Inflation Report

2005:1

15 March 2005

Contents

Foreword

The Riksbank's monetary policy target is price stability. The Riksbank has chosen to operationalise this target as keeping inflation at 2 per cent.

The Riksbank gives its collective view of the inflation outlook in the Inflation Report. The Executive Board's monetary policy decisions and discussions are presented in separate press releases. Executive Board members may differ in their opinions on inflation prospects. The Board members' assessments and individual stances on monetary policy decisions are presented in the minutes of the Executive Board's monetary policy meetings. The separate minutes of the Board meeting on 14 March will be published on 1 April 2005.

This Inflation Report reproduces the main features of the presentations and discussions of inflation at the Executive Board meetings on 24 February and 9 March 2005. The purpose of the Inflation Report is not merely to produce background material for monetary policy decisions, but also to spread knowledge about the Riksbank's assessments. The Bank aims to make it easier for external parties to follow, understand and assess monetary policy.

According to Chapter 6, Article 4 of the Sveriges Riksbank Act (1988:1385), the Riksbank is obliged to provide a written report on monetary policy to the Riksdag Committee on Finance at least twice a year. The Riksbank has chosen to use two of the year's four Inflation Reports for this purpose. This report constitutes one such account to the Riksdag.

To illustrate the consequences for monetary policy, the analyses in the Report's main scenario are as usual based on the assumption that the repo rate will remain unchanged for the coming two years. Thus, the projections using this assumption cover the period up to the end of 2007 Q1. The forecasts are also based on several other important assumptions, which are described in more detail in the Report.

A special box in the Report contains inflation forecasts that extend to the end of 2008 Q1 and are based on the assumption that the repo rate will develop in line with implied forward interest rates. These provide a broader base for discussions on monetary policy. The Riksbank's internal analysis work has from time to time included forecasts covering a longer time perspective than two years and making alternative assumptions for the repo rate path. The aim to be as open and clear as possible makes it natural to publish this additional information. It should be emphasised that this does not mean that an interest rate trend that follows forward rates should be interpreted as the monetary policy line the Executive Board considers most probable. Nor does the fact that the forecasts of inflation are based on a different assumption than a constant repo rate entail any change in the way we conduct our monetary policy. A more detailed description of the reason for the method changes is provided in a separate box.

The Inflation Report begins with a summary, followed by a discussion of the most important determinants of inflation. This is followed by the Riksbank's overall assessment of inflation prospects in the main scenario (using the assumption of an unchanged repo rate) and the key risks surrounding this assessment. Finally, there are boxes describing the method changes in the forecast work, the forecasts these result in and a base for assessing the monetary policy conducted 2002-2004.

Stockholm, March 2005
Lars Heikensten
GOVERNOR OF SVERIGES RIKSBANK

Summary

The Riksbank's assessment is that the economic upturn will continue over the coming years and that resource utilisation will increase gradually both in Sweden and abroad. Despite global economic growth being high, international price pressure is low. The low international inflation and high domestic productivity growth are important factors behind the low inflation in Sweden. There are also a number of specific factors that have depressed inflation further, including falling prices for food and clothes. These are linked to increased price competition in the non-durable goods trade and abolished import quotas on textile goods. These factors also mean that despite the stable economic upswing, inflation is expected to remain low in 2005 and rise only moderately during the forecast period to around 2 per cent two years ahead.

Stable international economic upturn but low price pressure.

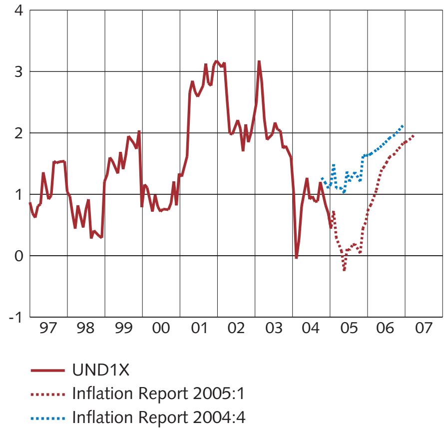
International economic growth continues to be robust. At the same time, inflation is still low. The large price increases for oil and other commodities have had limited effects on consumer price inflation. This is partly due to greater integration of low-cost countries like China, India and the countries in central and eastern Europe into global trade, which contributes to greater international competition and price pressure. However, some industrial nations have experienced relatively low cost trends arising from high productivity growth and modest resource utilisation. This has also contributed to low inflation globally and to expectations of continuing low interest rates. Nominal and real interest rates are now very low, given the length of time the recovery has been under way.

As economic activity improves, productivity growth is expected to decline and price pressure to increase. Signs of a more normal productivity growth can also be seen in the US economy, which is further ahead in the economic upturn than the euro area and Sweden.

The relatively good international economic growth is expected to continue and unutilised production capacity is expected to decline gradually over the coming years. In this situation, interest rates are expected to rise, particularly as they are unusually low at present.

Growth in the US economy in 2004 was in line with the assessment in the December Inflation Report. Several positive economic signals have come from the United States recently; employment and investment are increasing, consumer confidence remains high and private consumption is booming. All in all, there is reason to make an upward revision for growth in the United States in the short term. However, growth in the euro area and Asia has been slightly weaker than expected. Domestic demand growth in both Germany and Japan is still sluggish. Once again there is reason to be slightly more pessimistic with regard to economic growth in the euro area - in particular Germany. All in all, the growth forecast for the United States is being revised up somewhat for the short term and

Figure 1. UND1X: outcome and forecast in the main scenario.
Annual percentage change



Sources: Statistics Sweden and the Riksbank.

the euro area forecast is being revised down slightly for this year and next year. On aggregate, the assessment of growth in Swedish export markets remains largely the same as in the previous Report.

The oil price has continued to fluctuate significantly and at present is higher than was expected. Pricing in the forward market is also indicating higher prices ahead than was the case a few months ago. The fundamental assessment that the oil price will fall back still remains, but given the higher outcome and the recent forward prices, the forecast is being revised upwards.

International producer prices for manufactured goods often follow developments in oil and metal prices. Following a substantial upswing in 2004, oil and metal prices are expected to fall back. Producer prices are not expected to fall as much, because it is assumed that international demand will remain high. International producer prices are expected to rise by just over 2 per cent this year, which is roughly equivalent to the average for the past ten years but much lower than the rate of price increase during, for instance, the 1980s. The assessment of continuing moderate international price pressure remains unchanged from the December Report.

International price trends also affect Swedish prices through the exchange rate. The krona showed a temporary, relatively large appreciation towards the end of 2004, but has since then weakened slightly against the dollar and the euro, which is in line with the earlier forecast. The relatively good growth prospects in Sweden and the surplus in the trade balance are expected to lead to the krona appreciating during the forecast period.

■■ Good growth but low demand for labour in Sweden.

The recovery in the Swedish economy began in 2003 and has since continued. Growth in 2004 was 3.5 per cent. The high growth rate has been supported by strong international demand for Swedish exports. Productivity has also increased rapidly, particularly in industry. Exports of services have increased more than expected. The increased surplus from trade in services has been an important factor behind the high growth in the business sector in 2004. Some of this stems from merchanting, but service exports have been strong on the whole.

Recently, manufacturing activity appears to have entered a more moderate growth phase. The National Institute of Economic Research's business tendency survey and the purchasing manager's index, as well as statistics on output and order intake indicate continuing growth, albeit at a lower rate than in early 2004. At the same time, the expectations of manufacturing firms are remarkably positive, given that output growth did not entirely fulfil the firms' own expectations during the latter part of 2004.

Economic activity is expected to improve gradually in more sectors. Growth in domestic demand is expected to accelerate, while the contribution from net exports slackens. During 2005 firms' investment and households' consumption are expected to account for the major part of the increase in demand. Households' increased willingness to consume is supported by rising disposable incomes and improved labour market prospects.

The forecast for Swedish GDP growth is being revised marginally upwards for 2005, compared with the December assessment. This is mainly connected to strong investment growth and increased trade in services. Towards the end of 2004, investment in the economy accelerated more than expected and there are indications that this will also be the case at the beginning of 2005. Firms in the manufacturing sector and the majority of service industries are optimistic about the future. Profitability is generally good and interest rates are low, both in nominal and real terms. Continuing high demand also means a greater need to extend capacity. As capital stock is expected to expand more rapidly this year, the need to increase investment should be slightly less in 2006.

Despite last year's robust production growth, employment growth was weak and fell for the second year in a row. Firms were able to increase production so much without new recruitment because both productivity and average working hours increased. As in 2003, the decline in employment was primarily in the business sector. Employment fell slightly during 2004 Q4, which was a poorer result than anticipated in the December Inflation Report. Continuing strong GDP growth indicates that employment will rise this year, and this assessment is supported by an increasing number of indicators in the labour market. Fewer employees were given notice of redundancy during the second half of 2004 than in the same period in 2003. The number of new job vacancies rose on an annual basis between November and January after falling for almost two years. The number of temporary employees has risen since summer 2004. The National Institute of Economic Research's business tendency survey shows that firms in the construction and private services sectors are planning to add to their workforces. As economic activity strengthens, employment is expected to rise further in 2006 and 2007. Open unemployment is thus expected to fall during the forecast period.

■■ Low but rising resource utilisation and cost pressure.

As domestic demand becomes stronger, production and employment in the private services sector will increase at a more rapid rate. There is reason to assume that the economy's average productivity growth will decline somewhat as the economic upswing continues. However, the Riksbank's assessment is still that there has been a permanent increase in the rate of productivity and the forecasts for the coming years are therefore relatively high from a long-term, historical perspective.

There has been some downward revision to the forecast for domestic cost pressure. New statistics indicate that cost pressure in 2004 was lower than expected because of wage costs increasing less than previously forecast, while productivity was slightly higher than forecast. Some downward revision was also made to firms' average unit labour costs this year.

Resource utilisation was low in the Swedish economy during 2004. However, capacity utilisation in manufacturing has accelerated significantly for some time now. Indicators measuring labour shortages show a similar picture for certain service industries, but altogether the demand for labour is still very low. It will probably be some time before any significant labour shortage becomes apparent. The Riksbank's total assessment is that resource utilisation has risen, albeit from a low level, and that it will continue to rise. Wage costs are therefore expected to increase at a more rapid rate.

Inflation assessment

Inflation has been low over the past year. This applies to the rate of price increase for both domestically-produced goods and also most imported goods. However, there does not appear to be any tendency towards general deflation. While the low domestic inflation rate reflects the fact that there have been unutilised resources in the economy for some time, productivity has been high. Moreover, some specific factors have recently contributed to further depressing the already low domestic inflation rate. Food prices in particular have fallen. Several low-price supermarket chains have become established in recent years, which has contributed to tougher competition in the food industry.

It was expected that domestic inflation would be low at this point. The rate of price increase for domestically-produced goods has been largely in line with the previous forecast in recent months. In relation to the assessment in the previous Inflation Report the forecast for domestic inflation has nevertheless been revised down by 0.8 percentage points for 2005 and by 0.4 percentage points for 2006. One reason for this is that price pressure in the food industry is expected to be greater than was previously assumed. Food prices are now expected to fall by 3 per cent this year, compared with 2004. Price falls are implied by the industry's own expectations of price trends over the coming year, according to the National Institute of Economic Research's business tendency survey, and several of the large food chains have also notified price cuts. However, it is difficult to assess how large the average price falls will be, and also their significance for the general inflation rate in the longer term.

Other factors have also been significant in the assessment of domestic inflation. The current state of negotiations in the market for rental accommodation points to lower rent increases this year than was expected in the December Report. Cost pressure in the Swedish economy is expected to be slightly lower. As before, domestic inflation is forecast to rise as resource utilisation rises and firms' costs gradually increase. Towards the end of the forecast horizon domestic inflation is forecast to be 2.7 per cent. This is a low inflation rate from a historical perspective, given the expected economic cycle, and is explained by the low initial inflation rate and a number of specific favourable conditions.

Prices of non-oil imported goods and services have also shown weak development and even fallen in the past year. The decline in imported inflation has been relatively broad. One reason for the price fall is low price increases for manufactured goods in the international market. Moreover, the krona has appreciated in recent years. Exchange rate changes normally pass through to import prices with a lag. The krona appreciation should therefore have contributed to the recent low inflation for imported goods. The declines turned out to be sharper than expected in the December Inflation Report. It is difficult to find clear-cut reasons as to why imported inflation deviated from the forecast, as it is difficult to distinguish the significance of changes in the world market and in Swedish imports more specifically. However, there appear to have been structural changes that have led to increased competitive pressure in the international market and later distribution channels. Increased imports from low-wage countries may have led to greater price pressure on imported consumer goods than has been anticipated (see the box "Recent developments in inflation"). These price-dampening factors are also expected to affect future imported inflation. The forecast has therefore been revised down both for this year and next year.

Imported inflation is also affected by the abolition of the EU's import quotas on clothing and textiles in January 2005. Abolished quotas should lead to lower clothing prices both directly and indirectly in that competition from low-wage countries will intensify. This size of this effect is uncertain, as is its duration with regard to clothing prices and total inflation. The experiences of other countries – notably Norway, which scrapped its import quotas as early as 1996 – indicate that clothes prices might drop more than was originally thought likely this year and next year.

However, the effects of the factors that have led to price declines for imported goods over the past year are expected to gradually diminish during the forecast period. It is reasonable to believe that rising international resource utilisation will lead to higher price pressure. At the same time, the Swedish krona is not expected to strengthen nearly as much as it has in recent years. However, imported inflation is expected to remain relatively low in a historical perspective.

To summarise, the forecast for UND1X inflation is lower both this year and next year than that in the December report. Both imported inflation and domestic cost pressure are expected to be lower throughout the forecast period. This is not due to any change in the assessment of economic activity, but to a number of specific factors that have led to higher competition in the world market and in Sweden. Two important changes are the abolition of import quotas on clothing and greater price pressure on foods. However, these changes are not expected to have any long-term effects on inflation.

UND1X inflation is still expected to rise gradually as the economic upturn progresses and firms' costs increase. Two years ahead, UND1X inflation is expected to be 2 per cent.

■■ The risks are judged to be balanced.

The main scenario describes what the Riksbank assesses to be the most likely path for Swedish inflation provided that the repo rate remains unchanged at the current level. Monetary policy also takes account of the forecast being uncertain and the risk that inflation may therefore deviate from the main scenario.

In the December Inflation Report, the risks of lower inflation were regarded as slightly greater than the risks of higher inflation. The current main scenario has taken into account the risks of lower inflation to a greater extent than before and major downward revisions have been made to the inflation forecast. Of course, there are still risks that inflation will be even lower, but these are now assumed to be offset by the risks of higher inflation. Part of the risks in the inflation assessment have been topical for some time now, such as the development of the twin deficits in the United States, the Swedish krona and productivity. In addition, new risks have arisen, linked to certain specific factors affecting prices for food, for instance. There is considerable uncertainty over how these factors will affect inflation.

International competition is now calculated in the main scenario to have a more dampening effect on inflation than previously anticipated. Tougher domestic competition on food is also expected to hold inflation down, particularly this year. However, it is still possible that these structural factors have been underestimated and that inflation may be even lower than was previously assumed.

It is at the same time conceivable that too much of the present low inflation is being attributed to specific factors. It is well known that changes in demand affect inflation with some time lag. The previous economic slowdown is probably still dampening inflation in Sweden and abroad, and may be having a bigger impact in some markets than in others. If that is the case it is possible that inflationary pressures will increase faster than forecast in the main scenario when resource utilisation continues to rise.

Most forecasters – including the Riksbank – have also underestimated both the strength and the durability of the oil price upturn over the past year and there is therefore a risk that the oil price will not fall back as assumed in the main scenario. The relatively low spare capacity coupled with the possibility that demand for oil could increase more than anticipated could cause the high oil price to persist longer or rise even more than expected. So, there is a risk of higher international inflation due to oil price developments at the same time as economic activity risks being more subdued.

Another risk in the world economy stems from the low interest situation in many countries having contributed to maintaining household consumption during the most recent economic slowdown. Low interest rates have gone hand in hand with increased household debt and higher housing prices. To a great extent, the rising housing prices in many countries could be explained by fundamental factors, such as low interest rates and larger incomes. But it cannot be ruled out that the price developments in the housing market also contain an element of exaggerated expectations and short-termism in some countries. There is thus a risk that a slowdown in economic activity or an upturn in interest rates could lead to unexpectedly large price falls on houses. The consequence could be lower demand in the economy than was assumed in the main scenario.

The uncertainty related to the United States' twin deficits - in the federal budget and current account – remains. If confidence in the US economy is shaken, the imbalances may hasten an interest rate upturn that could in turn risk holding back both consumption and investment. Should the US need for capital inflows cause an adjustment in the financial markets, the dollar could weaken further. While a weaker dollar could contribute to reducing the imbalance in the US foreign trade, it could risk curbing the economic upswing in Europe and thereby growth in Sweden's largest export market. A weaker dollar trend would probably also mean a further strengthening of the krona and thereby lower imported inflation than in the main scenario.

The most important risk factor for domestic inflation is assessed, as before, to be the development in average labour productivity. One of the causes of the recent low inflation has been the rapid productivity growth. Productivity growth varies considerably from one year to the next and is also affected by cyclical fluctuations. It is assumed in the main scenario that the normal cyclical pattern will apply, that is, productivity growth will ease up as the economic upswing progresses. However, it is difficult to assess how soon this will occur. There is a risk that the continuing economic upturn will be followed by a more rapid decline in productivity growth than expected. In the United States, for example, productivity growth fell relatively sharply in 2004. This could indicate that the tide could also turn quickly here. At the same time, there is a risk that the durability of the high productivity growth has been underestimated. If the rapid restructuring in manufacturing observed in recent years continues with the same intensity, it could contribute to continuing high productivity growth over the coming years. Overall the Bank still deems the risks of overestimating or underestimating productivity growth to be about equal.

To sum up, the Riksbank judges the upside and downside risks to inflation to be balanced. Taking into account the risk outlook, CPI inflation is expected to be 1.2 per cent one year ahead and 2.1 per cent in two years. The corresponding forecasts for UND1X inflation are 1.1 per cent and 2.0 per cent, respectively.

Table 1. Inflation forecast in the main scenario and risk-adjusted. Annual percentage change

	Annual average			12-month rate		
	2004	2005	2006	Mar 05	Mar 06	Mar 07
CPI	0.4 (0.5)	0.1 (1.2)	1.5 (2.2)	0.0 (0.7)	1.2 (2.0)	2.1
UND1X	0.8 (1.0)	0.2 (1.3)	1.4 (1.9)	0.3 (1.1)	1.1 (1.7)	2.0
UNDINHX	1.5 (1.7)	0.9 (1.7)	2.1 (2.5)	0.8 (1.2)	1.9 (2.4)	2.7
UNDIMPX	-0.6 (-0.5)	-1.3 (0.5)	-0.1 (0.5)	-1.0 (0.9)	-0.6 (0.4)	0.4

Note. The figures in parentheses are the forecasts in the previous Inflation Report. UND1X is CPI inflation excluding household mortgage interest expenditure and the effects of changes in indirect taxes and subsidies. UNDINHX refers only to prices of mainly domestically produced goods and services in UND1X. UNDIMPX refers to prices of mainly imported goods and services in UND1X.

Sources: Statistics Sweden and the Riksbank.

Table 2. Key figures. Per cent and percentage change

Key figures	2004	2005	2006	2007
GDP OECD-19, change	3.2 (3.4)	2.6 (2.6)	2.8 (2.9)	2.7
Crude oil price, annual average, USD/barrel	38.2 (38.4)	43.3 (40.3)	39.5 (37.1)	37.6
Market growth for Swedish exports	8.4 (8.6)	7.0 (7.1)	6.9 (6.9)	6.8
SEK/TCW, annual average	126.0 (126.3)	123.6 (123.8)	122.5 (122.5)	122.5
GDP at market prices, change	3.5 (3.6)	3.2 (3.0)	3.2 (3.2)	2.8
Hourly wage, whole economy, change	3.3 (3.4)	3.5 (3.6)	3.9 (3.8)	4.2
Labour productivity in business sector, change	3.6 (3.4)	2.8 (2.7)	2.3 (2.3)	2.1
Unit labour cost in business sector, change	-1.4 (-0.9)	0.7 (0.9)	2.1 (2.1)	2.2
Employed, change	-0.5 (-0.4)	0.5 (0.5)	1.4 (1.2)	1.2
Open unemployment, per cent	5.5 (5.5)	5.1 (5.2)	4.4 (4.5)	4.0
General government net lending, per cent of GDP	1.2 (0.8)	1.5 (0.6)	1.7 (0.4)	1.9

Sources: Statistics Sweden and the Riksbank.

Determinants of inflation

The financial markets

Long-term interest rates have been lower than anticipated, particularly in the euro area and Sweden. In the United States, the Federal Reserve has continued its interest rate hikes. The low inflation in Sweden has resulted in expectations of an interest rate hike being deferred. The trade-weighted krona exchange rate has followed the path indicated in the December Report and is expected to appreciate somewhat.

Historically low interest rates.

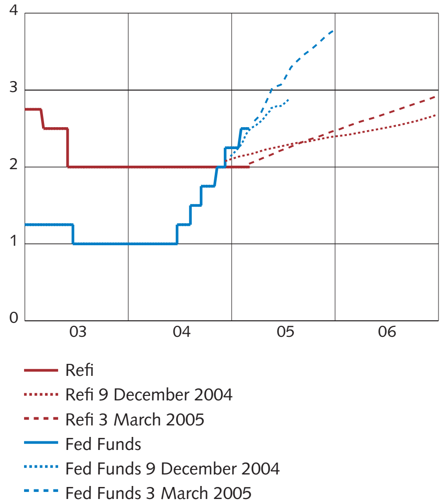
The Riksbank has been forecasting a rise in long-term interest rates over the past year, as have most other analysts. However, compared with early 2004, long-term interest rates in the euro area and Sweden have fallen, while interest rates in the United States have remained largely unchanged (see Figure 4). Interest rates are historically low, given the economic situation. Inflation has been lower than expected, particularly in Sweden, and expectations of tighter monetary policy have been postponed, which partly explains the decline in long-term interest rates. However, even taking into account inflation expectations, long-term interest rates are at a low level in a historical perspective. The fall in long-term rates has resulted in a drop in real interest rates. That points to an increase in, net financial saving, which has also been mirrored in generally good access to liquidity in the financial markets. Many fund managers have sought alternative investment opportunities, risk premiums have fallen and interest rate spreads have declined in most markets.

Given the real economy development outlined in the main scenario, economic activity will continue to strengthen both internationally and in Sweden, which is expected to lead to an upturn in interest rates. The unusually low interest rates and risk premiums mean there is a possibility that the upturn will be rapid, at least initially.

Upturn in long-term interest rates in coming years.

The 10-year Treasury bond rate is expected to rise and amount on average to 4.0 per cent in 2005, 4.6 per cent in 2006 and 5.0 per cent in 2007, which is a downward revision from the previous Inflation Report. The fact that the forecast is revised down is partly a technical result of the downward adjustment in market expectations of an interest rate hike. Some revision of the view of the correlation between short-term and long-term interest rates is also made. The assessment of interest rates with a long time to maturity is based, like all other aspects of the Inflation Report's main scenario, on the assumption of a constant repo rate during the forecast period. Using a different assumption of the repo rate (e.g. calculated on market expectations, see the box "Longer-term forecasts under the assumption that the repo rate evolves in line with implied forward

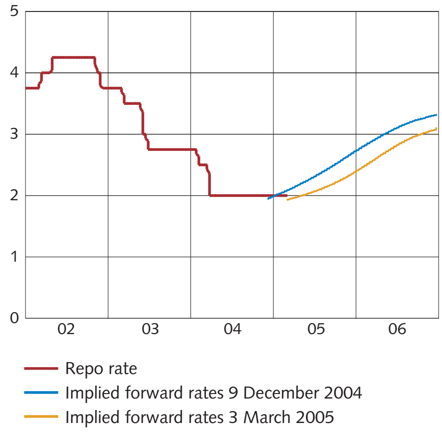
Figure 2. Monetary policy expectations in the euro area and the USA according to implied forward rates and Fed Funds futures. Per cent



Note. Fed Funds futures are priced in terms of the average key rate during the respective month.

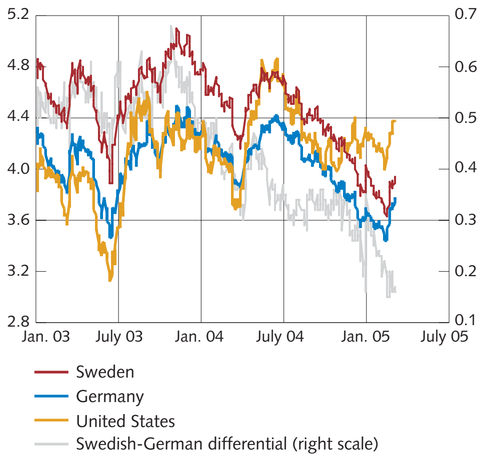
Source: The Riksbank.

