Contents

Foreword

Monetary policy is targeted at keeping inflation at 2 per cent, with a tolerance for deviations up to ±1 percentage point.

This Inflation Report reproduces the main features of the presentations and discussions of inflation at the Executive Board meetings on 10 and 17 May 2001. The assessment of inflation presented here represents the Riksbank's overall appraisal of inflation prospects in the present situation and constitutes the background to the Riksbank's monetary policy decision on 30 May 2001. Executive Board members may differ in their opinions about how inflation's main determinants will develop and the resultant impact on future inflation. Any divergent opinions of inflation prospects are recorded in the separate minutes of the Board meeting on 30 May, to be published on 14 June 2001.

The Inflation Report aims to provide a basis for monetary policy decisions and spread an awareness and knowledge of the Riksbank's assessments to a wider public, so that monetary policy is easier for outsiders to follow, understand and evaluate. The Report is also intended to encourage a discussion of matters relating to monetary policy.

The report is shorter than its predecessors. In future the Riksbank intends to publish two fairly short and two more extensive reports each year. The arrangement of the report has also been changed on this occasion. Chapter 1 presents the Riksbank's summary assessment of inflation prospects. Chapter 2 contains a discussion of the most probable development of inflation's principal determinants; the chapter is arranged to give a clear picture of which factors are most important for future inflation. The assessment of the risk spectrum in inflation prospects is presented in Chapter 3. The report also contains a boxed text where the recent development of inflation is analysed and interpreted.

Stockholm, May 2001
Urban Bäckström
Governor of Sveriges Riksbank

Inflation assessment

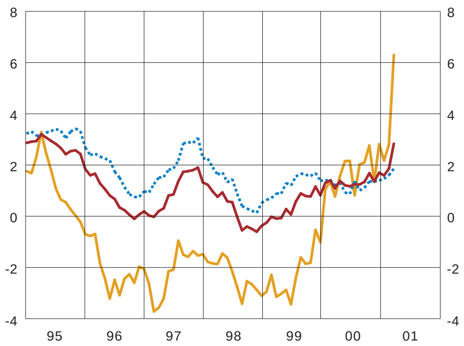
A summary assessment of the prospects for inflation up to the end of 2003 Q2 is presented in this chapter, given the technical assumption that the repo rate is unchanged. The recent development of prices is considered first, followed by the basic features of the scenario for the coming twenty-four months that is considered most probable. A brief account of the assessment of the risk spectrum in inflation prospects concludes the chapter.

Inflation's recent path

The increase in the rate of both CPI and UND1X inflation since the March Report has been considerably greater than expected. Part of the higher outcomes is due to price increases for imports being unexpectedly large, mainly because petrol prices have not fallen as predicted. Domestic prices have also gone on rising (Figs. 1 and 2). The upward domestic price tendency comes from numerous goods and services but it is rent increases and rising prices for meat, electricity and telecom that account for the acceleration being so marked. The background to and interpretation of the high outcomes are discussed more fully in the box on pp. 27–28. The increased inflationary pressure leads to inflation during 2001 being higher than foreseen in the March Report.

The rising rate of inflation's impact on inflation expectations has been limited to date. However, households have to some extent revised their expectations upwards and now foresee a rate one year ahead of two per cent. Other agents have also marginally increased their expectations of inflation one to two years ahead, while their expectations for the longer run have become somewhat lower. The expectations are firmly anchored around the targeted rate.

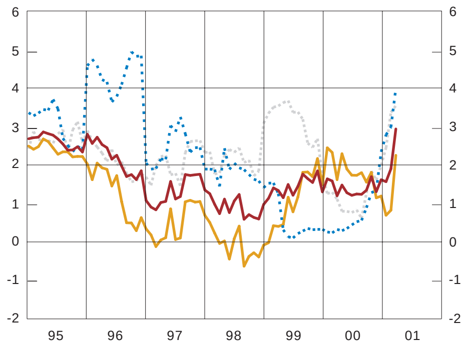
Figure 1. The CPI and a division into two groups. Percentage 12-month change



CPI
CPI excl. meat, electricity, heating oil, interest expenditure, petrol, fruit and vegetables, and telecom (78%)
Meat, electricity, heating oil, interest expenditure, petrol, fruit and vegetables, and telecom (22%)

Sources: Statistics Sweden and the Riksbank.

