This was a decline compared with April, when the inflation rate was 0.6 per cent. HICP inflation excluding energy, food, alcohol and tobacco has also fallen, but at a slower rate, and was 1.5 per cent in May (see Figure 71).

The inflation rate in the United Kingdom has fallen in recent months, and was 2.2 per cent in May. In Norway, inflation has been stable since the end of last year, but rose slightly to 3.0 per cent in May. Inflation in Denmark has fallen from just below 5 per cent in the middle of 2008 to 1.3 per cent in May 2009. In Asia, too, inflation has slowed down during the spring. China had an inflation rate of -1.4 per cent in May. In India the inflation rate fell substantially during the spring and was 0.5 per cent in May. In Japan the inflation rate was slightly negative in April.

To summarise, inflation has fallen further abroad since the April Monetary Policy Update. It is primarily lower energy prices compared with the same period in previous years that explains the downturn. The consumer price index adjusted for energy and food has stabilised, however, or even risen slightly in many countries. The outcomes for inflation abroad are in line with the forecasts in the April Monetary Policy Update.

■■ Fall in Swedish GDP slows down

GDP in Sweden fell by almost 4 per cent in the first quarter of 2009, when calculated as an annual rate (seasonally-adjusted). When the National Accounts for the first quarter of the year were published, Statistics Sweden announced a change in its method for making seasonal adjustments. This led to earlier outcomes being revised (see Figure 13).[5] This method change meant that the fall in GDP during the fourth quarter of 2008 is now much greater than was reported in the first publication in February. Developments earlier in 2008 have been revised slightly upwards. The level of GDP in the first quarter was lower than expected in the Riksbank's most recent forecast, which means that GDP for the whole year 2009 is now expected to fall more than was forecast in the April Monetary Policy Update (see Table A6).

In recent months several indicators have risen slightly from historically low levels. The National Institute of Economic Research's Economic Tendency Surveys, which summarise companies' and households' views of the Swedish economy, rose in May and June (see Figure 72). Confidence indicators in the business sector also imply some recovery (see Figure 73). The purchasing managers' index has risen for several months (see Figure 74). However, the levels of most indicators are still way below what can be described as normal.

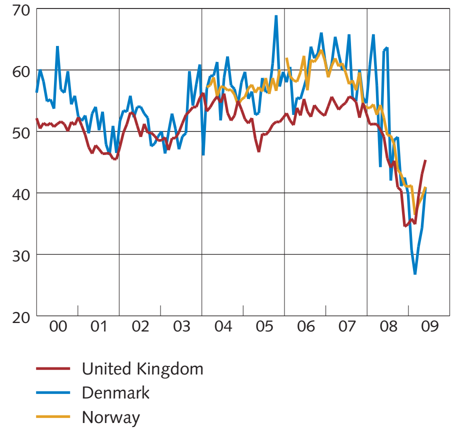
The Riksbank's company interviews in May largely confirm the picture painted by the other indicators. Companies state that there has been a slight improvement compared with the situation prevailing during the winter. A majority of companies now consider that the situation for their own company will not deteriorate further, which was not the case in the survey carried out prior to the February Monetary Policy Report. However, there is still concern among companies that problems with funding may curb both their own investment and a coming economic upturn.[6]

All in all, the indicators of GDP developments in the second quarter have been largely as expected. GDP is expected to fall by a good 1 per cent during this quarter when calculated as an annual rate (see Figure 13). In the third quarter of 2009 GDP is expected to fall by

5 For further information, see the notification on Statistics Sweden's website (in Swedish) http://www.scb.se/Pages/Standard____273778.aspx.

6 See also the publication "The Riksbank's company interviews", which was published on 22 June 2009. It can be downloaded from www.riksbank.se under the heading Press & Published/Reports.

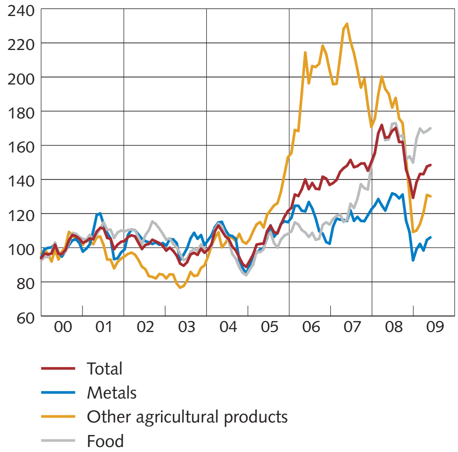
Figure 68. Purchasing managers' index in the manufacturing industry in United Kingdom, Norway and Denmark
Index, seasonally adjusted data



Note. An index over 50 means growth, below 50 means a decline.

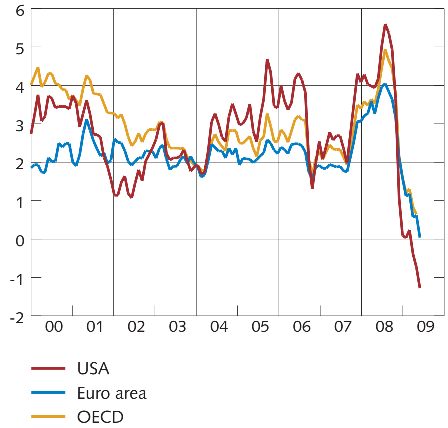
Sources: DILF, Markit Economics and NIMA

Figure 69. Commodity prices
USD, Index 2000 = 100



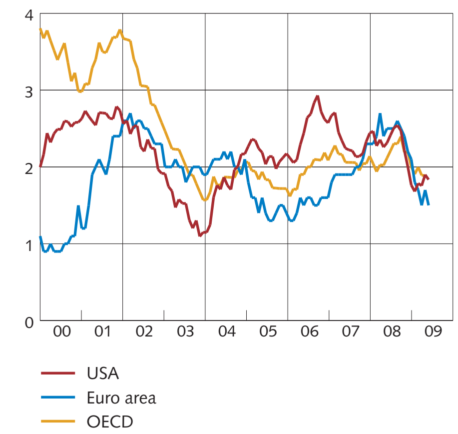
Source: The Economist

Figure 70. Consumer prices
Annual percentage change



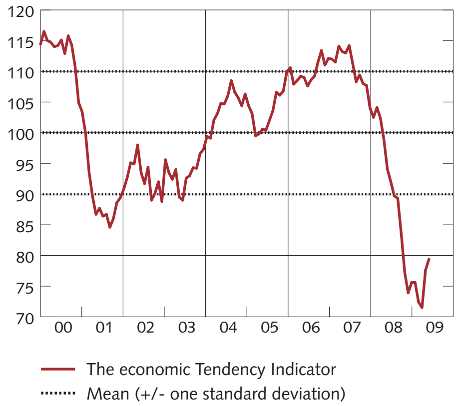
Sources: Bureau of Labor Statistics, Eurostat and OECD

Figure 71. CPI excluding energy and food
Annual percentage change



Sources: Bureau of Labor Statistics, Eurostat and OECD

Figure 72. The Economic Tendency Indicator
Index, mean = 100



Source: National Institute of Economic Research

Figure 73. Confidence indicators in the business sector
Seasonally adjusted net figures

Source: National Institute of Economic Research

almost 0.5 per cent when calculated as an annual rate, which entails a marginal upward revision compared with the assessment in April. It is primarily forward-looking indicators, such as orders and signs that developments abroad are heading for a turnaround that point to the fall in Swedish GDP slowing down.

■■ Some recovery in household consumption

Household consumption fell by 3 per cent in the first quarter of 2009, compared with the corresponding period in 2008 (see Figure 75). As in recent quarters, it was household expenditure on motor vehicles and transport that fell the most. The outcomes for retail sales in recent months show some recovery for consumption. In April consumption of retail goods increased by almost 4 per cent (figures not calendar-adjusted). However, cyclically-sensitive car sales have continued to develop weakly in recent months.

Several factors have contributed to the weak development in consumption. For instance, the situation in the labour market has deteriorated. This, together with a general uncertainty regarding economic developments, leads to households saving an increasingly large share of their incomes. Households saved on average just over 7 per cent of their disposable incomes over the past four quarters, which is high in an historical perspective.[7] The last time saving was at similar levels was in the period following the economic crisis at the beginning of the 1990s (see Figure 76).

The National Institute of Economic Research's Consumer Tendency Survey shows that households are still pessimistic both with regard to economic developments in Sweden as a whole and with regard to their own finances, although there has been some upturn in expectations in recent months. The consumer confidence indicator, CCI, has risen in recent months but is still at a very low level (see Figure 77). All in all, however, indicators and outcomes imply that developments in consumption during the second and third quarters will be slightly stronger than was forecast in April.

■■ Continued rise in public sector consumption

Public sector consumption increased by 1.5 per cent in 2008 and continued to increase during the first quarter of 2009 (see Figure 78). The increase during the first quarter was largely due to the privatisation of parts of the Swedish National Road Administration, which entailed certain one-off costs. The trend towards an increasingly large share of local government services being produced in the private sector is continuing, but does not affect the level of

7 The saving ratio is calculated excluding occupational pension saving. During the first quarter of 2009 the household saving ratio including pension saving was around 16 per cent.

public sector consumption. Production and employment in the public sector are declining, however, as a result of this, while production of private services and employment are being maintained. The strong outcome for the first quarter means that the forecast for the whole year is revised up compared with the forecast in the April Monetary Policy Update.

■■ Investments falling heavily

Total investment fell by just over 14 per cent in the first quarter of 2009, compared with the same period in the previous year. Housing investment, which accounts for almost 20 per cent of total investment, has fallen over the past year and the fall continued in the first quarter (see Figure 79). The number of apartments on which construction began in the first quarter declined by more than 40 per cent compared with the corresponding period last year. This is probably because demand for new tenant-owned apartments in particular has fallen, at the same time as construction companies are experiencing greater difficulty in funding new projects, which is born out by the responses to the Riksbank's company interviews.