Figure 3. Monetary policy expectations in Sweden according to implied forward rates. Per cent



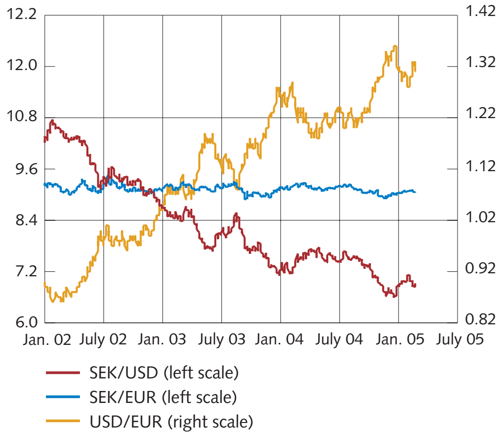
Source: The Riksbank.

Figure 4. Yields on 10-year government bonds in Sweden, Germany and the United States. Per cent



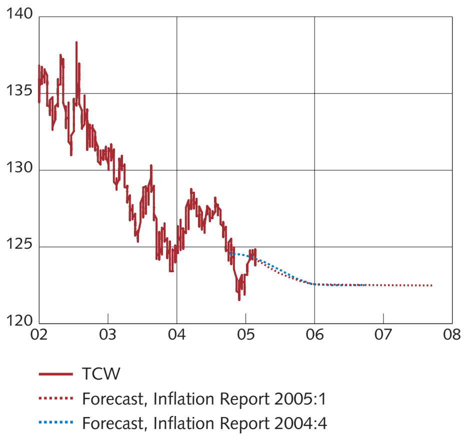
Source: The Riksbank.

Figure 5. Exchange rate developments for SEK/USD, SEK/EUR and USD/EUR.



Source: The Riksbank.

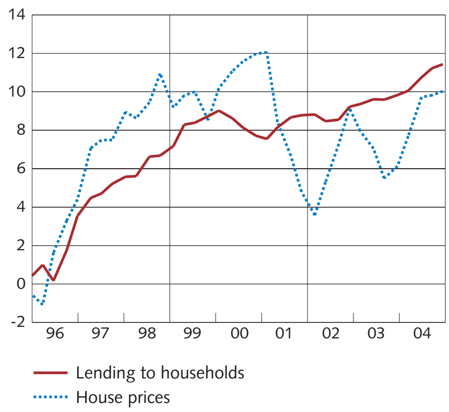
Figure 6. SEK/TCW exchange rate. Quarterly average, index 18 November 1992 = 100



Note. Outcome represents daily rates and forecasts are quarterly averages. The broken lines represent the Riksbank's forecasts.

Source: The Riksbank.

Figure 7. House prices and lending to households from all credit institutions. Annual percentage change



Sources: Lantmäteriet, Statistics Sweden and the Riksbank.

rates"), the assessment would be that long-term interest rates will be slightly higher.

■■ Instrumental rates continue to rise in United States.

As expected, the Federal Reserve has continued its interest rate hikes as economic activity has strengthened. This means that the instrumental rate has been raised from 1 per cent to 2.5 per cent since June last year. Pricing in the money market indicates that the hikes are expected to continue throughout 2005 (see Figure 2). As economic activity in the euro area has been slightly weaker than market expectations and inflation has been moderate, expectations are that the ECB's interest rate hike will come six months later than was assumed in the December Report.

The low inflation in Sweden in recent months has contributed to deferring market expectations of a hike by the Riksbank. The first hike is expected to come towards the end of the year, according to implied forward rates (see Figure 3).

■■ Krona in line with forecast.

Following its heavy fall in the autumn, the dollar recovered against both the euro and the krona (see Figure 5). At the same time, the krona has weakened slightly against the euro, which means that the trade-weighted SEK/TCW rate has fallen recently. This development has nevertheless been in line with the assessment in the December Report and the forecast for the coming years has not changed (see Figure 6).

The assumption of some continued strengthening in the SEK/TCW rate is partly based, as before, on relatively good growth prospects and an improved external position, stemming from the surplus on the current account in recent years. The SEK/TCW forecast is on average 123.6 for 2005 and 122.5 for 2006 and 2007.

■■ Recovery in the stock market.

During 2004, equity prices in the United States, Germany and Sweden rose. The Stockholmsbörsen OMX index rose by around 17 per cent, compared with around 9 per cent in the United States and 5 per cent in Germany. Continuing robust international economic activity indicates that equity prices will continue to rise. The recovery in the OMX index in recent years has coincided with a fall in the market's risk assessment (implied volatility). Prices in the options market thus indicate that market participants are expecting a stable development in the OMX index over the coming months.

■■ Higher house prices and household borrowing.

Lending to households is continuing to pick up speed. In January it increased by around 12 per cent, compared with January 2004. Loans have been used to buy single-family dwellings, which has driven up house prices (see Figure 7). In 2004 Q4, prices increased by around

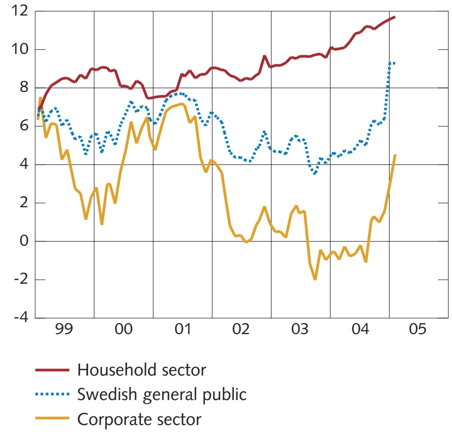
10 per cent compared with the corresponding period one year earlier. Preliminary data from Statistics Sweden's Real Estate Price Index in February indicate that the rate of increase has remained high during early 2005. The high rate of borrowing has increased households' debt ratio, that is, debts as a percentage of disposable income. At the same time, the low interest rates mean that interest costs account for a relatively small percentage of households' disposable incomes. Recently, there also appears to have been an increase in lending to firms, following a long period of decline (see Figure 8).

The annual growth rate of M3 has increased since the middle of 2004. In January it was at 4.5 per cent. Households and companies appear to have more liquid funds than before, that is, assets that can easily be converted to money. The low interest rates mean that the cost of liquid funds is low.

Revised forecasts since the December Inflation Report.

- The average long-term interest rate is expected to be 4.0 per cent in 2005, 4.6 per cent in 2006 and 5.0 per cent in 2007.

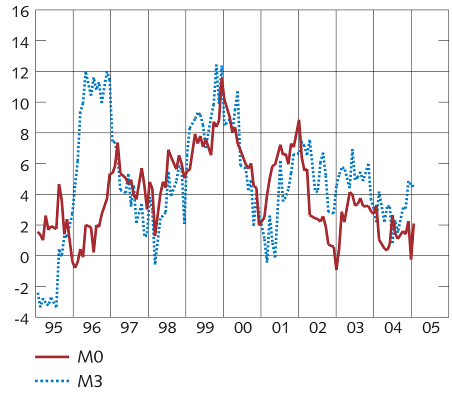
Figure 8. All credit institutions' lending to the general public in Sweden, sector breakdown. Annual percentage change



Note. Changes in reporting have led to some adjustments in Statistics Sweden's data.

Sources: Statistics Sweden and the Riksbank.

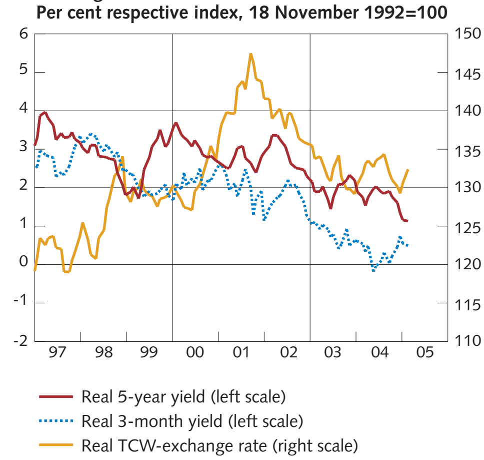
Figure 9. Money supply measured as M0 and M3. Annual percentage change



Note. The narrow money aggregate M0 consists of the general public's holdings of banknotes and coins. The broad money aggregate M3 also contains the Swedish general public's deposits in banks and holdings of bank certificates.

Source: Statistics Sweden.

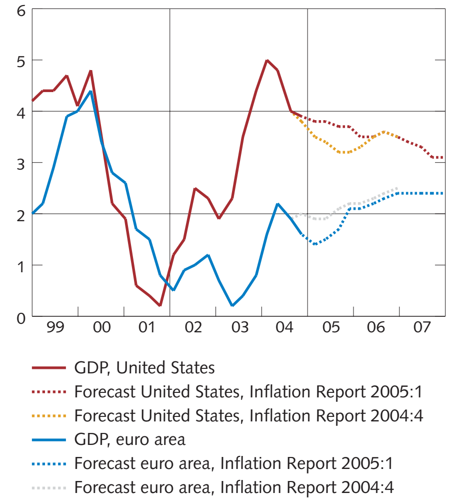
Figure 10. Real interest rate with 5-year and 3-month maturity respectively and real TCW-weighted exchange rate. Per cent respective index, 18 November 1992=100



Note. When calculating real interest rates, inflation expectations have been taken from the National Institute of Economic Research's HIP surveys for the three-month rate, and from Prospera for the five-year rate. The interest rates refer to treasury bills with 3 months to maturity and treasury bonds with 5 years to maturity.

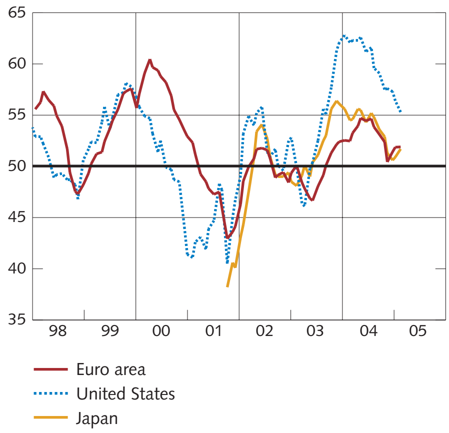
Sources: NIER, Prospera and the Riksbank.

Figure 11. GDP for the United States and euro area. Annual percentage change



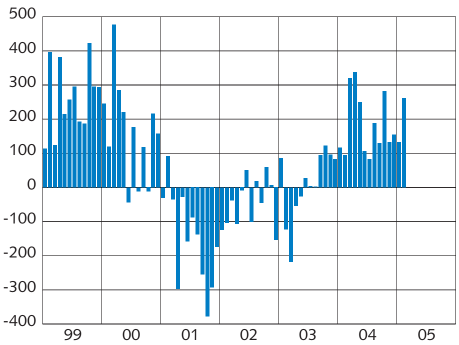
Sources: Eurostat, the US Department of Commerce and the Riksbank.

Figure 12. PMI in manufacturing: United States, euro area and Japan. Index



Sources: Institute for Supply Management and NTC Research Ltd.

Figure 13. Non-farm payrolls in the United States. Monthly change, 1000s persons



Source: Bureau of Labor Statistics.

International economic activity and inflation

Growth was strong in most regions last year, with the exception of the euro area. At the same time, inflationary pressure was low. Strong profit growth on a global basis combined with continuing low interest rates led to an increase in investment. Employment in the United States also picked up over the year. International growth is expected to become more moderate over the coming two years, partly as a result of less expansionary economic policy. Indicators in the United States with regard to labour market, households and industry are pointing towards lower, but still good growth. GDP growth in the United States has not slackened quite as much as expected, which has led to an upward revision of the forecast for 2005. The opposite is the case for the euro area.

■■ Stable economic growth in the United States.

US GDP growth was high in 2004 and employment accelerated considerably (see Figure 13). The number of employed has continued to rise this year. Preliminary figures show an increase in the US GDP of 4.4 per cent in 2004. The increase in GDP between 2003 Q4 and 2004 Q4 was 3.9 per cent. Continued weak growth in net exports was more than offset by very strong growth in investment and private consumption.

Economic growth in the United States thus looks very robust at present. Moreover, there are many indications that the slowdown in growth relative to 2004 will not be as great as many analysts had forecast. Domestic demand remains strong, despite less expansionary fiscal and monetary policy. However, the interest rate situation is still low, even after the Federal Reserve hikes. The large increase in employment in 2004 has not shown any signs of slackening. As before, net exports are expected to improve as a result of the weaker dollar.

The continued large deficits in the budget and foreign trade are a worrying element in the US economy. Preliminary figures for 2004 Q4 show that the deficit in net exports grew to almost 6 per cent of GDP. The weaker trade-weighted dollar rate is expected to lead to a stabilisation and improvement in net exports, but there is considerable uncertainty over how soon this will occur (see also the discussion in the risk section). Meanwhile a new budget proposal has been presented in the United States, aimed at halving the budget deficit by 2009. A number of savings are suggested that will have a short-term effect and proposals have been made to reform the social insurance and pension system. However, there remain some doubts regarding, for instance, defence costs.

The overall assessment is that there is reason to revise up the forecast for US GDP growth this year. Growth is now expected to be 3.7 per cent, compared with 3.3 per cent in the earlier assessment (see Figure 11 and Table 3). Over the coming two years, growth is expected to slacken somewhat but remain robust.

■■ Rising inflation in the United States.

The rapid increase in the number of employed reflects the acceleration in productivity growth (see Figure 14). During 2004 Q4, productivity increased by 2.5 per cent, which can be compared with a rise of 5.7 per cent at the end of 2003. There is nothing remarkable in this in itself. When employment accelerates, productivity growth usually declines. One question that is difficult to answer is what constitutes a long-term sustainable productivity growth in the United States and accordingly how cost pressure will develop. The weaker productivity growth so far has also entailed a more rapid increase in unit labour costs, which contributes to increased price pressure.

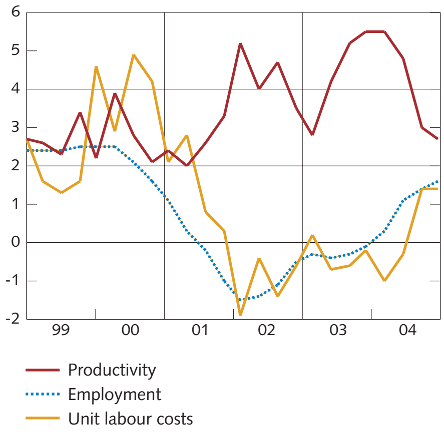
The relatively weak dollar and rising commodity prices have contributed further to an upturn in consumer prices in the United States. CPI inflation adjusted for energy and food is continuing to rise although the rate of increase remains low. Other measures are also indicating rising inflation (see Figure 15). However, inflation is expected to be slightly lower on average this year and over the coming two years, compared with 2004. This is partly attributable to the expected fall in the oil price during the forecast period.

■■ Weaker than expected in the euro area.

Growth in the euro area has been somewhat weaker than expected. This applies in particular to Italy and Germany, while there has been some improvement in France and Spain. The GDP for the euro area increased by only 0.2 per cent in Q4, compared with Q3. GDP in Germany and Italy fell. The German decline mainly reflects diminishing domestic demand that is only partly offset by rising net exports.

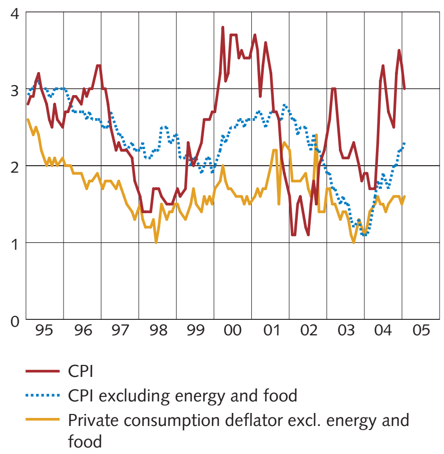
The upturn in the euro area has not reached the same stage of the economic cycle as in the United States. Domestic demand increased at a slow rate in 2004, with both household consumption and investment showing weak growth (see Figure 17). One factor contributing to the weak consumption growth is that there has been no clear rebound in the labour market. The labour market is expected to improve gradually as economic activity strengthens, and household consumption could then become an increasingly important growth engine. The stronger euro has probably contributed to subduing net exports (see Figure 18). During the forecast period foreign trade is expected to contribute positively to growth once again. Indicators such as the purchasing managers' index have also given more positive signals recently. However, the weak GDP outcome motivates a downward adjustment of the forecast for growth in the euro area, particularly in Germany. The current assessment is that the expected upturn in domestic demand in Germany will come somewhat later. Growth is expected to be slightly over the potential rate during the

Figure 14. United States: labour costs, productivity and employment. Annual percentage change



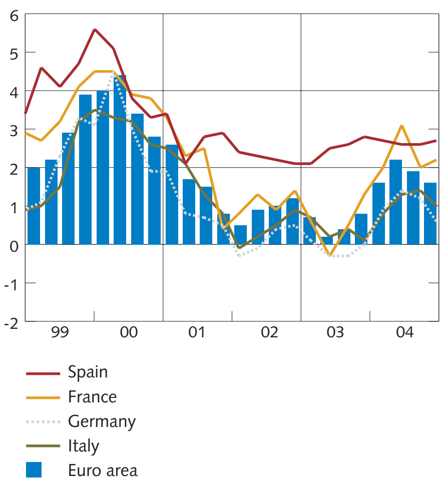
Source: Bureau of Labor Statistics.

Figure 15. Different measures of inflation in the USA. Annual percentage change



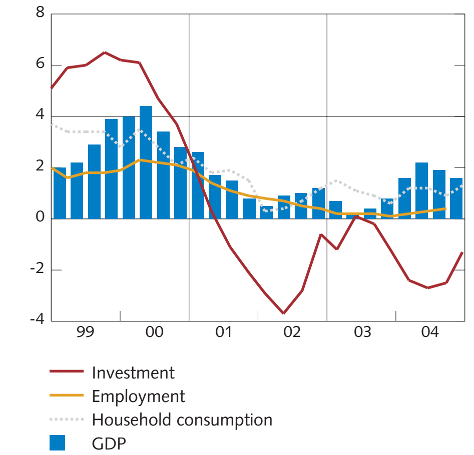
Sources: Bureau of Economic Analysis and Bureau of Labor Statistics.

Figure 16. GDP growth in euro area and largest member states. Annual percentage change



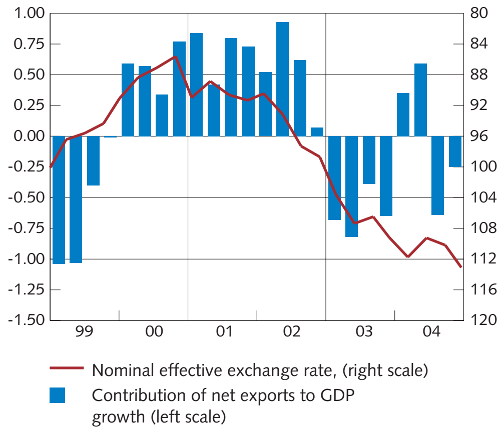
Sources: Eurostat, Federal Statistical Office, INE, INSEE and ISTAT.

Figure 17. Euro area: GDP, consumption, investment and employment.
Annual percentage change



Source: Eurostat.

Figure 18. Euro area: Exchange rate and net exports.
Contribution in percentage points and index, 1999 Q1=100



Note. The exchange rate index is defined so that a higher value entails a stronger euro.

Sources: ECB, Eurostat and the Riksbank.

Figure 19. Euro area: Unit labour costs, productivity and employment.
Annual percentage change

Source: ECB.

forecast period as a whole, which means that resource utilisation will rise gradually.

CPI inflation has been slightly above 2 per cent for most of 2004. Inflation adjusted for energy and foodstuffs has been around 2 per cent. Moderate wage increases and rising productivity have led to a declining rate of increase in unit labour costs (see Figure 19). The lower cost pressure is expected to lead to slightly lower inflation. At the end of the forecast period, inflation is expected to be almost 2 per cent.

Developments in the United Kingdom have been largely in line with the forecast in the December Inflation Report. The preliminary National Accounts for Q4 showed continued good growth, and for 2004 as a whole GDP increased by more than three per cent on average. Both private consumption and investment have increased at a relatively good rate (see Figure 20). The Bank of England's interest rate hikes over the past year, totalling 1.25 percentage points, have contributed to subduing house prices. The slackening in the housing market is expected to contribute to lower consumption growth.

The Nordic countries have also developed in line with the assessment made in December. Domestic demand increased at a good rate in 2004. However, net exports curbed growth somewhat, particularly in Norway and Denmark, which was probably partly due to a stronger exchange rate and to growth in the euro area not yet having gained impetus. In Norway, growth is expected to be stronger this year, mainly due to an unexpectedly large increase in oil investments, but also due to slightly more expansionary fiscal policy.

■■ Somewhat weaker growth in Asia.

Growth in the Japanese economy has slackened recently, following relatively strong developments in early 2004. This may be connected with both declining exports and a gradual slackening of domestic demand. Cautious tightening of fiscal policy has also contributed to reducing growth in demand. The preliminary outcome for GDP Q4 was unexpectedly low. Indicators have given rather mixed signals recently.

Growth in China was around 9.5 per cent last year. However, there was a slowdown during the second half of the year. It thus appears that the Chinese government's measures to tighten the economy have had some effect, at least on the rapid investment growth. The registered credit demand has also slackened considerably. Inflation was subdued during the second half of the year. According to the Chinese authorities, growth of around 8 per cent constitutes a long-term sustainable rate. Measures already implemented in combination with further policy restraint are expected to cause a fall in GDP growth. However, even a growth rate around 8 per cent is expected to give a high level of import demand in China, which will benefit other countries in Asia and also global growth.

Developments in Japan and China have in recent months have motivated some downward revision in the forecasts for Asia. The outlook for developments in eastern Europe is also weaker than expected. The opposite applies to Latin America (see Figure 21).

■■ Continued good Swedish export market growth.

All in all, there have been no major changes in the global economic climate. The forecast indicates continuing high export market growth, albeit slightly lower over the coming two years than it was last year (see Figure 22).

■■ Slightly higher oil price.

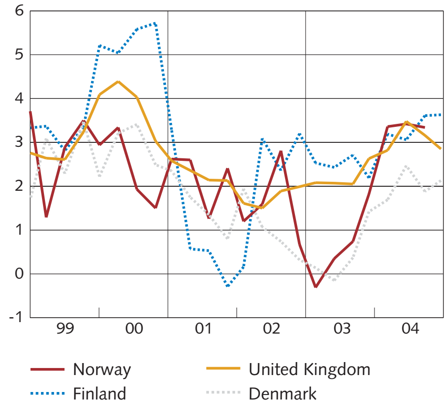
The oil price has fluctuated substantially since the December Inflation Report. At the beginning of December it fell slightly below the earlier forecast level, only to rise again later (see Figure 23). Continued unrest in Iraq, uncertainty over the winter weather and statements by OPEC representatives are some of the contributory factors. Pricing in the forward market indicates higher prices ahead than there were a few months ago. Robust demand and scanty reserve capacity mean that the situation in the oil market remains strained. As before, the Riksbank expects a gradual increase in the supply of crude oil to lead to a successive improvement. This indicates that the oil price will fall in the coming years, which is also in line with forward pricing. The fundamental assessment thus remains the same. However, given the higher oil price and forward prices, a small upward revision is nevertheless being made to the forecast.

■■ Stable prospects for global price pressure.

Inflation in consumer prices in the world's largest economies has risen somewhat over the past few months. This has been in line with the assessment in the Inflation Report. The rising inflationary pressure is partly due to the higher oil price. Underlying inflationary pressure has also risen, however, as economic activity has improved. Over the coming years, the rate of increase in consumer prices is nevertheless expected to be relatively moderate.

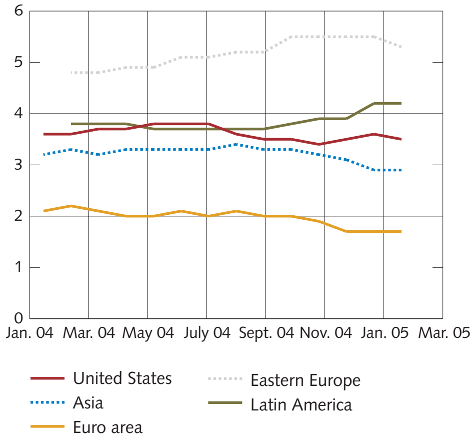
The measure the Riksbank usually employs to measure price trends in the world market if foreign currency is a trade-weighted index of producer prices for manufactured goods. Figure 25 shows that this index indicates low price increases between 2001 and 2003. During 2004 the rate of increase was higher, partly due to rising commodity prices. One problem with this index is that it does not necessarily capture the price encountered by Swedish importers. Eleven countries are included in the global producer price index and these are Sweden's traditionally most important trading partners. Low-cost countries such as China and Poland have increased their share of Swedish imports substantially in recent years, which makes it possible that the prices encountered by Swedish importers have increased less than global producer prices of manufactured goods. It is reasonable to believe that continued strengthening in global economic activity will increase international price pressure.