Figure 2. UND1X components: goods, services and housing. Percentage 12-month change



UND1X
Housing excl. interest expenditure
Goods
Services

Note. UND1X corresponds to the CPI excluding indirect taxes, subsidies and house mortgage interest expenditure. Housing costs have not been adjusted for effects of the freeze of taxable property values.

Sources: Statistics Sweden and the Riksbank.

The main scenario

International economic prospects have not changed appreciably since the March Report. The slowdown in international activity is still expected to be relatively marked, mainly on account of the comparatively abrupt downturn in the United States. Prospects for the American economy remain uncertain. International stock markets have continued to fluctuate, though most share price indexes show some recovery since the March Report. The dollar has continued to appreciate. The easing of the Federal Reserve's monetary stance occurred somewhat earlier than expected.

International economic prospects have not changed appreciably since the March Report.

The extent to which effects of the American slowdown spread to the euro area and Japan is judged to be somewhat greater than foreseen at the time of the March Report. Statistics in recent months point to weaker manufacturing activity and export demand in Europe as well as Japan. All in all, growth in the OECD area is calculated to be 2.0 per cent this year and 2.5 per cent in 2002, which means that the earlier forecasts have been revised marginally downwards, by 0.2 and 0.1 percentage points, respectively. A growth rate of 2.8 per cent is still foreseen in 2003 (Table 1). Thus, the main scenario continues to be characterised by a relatively good average annual growth rate. As there has been some increase in underlying inflationary pressure in recent months, inflation this year in the OECD area is now expected to be marginally higher.

Table 1. GDP growth.
Percentage annual change

	2001	2002	2003
United States	1.9 (-0.1)	2.7 (0.0)	3.2 (0.0)
Euro12	2.4 (-0.2)	2.7 (0.0)	2.8 (0.0)
Japan	1.0 (-0.2)	1.7 (-0.3)	2.0 (0.0)
OECD 19	2.0 (-0.2)	2.5 (-0.1)	2.8 (0.0)

Note. The figures in parentheses are the revisions compared with the March Report.

Source: The Riksbank.

The development of international demand affects prices in Sweden via a variety of channels. The pass-through from prices for imported products tends to be comparatively quick. As the change in the appraisal of international economic activity is limited, the picture of international prices in foreign currency has not been revised. In the short run, however, bottleneck problems at refineries have led to some upward revision of the world market price for petrol.

The extent to which international price impulses show up in Swedish inflation is partly dependent on the path of the exchange rate and the magnitude of its impact. Although the krona has appreciated marginally, its path since the time of the March Report has been weaker than expected. Like other currencies of comparatively small countries with a flexible exchange rate, the Swedish krona is relatively vulnerable to financial market unrest. It is also conceivable that portfolio flows have held the krona back. A further explanation may be the weak price trend for telecom shares. Partly in view of the fundamentally sound situation in the Swedish economy, during the forecast period the krona is expected to appreciate. Compared with the March assessment, however, the timing of the appreciation has shifted ahead and the average path of the krona will therefore be weaker this year. With the higher price of petrol and the weaker exchange rate, compared with the March Report import prices will rise faster, particularly during 2001.

Partly in view of the fundamentally sound situation in the Swedish economy, the krona is expected to appreciate during the forecast period.

The development of economic activity and capacity utilisation is crucial for inflation in Sweden. The downward revisions to the growth of export markets and total exports are small both this year and next. Outcome data point to somewhat lower growth rates for Swedish exports but to some extent the weaker exchange rate is expected to counter this tendency in the future. A more subdued import trend contributes to a somewhat stronger development of net exports in the forecast period (Fig. 3).

Like international demand, domestic demand is marginally weaker this year. This is primarily due to a more subdued development of household consumption expenditure. Some slowing of household consumption was foreseen in the March Report. There was also a risk of an even weaker path in connection with a continuation of financial market unrest.