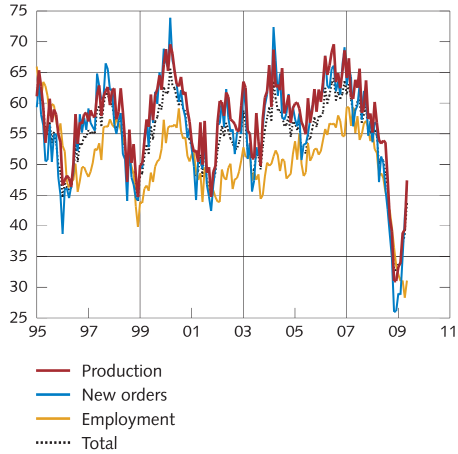
Business sector investment also fell heavily in the first quarter. Previously the developments for leasing machinery, for instance, have been relatively favourable, which may be connected to the fact that many companies have not wanted to make large investments in new machinery. The weak demand and low capacity utilisation may have contributed to companies now terminating their leasing contracts, which has direct effects on business sector investment. During the first quarter, however, public sector investment developed strongly, increasing by just over 6 per cent compared with the same period in the previous year. This was mainly because local governments had many large investments in schools and the infrastructure, for instance Citybanan (the City Line) in Stockholm.

Statistics Sweden's investment survey regarding the business sector's planned investment for 2009, which was published at the end of May, together with information obtained from the Riksbank's company interviews, points to a continued gloomy development in total investment during the remainder of 2009. Total investment is expected to fall during both the second and third quarters of 2009. Compared with the forecast in April, the forecast for the third quarter has been adjusted down slightly.

■■ The fall in exports and imports will slow down in the period ahead

The sharp fall noted in monthly statistics on foreign trade in goods in spring 2009 was confirmed in the National Accounts for the first quarter. Total exports fell by just over 15 per cent, compared with the corresponding period in the previous year. Exports of goods fell by over 20 per cent. A large percentage of Sweden's exports of goods

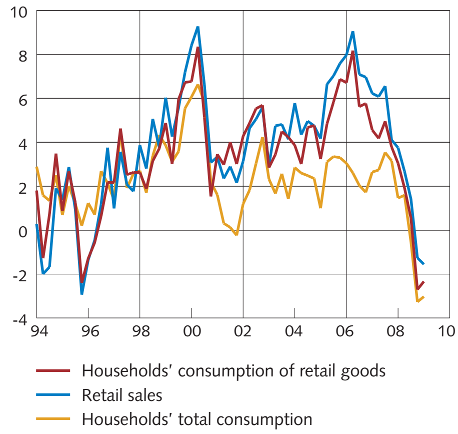
Figure 74. Purchasing managers' index in the manufacturing industry
Index, seasonally adjusted data



Note. An index over 50 means growth, below 50 means a decline.

Source: Swedbank

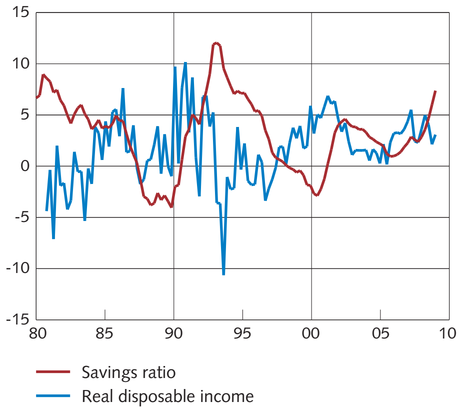
Figure 75. Retail sales and household consumption
Annual percentage change



Note. Non-calendar-adjusted data.

Source: Statistics Sweden

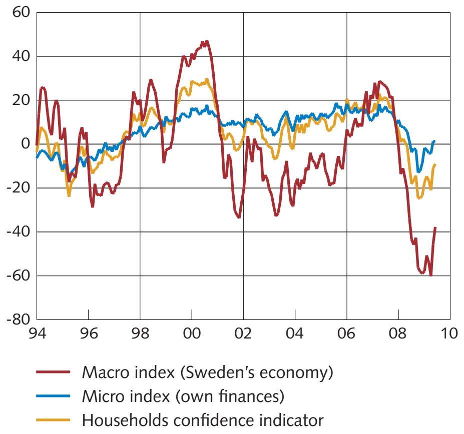
Figure 76. Disposable income and savings
Annual percentage change and per cent of disposable income



Note. Savings does not include savings in occupational pensions and is calculated as four quarter moving average.

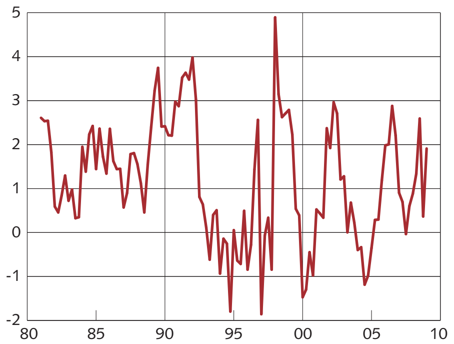
Sources: Statistics Sweden and the Riksbank

Figure 77. Households confidence indicators
Net figures



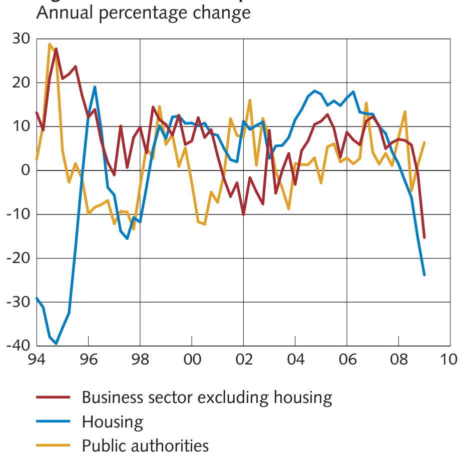
Source: National Institute of Economic Research

Figure 78. Government consumption
Annual percentage change



Source: Statistics Sweden

Figure 79. Gross fixed capital formation
Annual percentage change



Source: Statistics Sweden

consists of intermediate and investment goods, for instance machinery and motor vehicles, where demand has fallen sharply as a result of most of the world suffering an economic decline at the same time.

Like exports, total imports fell heavily during the first quarter. Imports of goods fell more quickly than imports of services, which is linked to imports of goods being hard hit by reduced investment. The large fall in exports also affects imports as many export products contain goods that were first imported to Sweden and then exported in a refined form.

Developments during the second quarter are expected to remain weak. Both exports and imports will fall further, but not as quickly as in the first quarter. This picture is supported by statistics for foreign trade in goods up to the end of May (see Figure 80). Orders from the export market have recovered slightly in recent months from the historically low levels prevailing at the beginning of the year (see Figure 81).

The fact that the Swedish krona has remained weak during the spring can indicate that Swedish manufacturers have some advantage over competitors in other countries. Some companies confirmed in the Riksbank's company interviews that they now preferred to locate production to Sweden than to countries in the euro area and that competitiveness had improved. At the same time, the general impression in these interviews appears to be that a more stable exchange rate would be preferable, as it would provide better conditions for long-term planning.

The Riksbank's forecast for exports and imports for the second quarter of 2009 has been revised down slightly compared with the forecast in April. However, the revision is marginal compared with what occurred at the end of the previous year and in the early spring. The export forecast for the third quarter remains unchanged, while imports are expected to fall slightly more than was previously expected, primarily due to weaker developments in investments.

■■ The situation in the labour market is continuing to deteriorate

The decline in the number of persons employed which began in the third quarter of 2008 has continued (see Figure 82). According to the labour market surveys, in May the number of persons employed declined by 107,000 compared with the same period last year. During the same period the number of persons in the labour force increased by 50,000, which means that the number of persons unemployed increased by 157,000 (see Figure 82). The labour supply has developed more strongly than expected, which has led to an upward revision in the forecast for the labour supply.

Public sector employment has been declining since the middle of 2007, partly as a result of local governments to an increasing extent outsourcing services or taking on temporary staff. This has also contributed to keeping up employment in the private services sector. The fall in employment in the business sector in recent quarters is almost entirely explained by the fact that the manufacturing industry has cut the number of employees.

Labour market indicators point to a rapid weakening. The competition for jobs is stiffening as the number of newly-registered vacancies declines. Over the past year the number of job vacancies has halved, at the same time as the Swedish Public Employment Service's follow-up on the redundancy notices given in the autumn now shows that an increasing number of people are becoming unemployed. While in recent months the number of persons given notice of redundancy has actually declined, the number of redundancy notices is still at a historically high level (see Figure 83). Almost 9,000 persons were given notice of redundancy in May and about 7,500 persons during the first three weeks of June, which means that a total of almost 143,500 persons have been given notice of redundancy since last September.

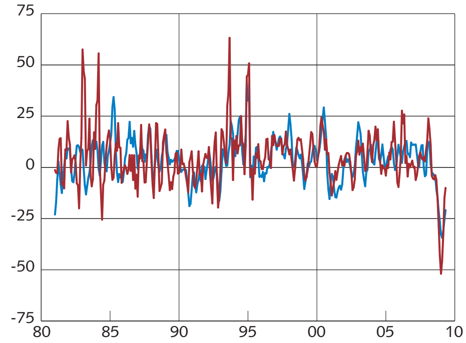
Statistics Sweden's economic statistics regarding job vacancies show that recruitment in the business sector has declined rapidly over the past year. According to the Economic Tendency Survey, the share of companies with a shortage of labour is now very low (see Figure 84). The business sector's expectations of future employment levels also remain very pessimistic, although the confidence indicator in May was slightly less negative. Employment in the business sector has declined and companies' plans for the coming months indicate continued staff cutbacks although at a declining rate (see Figure 85).

The weak GDP outcome for the first quarter is expected to affect the number of hours worked with some time lag. At the same time, the number of hours worked has been weaker than expected in recent months. All in all, this indicates a heavier fall in the number of hours worked in 2009 than was assessed in the April Monetary Policy Update. Falling demand for labour and agreements between the social partners regarding reductions in working hours are also expected to lead to a fall in average working hours.