Figure 20. GDP growth in Nordic countries and United Kingdom. Annual percentage change



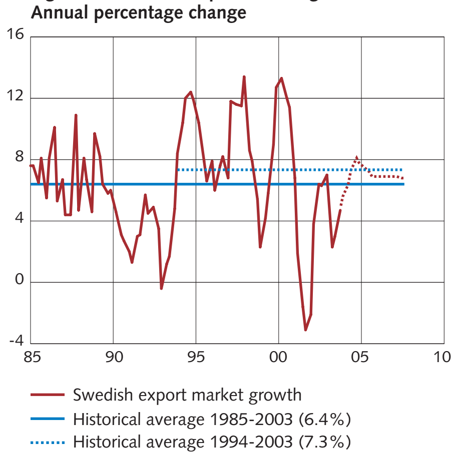
Sources: Statistics Denmark, Office for National Statistics, Statistics Finland and Statistics Sweden.

Figure 21. Consensus Forecasts for different regions: GDP growth 2005. Annual percentage change



Source: Consensus Economics Inc.

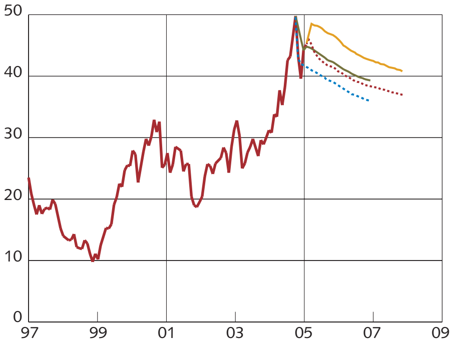
Figure 22. Swedish export market growth. Annual percentage change



Note. The broken red line represents the Riksbank's forecast. The results series is an aggregate of the real goods imports for the countries that make up the Swedish export market. The series is to some extent approximate as the statistics for some smaller countries/regions lag behind. Forecasts from the NIESR are used as far as possible to estimate goods imports for the countries/regions where results come after a time lag. Around 3 per cent of the aggregate is missing results.

Sources: NIESR and the Riksbank.

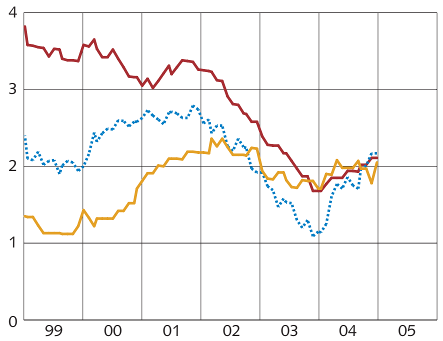
Figure 23. The oil price: Outcome, futures and forecasts.
USD



Oil price, outcome
Forecast, Inflation Report 2005:1
Forecast, Inflation Report 2004:4
Futures, 15-day average up to 3 March 2005
Futures, 15-day average up to 4 November 2004

Sources: International Petroleum Exchange and the Riksbank.

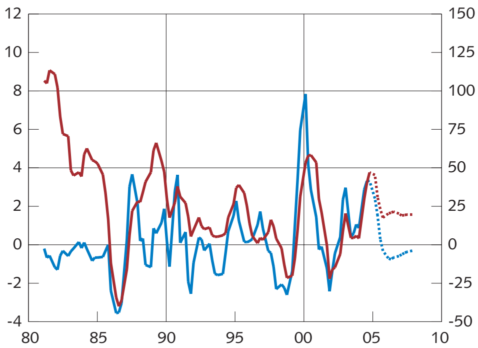
Figure 24. CPI excluding energy and food in the euro area, the USA and the OECD.
Annual percentage change



OECD
United States
Euro area

Source: OECD.

Figure 25. International producer prices of manufactured products and oil and metal price index: outcome and forecasts.
Annual percentage change



International producer prices (left scale)
Oil and metal price index (right scale)

Note. The broken lines represent the Riksbank's forecasts.
Sources: IMF, OECD and the Riksbank.

Table 3. International conditions.
Annual percentage change

	GDP				CPI			
	2004	2005	2006	2007	2004	2005	2006	2007
United States	4.4 (4.4)	3.7 (3.3)	3.5 (3.5)	3.2	2.7 (2.7)	2.5 (2.4)	2.3 (2.3)	2.5
Germany	1.6 (1.7)	1.0 (1.6)	1.9 (2.2)	2.0	1.8 (1.7)	1.4 (1.5)	1.4 (1.5)	1.5
France	2.3 (2.2)	1.9 (2.0)	2.2 (2.3)	2.3	2.3 (2.4)	1.9 (1.9)	1.8 (1.8)	1.5
United Kingdom	3.2 (3.2)	2.8 (2.8)	2.9 (2.9)	2.7	1.3 (1.3)	1.8 (1.8)	2.1 (2.1)	2.2
Denmark	2.0 (2.1)	2.2 (2.2)	2.5 (2.5)	2.0	0.9 (1.1)	1.7 (1.9)	1.9 (2.0)	1.8
Finland	3.7 (3.0)	2.9 (3.0)	2.7 (2.9)	2.3	0.1 (0.1)	1.5 (1.4)	1.7 (1.9)	1.7
Norway	3.2 (3.3)	3.5 (2.9)	2.8 (2.7)	2.5	0.5 (0.7)	1.8 (2.1)	2.5 (2.5)	2.5
Euro 12	1.8 (1.8)	1.7 (2.0)	2.3 (2.4)	2.3	2.1 (2.1)	1.9 (1.9)	1.9 (2.0)	1.8
TCW-weighted	2.6 (2.6)	2.2 (2.3)	2.5 (2.6)	2.5	1.6 (1.6)	1.7 (1.7)	1.8 (1.9)	2.0
OECD 19	3.2 (3.4)	2.6 (2.6)	2.8 (2.9)	2.7	2.0 (1.9)	1.9 (1.8)	1.8 (1.9)	2.1

	2004	2005	2006	2007
GDP World	4.8 (4.8)	4.1 (4.1)	4.0 (3.9)	3.5
Swedish export market growth	8.4 (8.6)	7.0 (7.1)	6.9 (6.9)	6.8
Global PPI	2.4 (2.4)	2.3 (2.3)	1.7 (1.7)	1.6
Crude oil price, annual average (USD/barrel Brent Blend)	38.2 (38.4)	43.3 (40.3)	39.5 (37.1)	37.6

Note. CPI refers to HICP for Germany, the United Kingdom, Denmark and Finland. GDP for Norway refers to the mainland economy. OECD 19 refers to the EU countries (excluding Luxembourg), the United States, Canada, Japan, Norway and Switzerland. The figures in parentheses are the assessments in the previous Inflation Report. Swedish export market growth refers to growth in imports of goods for all countries that are recipients of Swedish exports. The forecast is a weighted average of each country's share of total Swedish exports 2002-2003. International producer prices in national currencies are a weighted average of national PPI series for manufactured goods. This weighted average includes eleven countries and is arrived at using TCW weights. The countries included are the United States, Germany, the United Kingdom, Norway, Finland, Denmark, Belgium, Japan, Canada, France and the Netherlands. These together comprise approximately 85 per cent of the total TCW weighting.

Source: The Riksbank.

Revisions since the December Inflation Report.

- The oil price is being revised up somewhat during the forecast period, given the higher outcome and pricing in the forward market.
- GDP growth has been revised down somewhat for the euro area, particularly Germany, partly because of a weaker outcome in late 2004.
- GDP growth in the United States has been revised up for 2005, as incoming data gives no indication that GDP growth will slacken as expected.

Economic developments in Sweden

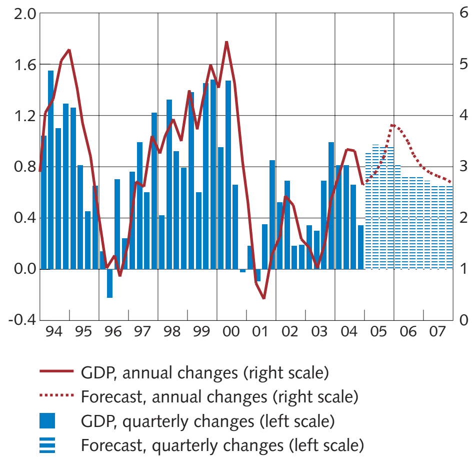
Growth in the Swedish economy picked up in 2003 and is expected to remain high in the coming years. Resource utilisation in the economy is still relatively low but is forecast to rise in the period ahead. The labour market situation is expected to improve during the forecast period as economic activity strengthens. Domestic cost pressures are anticipated to gradually rise in the coming years.

The Swedish economy grew 3.5 per cent in 2004, which was more or less in line with the Bank's forecast in December. Growth in net exports turned out stronger and investment increased faster than anticipated. However, both private and public consumption rose less than expected. GDP growth in 2005 is estimated to be somewhat higher than forecast in the December Inflation Report. Most factors suggest that the pick-up in investment will be somewhat more robust and that growth in net exports will be higher this year. The prospects for continued strong growth in the Swedish economy are deemed to be good. Households and firms are optimistic and interest rates are low. Corporate profits are high and households are expected to see increased real incomes in the years ahead. Consumption and investment are therefore estimated to be the main forces driving aggregate demand in the coming years, but net exports are nevertheless forecast to still contribute positively to demand growth. GDP growth in 2007 is expected to be dampened somewhat but to be still high in historical terms (see Table 4 and Figure 26). This slackening reflects a fall-off in investment growth as the capital stock is adapted to output levels. In addition, growth in public consumption is expected to be sluggish due to the need to consolidate the public finances.

The number of employed decreased in Q4 last year. However, there were several indications during the autumn and winter that the situation in the labour market is improving. These include an increasing number of job vacancies and fewer redundancy notices. Therefore, as in the previous Report, it is expected that firms will begin to hire new staff this year. Given the vigorous GDP growth, there is reason to believe that labour market growth will be slightly stronger in the period ahead. The increase in output is expected to be driven in some part by higher productivity, however.

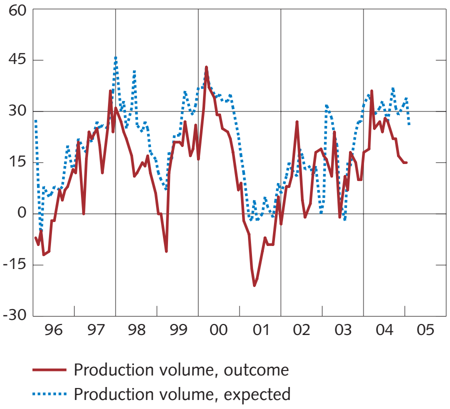
Resource utilisation in the whole economy is judged to be relatively low at present, largely owing to the weak labour market. It is reasonable to believe, however, that the high GDP growth in the coming years will gradually reduce the slack in resource use in the economy, thus leading to an increase in cost pressures.

Figure 26. GDP: outcomes and forecasts for calendar-adjusted and seasonally adjusted series. Quarterly and annual changes in per cent



Sources: Statistics Sweden and the Riksbank.

Figure 27. Production volume in manufacturing according to business tendency survey. Seasonally adjusted balance

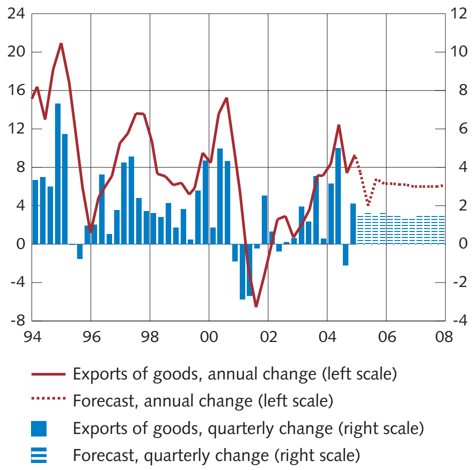


Source: NIER.

Figure 28. Confidence indicator for manufacturing sector. Seasonally adjusted balance

Source: NIER.

Figure 29. Exports of goods: outcomes and forecasts for seasonally adjusted series. Quarterly and annual changes in per cent



Sources: Statistics Sweden and the Riksbank.

Table 4. GDP by expenditure, volume changes. Annual percentage change

GDP by expenditure	2003	2004	2005	2006	2007
Private consumption	1.5	1.8 (2.4)	2.7 (2.8)	3.0 (3.0)	3.3
Government consumption	0.8	0.3 (1.0)	1.2 (1.3)	1.4 (1.4)	0.6
Gross fixed capital formation	-1.5	5.1 (4.0)	8.0 (7.5)	5.8 (6.5)	4.5
Change in inventories	0.2	0.3 (-0.1)	0.0 (0.0)	0.0 (0.0)	0.0
Exports	5.0	10.2 (9.7)	6.6 (6.0)	6.1 (6.3)	6.0
goods	4.9	9.5 (10.0)	6.1 (6.1)	6.2 (6.5)	6.0
services	5.4	12.6 (8.5)	8.0 (5.6)	6.0 (5.6)	6.0
Imports	4.9	6.7 (6.9)	7.5 (6.9)	6.6 (6.9)	6.7
goods	6.1	7.2 (7.5)	7.6 (7.4)	7.0 (7.4)	7.2
services	1.5	5.3 (5.3)	7.0 (5.2)	5.5 (5.2)	5.5
GDP at market prices	1.5	3.5 (3.6)	3.2 (3.0)	3.2 (3.2)	2.8

Note. The figures in parentheses are the forecasts in the December Inflation Report. The data refer to actual, non-calendar-adjusted, growth rates.

Sources: Statistics Sweden and the Riksbank.

■■ Continued upswing in manufacturing although rate has been dampened.

In the previous Inflation Report the Bank observed that the signals in manufacturing had been mixed during the autumn. Business tendency surveys were pointing to firm growth, while actual data indicated a more subdued performance. The National Institute of Economic Research's (NIER) quarterly business tendency survey in January, as well as its monthly survey in February, show continued growth in manufacturing, albeit at a lower rate than at the start of 2004. The purchasing managers index in recent months has given similar indications. Outcomes, too, for industrial production and new orders have provided evidence of softer growth at the end of last year. At the same time, the NIER's surveys show that manufacturing firms are optimistic. This is in spite of the fact that growth in production in recent months has not come up to the firms' own expectations (see Figure 27). The confidence indicator for the manufacturing sector is still relatively high, notwithstanding a slight decline recently (see Figure 28).

■■ Exports of services increasing faster than expected.

Exports of goods in 2004 rose somewhat weaker than expected in the December Inflation Report, although the out-turn was high nonetheless. Swedish goods exports were bolstered during the period by high export market growth. In 2005 and a few years thereafter Swedish export market growth is forecast to slacken somewhat, but to remain relatively high. The appreciation of the krona in TCW terms, which has been ongoing since early 2002 and which is expected to continue mainly this year, will also act as a drag on exports. Consequently, annual growth in exports of goods is estimated to be just over 6 per cent in the coming years (see Figure 29).

Exports of services rose almost 13 per cent last year. That was considerably more than expected in the December Inflation Report. The notable increases included exports of transportation and other business services. Merchanting, a component of other business services, accounted for almost one-quarter of the rise in service exports in 2004. It also contributed some 0.3 percentage points of the growth in GDP. A significant part of the increase is due to the fact that Swedish companies have been outsourcing production to other countries, while keeping their head offices and R&D activities in Sweden. The Swedish head offices receive the margin that arises when they purchase products from their overseas factories and re-sell them at higher prices in the international market. The way in which merchanting is treated in the National Accounts means that it contributes positively to Swedish GDP growth without having any significant impact on the number of hours worked in Sweden. That affects Swedish productivity positively even though no output has occurred in the country. The margin obtained by the companies, however, can be seen as payment for the research, development and marketing that is done in Sweden.

■■ Investment upswing stronger than expected.

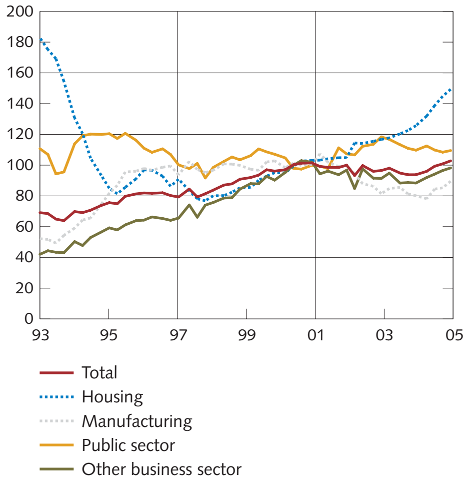
Both manufacturing and other areas of the business sector experienced an upturn in investment in 2004. The recovery in residential investment has been ongoing for some time, but developments accelerated last year. Gross investment in the public sector, however, fell in 2004 (see Figure 30).

The investment upswing last year seems to have been stronger than expected and the relatively high investment growth is projected to continue in the coming quarters as well. The forecast for growth in investment in 2005 has therefore been revised up from the December estimate. The firms in the manufacturing sector and the majority of service industries are also optimistic about the future. Profitability is generally good and interest rates are historically low, both in nominal and real terms. Given the expected firmness in demand and continued low interest rates, investment growth is expected to persist into 2006 and 2007. The pace of growth will gradually be dampened in conjunction with an expected rise in long-term interest rates and as the capital stock is adjusted to the output level. Since the capital stock is forecast to expand this year at a faster rate than in the previous assessment, the need to boost investment is anticipated to be somewhat smaller in 2006. The forecast means that investment growth at fixed prices is expected to surpass GDP growth in all years and that the investment ratio, which is calculated at current prices, will rise during the forecast period (see Figure 32).

■■ Lower growth in public consumption in 2007.

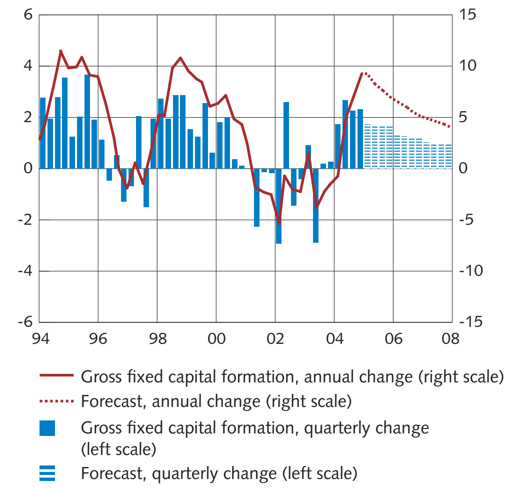
General government net lending was 1.2 per cent of GDP in 2004, exceeding the Bank's December forecast. This year and next year it is expected to be higher than previously estimated (see Table 5). The forecast for 2007 is based on the assumption that the public finances need to be consolidated if the surplus target is to be met in the longer term.

Figure 30. Gross fixed capital formation. Seasonally adjusted volume index, 2000 = 100



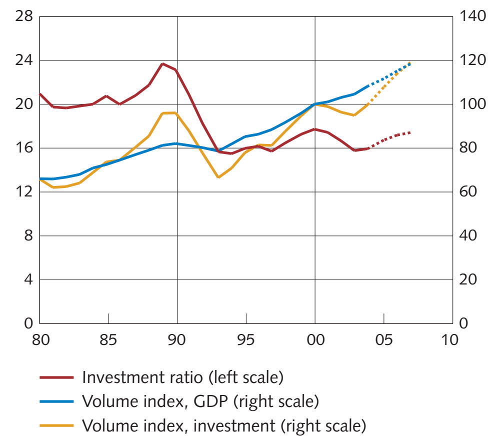
Source: Statistics Sweden.

Figure 31. Gross fixed capital formation: outcomes and forecasts, annual and quarterly changes. Per cent



Sources: Statistics Sweden and the Riksbank.

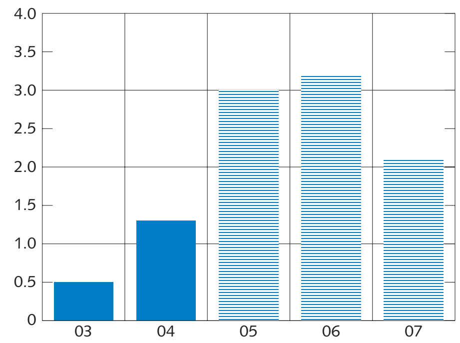
Figure 32. Investment ratio and volume index for investment and GDP: outcomes and forecasts. Index 2000 =100



Note. The broken lines represent the Riksbank's forecasts.

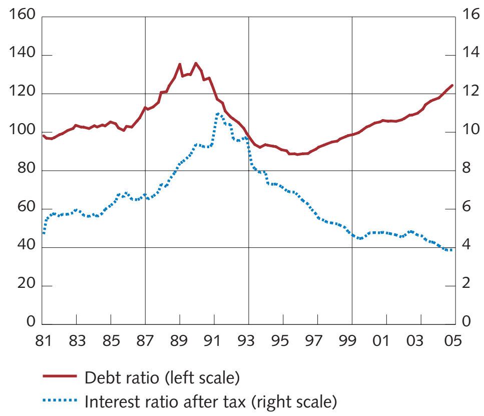
Sources: Statistics Sweden and the Riksbank.

Figure 33. Households' real disposable incomes, percentage change from a year earlier.
Per cent



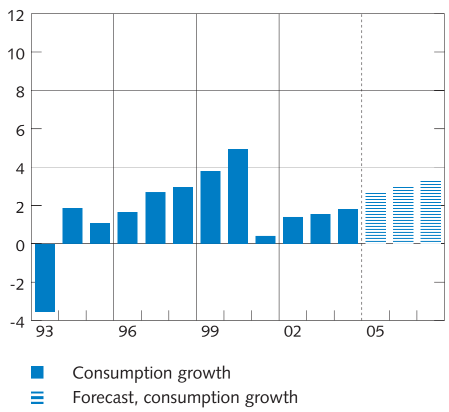
Note. The dashed columns are the Riksbank's forecasts.
Sources: Statistics Sweden and the Riksbank.

Figure 34. Households' debt ratio and interest ratio.
Per cent of disposable income



Sources: Statistics Sweden and the Riksbank.

Figure 35. Consumption growth: outcome and forecast.
Annual percentage change



Sources: Statistics Sweden and the Riksbank.

Following a decision by Eurostat, the premium pension scheme will not be included in the Swedish old-age pension system from 2007. As a result of the change the reported figure for general government net lending, expressed as a percentage of GDP, is forecast to be around 1 percentage point lower from that year. In Table 5, however, the premium pension system has been included in the figure for 2007.

Public consumption is estimated to grow by 1.2 per cent and 1.4 per cent, respectively, in 2005 and 2006. The relatively firm growth in these years reflects the strong cyclical upswing, the expansionary fiscal policy and improved local government finances. Consumption growth is assumed to be lower in 2007 given the need to consolidate the public finances if the surplus target is to be attained.

Table 5. The public finances.
Per cent

	2003	2004	2005	2006	2007
Net lending as share of GDP	-0.1 (0.3)	1.2 (0.8)	1.5 (0.6)	1.7 (0.4)	1.9

Note. The figures in parentheses are the forecasts in the December Inflation Report. The premium pension system is included in the figure for 2007.

Sources: Statistics Sweden and the Riksbank.

■■ Firm increases in household income.

Households' real disposable incomes rose by 1.3 per cent in 2004. In 2005 and 2006 their real incomes are expected to grow by around 3 per cent a year, slightly stronger than previously estimated. This is partly because inflation is now anticipated to be lower. Wage incomes in the period ahead are forecast to grow faster than in 2004, mainly due to an expected pick-up in employment. The tax cuts and allowance hikes announced by the Government, above all for 2006, will also contribute to the rise in incomes. In 2007 income growth will be restrained by the need to generate larger surpluses in the public sector (see Figure 33).

■■ Growth in household consumption to increase gradually.

Household consumption expenditure rose 1.8 per cent in 2004. That is less than forecast in the previous Inflation Report. Nonetheless it means that consumption growth was stronger than in 2003. A modest rise in incomes contributed to the consumption growth last year, but households have also reduced their saving.

Household debt continued to rise more than disposable incomes in 2004. Low interest rates and higher residential property prices are probably important reasons for this. But the low interest rate environment means that the interest ratio – interest payments as a percentage of households' disposable incomes – is low all the same (see Figure 34). Household saving is still high, suggesting that the increased borrowing has not significantly fuelled consumption growth.

Over the coming three years consumption growth is expected to rise, reaching around 3 per cent a year. Consequently, households are forecast to continue to save around 7 per cent of their incomes (see Figure 35).Compared with the past twenty years that is a high rate, driven mainly by firm income growth. Other factors that will underpin growth in consumption are that employment is expected to begin to rise again and that household wealth is assumed to continue to increase; among other factors, house prices are anticipated to continue upwards. Higher house prices entail greater borrowing opportunities for homeowners, although, as in recent years, this is not predicted to be a significant factor behind consumption growth.

■■ Imports of goods developing as expected but growth in service imports was weak last year.

In 2004 imports of goods grew largely in line with the forecast in the December Inflation Report. The rise moderated slightly in the fourth quarter. Imports of goods this year are expected to increase somewhat more than previously forecast, primarily due to higher investment growth. In 2006, though, growth in goods imports is anticipated to be slightly lower since both investment and exports of goods this year are projected to rise by less than assumed in December. All in all, imports of goods are expected to grow by around 7 per cent annually in the coming years (see Figure 36).