Since then, most short-term indicators point to the growth of consumption being weaker than expected. One explanation may be the uncertainty that still characterises stock markets. With a somewhat more subdued outlook for the development of wealth and real disposable income, consumption growth is expected to slow somewhat more than foreseen in the March Report. A recovery is assumed in the rest of the forecast period, partly in connection with rising income and wealth.

All in all, GDP growth is judged to be broadly as foreseen in the March Report.

New statistics indicate that industrial activity is also weakening more rapidly than envisaged earlier. The business tendency survey for manufacturing shows that order inflows, production and capacity utilisation have gone on falling. This background seems to call for some downward revision of gross fixed capital formation.

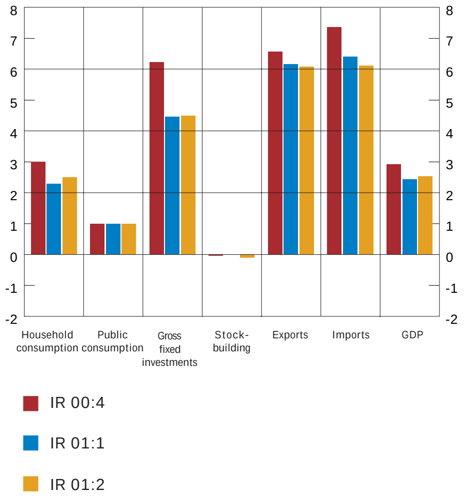
All in all, GDP growth is judged to be broadly as foreseen in the March Report. A marginally weaker rate is foreseen this year, followed by some upward revision for 2002 and 2003. GDP is accordingly expected to rise 2.2 per cent this year, 2.5 per cent in 2002 and 2.9 per cent in 2003 (Table 4, Fig. 3).

Total resource utilisation is still high and will remain more or less unchanged in the forecast period.

Demand's impact on inflation normally depends to a high degree on total resource utilisation. As the revision of GDP growth is only marginal and the more direct indicators of capacity utilisation have broadly followed the expected path, the appraisal of resource utilisation has not changed appreciably. Total resource utilisation is still high and will remain more or less unchanged in the forecast period (Fig. 4).

The round of wage negotiations that started at the end of last year is now largely over. The most recent settlements do not call for any revisions to the forecast average wage increases. Wages are accordingly assumed to rise 4.1 per cent this year and 3.9 per cent in both 2002 and 2003. The extent to which these

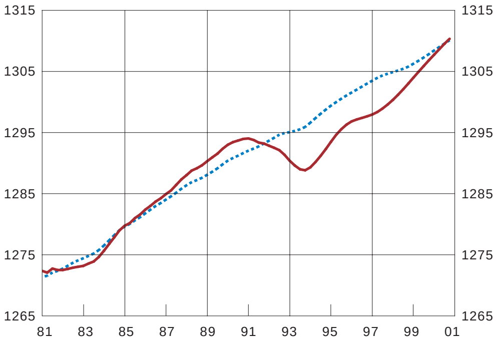
Figure 3. Supply and demand in 2002 as forecast in IR00:4, IR01:1 and IR01:2. Percentage annual change



Note. Stockbuilding shown as its contribution to GDP growth.

Source: The Riksbank.

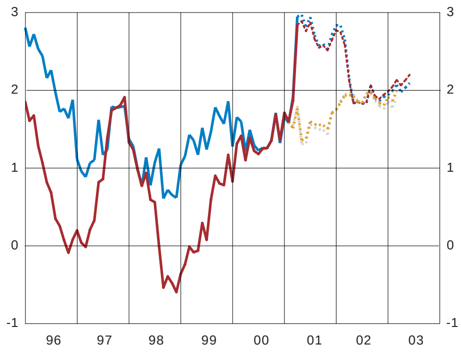
Figure 4. Actual GDP and the potential path. Logarithmic level



Note. Potential GDP estimated with the Unobserved Components method, which is one of several approaches used by the Riksbank to quantify resource utilisation (see *Inflation Report 1997:2*, box on p. 17).

Sources: Statistics Sweden and the Riksbank.

Figure 5. CPI and UND1X: outcome and the main scenario in this and the previous Report. Percentage 12-month change



Sources: Statistics Sweden and the Riksbank.

wage increases are compatible with a continuation of low inflationary pressure is partly dependent on the future path of productivity. Productivity growth this year is assumed to be somewhat weaker than foreseen in the March report.