■■ Continued weak labour productivity

Labour productivity in the Swedish economy has now fallen during more than two years, which is an unusually long period (see Figure 20). However, it is normal in an economic downturn that growth in labour productivity declines, as companies adjustments to their labour force and the number of hours worked come later than the adjustment to production. It was therefore expected that the outcome for the first quarter would be weak. Productivity fell by more than 5 per cent compared with the corresponding quarter in the previous

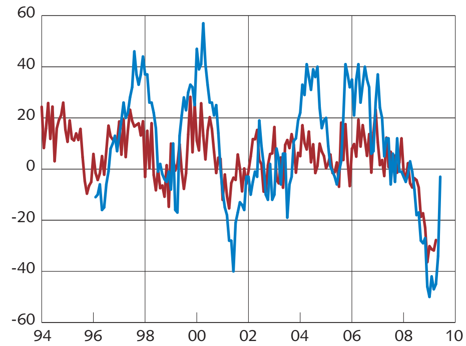
Figure 80. Foreign trade with goods in fixed prices
Three-month changes in per cent calculated in annualised terms, seasonally adjusted data



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

Sources: Statistics Sweden and the Riksbank

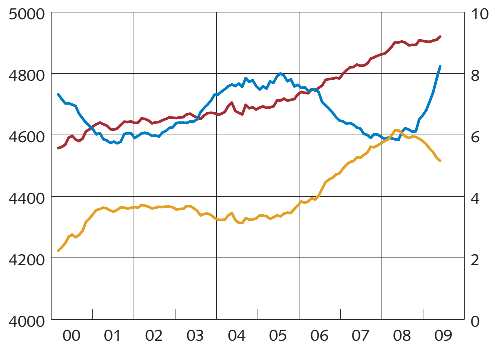
Figure 81. New export orders
Net figures and annual percentage change



Note. Data before 2000 is chained by the Riksbank.

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

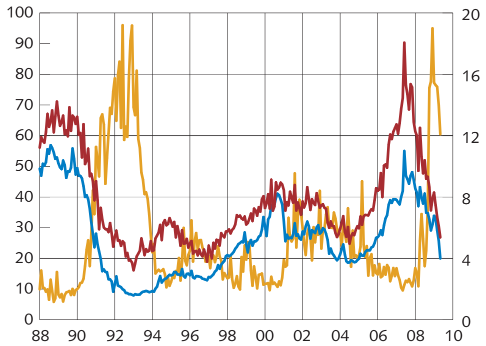
Figure 82. Employment, labour force and unemployment
Thousands, 15-74 years and per cent of the labour force, seasonally adjusted data



Note. Three-month moving averages. Data before April 2005 is chained by the Riksbank

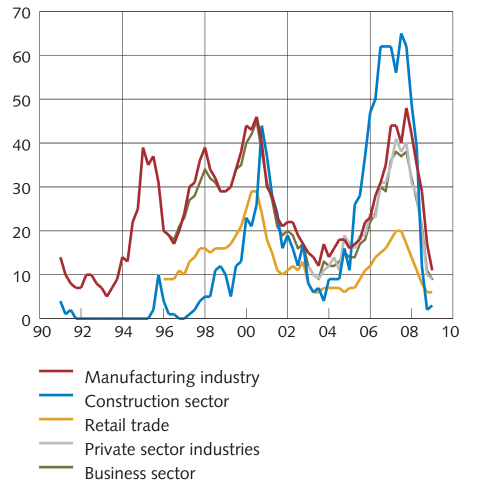
Sources: Statistics Sweden and the Riksbank

Figure 83. New and unfilled vacant jobs and redundancy notices
Thousands, seasonally adjusted data



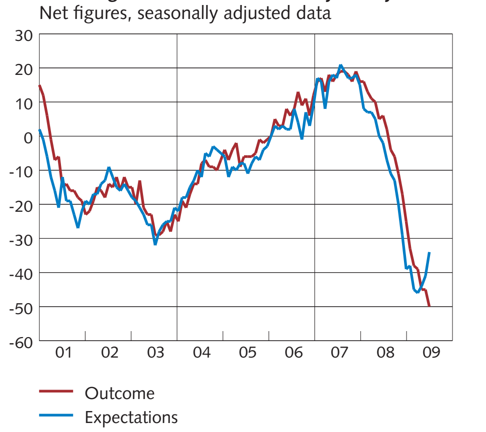
Sources: Employment service and the Riksbank

Figure 84. Proportion of firms reporting a shortage of labour
Per cent, seasonally adjusted data



Source: National Institute of Economic Research

Figure 85. Employees in the business sector according to the Economic Tendency Survey
Net figures, seasonally adjusted data



Source: National Institute of Economic Research

year. This was 1 percentage point more than was forecast in April.

As the economic downturn continues, it is probable that labour productivity will recover as companies reduce their labour forces. This also entails increasingly negative effects for the labour market, with falling employment and rising unemployment. The forecast for the rate of productivity growth has been revised up for the coming quarters as a result of the downward revision to the forecast for the number of hours worked.

■■ Resource utilisation is at a low level

There is no simple way of measuring resource utilisation in the economy. The Riksbank studies a number of different indicators and also uses several statistical methods to assess resource utilisation. The total picture shows that resource utilisation has fallen rapidly and is very low.

The rapid fall in production that occurred during the autumn and winter has led to companies having substantial spare capacity. Capacity utilisation in the manufacturing industry has fallen to historically low levels (see Figure 86). The demand for labour has also fallen rapidly and there are few companies stating that they have a shortage of labour (see Figure 84).

Resource utilisation in the labour market as a whole is also falling rapidly, which is clearly indicated by the rapid rise in unemployment and falling employment rate. One can also use several statistical measures to estimate resource utilisation in the economy. Figure 21 shows the estimates of deviations in GDP, the number of hours worked and employment from their respective trends, produced by means of what is known as an HP filter. The size of these gaps is affected by the method used and should therefore be interpreted with caution, but even with these measures resource utilisation is falling rapidly.

■■ Wages held back

According to the short-term wage statistics from the National Mediation Office, wages throughout the economy increased by 4.3 per cent in 2008. The statistics do not include retroactive payments for the last nine months of last year, but these are expected to be very small and should not have any tangible effect on developments for the year as a whole.

According to the short-term wage statistics, during the first three months of this year wages in the entire economy have on average increased by 2.9 per cent, compared with the corresponding period in the previous year. The definitive outcome is expected to be 3.3 per cent if retroactive payments are taken into account, which entails a downward adjustment to the forecast made in April. There may be several reasons for the fact that wages are rising more slowly than expected. One reason may be that the downward adjustment in wages is happening sooner than the Riksbank was expecting in April, as a result of the weaker labour market situation. The low wage outcome so far could also be partly due to changes in the sample for the short-term wage statistics.[8]

■■ Low rate of wage increase in manufacturing so far this year

Although the preliminary wage outcomes for this year will be revised upwards, wage growth is remarkably low in many sectors.

The rates of wage increase for manufacturing and transport workers were relatively low during the first quarter of this year, and amounted to 1.1 per cent and 0.9 per cent respectively. The low rates of increase can be partially explained by a decline in overtime. If one instead uses a wage measure excluding overtime supplements, wages have increased by 2.0 per cent and 1.8 per cent respectively for manufacturing and transport workers. The reduction in overtime entails a rate of wage increase approximately 0.6 percentage points lower for workers in the business sector in the first quarter of this year. For the economy as a whole, the reduction in overtime has an effect on the rate of wage increase of almost -0.2 percentage points so far this year, according to the short-term wage statistics.

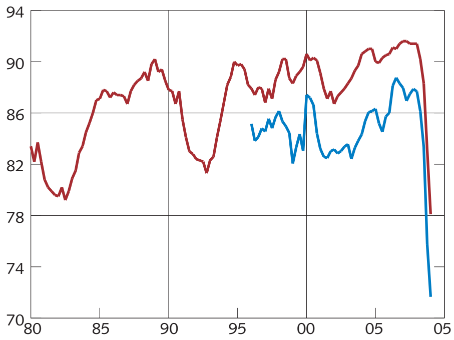
Wages in the public sector have increased slightly more quickly than wages in the business sector so far this year (see Figure 87). During the first quarter of 2009 wages in the public sector increased by just over 3 per cent compared with the same period last year. For the manufacturing industry and retail trade wages have increased by 1.7 per cent and 2.2 per cent respectively so far this year (see Figure 88). This means that the rate of increase in wages over and above the centrally-agreed increases (or what is known as wage drift) in these sectors has been negative so far this year. The definitive rate of wage increase in the economy as a whole is assessed to be 3.2 per cent in 2009, according to the short-term wage statistics. The centrally-agreed wage increases in the economy as a whole will be 3.0 per cent this year, according to the National Mediation Office, which means that wage increases over and above the central agreements will be at their lowest level since the short-term wage statistics began to be compiled in 1992.

■■ Continued rise in unit labour costs

According to the National Accounts, hourly wages in the economy as a whole increased by 2.8 per cent in the first quarter of this year compared with the corresponding period in the previous year. This is

8 In 2009 the size of the sample used in the survey of the business sector is being changed from around 7,800 companies last year to around 5,600 companies this year. A new branch breakdown will also be introduced into the statistics. This new breakdowns means that the percentage of companies replaced in the selection in 2009 relative to 2008 is greater than normal. Variable supplements, such as holiday supplements, are included in the measure of wages used in the forecasting work. As the Easter holiday was in March last year and in April this year, there will also be a calendar effect on the wage statistics.