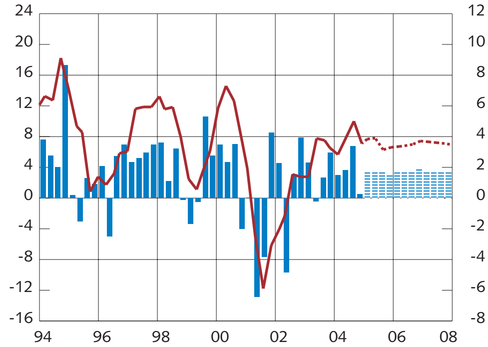
Imports of services in 2004 rose as expected by around 5 per cent. This year the growth rate for service imports is anticipated to be somewhat higher than forecast in December. In 2006 and 2007 imports of services are assumed to increase somewhat slower than the current year, as domestic demand and export demand are predicted to rise at a more modest pace.

■■ Signs of improvement in the labour market.

In spite of vigorous output growth in 2004 the number of employed fell for the second consecutive year, mainly in the business sector but also to some degree in the local government sector. The drop reflected high growth in productivity and a rise in average hours worked, which enabled firms to boost production without taking on new staff. In the fourth quarter, employment was weaker than assumed in the previous Inflation Report (see Figure 37).

Employment is expected to begin to pick up this year. Indicators of labour demand at the end of 2004 and beginning of 2005 have pointed to improved labour market conditions. The number of redundancy notices has continued to drop and the number of new job vacancies reported to employment offices has risen since autumn last year (see Figure 38). The rise was noted in both the business sector and public services sector. The NIER's business tendency survey indicates that more firms are planning to add to their workforces in construction and parts of the private services sector. As before, the most positive in this regard are computer consultants and other business services. Manufacturing and retail firms remain cautious in their hiring plans.

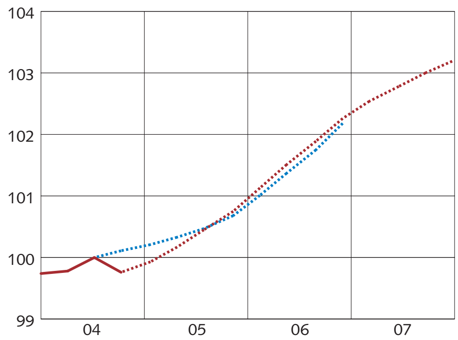
**Figure 36. Imports of goods: outcomes and forecasts for seasonally adjusted series.
Quarterly and annual changes**



Imports of goods, annual change (left scale)
Forecast, annual change (left scale)
Imports of goods, quarterly change (right scale)
Forecast, quarterly change (right scale)

Sources: Statistics Sweden and the Riksbank.

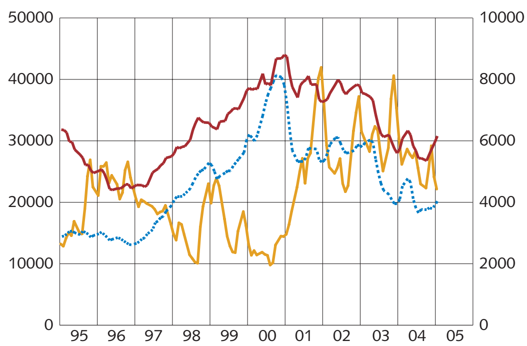
**Figure 37. Number of employed: outcome and forecasts.
Index: 2004 Q3 =100**



Outcome
Forecast, Inflation Report 2005:1
Forecast, Inflation Report 2004:4

Sources: Statistics Sweden and the Riksbank.

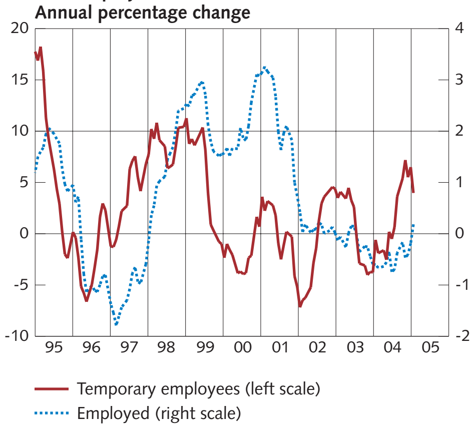
**Figure 38. New and unfilled vacant jobs with a duration of more than 10 days and number of redundancy notices.
Three–month moving average**



New job vacancies, seasonally adjusted (left scale)
Unfilled job vacancies, seasonally adjusted (left scale)
Redundancy notices (right scale)

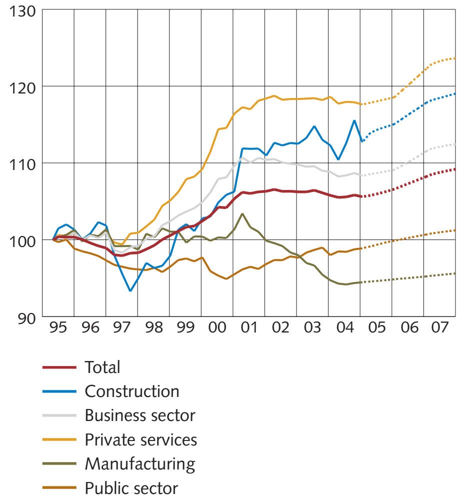
Source: National Labour Market Board.

Figure 39. Number of temporary employees and total employment.
Annual percentage change



Source: Statistics Sweden.

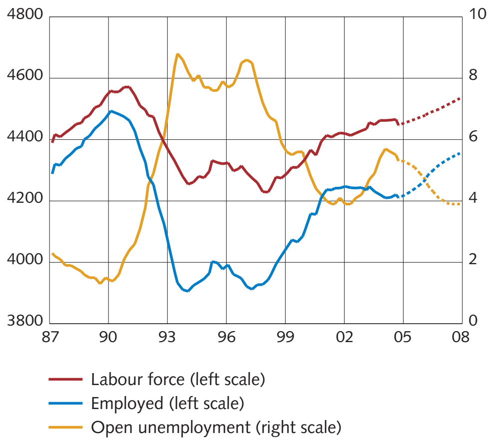
Figure 40. Number of employed in different sectors: outcomes and forecasts.
Seasonally adjusted index: 1995 Q1 = 100



Note. The broken lines represent the Riksbank's forecasts.

Sources: Statistics Sweden and the Riksbank.

Figure 41. Labour force, employment and open unemployment.
1000s of persons and per cent of the labour force, seasonally adjusted quarterly data



Note. The broken lines represent the Riksbank's forecasts.

Sources: Statistics Sweden and the Riksbank.

Temporary employment, which often precedes changes in total employment, began to rise during the first six months of 2004 (see Figure 39). In addition the Government's career break scheme – whereby employees can take a publicly financed career break of three to twelve months provided that their position is filled by an unemployed person – will contribute positively to registered employment in 2005. Both the employees and their substitutes are counted as employed, like other forms of absence. Local government employees are expected to make use of the career break most. Higher central government grants to local governments will also boost employment there during the year.

Given the upward revision to the forecast for GDP growth this year, employment in 2005 is expected to rise somewhat faster than assumed in December. But as the outcome at the end of 2004 was weaker than anticipated, the number of employed at the end of this year is estimated to be roughly the same as forecast in the previous Report (see Figure 37). Employment is then expected to continue to rise firmly in 2006 and 2007. The increase is projected to be quickest in the private services sector and construction (see Figure 40).

Average hours worked per person in employment rose 1.3 per cent in 2004. The fast increase mainly reflects the four extra working days last year compared with 2003, although average hours worked picked up somewhat regardless of this calendar effect. The reasons for this include lower absence from work, chiefly sick leave. Excluding calendar effects average hours worked per employee is forecast to continue to rise in 2005 and 2006, after which it will drop gently. That is partly because absence from work is expected to increase, as is the norm when economic activity strengthens.

The number of hours worked in 2004 fell somewhat compared with the previous year, excluding calendar effects. The expected rise in employment and average hours worked in 2005 and 2006 means that the number of hours worked will increase relatively strongly. In 2007 GDP growth is expected to slacken somewhat. The rise in the number of hours worked is anticipated to slow as well.

The number of people in the labour force rose 0.2 per cent year-on-year in 2004, slightly less than forecast in the previous Inflation Report. Labour force growth was particularly weak at the end of the year, most likely due to a high number of participants in labour market policy programmes. Most participants in these programmes (excluding special initiatives for persons with occupational disabilities) are counted as students outside the labour force. The number of participants averaged 117,000 in the second half of 2004, 36,000 more than the same period a year earlier. The labour force is expected to show only modest growth during the forecast period. Sweden's population is growing relatively strongly, but it is mainly age groups with low labour force participation that are increasing in number. The number of sick outside the labour force[1] has risen for several years

1 For example, recipients of sickness compensation (the former disability pension).

and is expected to continue to do so throughout the forecast period. The Government's Budget Bill for 2005 assumed a total of 111,000 participants in labour market policy programmes this year, measured as an annual average. The figure for 2006 is anticipated to be roughly as high, decreasing somewhat in 2007.

Open unemployment averaged 5.5 per cent of the labour force last year. It fell over the course of the year from 5.7 per cent to 5.3 per cent. Meanwhile, the number of participants in labour market policy programmes increased from 1.8 per cent of the labour force in 2004 Q1 to 2.8 per cent in the last quarter of the year. With economic activity expected to strengthen and employment to rise as a result, open unemployment is estimated to fall steadily over the forecast period, averaging 4.0 per cent in 2007 (see Figure 41). Taken together, the number of open unemployed plus the number of participants in labour market policy programmes is also expected to drop, although not by as much.

Table 6. The labour market.
Annual percentage change unless otherwise specified

	2004	2005	2006	2007
Number of hours worked	0.9 (0.9)	0.8 (0.7)	1.2 (1.2)	1.0
Average hours worked by the employed	1.3 (1.3)	0.3 (0.2)	-0.2 (0.0)	-0.2
Number of employed	-0.5 (-0.4)	0.5 (0.5)	1.4 (1.2)	1.2
Labour force	0.2 (0.3)	0.1 (0.1)	0.6 (0.4)	0.7
Open unemployment (per cent of labour force)	5.5 (5.5)	5.1 (5.2)	4.4 (4.5)	4.0
Labour market programmes (per cent of labour force)	2.4 (2.4)	2.5 (2.5)	2.5 (2.5)	2.1

Note. The figures in parentheses are the forecasts in the previous Inflation Report. Hours worked and average hours worked are actual values.

Sources: Statistics Sweden and the Riksbank.

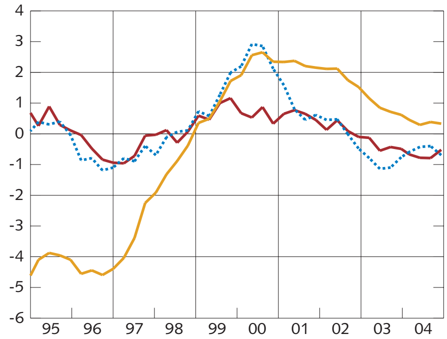
Growth in business sector productivity averaged 3.6 per cent in 2004. Productivity gains have therefore continued to be high. However, given that growth in GDP and business sector output is expected to be relatively brisk in the coming years, the higher resource utilisation is likely to result in a gradual moderation of productivity growth (see Figure 43). As GDP growth in 2005 is now forecast to turn out somewhat above the December estimate, the forecast for productivity this year has been revised up.

■■ Resource utilisation to pick up in the years ahead.

Estimates of the output gap provide a mixed picture of developments in resource utilisation. Those derived using the HP filter and production function approach suggest that resource utilisation remained low at the end of 2004. A third method – the UC approach – does point to higher resource utilisation than the other two approaches but also indicates that resource utilisation was more or less unchanged during 2004. The relatively weak developments in the labour market last year only have a limited effect on the results (see Figure 42).

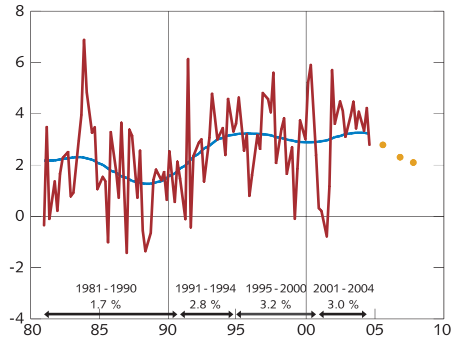
Capacity utilisation in industry was high at the end of 2004, according to both Statistics Sweden and the NIER. It did not appear

Figure 42. Econometric estimates of the output gap.
Per cent of potential GDP



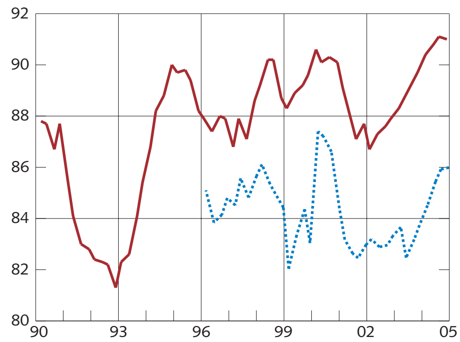
Sources: Statistics Sweden and the Riksbank.

Figure 43. Productivity growth in the business sector since 1980 and HP trend.
Annual percentage change



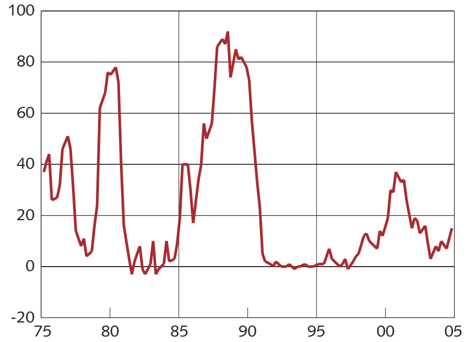
Sources: Statistics Sweden and the Riksbank.

Figure 44. Capacity utilisation in industry according to Statistics Sweden and the NIER, seasonally adjusted.
Per cent



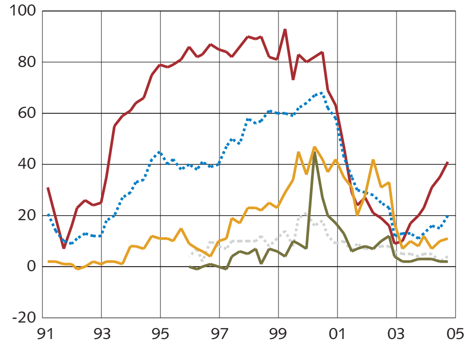
Sources: Statistics Sweden and NIER.

Figure 45. Proportion of construction firms reporting the supply of labour as the primary limiting factor, seasonally adjusted.
Per cent



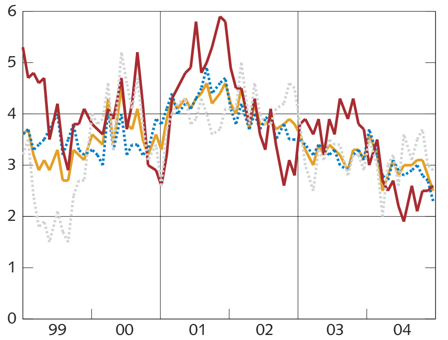
Source: NIER.

Figure 46. Proportion of firms in different service sectors reporting a shortage of labour, seasonally adjusted.
Per cent



Source: NIER.

Figure 47. Hourly wage in the business sector. Annual percentage change



Source: The National Mediation Office.

to rise between Q3 and Q4, though (see Figure 44). The fact that capacity utilisation is relatively high does not mean that firms are having difficulty finding labour. Shortages of skilled workers and technical employees in the manufacturing sector stand at around 10 per cent according to the NIER's business tendency survey, which is low in a historical perspective. There was a sharp upturn in construction activity in 2004 but the proportion of firms reporting the availability of labour as a limiting factor is still relatively small (see Figure 45). The clearest signs of increasing resource utilisation are to be found among computer consultants and computer services firms, where the proportion reporting a shortage of labour has been rising since the beginning of 2003 and now exceeds 40 per cent. But that is nonetheless only half as high as before the slowdown in 2001 (see Figure 46). The weak labour market situation is the main reason that resource utilisation is deemed to be relatively modest at present.

There are now signs that the labour market is strengthening, and employment is expected to pick up in 2005. With growth forecast to be comparatively robust in the period 2005-2007, the spare resources in the economy are expected to be put to use to an increasing extent, with resource utilisation reaching a relatively high level in 2006 and 2007.

■■ Moderate rate of wage increases in the business sector and public sector.

Hourly wages in the business sector continued to rise relatively slowly in 2004 (see Figure 47). Preliminary short-term wage statistics show that business-sector wages increased by 2.9 per cent in 2004. The gradual updating of statistics with retroactive wages is only expected to affect that figure to a limited extent, with the final outcome estimated to be 3.0 per cent. The developments were somewhat weaker than forecast in the previous Inflation Report. The costs for white-collar workers' pensions also turned out slightly lower than anticipated. Total wage costs in the business sector are now judged to have increased by 3.0 per cent in 2004, which is 0.3 percentage points lower than assumed in the previous Inflation Report.

The rate of wage increases in the public sector has moderated in recent months (see Figure 48). In 2004 public sector wages rose 3.8 per cent. A large number of central government wage agreements were negotiated during the winter. As retroactive wage increases are paid it is likely that the forecast for the rate of wage increases in the public sector will be revised up somewhat. New wage agreements will be concluded in the spring for employees in the local government sector. The negotiations, concerning 1.1 million employees, are expected to take place against the background of more benign economic conditions than was the case for the business sector. The Swedish Association of Local Authorities and Federation of Swedish County Councils concluded a general agreement with the Public Employees' Negotiation Council at the end of December. The agreement applies until further notice and puts emphasis on local wage formation. It does, however, guarantee a lowest wage increase at each employer of 2 per cent a year.

The relatively sluggish growth in wages recently has prompted a minor revision of the forecast for this year. Other wage costs, too, are assumed to increase by slightly less this year and next. As employment picks up and unemployment drops, the rate of wage increases in the business sector is expected to gradually rise (see Figure 49). The relatively weak demand for labour is nevertheless anticipated to lead to modest wage increases in 2005 and 2006. Labour market tightness towards the end of the forecast period will imply increases in hourly wages of just over 4.0 per cent, somewhat higher than the average for the period 1995-2003. The forecast is more or less the same as in December. Although the forecast for GDP growth this year has been revised up, this is only expected to have a limited impact on the labour market.

■■ Cost pressures weak but on the rise.

Lower wage costs and stronger productivity gains in 2004 and 2005 mean that domestic cost pressures in these years will be weaker than forecast in the previous Inflation Report. Unit labour costs are judged to have fallen by 1.4 per cent in 2004 and are expected to rise 0.7 per cent in 2005. Cost pressures are predicted to increase over the forecast period, however, as economic activity strengthens, wage costs increase and productivity growth slackens (see Table 7). In 2007 unit labour costs are forecast to rise a relatively modest 2.2 per cent.

Table 7. Wages and unit labour costs. Annual percentage change

	2004	2005	2006	2007
*Calendar-adjusted values **				
Nominal wage, whole economy	3.3 (3.4)	3.5 (3.6)	3.9 (3.8)	4.2
Nominal wage, business sector	3.0 (3.1)	3.3 (3.4)	3.9 (3.9)	4.2
Other wage costs, business sector (contribution)	0.0 (0.3)	0.1 (0.2)	0.1 (0.2)	0.1
Total wage costs, business sector	3.0 (3.3)	3.5 (3.6)	4.0 (4.0)	4.3
Actual values				
Total wage costs, business sector (1)	2.2 (2.5)	3.5 (3.6)	4.4 (4.4)	4.3
Productivity, business sector (2)	3.6 (3.4)	2.8 (2.7)	2.3 (2.3)	2.1
Output, business sector	4.3 (4.0)	3.7 (3.4)	3.6 (3.6)	3.3
Number of hours worked, business sector	0.7 (0.6)	0.8 (0.7)	1.3 (1.3)	1.1
Unit labour costs, business sector (=1-2)	-1.4 (-0.9)	0.7 (0.9)	2.1 (2.1)	2.2

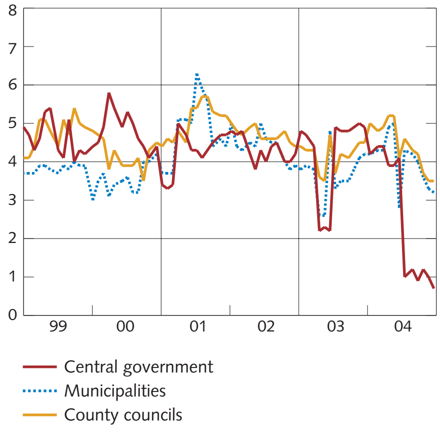
Note. The figures in parentheses are the forecasts in the previous Inflation Report. The forecasts are based on the National Mediation Office's short-term wage statistics. The items do not sum up due to rounding.

* The short-term wage statistics overestimate the actual growth in hourly wages in years with more working days than an average year (e.g. 2004). Employees with a monthly salary work therefore a greater number of hours without being compensated through higher pay. That makes the actual development in costs per hour in the business sector lower than the costs reported in the short-term wage statistics for 2004.

Source: The Riksbank.

The period 1995-2001 saw a drop in the profit share in the business sector, but it has been rising since. The rise is mainly explained by moderate wage increases and higher productivity, which have held back unit labour costs. The profit share during the period 2005-2007 is forecast to remain practically unchanged compared with 2004 (see Figure 50).

Figure 48. Hourly wage in the public sector. Annual percentage change

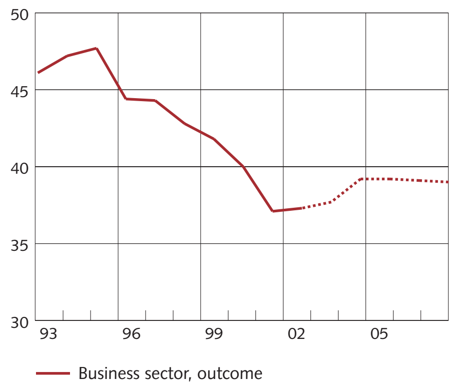


Sources: The National Mediation Office.

Figure 49. Nominal hourly wages in business sector. Annual percentage change

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

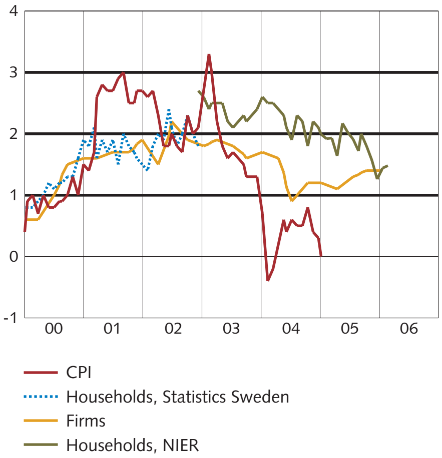
Figure 50. Profit share in the business sector according to the National Accounts. Per cent



Note. The broken line represents the Riksbank's forecast. The definition of profit share has been changed somewhat beginning with this Report. The business sector now includes the unallocated items. Furthermore, payroll taxes are now included in both the labour cost (numerator) and the value added at factor prices (denominator).

Sources: Statistics Sweden and the Riksbank.

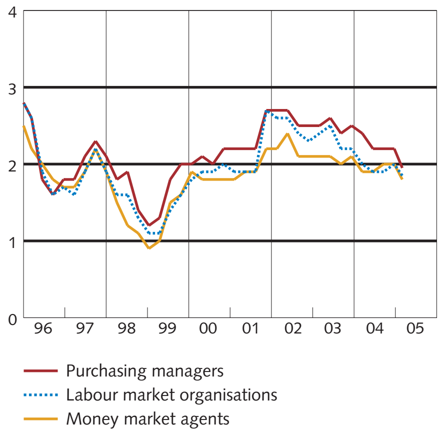
Figure 51. Actual CPI inflation and households' and firms' expectations of inflation one year ahead.
Annual percentage change



Note. The curves have been shifted ahead12 months to coincide with the CPI outcomes to which the expectations refer.

Sources: NIER and Statistics Sweden.

Figure 52. Different agents' expectations of inflation two years ahead.
Per cent



Note. The horizontal lines at 2, 1 and 3 per cent, respectively, are the Riksbank's target and the tolerance limits for the annual percentage rate of increase in the CPI.

Source: Prospera Research AB.

Inflation expectations

The inflation expectations of households and firms are a significant component in the Bank's monetary policy analysis since they affect actual inflation via price and wage formation.

Expectations of inflation two and five years ahead have only been revised marginally, and these are still in line with the Bank's inflation target of two per cent (see Table 8).

Households have revised down their inflation expectations somewhat since the previous Inflation Report. According to the National Institute of Economic Research's (NIER) survey, households' expectations of inflation one year ahead were anchored at 1.4 per cent, compared with 1.6 per cent in November.

The inflation expectations of firms, on the other hand, have been stable. The NIER's survey in January showed an expected rate of price increases in the coming twelve-month period of 1.4 per cent, the same as the previous measurement in October 2004 (see Figure 51). The expectations are consistent with the Riksbank's current forecast one year ahead.

Prospera's survey also points to falling inflation expectations. The company's most recent survey in February showed that most respondents had revised down their expectations, above all in the short term, compared with the survey in November.[2] Inflation one year ahead is now expected to average 1.6 per cent (2.0 per cent in November). Money market agents revised their expectations most. They now expect inflation to be 1.2 per cent in one year's time (see Table 8). Money market agents expect the repo rate to remain at 2.0 per cent over the next three months. They expect the rate to be raised to 2.25 per cent within one year and to 3.0 per cent within two years.[3]

2 The survey of inflation and wage expectations was conducted between 14 and 28 February.
3 Money market agents' expectations regarding the repo rate were surveyed on 16 February 2005.