As regards inflation one and two years ahead, the upward revisions are limited.

Against this background it seems that, compared with the assessment in the March Report, inflation will be higher, above all during 2001. With the weaker exchange rate and higher petrol price, imported inflation is revised upwards. Domestic inflation is also calculated to be somewhat stronger this year, for example in view of unexpectedly high outcomes in recent months and somewhat higher unit labour costs. Moreover, inflation this year is affected by certain price movements of a more occasional nature. As regards inflation one and two years ahead, on the other hand, the upward revisions are limited (Fig. 5).

All in all, given an unchanged repo rate, the 12-month rate of CPI inflation in the main scenario is judged to be 1.8 per cent one year ahead and 2.2 per cent after two years. The corresponding forecast of UND1X inflation gives rates of 1.8 and 2.1 per cent. Expressed as the change year-on-year, both CPI and UND1X inflation are expected to be 2.5 per cent in 2001 and 2.1 per cent in 2002 (Table 2).

Monetary policy is normally directed so as to fulfil the target one to two years ahead. There may be grounds, however, for departing from this rule, for instance because the path of inflation in the relevant time perspective can be markedly influenced by one or more factors that are not judged to affect it permanently.

In recent years the Riksbank has chosen to base monetary policy on inflation measured by UND1X, that is, on an index that excludes changes in interest expenditure, indirect taxes and subsidies, for example. At times, moreover, there have been extensive discussions about other factors that have influenced inflation but not been judged to have any considerable permanent effects. One example is the oil price increases during 1999 and 2000. However, there does not seem to be any simple way of making corrections for, say, the oil price movements. It is also considered that the evaluation of monetary policy will be easier if the chosen measure of inflation is not changed too frequently.

Recently, a number of factors have contributed to a rapid increase in inflation. For a number of them, the effect on inflation is not judged to be permanent. This applies, for instance, to some of the price movements for food, petroleum products and electricity. They will already have ceased affecting inflation one or two years from now and therefore they do not influence monetary policy today.

The risk spectrum

The risk spectrum is also relevant for the formation of monetary policy. Compared with the March Report, the downside risks for international growth are now judged to be somewhat larger, at the same time as international inflation contains certain upside risks. Altogether, therefore, international prospects pose an approximately unchanged downside risk for inflation in Sweden. The risk of the exchange rate being weaker than in the main scenario contributes to an upside risk for inflation that is about as large as in the March Report.

The higher inflation outcomes recently can be explained to a large extent by factors of a fairly transient nature. However, the outcomes do raise questions about resource utilisation and its conceivable impact on inflation. These are factors that, together with the risk of a somewhat higher growth of domestic demand, are judged to constitute an upside risk for inflation – particularly at the end of the forecast period – that is somewhat greater than at the time of the March Report.

All in all, the downside risk associated with international prospects is countered by upside risks connected with a weaker exchange rate and domestic resource utilisation. In this Report the risk spectrum is therefore assumed to be balanced both one and two years ahead for CPI as well as UND1X inflation. In the short run there are also some upside risks of a more transient nature, to do with BSE and foot-and-mouth disease, the termination of subsidies for certain prescribed medicines, transitory effects of increased petrol prices, and an end to downward effects from the deregulation of electricity and telecom markets. These risks, however, are judged to disappear one to two years ahead.

All in all, the downside risk associated with international prospects is countered by upside risks connected with a weaker exchange rate and domestic resource utilisation.

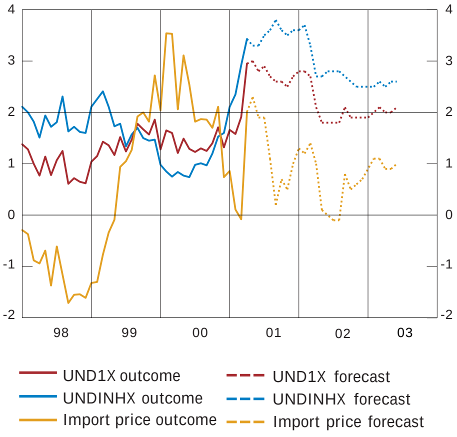
Table 2. Inflation forecasts in the main scenario.
Per cent

	Annual rate		12-month rate	
	2001	2002	June 2002	June 2003
CPI	2.5 (1.6)	2.1 (1.9)	1.8	2.2
UND1X	2.5 (1.5)	2.1 (1.9)	1.8	2.1
UNDINHX	3.2 (2.4)	2.9 (2.3)	2.8	2.6
HICP	2.4 (1.4)	1.6 (1.4)	1.3	2.1

Note. The figures in parentheses are the forecasts in the March Report.