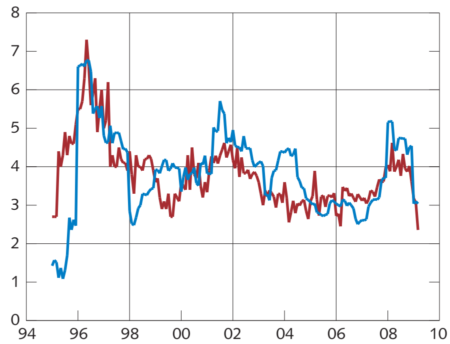
Figure 86. Capacity utilisation in industry
Per cent, seasonally adjusted data



Statistics Sweden, actual capacity utilisation
NIER, current capacity utilisation in the manufacturing industry

Sources: National Institute of Economic Research and Statistics Sweden

Figure 87. Wages
Annual percentage change

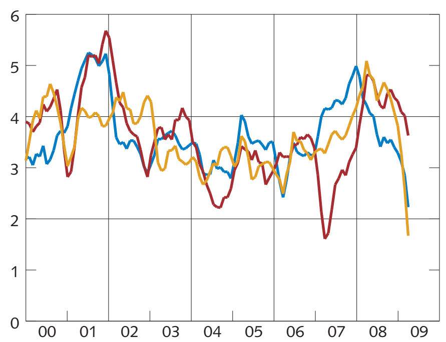


Business sector
Public sector

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

Sources: National Mediation Office, Statistics Sweden and the Riksbank

Figure 88. Wages in the business sector
Annual percentage change

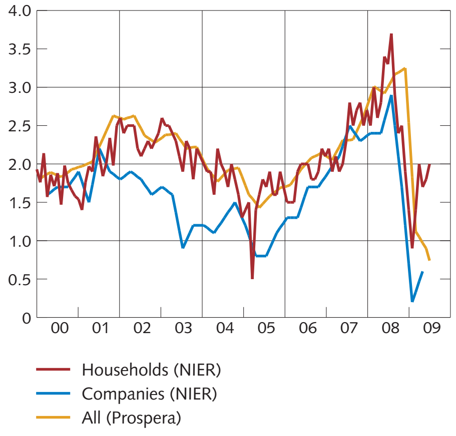


Construction sectors
Retail
Industry

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

Sources: National Mediation Office, Statistics Sweden and the Riksbank

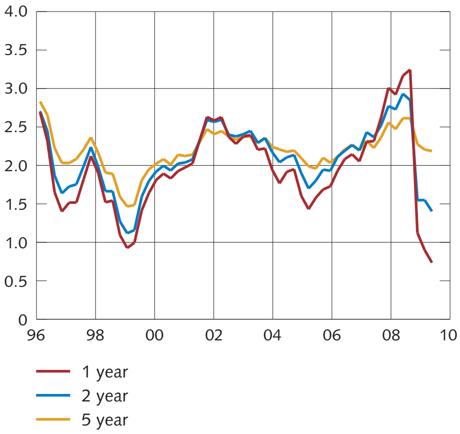
Figure 89. Expectations of inflation one year ahead
Annual percentage change



Note. Refers to all respondents.

Sources: National Institute of Economic Research and TNS Prospera

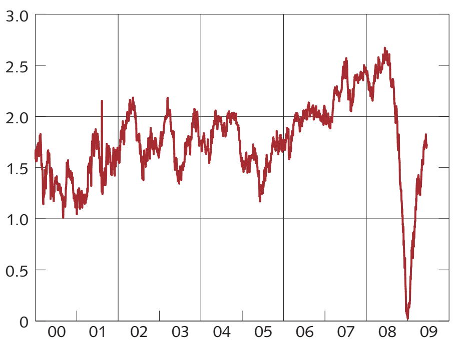
Figure 90. Inflation expectations one, two and five years ahead
Annual percentage change



Note. Refers to all respondents.

Source: TNS Prospera

Figure 91. The difference between nominal and real five-year rates (break-even inflation)
Percentage points



Source: The Riksbank

slightly less than the preliminary rate of wage increase according to the short-term wage statistics.[9] For 2009 as a whole, however, the rate of wage increase in the National Accounts' forecasts and the short-term wage statistics' forecasts is the same. Labour costs per hour, including payroll tax, increased by 2.5 per cent during the first quarter. The statutory payroll tax has been reduced and at the same time discounts in the agreed payroll taxes have been removed. The net effect of these measures is a slightly lower rate of increase for labour costs per hour than was forecast in April.

Labour productivity in the Swedish economy has now fallen for nine quarters in a row, regarded as an annual percentage change. This has been a strong contributing factor to the large increase in unit labour costs. Productivity fell by more than 5 per cent in the first quarter, compared with the same period last year, which meant that unit labour costs rose by more than 8 per cent, measured as an annual percentage change, for the second quarter in a row. Growth in unit labour costs is expected to gradually decline. The forecast for 2009 is 3.9 per cent, which is lower than the assessment made in April (see Table A8).

■■ Inflation expectations close to target in longer term

Households' inflation expectations one year ahead, as measured in the National Institute of Economic Research's Consumer Tendency Survey, amounted to 2.0 per cent in June 2009. This is an increase from 1.8 per cent in May. The lowest point for inflation expectations this year was 0.9 per cent in January (see Figure 89). Companies' inflation expectations one year ahead were 0.6 per cent in April 2009, according to the National Institute of Economic Research's Business Tendency Survey. This was also a rise from 0.2 per cent in January.

According to Prospera's survey in June 2009, inflation expectations have fallen slightly in relation to the previous survey in April, and are now at 0.7 per cent one year ahead. Inflation is expected to be 1.4 per cent and 2.2 per cent at two and five years ahead respectively. In the previous survey, inflation was expected to be 1.5 per cent two years ahead and 2.2 per cent five years ahead (see Figure 90). In Prospera's survey, inflation expectations are thus lower than in the National Institute of Economic Research's Consumer Tendency Survey and also in relation to the Riksbank's forecasts.

Break-even inflation, that is, the difference between the rates on nominal and real bonds with the same time to maturity, has risen in 2009 from very low levels at the start of the year. Break-even inflation calculated on rates with a five-year maturity in Sweden is currently just over 1.75 per cent (see Figure 91). In the United States, too,

9 There are several reasons why the rate of wage increases given in the National Accounts differs from the rate given in the short-term wage statistics. One reason is that term "wages" is more widely defined in the National Accounts. Apart from wages for hours worked, for example, it also includes bonuses, redundancy payments, benefits, sick pay and an estimate of wages paid in the shadow economy. Another reason is that in the short-term wage statistics, retroactive wage payments are allocated to the period in which the wages were earned. In the National Accounts, the wage sums paid are recorded instead.

break-even inflation calculated on rates with the same maturity has risen from unusually low levels. However, the break-even inflation measure has not been entirely reliable during the financial crisis. Although there are signs that trade in these instruments has increased, there is still reason to interpret break-even inflation with considerable caution. The main reason why the measure becomes misleading is that turnover in the market for real bonds has been low, which has meant that prices have probably not fully reflected expectations.

■■ Underlying inflation close to the target

Since the Monetary Policy Update was published in April, the outcome for inflation in April and May has been published. The rate of increase in the CPI is continuing to fall and amounted to -0.4 per cent in May, which was in line with the forecast in April (see Figure 24). One important cause of the fall in CPI inflation is that households' mortgage rates are falling substantially. Inflation measured in terms of the CPIF, where mortgage rates are held constant, amounted to 1.7 per cent in May.

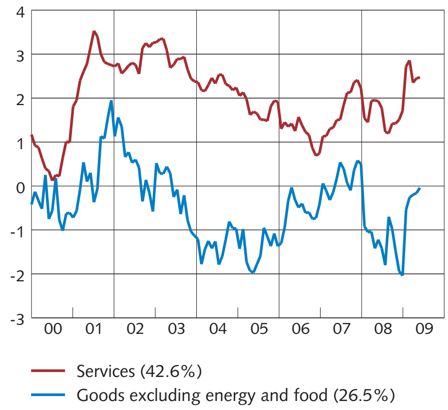
Energy prices have fallen compared with last year, although they have risen in recent months. When energy prices are excluded, the rate of increase in the CPIF was 2.0 per cent in May (see Figure 24). The weak krona, together with the high rate of increase in unit labour costs, is probably a contributing factor in holding up the underlying inflation rate despite the rapid deterioration in economic activity.

Electricity prices have fallen over the past year, but as with oil futures, the price of electricity futures has risen since April. Other commodity prices have also risen on the world market since April. Services prices increased by approximately 2.5 per cent when expressed as an annual percentage change, and goods prices remained unchanged (see Figure 92).

The annual rate of increase in the CPI is expected to continue falling rapidly over the coming months, as the twelve-month comparisons are made against last year's much higher energy prices and much higher interest rates. The rate of increase in the CPI is expected to be in line with the assessment made in April over the coming months. When mortgage rates and energy prices are excluded, however, inflation is expected to be slightly lower over the coming months.

The HICP rose by 1.7 per cent in May, when measured as an annual percentage change. The HICP is an EU measure and stands for Harmonised Index for Consumer Prices. The HICP, like the CPIF, is not affected by changes in mortgage rates. HICP inflation has been higher in Sweden than in the euro area in recent months (see Figure 93). The components that are increasing more slowly in the euro area than in Sweden include food prices and energy prices in particular. The krona has weakened against the euro over the past year, which is probably an important reason why prices are increasing more quickly in Sweden. When adjusted for energy and food prices, however, the HICP is increasing slightly more slowly in Sweden than in the euro area.

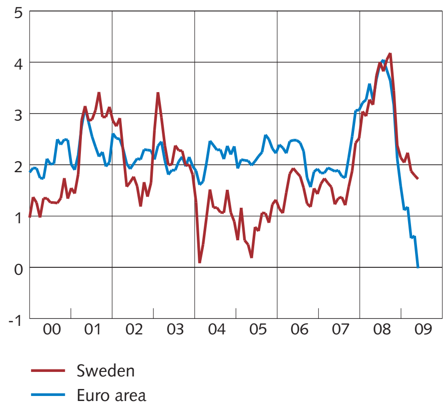
Figure 92. Prices of goods and services in the CPI
Annual percentage change



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

Source: Statistics Sweden

Figure 93. Harmonised index for consumer prices (HICP)
Annual percentage change



Sources: Eurostat and Statistics Sweden

Monetary policy when the interest rate is close to zero

The Riksbank has made substantial cuts in the repo rate since the beginning of October last year. The fact that the repo has rapidly approached zero has raised two important questions: How far can the repo rate be cut? What other measures can the Riksbank take to stimulate the economy, if this should prove necessary?

How far can the repo rate be cut?

When economic activity weakens and inflation falls, the central banks cut their policy rates in order to increase the level of demand in the economy. Normally, policy rate cuts are not associated with any particular costs or problems. However, when the interest rate begins to approach really low levels, as has been the case in Sweden and several other countries during the recent downturn, the central banks must, when making their monetary policy decisions, take into account circumstances that they do not normally need to consider.

Two such circumstances have, above all, been highlighted in the recent discussion. The first is that really low policy rates may have a negative impact on the profits of the banks or make them less willing to allow policy rate cuts to be reflected in the interest rates they offer to households and companies. The second is that there is a risk that some parts of the financial markets will begin to function less effectively at lower interest rate levels. In the background there is also perhaps the most dramatic consequence of the interest rate being too low: That companies and households choose to withdraw money from their bank accounts and instead choose to retain large amounts of cash.