Table 8. Expected rates of inflation according to Prospera's survey in February 2005, unless otherwise specified.
Per cent

Expected rate of inflation in 1 year	
Money market agents	1.2 (1.7)
Employer organisations	1.6 (1.8)
Employee organisations	1.5 (1.8)
Purchasing managers, trade	1.7 (2.0)
Purchasing managers, manufacturing	1.8 (2.2)
Households (Consumer Survey) in February (November)	1.5 (1.6)
Firms (Business Tendency Survey) in January (October)	1.4 (1.4)
Expected rate of inflation in 2 years	
Money market agents	1.8 (2.0)
Employer organisations	2.0 (2.0)
Employee organisations	1.7 (2.0)
Purchasing managers, trade	1.9 (2.1)
Purchasing managers, manufacturing	2.0 (2.3)
Expected rate of inflation in 5 years	
Money market agents	2.0 (2.0)
Employer organisations	2.3 (2.2)
Employee organisations	2.0 (2.1)
Purchasing managers, trade	2.1 (2.2)
Purchasing managers, manufacturing	2.1 (2.4)

Source: Prospera Research AB.

Revised forecasts since the December Inflation Report.

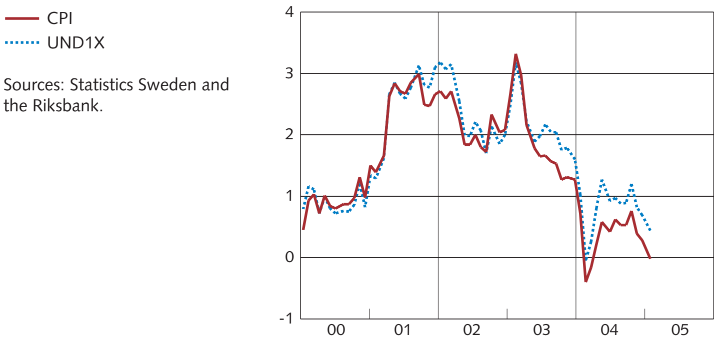
- GDP growth is forecast to be somewhat higher in 2005.
- The forecast for growth in gross fixed capital formation has been revised up for 2005 and down for 2006. The outcome for 2004 suggests that the pick-up in investment has begun earlier than forecast in December.
- Exports of services grew unexpectedly strongly last year. As a result the forecast for export growth has been revised up for 2005.
- The forecast for growth in imports has been revised up slightly for 2005 and down marginally for 2006. The changes are due to revised forecasts for demand developments.
- The somewhat higher GDP growth is forecast to result in slightly stronger developments in the labour market. Growth in the number of hours worked in 2005 is forecast to be marginally higher than previously assumed. It is average hours worked that is expected to increase more than assumed in December. For the following year the forecast for employment has been revised up slightly. The forecast for open unemployment has been revised down marginally for both 2005 and 2006.
- Lower wage costs and somewhat stronger productivity imply lower domestic cost pressures in 2004 and 2005.

Recent developments in inflation

Since the previous Inflation Report, inflation has been lower than expected. The unexpected fall stems mainly from imported inflation, while domestic inflation has developed well in line with the forecast. It is difficult to find clear-cut reasons as to why imported inflation deviated from the forecast. One reason could be that there have been structural changes that have led to increased competitive pressure in the international market and later distribution channels. Increased imports from low-wage countries may have led to greater price pressure on imported consumer goods than has been anticipated.

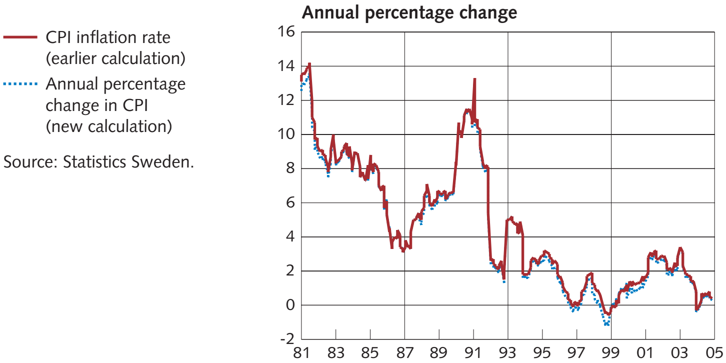
Inflation has been low over the past year. In recent months it has fallen even further. The decline has been on a broad scale; prices of most imported goods have fallen over the past year and the annual rate of price increase for domestic goods has decreased. In relation to the assessment in the December Inflation Report, inflation has been lower than expected. It is primarily imports that have been cheaper than anticipated. Domestic inflation, however, has developed largely as forecast in December. The following looks at various possible reasons behind the deviation from the forecast. Initially, there is a brief discussion of the new method for calculating the inflation rate that was recently introduced by Statistics Sweden.

Figure B1. UND1X and CPI.
Annual percentage change



Sources: Statistics Sweden and the Riksbank.

Figure B2. CPI inflation with the present and previous methods.
Annual percentage change



Source: Statistics Sweden.

New method for calculating inflation rate makes little difference on average

With effect from January this year, Statistics Sweden is using a new method to calculate the inflation rate. Previously the calculations of the inflation rate have aimed to neutralise the effects of changing consumption patterns on consumer price trends. This adjustment for substitution effects has now been discontinued. There is no estimate of the exact size of the contribution from the new calculation method to the change in the inflation rate between December and January, as the old method is no longer used. However, a historical comparison of the two different methods of measuring the rate of change in CPI shows that on the whole they show the same price trend; since 1981 the earlier measure of inflation has on average shown a higher rate of price increase of just under 0.2 percentage points a year. Allowance for this average difference between the two measures has already, since May 2004, been taken into the forecasts for UND1X and CPI inflation from 2005 and onwards.[4]

4 For a more detailed description of Statistics Sweden's method changes, see the box "Changes in calculation methods for the inflation rate" in Inflation Report 2004:2.

Lower price increases than expected for most imported product groups

It is not only in the past few months that imported consumer inflation (excluding oil products) has been lower than expected. Inflation on imported goods has been lower than forecast ever since spring 2003 (see Figure B3). Despite a gradual downward revision in the forecast for imported inflation since 2002, actual inflation has repeatedly been even lower.

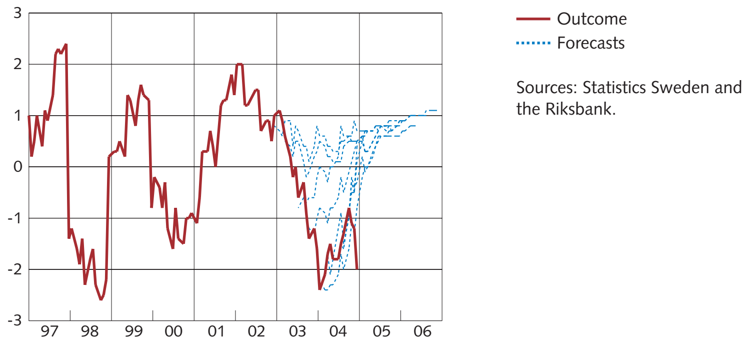
The unexpectedly low imported inflation rate in recent months stems from an unexpectedly large price fall on most product groups in the import sector. For instance, prices for clothing and shoes fell by 1.8 per cent and prices for foreign travel by 1.3 per cent on an annual rate in January. However, prices of oil products in CPI have increased roughly as expected.

Price cuts on imported products may stem from three different sources; falling prices in foreign currency on the world market for the goods Sweden imports, a stronger krona or reduced consumer prices for import goods in the Swedish market. The krona has not appreciated more than expected, which indicates that the reasons for the forecasting errors must lie with the other two factors.

Global producer prices increased as expected

The index the Riksbank usually uses to measure price trends in the world market in foreign currency is a trade-weighted index of producer prices for manufactured goods in eleven countries. As shown in Figure 28 in Chapter 1, this index indicates low price increases between 2001 and 2003. During 2004 the rate of increase was higher, partly due to rising commodity prices. In relation to the assessment in the December Inflation Report, the recent rate of price increase in global producer prices has not been surprisingly low.

Figure B3. UNDIMPX excluding oil products, outcome and forecasts.
Annual percentage change

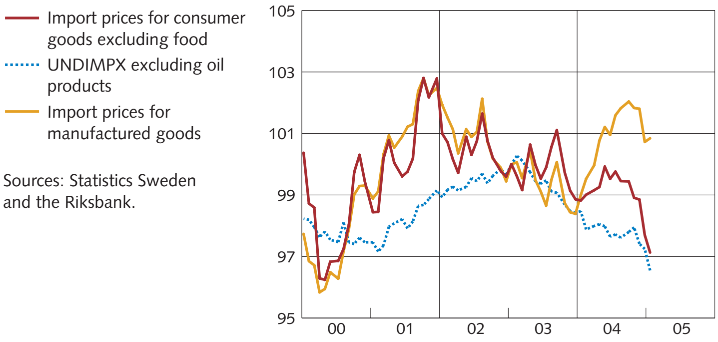


Sources: Statistics Sweden and the Riksbank.

One problem in this context is that this price index does not exactly measure the probable price trend for consumer product prices that have applied in earlier distribution channels. Eleven countries are included in the global producer price index and these are Sweden's traditionally most important trading partners. Low-cost countries such as China and Poland have increased their share of Swedish imports substantially in recent years. This probably had a greater impact on price trends in Swedish goods imports than was clear from the global producer prices index.

Another index that the Riksbank uses to measure international price pressure is the producer prices of imported manufactured goods expressed in kronor. These prices have increased slightly less than anticipated in recent months. The low inflation on manufactured import products probably therefore contributed to lower inflation in consumer prices than expected. However the deviation from forecast for producer prices of imported manufactured goods was much less than that for consumer goods and thus could at most provide a partial explanation of the low inflation in consumer prices as regards imported goods. Moreover, it should be pointed out that there is a time lag before price changes in different producer channels make a full impact on Swedish consumer prices. It is therefore uncertain to what extent producer price trends for imports in recent

Figure B4. UNDIMPX excluding oil products and producer import prices, manufactured goods and consumer goods excluding food.
Index: January 2003=100



Sources: Statistics Sweden and the Riksbank.

months can explain low consumer price increases in imported goods.

Lower price increases for imported consumer goods than for total imports

The imported products included in the CPI basket are not exactly the same products included in the import of manufactured goods in the producer prices index. It can therefore be interesting to also examine producer price trends for different types of imported goods.[5] Figure B4 shows that price increases for total goods imports and for imported consumer goods have been roughly the same size in a longer-term perspective. Historically, there has also been a fairly good covariation between these price measures and developments in prices of imported products in the CPI basket, UNDIMPX (excluding foods), although the latter has unsurprisingly fluctuated less than producer prices. Since early 2004, however, both producer and consumer prices for imported consumer goods have fallen, while prices for the entire aggregate of manufactured goods have risen. The inflation in producer prices for total goods imports has been pushed up by large price increases in intermediate goods, which are probably partly due to rising commodity prices having a more rapid impact on these than on consumer goods prices. At the same time, it is possible that the increasing globalisation and tougher competition from low-wage countries have led to profit margins on internationally-traded consumer goods coming under greater pressure than expected, both in the world market (to a higher degree than intermediate goods) and with regard to consumer prices, for instance, through more efficient distribution channels in the import countries. The latter can entail several different types of change, such as IT and the establishment of new low-price supermarkets.

In the long term, taking into account historical patterns, it is reasonable to assume that the higher price increases for imported intermediate goods will also be expressed in consumer prices. Although price trends for intermediate and consumer goods ought to follow one another in the long term, the relationship is sufficiently instable to make short-term forecasts difficult.

The conclusion is thus that there are probably several reasons why inflation in consumer import prices has been overestimated. One reason could be that there have been structural changes that have led to increased competitive pressure in the international market and later distribution channels. Increased imports from low-wage countries may have led to greater price pressure on imported consumer goods than has been anticipated.

Low price inflation even on domestic products

Domestic inflation has essentially developed as expected in recent months. The underlying domestic inflation rate, UNDINHX, amounted to an annual rate of 1.1 per cent in January, which was in line with the forecast in the December Report. The main explanation for the low domestic inflation stems from low consumer price increases on goods,

5 Import prices for consumer goods exclude food prices and oil products, as these product groups are not included in the UNDIMPX price index excluding oil products.

particularly food (see Figure B5). Price inflation for services has continued to outpace the total domestic inflation rate. Rents have also continued to rise at a higher rate than the average for domestic goods and services.

It should be emphasised that one cannot make an exact breakdown of the changes in consumer prices into imported and domestic inflation. Although the indications are that it is imported inflation that has been unexpectedly low, while the outcome for domestic inflation was largely as expected, the price fall on imported consumer products may partly be due to domestic factors.

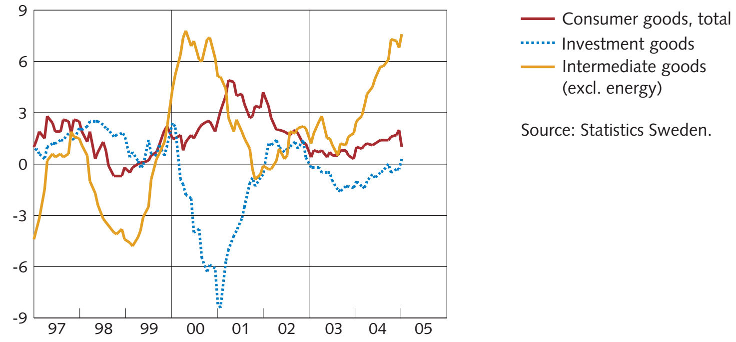
Producer prices for the home market, like producer prices for total imports, have risen at an increasing rate for the past year. Prices of intermediate goods have increased most here, too, while consumer goods have shown a much more modest growth (see Figure B6). In 2004, price inflation in Swedish producer prices for consumer goods rose gradually. However, the rate of increase declined in January.

The "Inflation assessment" section discusses the current changes in the food industry that are probably an explanation behind falling food prices. Developments in producer prices for food indicate that the tougher competition in this sector has also led to increased pressure on producer prices. In January, the annual rate of inflation in producer prices for foods was 0.4 per cent. However, even excluding this product category, producer prices for consumer goods have risen very moderately, at an annual rate of just over 1.5 per cent in January, which was a large decline from the end of 2004. It is difficult to know exactly what lies behind the slowdown in the inflation rate (there are no official weights from January available yet), but there appear to have been small price increases and even price falls in the categories publishing, printing and reproduction of recorded media (which includes CDs and DVDs) and chemicals (which includes pharmaceuticals).

Figure B5. UNDINHX: total and for different subgroups.
Annual percentage change

Sources: Statistics Sweden and the Riksbank.

Figure B6. Producer prices for the Swedish home market, different product groups.
Annual percentage change



Source: Statistics Sweden.

There is no reason to expect that the rate of increase in the producer price index for the home market and the domestic inflation rate for consumer goods (UNDINHX) will be the same even in the long run. As with imported products, the composition of goods differs between the producer price index and the consumer price index. However, in the long term, producer price trends for consumer goods are a signal of how consumer prices for domestically-produced goods may change. The slowdown in the rate of increase in producer prices for consumer goods in January, if it proves lasting, can therefore be regarded as a further indication that pressure on consumer prices from an earlier stage of the distribution chain has declined. The low domestic inflation is thus not only due to reduced prices and increased competition in the food industry.

Inflation assessment

Inflation is currently very low. It is expected to remain subdued throughout 2005. Compared with the December Inflation Report, UND1X inflation is forecast to be somewhat lower in both 2005 and 2006. That is partly because the forecast is now affected in greater measure by structural factors such as reduced food prices and abolished import quotas on clothing and textiles. In 2006 inflation is expected to increase. It is mainly domestic inflation that is anticipated to rise owing to increasing resource utilisation and mounting cost pressures in the Swedish economy. Imported inflation, too, is predicted to increase somewhat but to remain low nonetheless. Looking ahead two years, UND1X inflation is expected to be around 2 per cent, like the December forecast.

Inflation prospects in the main scenario

This chapter presents the Riksbank's assessment of inflation prospects up to and including 2007 Q1. It describes what the Bank deems to be the most likely path for inflation in the coming two years provided that the repo rate remains unchanged at 2.0 per cent.

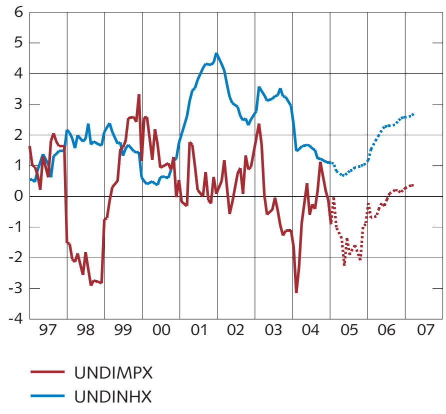
Falling food prices expected to lead to low domestic inflation this year.

Domestic inflation was low throughout 2004; moreover, the rate declined during the autumn. Recently, however, it has been broadly in line with the forecast in the previous Inflation Report. The low domestic price increases partly reflect the slack in resource utilisation that has been present for some time in the economy (see Figure 55).

The high productivity growth in recent years has also resulted in low increases in firms' costs and thereby weak price pressures on the cost side. Goods inflation in particular has been low. In annual terms, goods prices have fallen over the past year. The rate of price increases for services in the CPI has also dropped but has nevertheless remained at a higher level, just below 2 per cent. That is in line with the normal pattern and probably reflects in some measure the smaller increase in service-sector productivity compared with that seen in the goods sector.

Structural changes also appear to have contributed somewhat to the low domestic inflation. This is particularly true of food prices, which have dropped recently. Tougher competition in the retail food market has contributed to dampening food price inflation. More low-price food chains in the country have resulted in lower food prices and probably also squeezed profit margins in the sector. Food prices have fallen by 0.8 per cent in the past year. Food comprises one-fifth of the consumption basket in UNDINHX inflation, which explains its negative contribution of around 0.2 percentage points to domestic inflation in January.

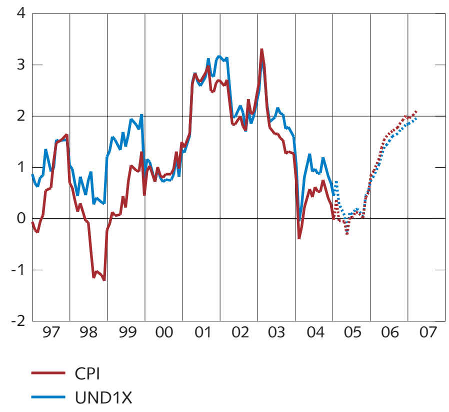
Figure 53. UNDINHX and UNDIMPX: outcome and forecast in the main scenario.
Annual percentage change



Note. The broken lines represent the Riksbank's forecasts.

Sources: Statistics Sweden and the Riksbank.

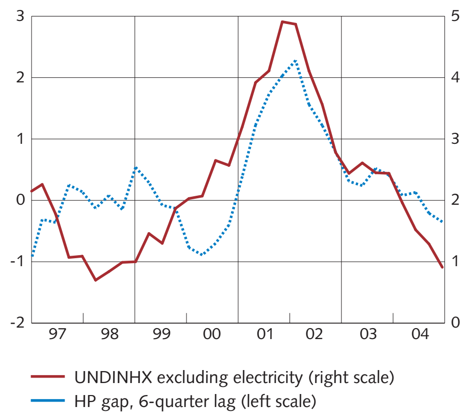
Figure 54. UND1X and CPI: outcome and forecast in the main scenario.
Annual percentage change



Note. The broken lines represent the Riksbank's forecasts.

Sources: Statistics Sweden and the Riksbank.

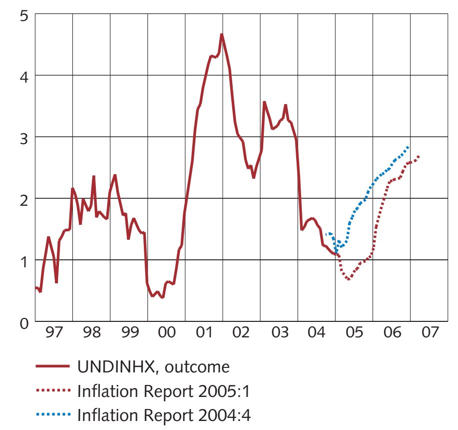
Figure 55. UNDINHX excluding electricity and estimate of the output gap.
Annual percentage change and per cent of GDP



Note. UND1X excluding electricity has been calculated on the basis of Statistics Sweden's definition of the inflation rate that applied until the end of 2004.

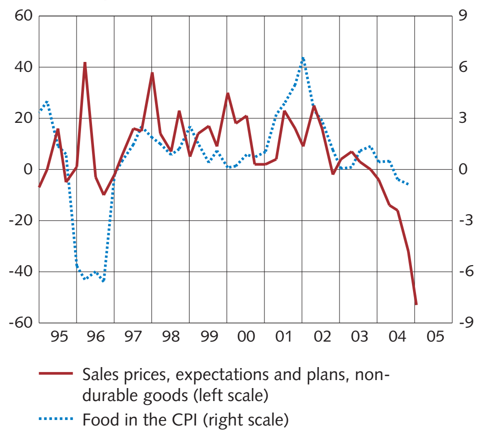
Sources: Statistics Sweden and the Riksbank.

Figure 56. UNDINHX: outcome and forecast in the main scenario.
Annual percentage change



Sources: Statistics Sweden and the Riksbank.

Figure 57. Food prices and price expectations in the retail food trade.
Annual percentage change and balance



Sources: NIER and Statistics Sweden.

The forecast for domestic inflation in 2005 has been revised down 0.8 percentage points compared with the previous Inflation Report. That is mainly because food prices are estimated to drop by around 3 per cent this year compared with 2004. Next year, too, food prices are anticipated to fall, implying somewhat lower domestic inflation in that year as well. As discussed above, there are signs that the retail food trade is currently undergoing considerable structural change. The retailers' own expectations regarding price developments in the coming year also suggest that the downward pressure on food prices has intensified (see Figure 57). All in all, the forecast for the rate of price increases in the CPI has been revised down by some 0.3 percentage points for this year and by 0.1 percentage points for next year on account of lower expected food prices.

Other factors have also contributed to the downward revision in the forecast for domestic inflation. The current state of negotiations in the market for rental accommodation points to lower rent increases this year than was assumed in the previous Report. In addition, it seems that unit labour costs in 2004 and 2005 will be somewhat lower than previously expected (see Chapter 2).

Domestic inflationary pressures are forecast to rise gradually in 2006, however, as the cyclical upswing continues and the slack in resource utilisation across the economy is reduced. A somewhat higher rate of wage increases when employment picks up, coupled with slower productivity growth, also means that unit labour costs are expected to increase somewhat more in the years ahead. This in turn should result in higher cost-push inflationary pressures. Looking ahead two years, domestic inflation is forecast to be 2.7 per cent. That is still a modest rate of inflation, however, given the state of the economy, and can be compared with the average rate for the past five years of 2.4 per cent.

■■ Low non-oil imported inflation for whole forecast period.

Prices of non-oil imported goods and services have fallen in the past year. The drop in imported inflation has been broad-based, with several factors contributing to it. Price increases for manufactured goods in the international market have been low for some time. In addition, the krona is stronger today than it was a few years ago. Exchange rate changes normally pass through to import prices with a lag, and the krona's appreciation in recent years should therefore have contributed to the low inflation for imported goods.

The falls seen in prices were much sharper than expected in the December Inflation Report (see the box "Recent developments in inflation"). Much suggests that there are price-dampening factors in Sweden's imports of consumer goods that have previously not been taken account of sufficiently in the inflation assessment. Internationalisation, for example, may have resulted in importers turning to low-wage countries to a greater extent than expected.

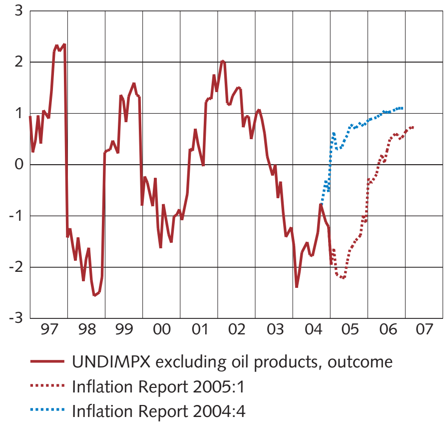
These tendencies may be more evident in consumer goods than other goods and they may also be difficult to capture in the price statistics.

These price-dampening factors are anticipated to affect price developments in the period ahead as well. This is one reason why the forecast for non-oil imported goods during the forecast period has been revised down from the December estimate. Another important factor that has affected the forecast for import prices is the removal of the EU's import quotas on clothes and textiles, which entered into force on 1 January 2005. This should lead to lower prices, partly through a direct price effect and partly through an indirect effect in that the competition from low-wage countries will increase. Experiences from other countries – notably Norway, which scrapped its import quotas back in 1996 – indicate that clothes prices might drop more than was assumed in the previous Inflation Report. In the current forecast the abolition of the import quotas is estimated to contribute to a decrease in CPI inflation of 0.1 percentage points this year and 0.2 percentage points next year. That is somewhat more than in the December forecast.

Some of the forces driving the price declines for imported goods in the past year are expected to gradually diminish during the forecast period. It is reasonable to believe that rising global resource utilisation will result in higher price increases for goods in the international market, compared with the average for recent years.

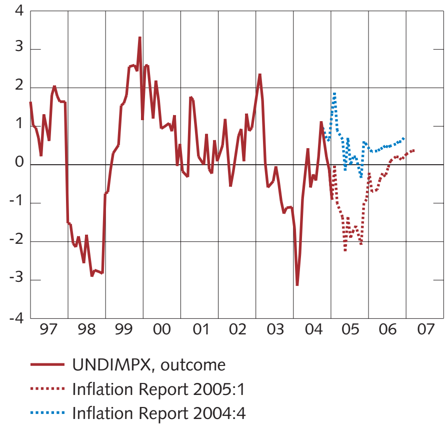
At the same time, the Swedish krona is not expected to strengthen nearly as much as it has in recent years. The exchange rate should therefore not restrain price increases in Swedish kronor to the same extent as then. Furthermore, gradually higher resource utilisation and mounting cost pressures in the Swedish economy in the coming years are predicted to contribute to larger price rises for imported goods and services as well. So, on balance, non-oil imported inflation is expected to increase gradually during the forecast period. It will take time, however, before the effects filter through fully to retail prices. The rise in imported inflation will therefore be moderate, with non-oil imported inflation expected to be around 0.5 per cent towards the end of the forecast period.

Figure 58. UNDIMPX excluding oil: outcome and forecast in the main scenario.
Annual percentage change



Sources: Statistics Sweden and the Riksbank.

Figure 59. UNDIMPX: outcome and forecast in the main scenario.
Annual percentage change



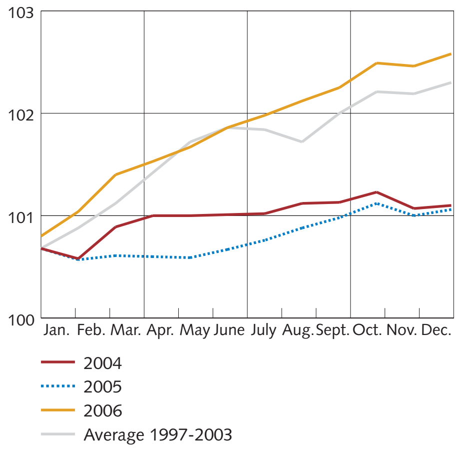
Sources: Statistics Sweden and the Riksbank.

■■ Oil price estimate revised up in the short term.

The sharp rise in the oil price in 2004 has had large direct effects on the rate of price increases for petrol and heating oil. It is also likely that the oil price has indirectly contributed to higher producer prices for manufactured goods. The full impact of these price increases has probably not passed through to consumer prices yet. The direct effects on recorded inflation, on the other hand, are expected to turn negative coming into the summer, when last year's unusually high oil prices drop out of the twelve-month comparisons.

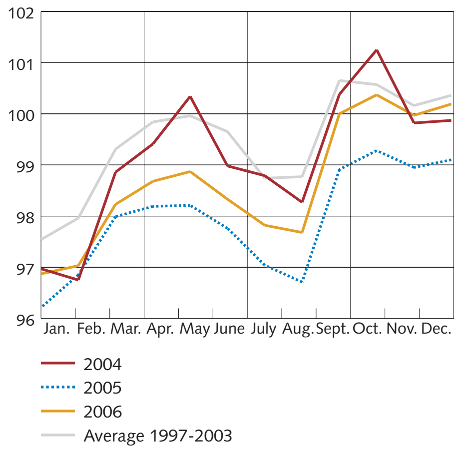
Compared with the December Inflation Report the forecast for the oil price has been revised up somewhat (see Chapter 1).

Figure 60. Monthly developments in UNDINHX: outcome and forecasts.
Index: December in previous year = 100



Note. The broken line represents the Riksbank's forecast.
Sources: Statistics Sweden and the Riksbank.

Figure 61. Monthly developments in UNDIMPX: outcome and forecasts.
Index: December in previous year = 100



Note. The broken line represents the Riksbank's forecast.
Sources: Statistics Sweden and the Riksbank.

As a result, the rate of price increases for oil products in the CPI is marginally higher around a year from now, compared with the previous Report.

Taken together this means that total imported inflation including oil products is judged to be negative in the coming year, but is expected to rise weakly in the longer term. At the end of the forecast period imported inflation is forecast to be 0.4 per cent.

■■ Monthly developments in inflation.

Annual inflation rates sometimes suggest relatively fast changes in inflationary pressures. Figure 56 shows, for example, that domestic inflation is forecast to rise comparatively quickly in 2006. Imported inflation is expected to fluctuate relatively sharply in 2005, but then to stabilise in 2006. However, Figures 60 and 61 show that the monthly price changes in 2005 and 2006 for both domestic and imported inflation are not expected to be markedly different from the previous seasonal pattern.

■■ Inflation expected to be 2 per cent in two years.

To sum up, the forecast for UND1X inflation in the year ahead has been revised down in relation to the December Report. This partly reflects a different assessment of food prices and the effect of the abolished import quotas. Furthermore, the recently low inflation points to generally higher competition in the world market and in Sweden. In the main scenario, UND1X inflation is expected to be 1.1 per cent one year ahead and 2.0 per cent in two years. The corresponding forecasts for CPI inflation are 1.2 per cent and 2.1 per cent, respectively. The forecasts are based on Statistics Sweden's new methods for computing the CPI, which were adopted in January 2005.

Table 9. Inflation forecasts in the main scenario.
Annual percentage change

	Annual average			12-month rate		
	2004	2005	2006	Mar 05	Mar 06	Mar 07
CPI	0.4 (0.5)	0.1 (1.2)	1.5 (2.2)	0.0 (0.7)	1.2 (2.0)	2.1
UND1X	0.8 (1.0)	0.2 (1.3)	1.4 (1.9)	0.3 (1.1)	1.1 (1.7)	2.0
UNDINHX	1.5 (1.7)	0.9 (1.7)	2.1 (2.5)	0.8 (1.2)	1.9 (2.4)	2.7
UNDIMPX	-0.6 (-0.5)	-1.3 (0.5)	-0.1 (0.5)	-1.0 (0.9)	-0.6 (0.4)	0.4

Note. The figures in parentheses are the forecasts in the previous Inflation Report. UND1X is CPI inflation excluding household mortgage interest expenditure and the effects of changes in indirect taxes and subsidies. UNDINHX refers only to prices of mainly domestically produced goods and services in UND1X. UNDIMPX refers to prices of mainly imported goods and services in UND1X.

Sources: Statistics Sweden and the Riksbank.

■■ Households' interest costs affecting CPI inflation.

CPI inflation has been lower than UND1X inflation since 2003. This is mainly because the low interest rate levels have reduced the interest costs in the CPI, leading in turn to lower CPI inflation compared with UND1X. The difference is forecast to continue in the short run.

The effect will peter out gradually, however. Towards the end of the forecast period CPI inflation is expected to be more or less in line with UND1X inflation.

Table 10. Change in the CPI compared with UND1X. Annual percentage change and percentage points

	Mar 05	Mar 06	Mar 07
UND1X	0.3 (1.1)	1.1 (1.7)	2.0
+ Effects of changes in mortgage interest expenditure	-0.4 (-0.5)	-0.1 (0.0)	0.1
+ Effects of changes in indirect taxes and subsidies	0.2 (0.2)	0.2 (0.3)	0.1
=CPI	0.0 (0.7)	1.2 (2.0)	2.1

Note. The figures in parentheses are the forecasts in the previous Inflation Report.

Source: The Riksbank.

Revised forecasts since the December Inflation Report.

- CPI and UND1X inflation is forecast to be lower.

- Imported inflation is estimated to be lower throughout the forecast period. Firstly, the unexpectedly low inflation recently points to generally higher competition in both the world market and Sweden. Secondly, the abolished import quotas are forecast to have a bigger impact.

- Domestic inflation, too, is expected to be more subdued throughout the forecast period. Food prices in particular are forecast to be lower. In addition, rent increases are anticipated to be more modest. Finally, cost pressures are forecast to be slightly lower.

The balance of risks

The Inflation Report's main scenario describes what the Riksbank assesses to be the most likely path for Swedish inflation provided that the repo rate remains unchanged at the current level. The forecast is uncertain, however. When formulating monetary policy, therefore, the Bank also takes account of the risk that inflation may deviate from the main scenario.

In the previous Inflation Report the risks of lower inflation than in the main scenario were judged to be somewhat larger than the risks of higher inflation. In the current main scenario the risks of lower inflation have been taken into account to a greater extent than before, prompting sharp downward revisions in the inflation forecast. Risks remain, of course, that inflation will turn out lower still but these are deemed to be offset by the upside risks. Some of the risks in the inflation assessment have been in focus for some time, such as the developments in the US twin deficits, the krona and productivity. Adding to these is a number of new risks that stem from certain specific factors affecting, for example, food prices. There is considerable uncertainty over what impact these factors will have on inflation in the period ahead.

■■ Uncertainty over price-dampening effects of increased competition.

It is genuinely difficult to judge what impact the tougher competition in the world economy is having on Swedish and international inflation. On the one hand, there is a direct effect on import prices when importers start buying from low-cost countries with a low price level; on the other, there is an indirect effect when firms in industrialised countries are forced into price competition. Our knowledge of the competition situation in different markets at present and of profit margins at different stages of production is incomplete. Another question is how long it takes for these kinds of changes to have their full impact on prices. In the long term the effects on inflation should be temporary since changed competitive conditions can primarily be assumed to affect what price levels are set. But it is difficult to know exactly how long this adjustment takes and in the meantime the inflation rate will be lower than it otherwise would have been. If there is a quick adaptation to the new price levels, the effect on inflation will be larger than if the process is drawn-out.

In the main scenario the stiffening international competition is estimated to have a somewhat bigger impact on Swedish prices than previously assumed. It is still possible, though, that the effects have been underestimated and that imported inflation will turn out slightly lower. Other structural changes, whose results are hard to estimate, include the recently abolished import quotas on clothing and the tougher competition in the Swedish retail food market. Here, too, the main scenario has taken account of the most likely effect of these changes. But there is great uncertainty in this respect and the price-dampening effects may have been underestimated.

There is also a risk that the presently low inflation is being attributed too much to structural factors and that the durability of these effects is being overestimated. Changes in demand affect inflation with a lag. The previous economic slowdown is in all likelihood still dampening inflation in Sweden and abroad, and may be having a bigger impact in some markets than in others. If that is the case it is also possible that inflationary pressures will increase faster than forecast in the main scenario when resource utilisation picks up.

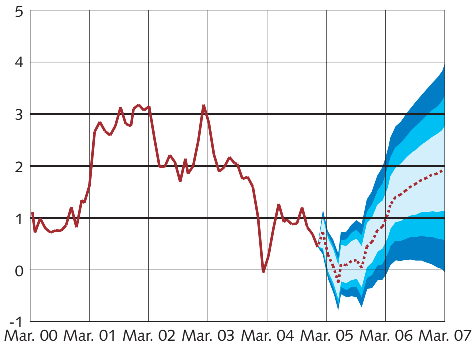
■■ Risks from international developments.

The oil price has dropped from its peak levels, but remains high. The Bank's assessment regarding the oil price and how it is affecting international economic activity and price developments is still very uncertain. It cannot be ruled out that the rise in the oil price will have a bigger impact than estimated, both on the real economy and on inflation. There is also a risk that the oil price will remain at high levels for longer than expected, or rise further. The relatively low spare capacity in global production, coupled with the possibility that demand for oil will increase more than anticipated in the strongest-growing regions of the world, could cause the high oil price to persist longer than expected. The security policy situation in the Middle East is also a source of uncertainty. So, on the whole, there is still a risk that the oil price will result in higher global inflation, in which case international economic activity risks being more subdued than in the main scenario.

There are also other risks in the world economy that could lead to weaker activity and lower inflation than forecast in the main scenario. The low interest rates in recent years have helped to sustain private consumption during the economic slowdown. In many countries the low rates have gone hand in hand with increased household debt and sharply rising housing prices. In a number of cases, like Sweden's, the increasing housing prices can be explained in large measure by fundamentals such as low interest rates. But it cannot be ruled out that these price developments also contain an element of exaggerated expectations and short-termism. That in turn means that a future slackening of economic activity or a rise in interest rates could lead to unexpectedly large adjustments in property prices in some countries, possibly resulting in weaker private consumption than assumed in the main scenario.

There has been uncertainty for some time now regarding the US twin deficits – in the federal budget and current account – in terms of the adjustments that these may bring about. This uncertainty remains. The recent presentation of the federal budget did include plans for a long-term reduction of the budget deficit, but the deficit is nevertheless going to remain for a long time. It is therefore also probable that a low national saving rate will continue to result in

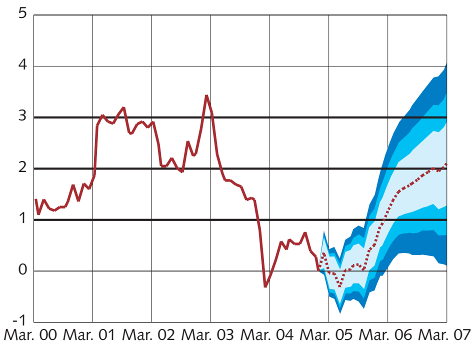
Figure 62. UND1X inflation with uncertainty bands.
Annual percentage change



Note. The uncertainty bands show the 50, 75 and 90 per cent chances of UND1X inflation being within the respective range. The broken line represents the forecast in the main scenario. The horizontal lines at 2, 1 and 3 per cent, respectively, are the Riksbank's inflation target and the tolerance limits for the annual change in the CPI.

Sources: Statistics Sweden and the Riksbank.

Figure 63. CPI inflation with uncertainty bands.
Annual percentage change



Note. The uncertainty bands show the 50, 75 and 90 per cent chances of CPI inflation being within the respective range. The broken line represents the forecast in the main scenario. The horizontal lines at 2, 1 and 3 per cent, respectively, are the Riksbank's inflation target and the tolerance limits for the annual change in the CPI.

Sources: Statistics Sweden and the Riksbank.

large deficits on the current account. The deficits are in danger of triggering a rise in interest rates that would hold back consumption and investment. There is accordingly a risk that growth in the US economy will be lower than forecast in the main scenario. Reduced capital inflows to the United States could also involve a more drastic weakening in the dollar. The substantial dollar holdings in Asia appear problematic in this regard.

Even though a continued depreciation of the dollar would help reduce the imbalances in world trade, a fast, sharp change in exchange rates would also risk hampering the cyclical upswing in Europe and growth in Sweden's export markets. A firmer strengthening of the trade-weighted krona exchange rate could result in even lower imported inflation than in the main scenario. The large surpluses on Sweden's current account are another reason that the krona could strengthen more than in the main scenario.

■■ The domestic risks are balanced.

The key risk factor for domestic inflation is deemed as before to be developments in productivity. Productivity growth has been high recently, and this has been reflected in low inflation. Growth in productivity varies sharply from year to year and is also affected by cyclical swings in the economy. In the main scenario productivity growth is assumed to follow the normal cyclical pattern, decreasing in the coming years as employment picks up. It is difficult, however, to predict how fast the slowdown in productivity growth might prove to be. There is a risk that the ongoing economic upturn will be followed by a more rapid decline in productivity gains than expected. In the United States, for example, productivity growth fell relatively sharply in 2004, showing that the tide can turn quickly. At the same time there is a risk that the permanent element of the high productivity growth has been underestimated and that productivity gains will therefore be higher than expected in the years ahead. In manufacturing, for example, high productivity growth has been accompanied by a trend fall in employment over a long period. The fast pace of restructuring in the Swedish manufacturing sector may continue another while yet, contributing to higher growth in productivity. Overall the Bank still deems the risks of overestimating or underestimating productivity growth to be about equal.

To sum up, the Riksbank judges the upside and downside risks to inflation to be balanced. Taking into account this risk outlook, CPI inflation is expected to be 1.2 per cent one year ahead and 2.1 per cent in two years. The corresponding forecasts for UND1X inflation are 1.1 per cent and 2.0 per cent, respectively.

**Table 11. Risk-adjusted inflation forecasts.
Annual percentage change**

	Annual average		12-month rate	
	2005	2006	Mar 06	Mar 07
CPI	0.1 (1.2)	1.5 (2.2)	1.2 (2.0)	2.1
UND1X	0.2 (1.3)	1.4 (1.9)	1.1 (1.8)	2.0

Note. The table gives the mean values of the probability distributions for the inflation forecasts in Figures 62 and 63. The figures in parentheses are the corresponding forecasts in the previous Inflation Report.

Source: The Riksbank.

**Table 12. UND1X inflation (12-month rate).
Percentage probability of different outcomes**

	UND1X<1	1< UND1X <2	2< UND1X <3	UND1X >3	Total
Mar 2006	44 (22)	45 (51)	11 (25)	0 (2)	100
Mar 2007	22 (20)	30 (29)	29 (30)	19 (21)	100

Note. The figures show the probability of UND1X inflation being within the given range. The figures in parentheses show the corresponding data in the previous Inflation Report.

Source: The Riksbank.

**Table 13. CPI inflation (12-month rate).
Percentage probability of different outcomes**

	CPI<1	1< CPI <2	2< CPI <3	CPI >3	Total
Mar 2006	38 (21)	48 (51)	13 (26)	1 (2)	100
Mar 2007	18 (12)	29 (24)	30 (32)	23 (32)	100

Note. The figures show the probability of UND1X inflation being within the given range. The figures in parentheses show the corresponding data in the previous Inflation Report.

Source: The Riksbank.

Changes in the Riksbank's forecasting methods

A box in this Inflation Report presents forecasts in a slightly longer perspective than the main scenario and using the assumption that the repo rate will develop in line with implied forward rates. Extending the forecast horizon illustrates more clearly how the path of inflation can be affected by various temporary effects and how monetary policy takes account of developments in the real economy. Moreover, there is reason to believe that implied forward rates usually describe a more realistic development of the repo rate than the assumption that it will not change. This makes it easier to assess the forecasts and thereby the monetary policy stance that is based on the forecasts.[6]

Monetary policy is often described with a simple rule

The main scenario in the Riksbank's Inflation Reports focuses on the path of inflation one to two years ahead. This is because analysis suggests that this is when monetary policy has its main impact on inflation. The Riksbank often uses a simple policy rule to clarify how inflation forecasts affect the repo rate: if the forecasted inflation rate one to two years ahead, using the assumption of an unchanged repo rate, is higher than 2 per cent, the repo rate should usually be raised and if the forecasted inflation rate is below 2 per cent, it should usually be cut. The aim of this simple rule has been to make it easier to understand how the Riksbank's repo rate decision is linked to its assessments of economic developments. Various assessments of the Riksbank's actions also show that it provides a good description of the development of the repo rate.[7]

Situations may arise where there is reason to deviate from the simple rule

However, a simple policy rule cannot explain all of the changes a central bank needs to make to the interest rate. Circumstances may arise that make it necessary to change the rate even when the inflation forecast a couple of years ahead is in line with the target. Similarly, there may sometimes be reasons for not changing the rate, despite forecast indications that inflation will be above or below the target level. This induced the Executive Board of the Riksbank to publish in 1999 a clarification of the way it conducts its monetary in practice.[8] The clarification contains a discussion of two cases of principle where there may be reason to diverge from the policy rule.

The effects of some disturbances may not have subsided in a two-year perspective

The first case is that inflation is affected by a certain type of disturbance, the effects of which have not fully subsided within the two-year time horizon, but which nevertheless has no lasting impact on inflation. A recent example can be taken from the turn of the year 2002/2003, when rapidly rising energy prices pushed up inflation. On this occasion, the assessment was that the energy price fluctuations would not have subsided entirely within the two-year horizon but that they were nevertheless of a temporary nature and would gradually disappear from inflation. The Riksbank therefore chose not to change the repo rate.[9]

6 The method changes are also discussed in Heikensten, L., "Thoughts on how to develop the Riksbank's monetary policy work", speech held at the Swedish Economics Association on 22 February 2005.

7 See for instance Penningpolitiken 1999-2001, Specialstudier Nr 1 (Monetary policy 1999-2001, Special studies No 1), March 2002, National Institute of Economic Research, the box "Material for assessing monetary policy 2001-2003" in Inflation Report 2004:1, the corresponding box in this Inflation Report and Jansson, P. and A. Vredin, "Forecast-Based Monetary Policy: The Case of Sweden", *International Finance* 6:3, 2003, 349-380.

8 See the memorandum "The Riksbank's inflation target – clarifications and evaluation", 4 February 1999, registration number 1999-00351 DIR, or Heikensten, L., "The Riksbank's inflation target – clarifications and evaluation", *Sveriges Riksbank Quarterly Review* 1, 1999.

9 See the box "The Riksbank's monetary policy – target and indicators" in Inflation Report 2003:3 for further examples of temporary disturbances.

Rapidly counteracting disturbances may sometimes lead to large real economic costs

The other case is when inflation has for some reason come to deviate too far from the target level. In this situation the central bank may wish to refrain from rapidly bringing inflation back on target and prefer to cautiously adapt its monetary policy to limit the negative consequences for output and employment.

One type of disturbance that can be particularly problematic leads to prices and output moving in opposite directions. This can occur when shocks occur to the supply side of the economy, such as sudden changes in production costs, technology and productivity. For example, a substantial cost increase could force firms to both raise their prices and cut production. If the repo rate is raised with the purpose of counteracting the price increase, this could contribute to further weakening the real economy. It is difficult for the central bank to stabilise both inflation and the real economy when this type of disturbance arises.[10] It may then wish to conduct its policy in a flexible manner, taking into account both price and output developments.

It is worth emphasising that the scope for this type of flexible inflation-targeting policy is dependent on confidence in the price stability aim in the long term. If there is confidence in this aim, there is greater scope for flexibility in the short-term policy. However, if confidence is low and there is a tangible effect on households' and firms' inflation expectations, monetary policy cannot take account of the negative effects on the real economy to the same extent.

Temporary effects and supply shocks can be illustrated by various adjusted inflation indices

One means of demonstrating that it is not always the intention to fully stabilise inflation within the normal two-year horizon is to show the development of an inflation measure that tries to adjust for the effects that will not be offset. Various underlying measures of inflation can be constructed by excluding index components that are affected by temporary disturbances and supply-related changes. The Riksbank has on several occasions emphasised other indices than CPI and UND1X in its monetary policy communications.[11] When inflation had risen very rapidly around the turn of the year 2002/2003, for instance, the Inflation Report contained an index adjusted for energy price changes.

There is no inflation index that is perfect under all circumstances

It is important to stress that there is no single inflation index that is best in all contexts and that can once and for all exclude all of the effects monetary policy should not counteract. This is why the Riksbank has chosen to adhere to a target formulated in terms of CPI, the broadest and most well-known measure of inflation.

The fact that the most relevant inflation index for monetary policy varies over time and is not always the same can be a complicating factor when communicating monetary policy. External analysts have sometimes expressed uncertainty over which inflation measure is currently used for shaping monetary policy. The fact that the index must be calculated by the Riksbank and is not readily available outside of the Bank is another problem worth noting.

10 For a more detailed discussion, see the box "Oil prices and monetary policy" in Inflation Report 2004:3.

11 The Riksbank's inflation target is formulated in terms of CPI inflation: the increase in CPI should be limited to 2 per cent with a tolerated deviation of 1 percentage point up or down. UND1X is an adjusted inflation index (CPI adjusted for the effects of changes in indirect taxes and subsidies and households' mortgage interest expenditure) but has been given a particularly prominent role as the difference between CPI and UND1X inflation is affected by the Riksbank's own actions. The reason is that households' mortgage interest expenditure is directly affected by changes in the repo rate: if the rate is raised then interest expenditure rises, while it falls if the repo rate is cut. The Riksbank has chosen not to offset this type of effect on CPI.

Forecasts in a longer perspective can make it easier to understand monetary policy

One procedure that could reduce the need to use several different inflation measures is, where possible, to illustrate the expected path of inflation in a slightly longer perspective. By also illustrating the expected development of GDP and resource utilisation, the Riksbank can make it easier to understand the expected real-economy consequences of its policy. In this sense, forecasts in a longer perspective can clarify the trade-offs faced in monetary policy and thereby improve understanding.

The box "Longer-term forecasts under the assumption that the repo rate evolves in line with implied forward rates" in this Inflation Report presents forecasts that extend one year further ahead than those in the main scenario. Another new element is that the forecasts are not conditional on the repo rate remaining unchanged during the forecast period, but are instead based on the assumption that the Riksbank adapts monetary policy in line with implied forward rates.[12]

Implied forward rates facilitate assessment of the forecasts

Implied forward rates usually provide a more realistic assumption of monetary policy than a constant repo rate.[13] This in turn makes it easier to compare the forecasts with the outcome (and with forecasts made by other analysts). In this sense, a forecast based on the assumption that monetary policy will be conducted in line with implied forward rates is easier to assess than a forecast based on the assumption of a constant repo rate.