The banks' deposit rates are normally lower than the policy rate and will therefore reach zero before policy rates do. Given that the banks feel that they can not reduce their deposit rates below zero, their margins – the difference between the deposit rate and the lending rate – will fall as the policy rate is reduced. Moreover, the banks' cost for borrowing from the central bank are higher than the policy rate, as they must provide collateral for these loans. Lower margins have a negative impact on the earning capacity of the banks and risk reducing the willingness of the banks to lend in a situation where this willingness is probably already low. Alternatively, the banks may choose to maintain their margins by not allowing lending rates to fall along with the policy rate. In both cases, the cut in the policy rate has less of a positive effect on the economy than would otherwise be the case. An additional alternative is that the banks, to the extent that this is possible, adapt their charges for deposit accounts and banking services in a way that in practice entails a negative interest rate.

Even if the banks' deposit and lending rates did not to fall as much as the policy rate, other market rates would probably fall along with the policy rate. This can in itself stimulate the economy, but very low interest rates can also entail certain risks with regard to the functioning of the financial markets. There are markets where interests rates can be below the policy rate. In Sweden, this applies for instance to government securities at very short maturities and to loans that have interest-bearing securities as collateral. At some level, such interest rates are pushed down to zero or become negative. Negative interest rates may be necessary to maintain trading on these markets in such a situation. However, the practical handling of negative interest rates may entail certain administrative costs, for example it may be necessary to adapt computer systems. These costs are probably moderate but are nevertheless worth taking into account.

The level of activity on certain markets, particularly those handling interbank loans may also be negatively affected if the market participants believe that the level of return is too low. Thinner trading can, for example, lead to less effective pricing on the market. If a market shrinks in this way over a long period of time, it may be difficult to restore it to a normal level of activity again at a later stage.

No certain answer

To date, there is limited experience of the low policy rate levels that can now be observed in many countries. There is a great deal of uncertainty about how important the mechanisms discussed above are and about at exactly what policy rate levels it becomes necessary to begin to take them into account. The situation is also slightly different in different countries. Central banks that have communicated that they do not intend to cut their policy rates further have therefore chosen to stop at somewhat different levels and have placed varying degrees of emphasis on these mechanisms.

The Bank of England, which has chosen to stop at a policy rate level of 0.5 per cent, apperas to have emphasised the sensitivity of the banks to low interest rates and the role of the banks in the monetary policy transmission mechanism. Central banks that have instead mainly focused on the risks associated with the functioning of the financial markets, for example the Federal Reserve and the Bank of Canada, have chosen to stop at lower levels for the policy rate, 0.25 per cent or lower. Experience to date appears to be that the financial markets are not too negatively affected by these low policy rate levels.

The central banks that believe that they have reached their lowest limit for the policy rate have all chosen to stop at levels that by a slight margin exceed the levels at which companies and households can be expected to switch over to retaining large amounts of cash. This will probably only begin to happen when the interest rate has fallen somewhat below zero as large amounts of cash are inconvenient and costly to store and handle. It is therefore conceivable that households and companies would allow their money to remain in their accounts despite a slightly negative interest rate. However, it is possible, that the banks are not particularly willing to allow deposit rates to fall below zero, for example for competitive reasons. Cutting the repo rate to a very low level would therefore, in the way described above, either reduce the banks' margins or have no impact on deposit rates.

To sum up, it can be said that there is no obvious answer to the question: How far can the repo rate be cut? It is in all essentials a question of judgement and, given the uncertainty that prevails, there is every reason to proceed cautiously when making any such decision. The Riksbank has in various ways analysed the potential positive and negative effects of very low interest rates and has monitored developments on the financial markets since the repo rate was cut to 0.5 per cent in April. The decision to reduce the repo rate to 0.25 per cent reflects, for instance, the assessment that such a level will not give rise to any substantial problems for the functioning of the markets.

What other measures can the Riksbank take?

Even when the repo rate has been cut as far as is considered reasonable, there are still measures that the Riksbank can take. Here the focus is on more explicit monetary policy measures in the sense that their primary aim is to stimulate the economy. Since October last year, the Riksbank has taken various measures, in parallel with the cuts in the repo rate, whose main aim has been to safeguard financial stability. These measures are not discussed here, even though they may have side effects of a monetary policy nature – for example they may reduce risk premiums and thus lead to lower nominal interest rates. Moreover, the discussion only covers those monetary policy measures that are currently judged to be closest to hand.[10]

It is also worth pointing out that monetary policy stimulation, largely irrespective of how it is achieved, can usually be seen as a "package" of interconnected mechanisms that help to increase demand in the economy in various ways. A policy rate cut can, for example, lead to lower market rates, higher inflation and inflation expectations and a weaker exchange rate. The discussion below does not address all these mechanisms, although they are there in the background.

Low repo rate for some time to come

One monetary policy measure which is relatively straightforward and that the Riksbank has already used is to declare that the repo rate is expected to remain at a low level for a long period of time. The development of demand in the economy is not dependent on the level of the repo rate at any particular point in time but on the entire expected repo rate path for the period ahead. Different repo rate paths can have approximately the same overall impact on demand. By keeping the repo rate at a low level for a long period of time, the effect on demand may be approximately the same as if the repo rate had been cut more for a shorter period.

The Riksbank's monetary policy framework provides an advantage here. The fact the Riksbank publishes detailed forecasts for inflation, the real economy and the repo rate makes it easier to illustrate and argue the case for keeping the repo rate low for some time to come.

10 A more detailed review of possible measures is presented in U. Söderström and A. Westermark, "Monetary policy with a zero interest rate", Economic Review 2009:2, Sveriges riksbank.

Loans at fixed interest rates with long maturities

Put simply, the way the repo rate works as a monetary policy instrument is that the banks either borrow against adequate collateral or buy Riksbank Certificates with a maturity of one week from the Riksbank at the price of the repo rate. In addition, there are what is known as daily fine-tuning operations between the Riksbank and the banks at an interest rate very close to the repo rate. The current level of the repo rate and expectations of what it will be in the future in their turn affect other interest rates with longer maturities and, through these, activity in the economy. However, the Riksbank can also more directly affect interest rates further along the yield curve.

One way of doing this is to give the monetary policy counterparties the possibility to borrow kronor at longer maturities and with a fixed interest rate. In connection with the most recent monetary policy meeting, the Executive Board also decided to offer loans with a maturity of 12 months and an interest rate equivalent to the current repo rate plus 0.15 percentage points. It was previously possible to get loans at a maturity of 12 months, but at a variable interest rate. This meant that the borrowers had to calculate the expected costs on the basis of an assessment of the development of the repo rate during the period. With a fixed interest rate, there is no longer any uncertainty about what the interest rate for the loan will finally be.

The aim of this measure is to initially bring down interest rates on the interbank market by providing liquidity at a low cost. Lower interbank rates can then have an impact on the interest rates offered to households and companies and thus help to stimulate economic activity.

It can be noted that in an international perspective, the provision of loans by the central banks at longer maturities and fixed interest rate is not unusual. The ECB, for example, offers fixed lending rates at a range of maturities.

Buying securities

The Riksbank's current assessment is that the measures that have been taken so far are sufficient to provide a development of inflation and the real economy that, given the circumstances, can be regarded as satisfactory. If, however, it becomes apparent that additional stimulation is required then one possibility is for the Riksbank to buy securities of different kinds. This has been done by other central banks, for example the Federal Reserve and the Bank of England. The need for monetary policy stimulation over and above policy rate cuts has, however, been more limited in Sweden so far and the Swedish financial markets have, on the whole, functioned more effectively.

If, in the period ahead, the Riksbank nevertheless decides to buy securities, it is probable that these would primarily be government-bonds. An advantage of buying government-bonds compared with the most conceivable alternatives – mortgage bonds and commercial paper – is that such a measure is more general and not aimed at a specific sector to the same extent. This makes such purchases a more natural extension of traditional monetary policy.

As in the case of lending at a fixed interest rate, the primary aim of buying government-bonds is to reduce interest rates in general. The purchases push down government bond rates and investors then turn to investments that provide a higher yield. When the demand for higher-risk assets increases, the interest rate for such assets will also be driven down and interest rates will fall in general. An additional effect could be that the banks increase their lending because the central bank's purchase of government-bonds increases the banks' deposits and their reserves in the central bank.

The effects of lending at a fixed interest rate and of buying securities are difficult to predict. This is partly because these are unusual measures, which means that forecasts of the effects can not be based on previous experience. It is also because interest rates at long maturities are affected by a number of factors other than the measures taken by the central bank.

Differences in financial structure and crisis measures in various countries

Central banks around the world have implemented extensive measures to counteract the effects of the financial crisis. These measures have aimed to support monetary policy and to improve the functioning of the financial markets, which has been seriously impaired during the crisis. The type of measures taken have been affected by the structure of the financial sector in the respective countries.

The financial crisis began in 2007 on the US mortgage market. During the autumn of 2008 it developed into a global liquidity crisis. The functioning of many credit markets seriously deteriorated and in some cases the markets practically ceased to function at all. The banks, for example, found it very difficult to issue securities at longer maturities. In order to counteract this, the central banks began to lend large volumes at shorter maturities on the interbank market. The countermeasures of the central banks have largely aimed at securing the banks' supply of liquidity. Measures have been taken by the Riksbank and the European Central Bank (ECB), as well as by the Federal Reserve and the Bank of England. For example, all of these central banks have extended the maturities of the loans they provide. Another example is that the four central banks now accept a wider range of assets as collateral for loans. The number of counterparties has also been increased. Moreover, policy rates have been cut to all-time lows.

It is interesting to note the differences that exist concerning the measures taken and to attempt to explain what these differences are due to. In Sweden and the euro area, the banks are very important to the financial system. The Riksbank and the ECB have therefore mainly channelled their measures through the banking system. In the USA, where the financial sector is strongly market based, the Federal Reserve has, in addition to the measures directed at the banking system, also focused on getting the flow of credit moving on important credit markets outside the banking system.

Differences in the structure of the financial sectors – a comparison

Although the financial sectors are well developed in most of the countries with a high income level, there are significant structural differences.[11] These differences can be expected to influence the effects of the crisis as well as how the central banks choose to design their countermeasures. Over the last ten years, capital markets like the stock market and the corporate bond market have become increasingly important to corporate funding. Before the crisis broke out, this trend had developed furthest in the USA where the size of these markets amounted to 144 per cent and 168 per cent of GDP respectively in 2007.[12] This can be compared with the euro area, which is traditionally regarded as bank based, where the size of the stock market corresponds to 85 per cent of the area's GDP and the corporate bond market to 81 per cent of GDP.