It is worth pointing out that a repo rate path in line with implied forward rates is not necessarily the most probable assumption for monetary policy. This is because forward rates reflect market expectations of monetary policy. It cannot be taken for granted that these will always correspond to the Riksbank's expectations. For example, it is conceivable that the market and the Riksbank sometimes have differing perceptions of how monetary policy can best manage a shock. In addition, the existence of various types of risk premiums means that the link between implied forward rates and the repo rate becomes indirect.

The new forecasts have been used for some time now in the Riksbank's internal analyses. The aim to be as open and clear as possible in communicating monetary policy makes it natural to publish this additional information in the Inflation Report. This will hopefully improve the opportunities for Parliament and external analysts to evaluate and predict monetary policy.

The 1999 clarification will continue to guide monetary policy

The advantages of the new forecasts mainly entail explaining monetary policy in a better way. Longer-term inflation forecasts using alternative policy assumptions will provide a more complete base for discussing monetary policy. They do not entail changing the way monetary policy is conducted. The aim to bring inflation back on target within two years will normally continue to guide the Riksbank's actions. If the Riksbank finds it necessary to take account in its interest rate decision of other information than that included in the two-year inflation projection, it is hoped that the new forecasts will make it easier to understand how this is done. This is entirely in line with the clarification supported by the Executive Board of the Riksbank in 1999.

One possible problem with extending the forecast horizon is the increased uncertainty associated with a longer-term forecast. However, it should be noted in this context that there is no fundamental difference between extending the forecast horizon and assessing which factors

12 The interest rate path has been calculated using the extended Nelson-Siegel method, which is described in Svensson, L.E.O., "Estimating Forward Interest Rates with the Extended Nelson & Siegel Method", *Sveriges Riksbank Quarterly Review* 3, 1995.

13 Of course, under certain circumstances a constant repo rate may also be a realistic monetary policy assumption. However, it is not realistic when the interest rate is unusually high or low and the forecast horizon is relatively long.

will not have fully subsided within the two-year perspective. Both procedures essentially require the same analyses of the future path of inflation.

Another possible disadvantage is that misunderstandings can arise with regard to interpretation of the assumption for the repo rate. Of course, even if the Riksbank's forecast indicates that a repo rate path in line with implied forward rates can be regarded on the whole as a reasonable expectation of future monetary policy; the Riksbank is not bound to set interest rates accordingly. As the economy is constantly affected by shocks of various kinds, the Riksbank's assessment will also change over time.

The reasoning presented here is not new in itself. The Reserve Bank of New Zealand has used similar methods for some time now. More recently, Norges Bank and the Bank of England have found it appropriate to make corresponding changes in their Inflation Reports. The Riksbank's inflation report has also previously presented rough assessments of economic trends in the slightly longer term as well as calculations illustrating the effects on inflation and the real economy of monetary policy being adapted to (survey-based) market expectations. The changes now being made – in the form of more detailed forecasts in a slightly longer perspective and with an alternative monetary policy assumption – are therefore a natural stage in a process aimed at increasing understanding of the Riksbank's reasoning and providing agents outside the Bank with better opportunities to participate in the monetary policy debate.

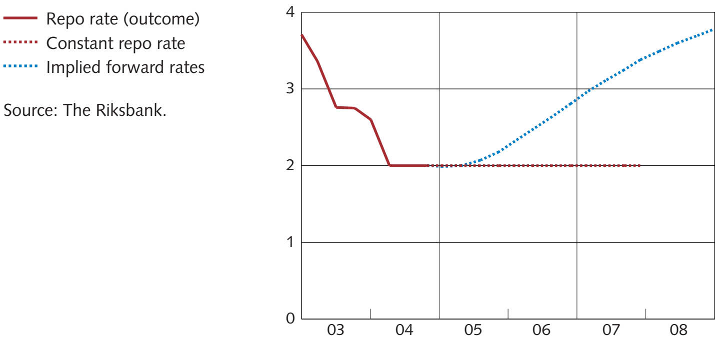
Longer-term forecasts under the assumption that the repo rate evolves in line with implied forward rates

This box presents inflation forecasts that extend one year beyond the horizon in the main scenario. Moreover, the forecasts for the real economy and inflation developments are based on a different interest rate assumption: that the repo rate tracks a 15-day average of the implied forward rates as at 23 February 2005. In this alternative scenario, which entails a rising repo rate and thereby tighter monetary policy than in the main scenario, inflation increases slowly in the coming three years. Economic growth is firm, resource utilisation is rising gradually and the output gap in 2007 is positive.

Implied forward rates suggest that monetary tightening will begin at end of 2005

The alternative rate assumption here is that the repo rate follows a 15-day average of the implied forward rates as at 23 February 2005.[14] An average has been chosen so as to exclude any temporary movements in the forward curve. Figure B7 shows the interest rate path on which the forecasts in this box are based. As can be seen from the Figure, the forward rates imply that monetary policy is conducted in such a way that the repo rate remains at its current level until the end of 2005, after which it is raised by some 25 basis points roughly every second quarter. At the end of 2008 the repo rate stands at around 3.75 per cent. Compared with the assumption of a constant repo rate this entails tighter monetary policy, but nonetheless a level of the policy rate that for a long period is low in a historical perspective.

Figure B7. Repo rate assumptions: Implied forward rate curve (15–day average as at 23 February 2005) and constant repo rate. Per cent



Source: The Riksbank.

Developments in the world economy are expected to be the same as in the main scenario

The international economy is not affected by different assumptions regarding Swedish interest rate developments. The expected international economic performance for the period 2004-2007 is therefore the same as in the main scenario. In other words, global economic activity is assumed to continue to strengthen and global resource utilisation to gradually pick up. The growth rates slacken by degrees, however, as resources become increasingly strained. The fall-off in economic activity also entails a slow decline in Swedish export market growth during the period. International inflation (producer prices) is relatively high this year, but gradually drops to around 1.5 per cent in 2007. The oil price is nevertheless assumed to remain comparatively high, although it falls back somewhat to stand at some USD 38 per barrel in the final forecast year.

Higher interest rates imply a stronger exchange rate and lower domestic demand

The Swedish krona is affected, though, by how the policy rate evolves. A rising repo rate implies a somewhat stronger krona than in the main scenario: the TCW-weighted exchange rate is now assumed to appreciate faster in 2005 and 2006. In the following years the krona is expected to strengthen somewhat further.

The effects of the rising repo rate on Swedish growth are exerted via a number of channels. On the one hand the stronger krona influences exporters' and importers' trade, and on the other, both households and firms adapt their investment and consumption

14 Each individual implied forward rate curve has been derived from interest rates on T-bills and government bonds. These interest rates represent averages of the bid and offer rates, and have been taken from the Riksbank's database (VERA). The method for estimating the implied forward rates is based on the extended Nelson-Siegel method, which is described in Svensson, L.E.O. "Estimating Forward Interest Rates with the Extended Nelson & Siegel Method", *Sveriges Riksbank Quarterly Review* 3, 1995.

decisions to the higher interest rate level. The price of Swedish exports (imports) becomes higher (lower) when the krona appreciates, and a higher level of interest rates lowers the present value of all investment and increases households' interest costs. That results in weaker growth in exports, investment and consumption than in the main scenario. Domestic demand remains high, however, and annual GDP growth in 2005-2007 is forecast to be 3.0 per cent, 2.7 per cent and 2.3 per cent, respectively. The corresponding forecasts in the main scenario are 3.2 per cent, 3.2 per cent and 2.8 per cent, respectively (see Table B1).

Table B1. GDP growth: forecasts under the assumption of a repo rate path in line with implied forward rates.
Annual percentage change

	2005	2006	2007
GDP at market prices	3.0 (3.2)	2.7 (3.2)	2.3 (2.8)

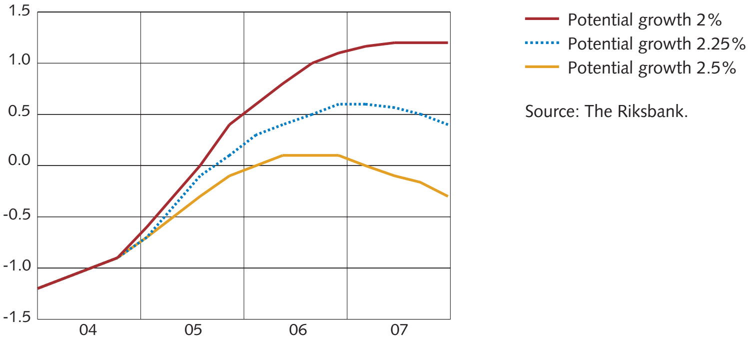
Note. The data refer to actual, non-calendar-adjusted, growth rates. The figures in parentheses are the forecasts based on a constant repo rate.

Sources: Statistics Sweden and the Riksbank.

The relatively fast moderation of GDP growth is due in part to the fact that expectations of tighter monetary policy are reflected in higher long-term rates already in the short term.

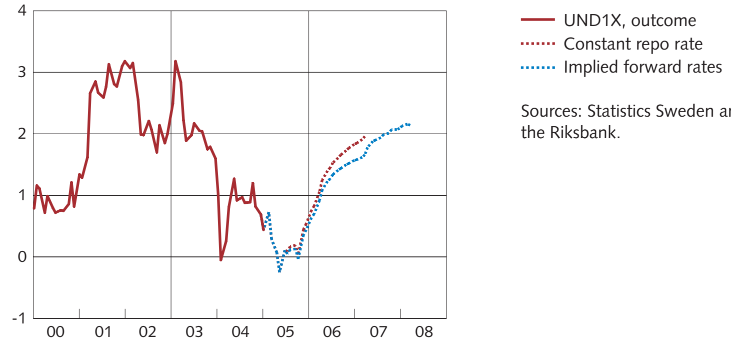
Resource utilisation, which is judged to be moderate initially, rises gradually during the period. Exact estimates of the output gap are highly uncertain, however, since they require assumptions regarding both potential growth and the current level of resource utilisation. Figure B8 shows developments in the output gap until 2007 on the basis of three different assumptions regarding potential growth and provided that the current gap is around -1 per cent of potential GDP in 2004. Given potential growth of around 2.25 per cent the output gap turns positive in 2006, narrowing thereafter only slowly. If, instead, potential growth in the coming years is higher than 2.25 per cent resource utilisation turns out lower. Conversely, if potential growth is lower than 2.25 per cent the output gap risks ending up at levels that lead to higher increases in wages and prices.

Figure B8. Measures of the output gap 2004-2007 under the assumption of a repo rate path in line with implied forward rates.
Per cent of potential GDP



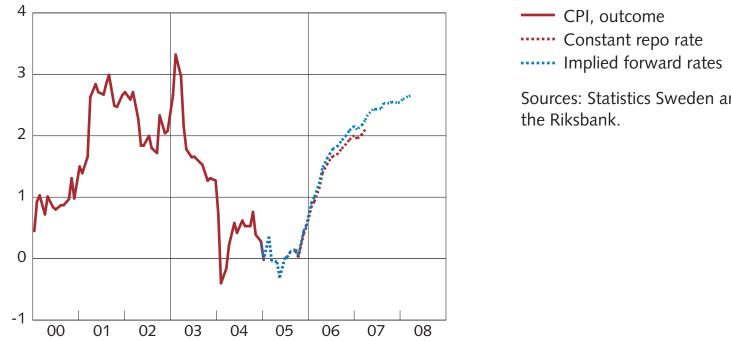
Source: The Riksbank.

Figure B9. UND1X inflation: outcome and forecasts under the assumption of a repo rate path in line with implied forward rates and constant repo rate.
Annual percentage change



Sources: Statistics Sweden and the Riksbank.

Figure B10. CPI inflation: outcome and forecasts under the assumption of a repo rate path in line with implied forward rates and constant repo rate.
Annual percentage change



Sources: Statistics Sweden and the Riksbank.

Table B2. Inflation forecasts under the assumption of a repo rate path in line with implied forward rates. Annual percentage change

	Annual average				12-month rate			
	2004	2005	2006	2007	mar 05	mar 06	mar 07	mar 08
CPI	0.4 (0.4)	0.1 (0.1)	1.7 (1.5)	2.4	0.0 (0.0)	1.2 (1.2)	2.2 (2.1)	2.7
UND1X	0.8 (0.8)	0.2 (0.2)	1.2 (1.4)	1.9	0.3 (0.3)	0.9 (1.1)	1.7 (2.0)	2.1

Note. The figures in parentheses are the forecasts based on a constant repo rate.

Sources: Statistics Sweden and the Riksbank.

Inflation is expected to rise gradually towards the target

In the main scenario, which assumes a constant repo rate, inflationary pressures are forecast to remain weak for some time yet. A rising repo rate reinforces that tendency since a higher interest rate entails both a stronger krona (i.e. lower imported inflation) and slower growth (lower domestic inflation). Assuming a rising repo rate, UND1X inflation one to two years ahead is expected to be 0.2-0.3 percentage points lower than the corresponding forecast based on a constant repo rate (see Table B2). But despite the higher interest rate level, inflation rises throughout the forecast period, approaching the inflation target gradually (see Figure B9). The forecast for CPI inflation is affected in relatively large measure by the increasing mortgage interest costs that result from the higher interest rate level. Consequently, the CPI forecast conditioned on implied forward rates is higher than that in the main scenario (see Figure B10).

To sum up, the forecasts conditioned on a repo rate path in line with implied forward rates indicate that UND1X inflation and economic growth in 2005 and 2006 turn out lower than in the main scenario. In 2007 the inflation rate rises, partly due to increasingly strained resources in the economy. The exact level of the output gap is uncertain, however. The lower the growth rate of output becomes, the greater the strain becomes on economic resources.

There is reason to underline that a repo rate development in line with forward rates, as with the assumption of a constant repo rate in the main scenario, should not be interpreted as being the monetary policy assumption that the Executive Board considers most probable. The purpose of analysing the expected path for inflation using more than one rate assumption is to broaden the basis for monetary policy discussions. The Executive Board's analysis and conclusions regarding this basis for the formulation of monetary policy will as usual be presented in press releases and in the minutes of the Board's monetary policy meetings.

Material for assessing monetary policy 2002-2004

This box analyses inflation in 2004 and the monetary policy conducted in the period 2002-2003. Its purpose is to provide a basis for the Riksdag Committee on Finance's annual assessment of the Bank's monetary policy. Inflation in 2004 was 0.5 per cent, measured in terms of the change in the consumer price index. Underlying inflation (UND1X) averaged 0.9 per cent. The low rate of price increases was due in part to weak developments in the prices of imported goods as well as to surprisingly high productivity growth during the year, which restrained cost pressures.

Introduction

The Sveriges Riksbank Act states that the Riksbank's objective is to maintain price stability. The Bank has defined this objective as keeping inflation at 2 per cent a year, as measured by the change in the consumer price index (CPI). The target has been supplemented with a fluctuation band of ± 1 percentage point. The purpose of the band is to clarify that deviations from target are likely but that the Riksbank aims to limit these deviations.

Since monetary policy affects inflation with a lag, it is mainly the conduct of monetary policy in 2002 and 2003 that is relevant to the inflation outcome in 2004. Consequently, this discussion of monetary policy primarily focuses on the forecasts and interest rate decisions from these two years.

Outcome and target fulfilment in 2004

Even though the economic upswing that began in the second half of 2003 was increasingly consolidated in 2004, inflation turned out considerably lower than the Bank's target. In 2002 and 2003 policy was initially guided by the measure of underlying inflation that the Riksbank has used most in recent years, UND1X. In 2003, however, the Bank shifted its focus to UND1X excluding energy prices. Inflation according to these measures averaged 0.9 per cent and 0.8 per cent, respectively, in 2004. CPI inflation was 0.5 per cent. One important reason for CPI inflation being significantly lower than the UND1X measure was that the fairly substantial monetary easing that began at the end of 2002 and continued through 2003 and into 2004 held down households' mortgage costs.[15]

Table B3. Comparison of different inflation measures.
Annual percentage change

	Annual average		Standard deviation	
	2004	1995-2003	2004	1995-2003
CPI	0.5	1.5	0.4	1.1
UND1X	0.9	2.0	0.4	0.7
UNDIMPX	-0.6	0.7	1.2	1.3
UNDINHX	1.7	2.5	0.3	1.0
UND1X excl. energy	0.8	1.9	0.1	0.8

Note. The annual averages and standard deviations are calculated on the basis of the twelve-month rates in 2004 and the period 1995-2003, respectively. From January 2005 Statistics Sweden calculates the inflation rate according to a new method that has also been used to back-calculate inflation. Inflation measured according to the new method differs somewhat from the data presented here. The table presents the original inflation figures since these are comparable with the forecasts of the inflation outcomes up to and including 2004.

Sources: Statistics Sweden and the Riksbank.

There was also a considerable difference between imported inflation and domestic inflation during the year. It is normal for imported inflation to be lower on average than domestic inflation since import prices mainly comprise goods whereas domestic prices also include services, but the difference in 2004 was unusually large. UNDIMPX, the import component of UND1X, was -0.6 per cent while the domestic component, UNDINHX, was 1.7 per cent.

The developments during the year were characterised by an initially sharp fall in inflation (see Figures B11 and B12). From a rate of 1.7 per cent in December 2003 the twelve-month change in UND1X (the change in relation to the same month a year earlier) fell to 0.1 per cent in February 2004. The decline in inflation between February 2003 – when the twelve-month change in UND1X was 3.3 per cent – and February 2004 is the biggest drop noted

15 UND1X is defined as the change in the CPI excluding household mortgage interest expenditure and the direct effects of changes in indirect taxes and subsidies.

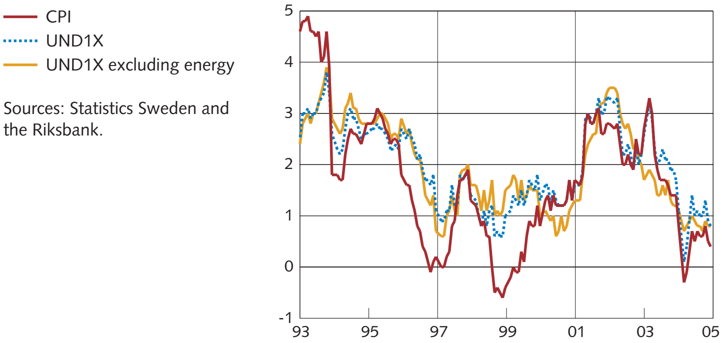
in one single year since the inflation target was adopted. That also applies to CPI inflation. Inflation then rose during the spring, but remained at a level clearly below target for the rest of the year.

How do the Swedish developments compare with those in other inflation-targeting countries? Such a comparison is difficult to make because some countries have defined their target in terms of a range rather than an exact figure. It is clear, though, that the Swedish target deviation last year was comparatively large even in an international perspective. Of the countries in Table B4 only Norway had a bigger deviation.

Why was inflation so low in 2004?

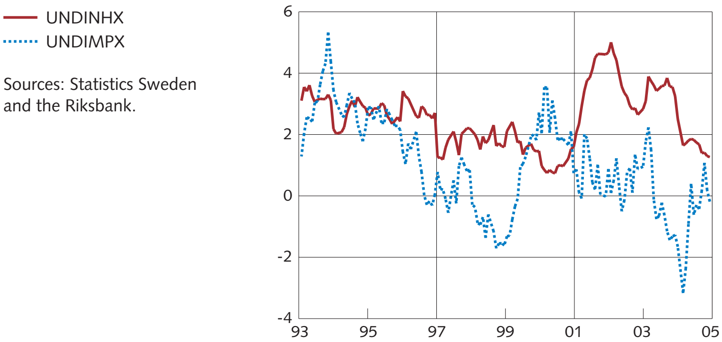
The rapid fall in inflation in early 2004 was partly due to the fact that the price level had been pushed up unusually high at the start of 2003 following a steep, temporary rise in energy prices. As a result of this exceptionally sharp increase in prices in early 2003, the Riksbank estimated in its first Inflation Report that year that the twelve-month change one year ahead would be unusually small, i.e. that inflation would fall at the beginning of 2004 (see Figure B13). Since the fluctuations in energy prices were only judged to have a temporary impact on inflation, however, neither the rise in inflation at the start of 2003 nor the forecast decline at the beginning of 2004 were considered to warrant any monetary policy action, consistent with the clarification of monetary policy published by the Bank in 1999.[16] A key reason was that the effect on inflation was expected to dissipate by itself and that measures to quickly counter such temporary swings in inflation might even result in a more unstable real economic performance.

Figure B11. CPI, UND1X and UND1X excluding energy, 1993-2004.
Annual percentage change



Sources: Statistics Sweden and the Riksbank.

Figure B12. UNDINHX and UNDIMPX, 1993-2004.
Annual percentage change



Sources: Statistics Sweden and the Riksbank.

Table B4. Inflation in Sweden and other inflation-targeting countries.
Per cent

	Annual average		Inflation target
	2004	1999-2003	
Australia	2.4	3.2	2-3
Euro area	2.2	2.0	below but close to 2
Canada	1.8	2.4	1-3, aiming for 2
Norway	0.5	2.2	2.5
New Zealand	2.3	1.9	1-3
United Kingdom	1.4	2.3	2
Sweden	0.5	1.7	2 with fluctuation band of ± 1 percentage point

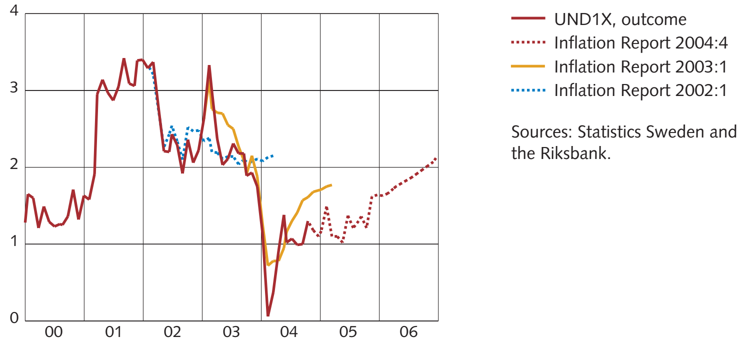
Note. The calculation for Norway refers to the period from March 2001, when the country adopted inflation targeting. New Zealand had a target range of 0-3 per cent between 1997 and September 2002. The UK's target used to be 2.5 per cent but this was changed to 2 per cent in December 2003 when the inflation measure was changed. The period 1999-2003 refers to this previous inflation measure.

Sources: Eurostat, OECD, Office of National Statistics, Statistics Norway and Statistics Sweden.

16 See Heikensten, L., "The Riksbank's inflation target – clarifications and evaluation", *Sveriges Riksbank Quarterly Review* 1, 1999. The article is based on a memorandum with the same title and which was supported by the Executive Board (4 Feb. 1999, registration number 1999-00351 DIR).

With a view to clarifying that actual and forecast inflation were being heavily affected by temporary shocks to energy prices and could therefore be expected to deviate from target, the Riksbank decided to use forecasts of inflation excluding energy prices – the inflation measure UND1X excluding energy – as the key factor in its conduct of policy during most of 2003 and the beginning of 2004. The fact that monetary policy has been based on other measures than the CPI implies that the Riksbank has assumed in advance that CPI inflation will not be on target. This should be kept in mind when assessing the Bank's monetary policy.

Figure B13. Forecasts of UND1X at different times and actual outcome.
Annual percentage change



Sources: Statistics Sweden and the Riksbank.

In spite of the increasingly evident cyclical upswing, domestic cost pressures remained, as mentioned earlier, lower than expected. One significant reason was that productivity growth was stronger than at the corresponding stage of previous business cycles, surprising the Riksbank and many other economic analysts. The causes of the high productivity gains are not fully understood but there are some indications that at least part of the gain is permanent. One hypothesis supporting such a view is that the large-scale IT investment in many sectors at the end of the 1990s is now beginning to pay off. Another theory argues that Sweden is a highly open economy, making it strongly exposed to global structural change. Reflecting the high productivity growth was an unusually weak labour market and subdued domestic cost pressures.

Imported inflation, too, turned out sharply lower than expected in 2004. Developments in imported inflation depend on a number of factors that are often difficult to predict, such as variations in the exchange rate and developments in international price pressures. Conditions in Sweden also have an impact on imported inflation, for instance because foreign exporters' prices to Swedish importers may be governed by the Swedish demand situation and because importers' prices may be influenced by domestic cost developments. The fact that the prices of imported consumer goods (excluding oil) have fallen since spring 2003 is likely due in large part to low international price pressures and the strengthening of the exchange rate in recent years.[17] Imported inflation rose during the autumn, mainly as a result of the rise in oil prices. The krona's appreciation against the dollar, however, helped dampen the oil price increase in krona terms.

Changed competitive conditions in the Swedish economy may also have contributed to the low inflation during the year. That is especially true of the Swedish retail food market, where several low-price chains have sprung up in recent years. The resultant increase in competition has probably dampened the price increases for both domestically produced and imported products.[18]

Forecasts in 2002-2003

So how successful was the Riksbank in predicting developments in inflation? Table B5 presents the Bank's inflation forecasts for 2004 as well as the forecasts for some variables that are especially important to the inflation forecast.

One difficultly when analysing the Riksbank's forecasts is that they are based on the assumption of an unchanged repo rate. Since the repo rate is usually changed during the forecast period, thereby affecting the outcomes

17 See, for example, the box "The exchange rate and imported inflation" in Inflation Report 2004:2.
18 See the box "Recent developments in inflation" in this Report.

for inflation and other economic factors, it is not possible on the basis of the published forecasts to get an exact idea of their accuracy.

GDP growth in 2003, which can be assumed to have influenced the inflation outcome in mainly 2004, was overestimated to a relatively large extent in the forecasts produced in early 2002. The growth forecast was gradually revised down during the year, however, as it became increasingly clear that Swedish and international economic activity was not going to be as firm as previously forecast. At the start of 2003 the forecast for growth in 2003 was in line with what proved to be the actual outcome. Since monetary policy affects the economy with a lag it is likely that the Riksbank's rate cuts in 2003 had a relatively limited impact on the GDP outcome that year. GDP growth in 2004 was instead underestimated in the forecasts produced in 2002 and 2003. The forecast was revised up in 2004 but was only in line with the outcome by the Bank's third Inflation Report of that year.

The inflation forecasts in 2002 sharply overestimated 2004 inflation. However, the reappraisal in early 2003 of the short-term economic outlook also brought about a fairly sizable downward revision in the inflation forecast for 2004. The Bank's forecasts in 2003 for underlying inflation in 2004 were thereafter roughly in line with the actual outcome. Nevertheless the fact that the forecasts were based on the assumption of an unchanged repo rate, while the rate in actual fact was cut relatively sharply in 2003 and at the start of 2004, indicates that the 2003 forecasts overestimated inflation developments.

Early last year the Bank temporarily revised down its inflation forecast for 2004 again. Inflation outcomes at that time had proved remarkably low even though the cyclical upswing had been consolidated further. That resulted in a reappraisal of domestic and international cost pressures, partly due to a more positive outlook for productivity growth. The forecasts for both domestic and

Table B5. The Riksbank's forecasts and outcome in 2004 for some variables of importance to the inflation forecast.
Annual average

	IR02:1	IR02:2	IR02:3	IR02:4	IR03:1	IR03:2	IR03:3	IR03:4	IR04:1	IR04:2	IR04:3	IR04:4	Outcome
GDP growth 2003	3	2.7	2.3	2.1	1.7	1.2	1.5	1.5					**1.5**
GDP growth 2004	2.6	2.5	2.1	2.3	2.4	2.4	2.4	2.4	2.8	2.9	3.6	3.6	**3.5**
GDP growth 2005					2.4	2.4	2.5	2.5	2.6	2.8	3.2	3.0	
GDP OECD 19 2003	2.7	2.6	2.4	2.2	2.0	1.7	1.9	2.0					**2**
GDP OECD 19 2004	2.8	2.7	2.8	2.7	2.7	2.5	2.8	2.9	3.2	3.3	3.5	3.4	
TCW	123.7	123.8	125	125	124.5	124	124	124	124.5	126.5	126.7	126.2	**125.9**
Oil price USD	22	22	22.5	22.2	22.4	22.3	25.2	25.6	31.5	32.9	37.3	38.4	**38.2**
Private consumption	2.5	2.4	2	2.1	1.8	2.1	2.3	2.3	2.6	2.6	2.5	2.4	**1.8**
Wages in business sector	4.3*	4.3*	4.2*	4	3.7	3.5	3.6	3.5	3.4	3.3	3.2	3.1	
Labour productivity in business sector	1.9*	1.8*	1.8*	2.3	2.3	2.3	2.1	2.2	2.7	3.2	3.5	3.4	**3.6**
Unit labour costs in business sector	2.4*	2.4*	2.4*	1.7	1.6	1.5	1.8	1.6	0.2	-0.4	-0.8	-0.9	
International export prices**	1.4	1.4	1.3	1.2	1.4	1.3	1.7	1.7	1.4	1.4	2.3	2.4	**2.4**
UNDINHX				2.7	2	1.8	2	2.2	1.7	1.7	1.7	1.7	**1.7**
UNDIMPX				0.2	-0.3	-0.3	-0.5	-1.1	-1.6	-0.6	-0.5	-0.5	**-0.6**
UND1X				1.9	1.2	1.1	1.2	1.1	0.6	0.9	1.0	1.0	**0.9**
UND1X excluding energy						1.8	1.7	1.6	0.9				**0.8**
CPI				2.2	1.5	1.3	1.1	1.1	0.4	0.4	0.5	0.5	**0.5**

Note. * whole economy ** international producer prices from Inflation Report 2004:1.

Sources: Statistics Sweden and the Riksbank.

imported inflation were revised down fairly sharply. Against this background the Bank eased monetary policy further in the first quarter of 2004. The forecast for imported inflation in 2004 was thereafter revised up, partly because oil prices had begun to rise steeply. By the May Inflation Report, therefore, the forecast for 2004 inflation, in terms of UND1X, was already back at a level that was well in line with the actual outcome. So it was mainly in 2002 that the forecasts for UND1X inflation in 2004 were too high. In 2003 and 2004 the forecasting errors regarding 2004 were relatively small.

Comparison with other forecasters

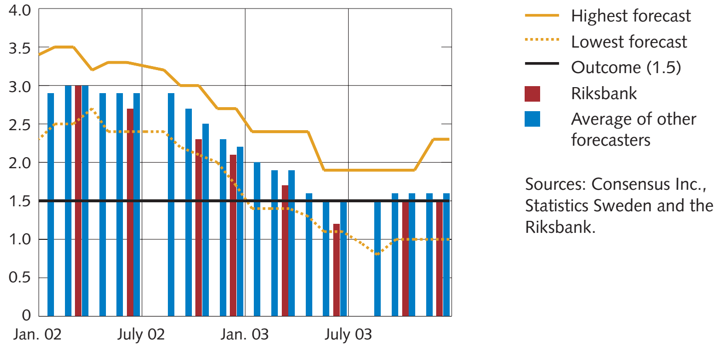
Both the economic slowdown in the second half of 2002 and the low international and domestic cost pressures appear to have taken most forecasters by surprise. If one studies an average of the projections from some twenty forecasters one finds a similar pattern as in the Riksbank's forecasts. The forecasts for GDP growth in 2003 were gradually revised down during the second half of 2002 and the beginning of 2003 (see Figure B14). That also prompted a downward revision in the inflation forecasts for 2004 (see Figure B15). The Riksbank was one of the first forecasters to begin to revise down its inflation forecasts. But even at the end of 2003 the actual CPI outcome in 2004 was overestimated relatively sharply by both the Bank and other forecasters.

The fact that all forecasters were so inaccurate in their forecasts suggests that inflation has been depressed by factors that have been unusually difficult to predict. It is therefore necessary that we deepen our knowledge of, for instance, what drives increases in productivity growth and what extent structural changes have resulted in higher competition both in the world market and in subsequent distribution channels.

The Riksbank's monetary policy decisions in 2002-2003

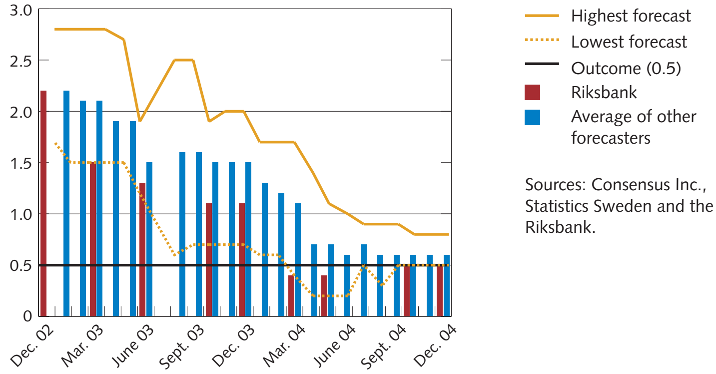
At the beginning of 2002 the repo rate stood at 3.75 per cent. It was then raised in the spring in two steps to 4.25 per cent. At the start of

Figure B14. Forecasts of GDP growth in 2003 at various times: the Riksbank and an average of other forecasters.
Annual average



Sources: Consensus Inc., Statistics Sweden and the Riksbank.

Figure B15. Forecasts of CPI inflation in 2004 at various times: the Riksbank and an average of other forecasters.
Annual average



Sources: Consensus Inc., Statistics Sweden and the Riksbank.

November that year the Bank began a gradual easing of monetary policy. The repo rate was cut five times, to 2.75 per cent in July 2003. The rate was then held unchanged for the remainder of that year.

Rates were hiked in spring 2002 because the expansionary policy that followed the terrorist attacks in the US in September 2001 was deemed to have laid the foundation for a relatively stable upswing in the international economy. There were indications of a nascent recovery in both Sweden and abroad. The gradual rise in underlying inflation, coupled with unexpectedly high wage increases in mainly the service industries, seemed to point to higher resource utilisation in the Swedish economy than the Bank had assumed in previous assessments. The growth in wages and domestic prices was also thought to indicate a relatively high inflationary tendency in the Swedish economy.

The end of 2002 saw the beginning of the easing cycle that continued into 2004. The reason for the looser monetary stance was that the international economic upswing had begun to lose pace. Manufacturing activity had deteriorated again both in Sweden and abroad, while persistent unease in the financial markets, including sharp falls in equity prices, meant that the optimism of households and firms in many countries had begun to fade. The weaker demand in Sweden and abroad, as well as an expected appreciation of the krona, was judged to imply more subdued inflation developments than previously forecast.

As mentioned, the Riksbank continued to ease monetary policy in 2003, lowering the repo rate in March, June and July by 1 percentage point in total. The background to the rate cuts was that the international and Swedish economic outlook had gradually continued to deteriorate and that the still expected recovery had been postponed. Among other things the developments appeared to confirm fears that the adjustment of households' and firms' balance sheets following the dramatic equity market decline since 2000 would be drawn-out and that it would hamper consumption and investment for a relatively long period. At the beginning of the year geopolitical concerns in connection with the hostilities in Iraq also fuelled expectations of weaker performance.

After the rate cut in July 2003 the Bank held off on further monetary easing. The Executive Board was of the view that the delayed recovery had now begun, partly underpinned by the previous repo rate cuts. Inflation was in line with the Bank's forecasts and was expected in the period ahead to develop according to paths that, excluding the temporary electricity price effects, could normally be anticipated during a cyclical upswing. The unexpectedly low inflation outcomes at the beginning of 2004, however, prompted the Bank to revise its outlook on underlying inflationary pressures. It seemed that these were lower than assumed in spite of somewhat stronger economic activity, partly owing to lower import prices, a weaker labour market and higher productivity than previously forecast. Consequently, the repo rate was cut a further 0.75 percentage points in total between February and March 2004.

REPO RATE DECISIONS 2002

7 February: The repo rate was left unchanged at 3.75 per cent. Eva Srejber entered a reservation against the decision, believing instead that the repo rate should be raised by 0.25 percentage points. According to Ms Srejber, the uncertainty over international developments that had motivated the rate cut in September no longer existed and there was therefore reason to tighten the monetary policy stance to ensure that also future inflation expectations were anchored at the Bank's inflation target.

18 March: The repo rate was raised by 0.25 percentage points to 4.0 per cent. Villy Bergström entered a reservation against the decision, proposing instead that the rate be hiked 0.5 percentage points. Among other things Mr Bergström cited high wage outcomes and the risk of compensation demands in the wage bargaining round.

25 April: The repo rate was raised by 0.25 percentage points to 4.25 per cent.

5 June: The repo rate was left unchanged at 4.25 per cent. Eva Srejber entered a reservation against the decision, favouring a rate hike of 0.25 percentage points. Ms Srejber argued that economic policy in most countries was already highly expansionary and that the recovery in the Swedish economy was occurring from a position where resource utilisation was already high and where inflation and inflation expectations were above target.

4 July: The repo rate was left unchanged at 4.25 per cent.

15 August: The repo rate was left unchanged at 4.25 per cent.

16 October: The repo rate was left unchanged at 4.25 per cent. Kristina Persson entered a reservation against the decision, believing that the repo rate should be lowered by 0.25 percentage points. According to Ms Persson, the outlook in the Inflation Report gave good grounds for a rate cut, while there were large risks of an even weaker performance in Sweden and abroad due to the security policy situation in the Middle East, continued unease in the financial markets, softer domestic demand and a lower fiscal stimulus.

14 November: The repo rate was cut by 0.25 percentage points to 4.0 per cent.

4 December: The repo rate was lowered by 0.25 percentage points to 3.75 per cent. Eva Srejber entered a reservation against the decision, proposing that the repo rate be kept unchanged. According to Ms Srejber, it was likely that the inflationary risks from the labour market and wage formation had been underestimated.

REPO RATE DECISIONS 2003

6 February: The repo rate was left unchanged at 3.75 per cent.

17 March: The repo rate was lowered by 0.25 percentage points to 3.5 per cent.

24 April: The repo rate was left unchanged at 3.5 per cent. Lars Nyberg and Kristina Persson entered a reservation against the decision, favouring instead a rate cut of 0.25 percentage points, partly because the Bank's policy rule pointed to such a move and because the international downside risks to inflation could be assumed to slightly outweigh the domestic upside risks.

4 June: The repo rate was lowered by 0.5 percentage points to 3.0 per cent.

3 July: The repo rate was lowered by 0.25 percentage points to 2.75 per cent.

14 August: The repo rate was left unchanged at 2.75 per cent.

15 October: The repo rate was left unchanged at 2.75 per cent. Kristina Persson entered a reservation against the decision, proposing that the rate be lowered by 0.25 percentage points. Ms Persson argued that the labour market was still weak and that it would be another while before firms began to hire new staff and the economic upturn stabilised.

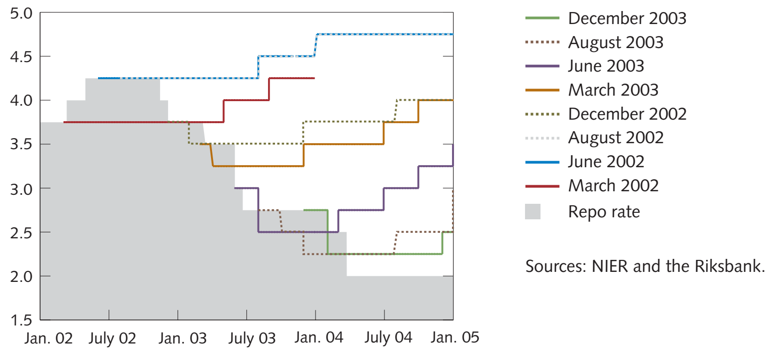
4 December: The repo rate was left unchanged at 2.75 per cent. Villy Bergström and Kristina Persson entered a reservation against the decision, favouring a rate cut of 0.25 percentage points. Among other things the two deputy governors argued that Swedish economic activity risked turning out weaker than forecast in the Inflation Report.

Would a different monetary policy stance have been realistic?

As mentioned above, the policy conducted in 2002-2003 was based on an outlook for the economy and inflation that was not significantly different to that of other forecasters. Some forecasters were of the opinion that inflation in 2004 would be somewhat more subdued than predicted by the Riksbank, but the differences compared with the Bank's forecasts were comparatively small. So they would not have had any great significance for the conducted policy and nor therefore for how much inflation had deviated from target.

A comparison with the National Institute for Economic Research (NIER), which was one of the first forecasters to revise down its inflation forecasts, may be illustrative in this context. Figure B16 shows the repo rate paths recommended by the NIER on its eight forecasting occasions in 2002 and 2003, as well as the actual rate path. It can be seen that the NIER in 2003 recommended that the repo rate be cut at a somewhat faster pace than that chosen by the Riksbank, but also that the institute shared the view held by most forecasters, namely that increasing economic activity and mounting inflationary pressures would give cause for tighter monetary policy by 2004.

Figure B16. The repo rate according to the NIER's forecasts in 2002-2003 and the actual repo rate. Per cent



Sources: NIER and the Riksbank.

The difference between the actual repo rate and the NIER's recommended rate was fairly small on average during the period, almost 0.2 percentage points. Given the monetary policy effects that one generally expects, inflation in 2004 would only have been marginally closer to target if the Riksbank had followed the NIER's recommendations.

Thus, the demands on monetary policy would have had to be considerable if 2004 inflation were to have turned out a lot closer to the target than was the case. Firstly, the Riksbank would have had to be able to foresee developments that no other forecaster had managed to predict and that had proved to be drastically different from the general outlook for the economy and inflation prospects at the time. So it would not have been enough if the Riksbank's forecasts had been marginally more accurate than those of other forecasters; they would have had to have been considerably better.

Secondly, it would have necessitated a policy that was not simply different in degrees from the one conducted; rather, it would have required a dramatically different policy. For example, the Riksbank would probably have had to lower the repo rate rapidly and sharply at the start of 2002 instead of raising it from 3.75 per cent to 4.25 per cent, as was the case during the spring. The outlook for the economy and inflation at the time gave scant support for a drastic easing of policy. Inflation was clearly above target and the consensus view was rather that the repo rate sooner or later would have to be raised. As Figure B16 shows, the NIER's view in August 2002 was that the repo rate should be kept unchanged at 4.25 per cent and then raised in the second half of 2003. Against that background it is reasonable to conclude that a policy that would have ensured inflation was in line with the target in 2004 would have been very difficult to justify in 2002 given the information that was available.

In this context it is also worth noting that the Riksbank, following the rise in inflation caused by the higher energy prices at the turn of the year 2002-2003, did not deem it desirable to conduct policy in a way that aimed to bring CPI inflation on target in 2004. The fall in inflation at the beginning of 2004 was, as stated above, largely a recoil from the increase a year earlier. Since the effects on inflation of the energy price fluctuations were expected to be temporary the Bank did not think it justified to try to counter them with monetary policy measures. Thus, there was reason to tolerate a slight downside deviation from target in 2004, even though the actual target deviation subsequently proved to be slightly larger than expected.

Finally, it may be worth reflecting on what consequences a much looser monetary policy could have had during a period when the low inflation was not primarily due to weak developments in demand but instead was largely a result of high productivity growth and low imported inflation. For instance it is likely that the rise in household debt and residential property prices, which even today is attracting a lot of attention, would have been stronger still against the background of a looser monetary policy that would have further fuelled the willingness to borrow.

Relationship between interest rate decisions and forecasts

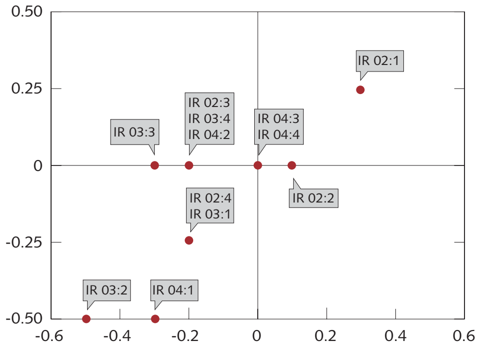
Even though it cannot be expected that the Riksbank have perfect foresight, one should be able to expect monetary policy to appear reasonable and consistent in view of the conditions that prevailed at the time of the decisions. One way to examine the reasonableness of the Bank's monetary policy decisions is to try to answer the question of whether its rate adjustments have been easy to understand, given its forecasts. In those cases where the inflation forecast was above target the Riksbank should normally have raised the repo rate, whereas inflation forecasts below target should normally have resulted in a rate cut.

One complicating circumstance here is that interest rate adjustments cannot always be related to a certain measure of inflation according to some mechanical policy rule, such as that the repo rate is always changed when the forecast for UND1X deviates sufficiently from the inflation target two years ahead. For example, situations may arise whereby inflation is affected by a shock whose effects do not fully dissipate within the two-year horizon but that nevertheless have no lasting impact on inflation. It may also be the case that a large shock to inflation would see a return to target two years ahead combined with inordinately large undesirable effects on the real economy.[19] This sets certain limitations on the strength of the relationship that can be expected between repo rate adjustments and UND1X forecasts two years ahead, which is the relationship analysed below.

The relationship between repo rate decisions and forecast deviations for UND1X two years ahead is illustrated in Figure B17, including the decisions in 2004. When the Bank's rate-setting meetings do not coincide with an Inflation Report, the Bank does not publish a quantitative forecast of inflation. Instead, it publishes a more qualitative inflation assessment in a press release. Table B6 summarises the qualitative assessments and the interest rate decisions at such rate-setting meetings. As Figure B17 and Table B6 show, there is a clear positive relationship between the forecast deviation from target and the rate decision. Figure B17 also illustrates that when the deviations from target have been small, they have not always resulted in a change in the repo rate; in addition, the target deviations have to be sizable for the rate to be adjusted by more than 0.25 percentage points, which has been the most common adjustment in recent years.

As Figure B17 and Table B6 show, the repo rate was left unchanged on a number of occasions even though UND1X inflation a couple of years ahead was forecast to undershoot the Bank's target. That reflects the developments in energy prices discussed above. In 2003 energy prices fluctuated in a way that was assumed to affect inflation only temporarily but that nevertheless was not predicted to subside within two years. As a result the Riksbank decided for a period to focus on an inflation measure that had been adjusted for energy prices, UND1X excluding energy, as this was considered to give a better reflection of underlying cyclical inflation. The forecast for this measure was in line with the inflation target two years ahead on those occasions when the repo rate was left unchanged even though the forecast for UND1X fell short of the target. At the rate-setting meeting in March 2004, the Bank's assessment was that the temporary effects from the energy price fluctuations would subside from mid-2005 and that there was no longer any reason to exclude energy prices from the conduct of policy.

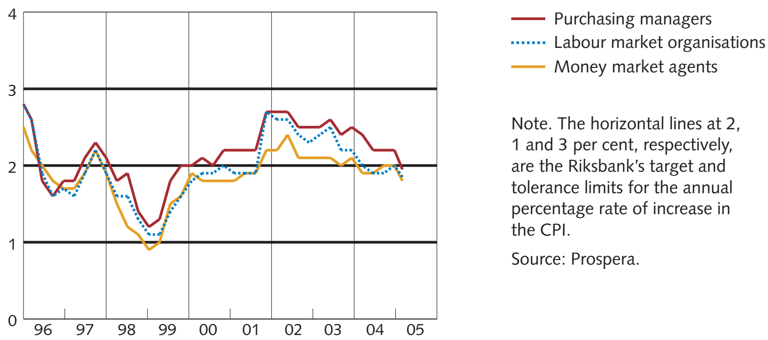
Figure B17. Relationship between interest rate decisions and forecasts.
Repo rate adjustment on vertical axis and forecast deviation from target on horizontal axis



Note. The forecasts refer to risk-adjusted UND1X two years ahead.

Source: The Riksbank.

Figure B18. Different economic agents' expectations of inflation two years ahead, 1995-2005.
Per cent



Note. The horizontal lines at 2, 1 and 3 per cent, respectively, are the Riksbank's target and tolerance limits for the annual percentage rate of increase in the CPI.

Source: Prospera.

Inflation expectations

Inflation expectations can be seen as a measure of the general public's confidence that the Riksbank will meet its target. When inflation falls short of the target as much as it did in 2004, it is reasonable to ask whether economic

19 See Heikensten, L., "The Riksbank's inflation target – clarifications and evaluation", *Sveriges Riksbank Quarterly Review* 1, 1999, and the memorandum dated 4 February 1999, registration number 1999-00351 DIR.

Table B6. Inflation assessments and repo rate decisions at rate-setting meetings that do not coincide with the publication of an Inflation Report.

Date	Qualitative assessment	Interest rate decision
7 Feb 2002	Inflation forecast in line with target	unchanged
25 Apr 2002	Inflation forecast above target	rate hike of 0.25 percentage points
4 July 2002	Inflation forecast in line with target	unchanged
15 Aug 2002	Inflation forecast in line with target	unchanged
14 Nov 2002	Inflation target below target	rate cut of 0.25 percentage points
6 Feb 2003	Inflation forecast in line with target	unchanged
24 Apr 2003	Inflation target below target	unchanged
3 July 2003	Inflation target below target	rate cut of 0.25 percentage points
14 Aug 2003	Inflation forecast in line with target	unchanged
5 Feb 2004	Inflation target below target	rate cut of 0.25 percentage points
28 Apr 2004	Inflation forecast in line with target	unchanged
27 May 2004	Inflation forecast in line with target	unchanged
19 Aug 2004	Inflation forecast in line with target	unchanged

Source: The Riksbank.

agents expect the Bank to succeed in bringing inflation back to target in a couple of years. Figure B18 shows how different economic agents' expectations of inflation two years ahead have evolved since 1995. As can be seen, the expectations since 1996 have been firmly anchored to the Riksbank's target since they have more or less stayed within the tolerance band of 1-3 per cent. Neither does the currently low inflation appear to have affected the economic agents' confidence in the Bank's ability to bring inflation back to target over a two-year horizon. According to Figure B18, all agents expect inflation two years ahead to be close to 2 per cent.

Summary

Inflation turned out sharply lower than target in 2004. The steep fall in inflation at the beginning of the year had been expected by the Riksbank as early as the start of 2003, since the price level at that time had been driven up unusually high by a temporary rise in energy prices. Important reasons for why inflation then turned out lower than forecast were that surprisingly high productivity growth was contributing to muted domestic cost pressures and that imported inflation was unexpectedly low. Even though the Riksbank did not manage to foresee these factors, the Bank's forecasts compared favourably with an average of other forecasters'. The somewhat looser monetary policy proposed by some forecasters is unlikely to have brought inflation more than marginally closer to target. The currently low inflation does not appear to have affected economic agents' confidence that inflation a couple of years ahead will again be in line with the target.