11 A common way of characterising the structure of the financial sector is to see whether the sector is mainly bank based or market based. See for example R. Levine, "Bank-based or market-based financial systems: which is better?," NBER Working Paper No. 9138, 2002; A. Demirgüç-Kunt and R. Levine, "Bank-based and market-based financial systems. Cross-country comparisons", Policy Research Working Paper no. 2143, The World Bank; and A. Ludwig, and T. Sløk, "The impact of stock prices and house prices on consumption in OECD countries", IMF Working Paper No. 02/1, 2002.

12 Measured in terms of the market value of outstanding shares and bonds according to Monthly Bulletin, May 2009, ECB.

The banks play a much more important role for corporate funding in Sweden, the euro area and, to a certain extent, the UK than in the USA. At the end of 2008, bank loans constituted just over 50 per cent of the Swedish companies' total borrowing. In the USA, the corresponding figure was 10 per cent (see Table B1). In Sweden, loans from financial institutions other than banks, for example mortgage institutions and finance companies, accounted for slightly less than 40 per cent of borrowing. On the other hand, borrowing on the credit markets in the form of commercial paper and corporate bonds played a relatively limited role.[13] In the USA, however, over 50 per cent of the borrowing comes from corporate bonds. In the UK, bank loans account for the same proportion of the companies' external funding as in Sweden and the euro area, but the market for corporate bonds is also relatively important there and accounts for over 20 per cent of total borrowing.

Crisis measures in the various countries

To date, the financial crisis has resulted in write downs and losses for financial institutions amounting to over USD 1 200 billion.[14] The IMF estimates that the total losses around the world may reach more than USD 4 000 billion.[15] The major part of the losses is expected to stem from US assets. The level of loss given default is expected to be twice as high in the USA as in Europe. The banking sector is expected to account for two-thirds of the global write downs and losses. The financial sector has thus been exposed to severe stresses and strains around the world.

Extensive measures have been taken by the authorities to support the banking sector with liquidity and to avoid a dramatic fall in the supply of credit to companies and households. The central banks have provided special liquidity assistance to individual institutions as, for example, in the case of the Riksbank's assistance to Carnegie Investment Bank AB and Kaupthing Bank Sverige AB. Governments have introduced borrowing guarantee schemes. Many governments have also participated in the banks' rights issues or have attempted to inject capital into the banking sector by other means.

In the euro area, the banks perform a vital function for corporate and household funding (see Table B1). The ECB has therefore channelled its measures through the banking system. The ECB's planned purchases of so-called covered mortgage bonds issued by the banks follow the same strategy.[16] These represent an attempt to kick start the European market for these bonds, which has been hit hard by the financial crisis. There have been periods when practically no trading at all has been conducted on this market.

In the USA, where the securities markets perform an important funding function, the Federal Reserve has taken direct action on important credit markets. The problems on the US mortgage market were a factor that triggered the financial crisis and turned out to be directly linked to the techniques for

13 Although this market is not as large in Sweden, funding difficulties on the securities market do have consequences for bank lending. For a more detailed description of this see the article "The effects of the financial crisis on companies' funding possibilities" in Financial Stability Report 2009:1, Sveriges riksbank.

14 Financial Stability Report 2009:1, Sveriges riksbank.

15 Global Financial Stability Report, April 2009, IMF.

16 A bond for which the holder has a specific right of priority in the event of default. The aim of covered bonds is that the credit risk should normally be lower compared to bonds that are not covered, which in turn reduces the borrowing costs.

securitising credit that have developed in recent years. These techniques have entailed the use of portfolios made up of various long-term credit instruments as the basis for so-called structured credit products. Basically illiquid assets, such as mortgages, have been converted into securities that the banks have then been able to sell. This has been more common in the USA than in other countries. With the aim of supporting the market for asset-backed securities, the Federal Reserve has, for example, directly purchased assets that have mortgages as their underlying collateral.[17]

The Federal Reserve also has a programme for loans against collateral in assets linked to consumer credits, such as car loans. One of the reasons why the Federal Reserve has taken these measures is that consumer credits make up a relatively large proportion of household sector borrowing in the USA.

The Bank of England has bought commercial paper and corporate bonds. Like the Federal Reserve, the Bank of England has to a certain extent circumvented the commercial banks and has instead chosen to directly support specific markets in order to facilitate the supply of credit to companies and to stimulate the economy. The market for corporate bonds in the UK is much more important for corporate funding than in the euro area and Sweden (see Table B1).

In Sweden, the Riksbank's measures have so far been channelled through the banking system. The need to support specific credit markets in Sweden has, in the Riksbank's assessment, not been as great as these markets have either not encountered substantial problems or have not been of sufficient importance for household or corporate funding.

Despite the differences between the measures taken, the consequences for the central banks' balance sheets have been similar (see Figure 53). For example, the Riksbank's balance sheet total has tripled. The governments have also taken measures that aim to increase access to credit. These measures are not reflected, however, on the balance sheets of the central banks.

Table B1. Distribution of borrowing for non-financial companies in the euro area, Sweden, the UK and the USA at the end of 2008
Per cent

	Sweden	Euro area	UK	USA
Bank loans	51	53*	47	10
Other loans	38	39	31	34
Corporate bonds	9	5	21	54
Commercial paper	2	3	1	2

*For the euro area bank loans also includes loans from other monetary financial institutions, for example mortgage institutions and finance companies.

Note: Other loans includes, for example, loans between companies and loans from financial participants other than banks, for example mortgage institutions and finance companies.

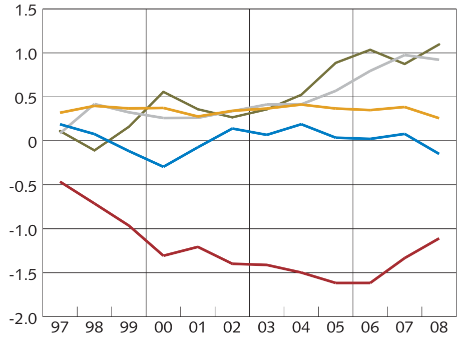
Sources: ECB, Federal Reserve, Office for National Statistics and Statistics Sweden.

17 B. Bernanke, "Four questions about the financial crisis", speech at Morehouse College, Atlanta, 14 April 2009.

Global imbalances, saving and demand in the wake of the crisis

Since the 1990s, major imbalances have accumulated in global current account relationships. The United States has long had a large current account deficit, and China a large current account surplus. A higher level of saving and a lower level of demand from the US mean that the US current account deficit has now started to decrease, which, in the short term, may have negative consequences for growth in the rest of the world and for Swedish exports. However, in the slightly longer term, reduced global imbalances should not be unfavourable for the growth potential of Sweden or other countries.

Figure B1. Global imbalances
Current accounts as per cent of World GDP

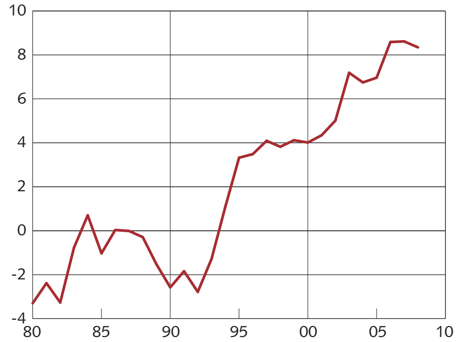


USA
Euro area
Japan
Growth economies in Asia
Oil exporting economies

Note. Growth economies includes China, India, Indonesia, Malaysia, Philippines and Thailand.

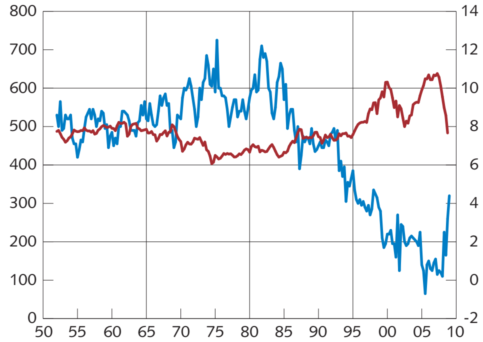
Source: IMF

Figure B2. Current account in Sweden
Per cent of GDP



Sources: Stastistics Sweden and the Riksbank

Figure B3. Savings and net worth in the USA
Per cent of disposable income



Net worth (left scale)
Household saving ratio (right scale)

Sources: Federal Reserve and U. S. Department of Commerce

What are "global imbalances"?

A current account deficit arises during periods in which a country's total domestic demand, i.e. investments and total consumption of goods and services, exceeds its income. In order for a country to be able to consume and invest more than it produces, it must either accrue foreign debt or sell assets abroad. Another way of putting it would be to say that the country's total savings are not sufficient to cover the investments being made there. These global imbalances have had a relatively high profile in recent years as certain countries have had major deficits for long periods of time, while others have had major surpluses (see Figure B1). The debate has focused on whether these circumstances are sustainable or if the situation has become "unbalanced", as well as the possible consequences of a very swift return to more normal current account relations (historically speaking), for example as regards the real exchange rate of the USD,[18] considering that the United States alone accounts for three-quarters of the total global current account deficit. In contrast, in recent years, Sweden has had a relatively large current account surplus (see Figure B2).

Certain commentators claim that these global imbalances formed the basis of the circumstances triggering the current financial crisis. They refer to the manner in which a surplus in savings in certain parts of the world, primarily China, Japan and the oil-producing nations, led to a surplus supply of easily-available credits and rising asset prices in countries with well-developed financial markets and high consumption propensities, such as the United States.

Whether or not these global imbalances are considered to be a crucial cause of the ongoing crisis, it has nevertheless been established that a reduction of the US current account deficit will entail changes in global consumption and production patterns that may impact GDP development and employment across the world in the years to follow.

The effects of the financial crisis on the imbalances

The great US current account deficit can primarily be explained by the very low levels of household saving in recent decades (see Figure B3), although the level of public sector saving has also been low. During the

18 Refer, for example, to M. Obstfeld and K. Rogoff, "Global current account imbalances and exchange rate adjustments" Brookings Papers on Economic Activity, 1:2005, 67-146.

same period, household wealth has increased, largely as a result of rising housing and equity prices. These prices have now decreased dramatically. At the same time, household saving has increased with record speed. Although the public sector deficit has increased dramatically over the most recent year, the increased levels of private saving mean that the US current account deficit is continuing to decrease.

As US households decrease consumption and increase saving, a fall in total global demand will occur, unless consumption increases to an equivalent degree in other countries, assuming that public consumption and investment in the US cannot compensate for the decline in demand from private consumption. As it takes some time for companies to adjust their production to lower demand, overcapacity will arise. In countries which have had large current account surpluses, and where growth has been highly dependent on the export industry, for example China, this will entail problems for the export sector. For this reason among others, the Chinese government has implemented an extensive packet of fiscal measures, including efforts to encourage domestic consumption. There are signs that these measures have succeeded in stimulating domestic demand in China.[19]

An indication of the extent of the changes to be expected in the US current account deficit in the near future can be gained from the analysis of historical saving and investment patterns in households, companies and the public sector. Assuming that households and companies will adjust their saving to the historical average, the result will be a striking decrease of the US current account deficit in the near future, event though the US public sector is expected to have a relatively large deficit.

How important is the development of these global imbalances for future growth in Sweden and other countries?

Countries with current account deficits consume more internationally-traded goods than they produce. In simplified terms, the export sector (or manufacturing industry) could be described as being "too small" in relation to the service sector. Consequently, a decrease in the US current account deficit will entail an increase in the US export industry's share of production in relation to the service sector's share. This adjustment will impact the real exchange rate and relative prices of traded and non-traded goods.

If global imbalances decrease in the near future, the US share of the total global production of internationally traded goods is expected to increase, at the same time as the share decreases in the present surplus countries, such as Sweden. As US production of internationally traded goods increases, relative prices will change, so that US export goods will become cheaper to consume in the previous surplus countries. In turn, this will also have consequences for the relative size of the service sector and manufacturing industry in these countries, as it will become more profitable to produce services and less profitable to produce goods for export.

19 See Chapter 3 of this report.

In the short term, reduced consumption in the United States and other deficit countries may have negative consequences for the Swedish export industry. At present, just under seven per cent of Swedish exports go to the United States. However, if consumption patterns change across the world, so that a larger portion of demand comes from China and other previous surplus countries, Swedish companies should be able to increase their exports to these countries and thus partially compensate for the reduction in orders from the United States. This may, however, mean that different types of goods will be in demand as compared with before the crisis. Such an eventuality would lead to a period of restructuring, possibly resulting in unemployment in certain sectors, before training and investment have time to adapt to the new demand situation.

The extent of the consequences of a reduction of the world's imbalances is largely dependent on whether any adjustment takes place gradually enough to allow economies to adapt to the new situation. There otherwise exists a risk that this need for restructuring will give rise to protectionism or reduced financial and economic integration across the world. As an example, this was what happened in conjunction with the depression of the 1930s. Such a development would impact long-term conditions for global growth. On the other hand, a reduction of global imbalances in itself should not give rise to lower growth potential.

The Riksbank's company interviews in May 2009

In the discussions with the companies, a picture emerges of a certain degree of stabilisation and of cautious optimism following the sharp downturn of the autumn and winter. The clearest signs of the stabilisation of production and sales are primarily to be found in the manufacturing and retail sectors. At the same time, there is considerable anxiety about a setback in the development of economic activity, which partly relates to the fact that funding remains tight. Since the previous survey in December, the funding situation seems to have eased somewhat, above all as the result of an improvement in the functioning of market borrowing through the use of corporate bonds and certificates. The companies also report that wage costs are expected to be lower than previously. According to the companies, the main effects of the weak krona on the companies' pricing may have already arisen.

Approximately two-thirds of the companies interviewed described the economic situation as poor, while most other companies, mainly in the retail sector, believed that it was satisfactory.[20] The responses mean that the companies' perception of the current economic situation is largely the same as at the time of the previous survey in December 2008. A marked change since the previous survey is, however, that only one third of the companies contacted now expected to see a further deterioration in economic activity. Apart from those in the construction industry, the assessment of most companies is that economic activity is beginning to stabilise.

There are, however, clear differences between different sectors. While the non-durables segment of the retail sector largely assesses the situation as satisfactory and there are some signs of light at the end of the tunnel in the export sector, the situation is weaker in the rest of the retail sector, particularly with regard to electrical goods. The situation is much worse in the construction sector, which apart from the caution being exercised by the customers in the current situation, also mentions the difficulties involved in finding funding for new projects. However, for most of the companies covered by the survey the funding situation has improved somewhat since the Riksbank's previous survey in December. A contributing factor is also that the securities markets have begun to function again, although at a high cost for the issuers.

The general picture conveyed by the companies is that price pressures are till low and that this is only partly counteracted by rising import prices as a result of the weak krona. A common comment from the companies was that "it is difficult to increase prices in the present situation." There are, however, differences between the companies in the survey. For companies in the retail sector that have a high proportion of imported goods in their sales, the exchange rate naturally plays an important role. Judging by the responses of the companies, most of the effects of the weaker krona on sales prices should arise within six months and they may thus have already had an impact on pricing.

20 The Riksbank's interviews with Swedish companies mainly took place in May 2009 and comprised 62 companies. For a more detailed presentation see "The Riksbank's company interviews in May 2009", 22 June 2009 (www.riksbank.se, under the heading Press & Published, Reports).

Appendix

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

Tables

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

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

	Q2 2009	Q3 2009	Q4 2009	Q3 2010	Q3 2011	Q3 2012
Repo rate	0.6	0.3 (0.5)	0.3 (0.5)	0.3 (0.5)	1.8 (1.8)	4.0

Source: The Riksbank

Table A2. Inflation, annual average
Annual percentage change

	2008	2009	2010	2011
CPI	3.4	-0.2 (-0.3)	1.4 (1.3)	3.2 (3.2)
CPIF	2.7	1.9 (1.9)	1.9 (1.8)	2.0 (2.0)
CPIF excl. energy	2.0	2.3 (2.4)	2.0 (2.1)	2.0 (2.0)
HICP	3.3	2.0	1.8	1.9

Note. CPIF is CPI with fixed interest rate.
Sources: Statistics Sweden and the Riksbank

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

	Sep. -08	Sep. -09	Sep. -10	Sep. -11	Sep.-12
CPI	4.4	-1.2 (-1.4)	1.5 (1.4)	3.7 (3.7)	3.7
CPIF	3.5	1.5 (1.4)	1.7 (1.6)	2.0 (2.1)	2.2
CPIF excl. energy	2.1	2.3 (2.6)	2.0 (1.9)	2.0 (2.0)	2.1
HICP	4.2	1.6	1.6	1.9	2.1

Note. CPIF is CPI with fixed interest rate.
Sources: Statistics Sweden and the Riksbank

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

	2008	2009	2010	2011
Repo rate	4.1	0.7 (0.8)	0.3 (0.5)	1.6 (1.6)
10-year rate	3.9	3.4 (3.1)	4.1 (3.7)	4.6 (4.2)
Exchange rate, TCW-index, 1992-11-18=100	127.2	141.8 (142.7)	134.8 (134.8)	132.4 (132.4)
General government net lending*	2.5 (2.5)	-2.9 (-2.9)	-4.0 (-3.9)	-2.6 (-2.6)

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

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

GDP	2008	2009	2010	2011
USA	1.1 (1.1)	-3.1 (-3.2)	0.9 (0.7)	3.0 (3.0)
Japan	-0.7 (-0.7)	-6.3 (-6.0)	0.6 (-0.3)	1.6 (1.6)
Euro area	0.6 (0.7)	-4.8 (-3.6)	0.0 (0.1)	1.6 (1.6)
OECD	0.9 (0.9)	-4.0 (-3.6)	0.7 (0.6)	2.5 (2.4)
TCW-weighted	0.7 (0.8)	-4.4 (-3.6)	0.2 (0.1)	1.9 (1.9)
World	3.2 (3.2)	-1.2 (-1.1)	2.3 (2.1)	3.8 (3.8)

CPI	2008	2009	2010	2011
USA	3.8 (3.8)	-0.8 (-0.8)	1.4 (1.2)	2.0 (2.0)
Japan	1.4 (1.4)	-1.0 (-0.9)	-0.6 (-0.2)	0.5 (0.5)
Euro area (HICP)	3.3 (3.3)	0.4 (0.3)	0.9 (1.0)	1.6 (1.6)
OECD	3.6 (3.5)	0.5 (0.3)	1.3 (1.3)	1.9 (1.9)
TCW-weighted	3.3 (3.3)	0.4 (0.3)	1.0 (1.1)	1.6 (1.6)

	2008	2009	2010	2011
Crude oil price, USD/barrel Brent	97	62 (52)	76 (63)	79 (68)
Swedish export market growth	0.5 (1.2)	-11.7 (-9.5)	0.3 (-0.5)	7.5 (7.5)

Note. The export market index aims to measure demand for internationally-traded goods in the countries to which Sweden exports. The index is calculated with the aid of import figures in recipient countries weighted with the country's relative importance for Swedish exports. The IMF has changed the weight used for calculating world GDP. This provides a positive contribution of 0.2 and 0.1 percentage points respectively to GDP growth in 2009 and 2010 compared with the weights used in the April Monetary Policy Update.
Sources: Eurostat, IMF, Intercontinental Exchange, OECD and the Riksbank

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

	2008	2009	2010	2011
Private consumption	-0.2 (-0.2)	-1.8 (-1.2)	1.6 (1.6)	2.0 (2.0)
Public consumption	1.5 (1.3)	1.2 (0.4)	0.4 (0.6)	0.6 (0.7)
Gross fixed capital formation	2.7 (3.5)	-16.6 (-10.3)	-6.1 (-5.6)	5.6 (5.5)
Inventory investment*	-0.6 (-0.7)	-0.8 (-1.1)	0.7 (0.7)	0.2 (0.2)
Exports	1.8 (1.7)	-16.1 (-14.2)	2.0 (2.3)	6.6 (6.2)
Imports	3.0 (3.0)	-17.0 (-14.3)	0.3 (1.0)	5.6 (5.4)
GDP	-0.2 (-0.2)	-5.4 (-4.5)	1.4 (1.3)	3.1 (3.1)
GDP, calender-adjusted	-0.4 (-0.5)	-5.2 (-4.4)	1.1 (1.0)	3.1 (3.1)
Final figure for domestic demand*	0.8 (0.9)	-3.8 (-2.5)	-0.2 (-0.1)	2.0 (2.1)
Net exports*	-0.4 (-0.4)	-0.8 (-1.0)	0.9 (0.7)	0.9 (0.8)
Current account, per cent of GDP	8.3 (8.2)	7.1 (8.1)	7.6 (8.5)	8.1 (8.9)

*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 A7. Production and employment
Annual percentage change, unless otherwise stated

	2008	2009	2010	2011
Population, aged 16-64	0.8 (0.8)	0.6 (0.5)	0.3 (0.2)	0.2 (0.0)
GDP, calendar-adjusted	-0.4 (-0.5)	-5.2 (-4.4)	1.1 (1.0)	3.1 (3.1)
Number of hours worked, calendar-adjusted	0.9 (0.9)	-3.9 (-2.6)	-2.4 (-2.2)	0.4 (0.5)
Employed (EU-definition)	1.2 (1.2)	-2.7 (-2.7)	-3.1 (-2.9)	-0.3 (-0.3)
Labour force (EU-definition)	1.3 (1.2)	0.0 (-0.1)	-0.8 (-0.7)	-0.3 (-0.3)
Unemployment aged 15-74(EU-definition)*	6.2 (6.2)	8.8 (8.7)	11.0 (10.7)	10.9 (10.7)

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

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

	2008	2009	2010	2011
Hourly wage, NM	4.3 (4.3)	3.2 (3.5)	2.2 (2.3)	2.4 (2.6)
Hourly wage, NR	4.8 (4.8)	3.0 (3.6)	2.3 (2.4)	2.6 (2.8)
Employer's contribution*	-0.7 (-0.7)	-0.4 (-0.1)	0.1 (0.1)	0.1 (0.1)
Hourly labour cost, NA	4.1 (4.2)	2.5 (3.5)	2.3 (2.4)	2.7 (2.9)
Productivity	-1.3 (-1.5)	-1.3 (-1.8)	3.5 (3.2)	2.6 (2.6)
Unit labour cost	5.5 (5.7)	3.9 (5.4)	-1.2 (-0.8)	0.0 (0.2)

* Contribution to the increase in labour costs, percentage points.
Note. NMO is the National Mediation Office's short-term wage statistics and NA is the National Accounts. Labour cost per hour is defined as the sum of actual wages, collective charges and wage taxes divided by the seasonally adjusted total number of hours worked. Unit labour cost is defined as labour cost divided by seasonally adjusted value added at constant prices.
Sources: National Mediation Office, Statistics Sweden and the Riksbank

Table A9. Scenario with higher repo rate
Annual percentage change, unless otherwise stated

	2008	2009	2010	2011
GDP, calendar adjusted	-0.4	-5.2 (-5.2)	0.9 (1.1)	3.1 (3.1)
CPI	3.4	-0.2 (-0.2)	1.3 (1.4)	3.0 (3.2)
CPIF	2.7	1.9 (1.9)	1.7 (1.9)	1.8 (2.0)
Repo rate, per cent	4.1	0.8 (0.7)	0.5 (0.3)	1.6 (1.6)
Exchange rate, TCW-index, 1992-11-18=100	127.2	141.6 (141.8)	134.0 (134.8)	131.6 (132.4)
Labour market gap, per cent	3.8	-0.2 (-0.2)	-2.9 (-2.7)	-2.7 (-2.5)
Productivity gap, per cent	2.6	-3.8 (-3.8)	-4.4 (-4.1)	-3.1 (-2.9)

Note. The labour market gap and productivity gap refer to the deviation in GDP and the number hours worked respectively from the HP trend.
Main scenario's forecast in brackets.
Sources: Statistics Sweden and the Riksbank

Table A10. Scenario with lower repo rate
Annual percentage change, unless otherwise specified

	2008	2009	2010	2011
GDP, calendar adjusted	-0.4	-5.1 (-5.2)	1.2 (1.1)	3.1 (3.1)
CPI	3.4	-0.2 (-0.2)	1.6 (1.4)	3.5 (3.2)
CPIF	2.7	2.0 (1.9)	2.1 (1.9)	2.2 (2.0)
Repo rate, per cent	4.1	0.6 (0.7)	0.1 (0.3)	1.6 (1.6)
Exchange rate, TCW-index, 1992-11-18=100	127.2	141.9 (141.8)	135.8 (134.8)	133.3 (132.4)
Labour market gap, per cent	3.8	-0.1 (-0.2)	-2.4 (-2.7)	-2.2 (-2.5)
Productivity gap, per cent	2.6	-3.7 (-3.8)	-3.8 (-4.1)	-2.7 (-2.9)

Note. The labour market gap and productivity gap refer to the deviation in GDP and the number hours worked respectively from the HP trend.
Main scenario's forecast in brackets.
Sources: Statistics Sweden and the Riksbank

Table A11. Scenario with weaker wage development
Annual percentage change, unless otherwise specified

	2008	2009	2010	2011
GDP, calendar adjusted	-0.4	-5.1 (-5.2)	1.4 (1.1)	3.6 (3.1)
CPI	3.4	-0.2 (-0.2)	1.3 (1.4)	3.0 (3.2)
CPIF	2.7	1.9 (1.9)	1.8 (1.9)	1.8 (2.0)
Repo rate, per cent	4.1	0.7 (0.7)	0.1 (0.3)	1.3 (1.6)
Hourly labour cost	4.1	2.5 (2.5)	1.8 (2.3)	2.0 (2.7)
Exchange rate, TCW-index, 1992-11-18=100	127.2	141.8 (141.8)	135.3 (134.8)	133.4 (132.4)
Repo rate, per cent	2.0	-0.9 (-1.0)	-2.6 (-2.6)	-
Labour market gap, per cent	3.8	-0.2 (-0.2)	-2.3 (-2.7)	-1.5 (-2.5)
Productivity gap, per cent	2.6	-3.8 (-3.8)	-3.8 (-4.1)	-2.0 (-2.9)

Note. The labour market gap and productivity gap refer to the deviation in GDP and the number hours worked respectively from the HP trend.
Main scenario's forecast in brackets.
Sources: Statistics Sweden and the Riksbank

Table A12. Scenario with more rapid international recovery
Annual percentage change, unless otherwise specified

	2008	2009	2010	2011
TCW-weighted interest rate, per cent	3.8	1.0 (1.0)	1.6 (1.4)	3.6 (2.6)
TCW-weighted inflation	3.3	0.4 (0.4)	1.0 (1.0)	2.2 (1.6)
TCW-weighted GDP	0.7	-4.3 (-4.4)	1.0 (0.2)	2.4 (1.9)
GDP, calendar adjusted	-0.4	-5.1 (-5.2)	1.3 (1.1)	3.4 (3.1)
CPI	3.4	-0.2 (-0.2)	1.9 (1.4)	4.0 (3.2)
CPIF	2.7	2.0 (1.9)	2.0 (1.9)	2.5 (2.0)
Repo rate, per cent	4.1	0.7 (0.7)	0.7 (0.3)	2.4 (1.6)
Real repo rate, per cent	2.0	-1.1 (-1.0)	-2.8 (-2.6)	-
Exchange rate, TCW-index, 1992-11-18=100	127.2	141.8 (141.8)	134.9 (134.8)	133.3 (132.4)
Labour market gap, per cent	3.8	-0.2 (-0.2)	-2.6 (-2.7)	-2.3 (-2.5)
Productivity gap, per cent	2.6	-3.7 (-3.8)	-4.1 (-4.1)	-2.9 (-2.9)

Note. The labour market gap and productivity gap refer to the deviation in GDP and the number hours worked respectively from the HP trend.
Main scenario's forecast in brackets.
Sources: Statistics Sweden and the Riksbank

Outline of boxes published 2007-2009[21]

2007

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

2008

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

2009

2009 February Monetary policy alternatives in times of financial crisis and concern over deflation

2009 February The financial crisis and the effects of monetary policy

2009 February The recent weakening of the krona

2009 February The Riksbank's company interviews in December 2008–January 2009

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

Earlier interest rate decisions[22]

Date of meeting	Repo rate (per cent)	Decision (percentage points)	Monetary Policy Report
2005			
27 January	2.00	0	no report
14 March	2.00	0	2005:1
28 April	2.00	0	no report
20 June	1.50	-0.50	2005:2
23 August	1.50	0	no report
19 October	1.50	0	2005:3
1 December	1.50	0	2005:4
2006			
19 January	1.75	+0.25	no report
22 February	2.00	+0.25	2006:1
27 April	2.00	0	no report
19 June	2.25	+0.25	2006:2
29 August	2.50	+0.25	no report
25 October	2.75	+0.25	2006:3
14 December	3.00	+0.25	no report
2007			
14 February	3.25	+0.25	2007:1
29 March	3.25	0	no report
3 May	3.25	0	no report
19 June	3.50	+0.25	2007:2
6 September	3.75	+0.25	no report
29 October	4.00	+0.25	2007:3
18 December	4.00	0	Monetary Policy Update
2008			
12 February	4.25	+0.25	2008:1
22 April	4.25	0	Monetary Policy Update
2 July	4.5	+0.25	2008:2
3 September	4.75	+0.25	Monetary Policy Update
8 October	4.25	-0.50	no report
22 October	3.75	-0.50	2008:3
3 December	2.00	-1.75	Monetary Policy Update
2009			
10 February	1,00	-1,00	2009:1
20 April	0,50	-0,50	Monetary Policy Update

22 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**.**

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.

Covered bonds: bonds where the holder has a special preferential right in the event of bankruptcy. The purpose of covered bonds is that they normally have a lower credit risk than bonds that are not covered, which means that the borrowing cost is reduced.

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.

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 index: Aims to measure the demand for internationally-traded goods in the countries to which Sweden exports. The index is calculated with the aid of import developments in the recipient countries weighted with the respective country's relative importance for Swedish exports.

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, for instance, mortgage rates are not included in the HICP.

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

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 figure: The percentage of companies or households stating a positive development minus the percentage stating a negative development.

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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