Source: The Riksbank.

Figure 6. UND1X, UNDINHX and price of imported goods; outcome and main scenario. Percentage 12-month change



Sources: Statistics Sweden and the Riksbank.

Prospects beyond the forecast horizon

Monetary policy also has effects beyond the two-year perspective that is analysed more closely in earlier sections. A more general discussion of inflation in a longer perspective is therefore presented here.

In the main scenario, growth internationally as well as in Sweden is judged to pick up successively during the forecast period after a relatively weak tendency this year. Growth in 2002 and, above all, 2003 is judged to be above the potential level. That points to rising inflationary pressure. The expected appreciation of the krona subdues inflation tendencies in the main scenario.

This picture of the future path of economic activity and inflation is comparatively harmonious. It could, however, be upset in various ways. One evident possibility is that the international economic slowdown deepens or that the upturn is delayed, with negative effects on resource utilisation in Sweden, so that inflation is below the target even in a longer perspective. Another conceivable development is that domestic demand or domestic inflationary pressure becomes unexpectedly high. The demands on monetary policy can evidently differ greatly, depending on the path developments take.

Summary

In the March Inflation Report, the forecast of international economic growth was revised downwards relatively markedly, particularly for this year, and that was judged to subdue economic activity and inflationary pressure in Sweden. In the present Report the appraisal of real economic development, internationally as well as in Sweden, has not been revised to any major extent. Inflation, on the other hand, has been clearly higher than expected earlier. That is the main background to the upward revision of the inflation forecast, above all for 2001. The risk spectrum, which previously favoured a lower inflation outcome than the main scenario, has shifted and now shows a balanced picture.

In the main scenario, inflation is judged to be close to 3 per cent initially. It then falls back and is more in line with the targeted rate at the end of the forecast period. A major explanation for the future slackening of inflation is that the recent rapid price increases for a number of goods and services, for example petrol and electricity, drop out of the 12-month change figures for both the CPI and UND1X; other explanations are the assumption of a stronger exchange rate and falling petrol prices. A contrary factor in the latter part of the period is the increase in resource utilisation.

The uncertainty about future inflation is unusually large. It primarily concerns the course of events in the United States and its conceivable repercussions on demand and inflation in Sweden. But in view of the rapid price increases recently, combined with a persistently weak exchange rate, even the domestic inflation assessment is more uncertain.

To sum up, it is considered that, given an unchanged repo rate of 4.0 per cent, inflation one to two years from now will develop approximately in line with the target. This applies in the main scenario as well as when various risk factors are taken into account.

Determinants of inflation

The assessment of the most probable development of inflation's main determinants in the coming twenty-four months is presented in this chapter. International factors are considered first, followed by a description of monetary conditions and economic developments in Sweden.

International activity and inflation

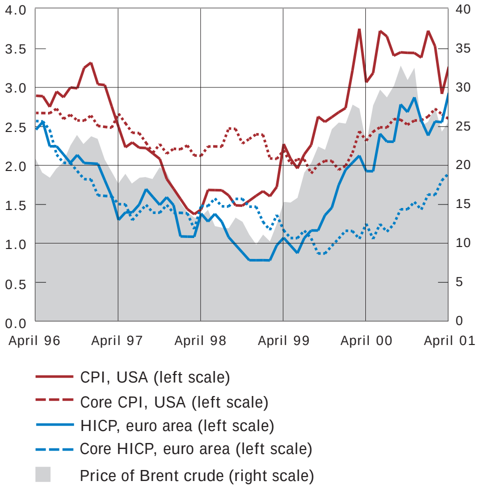
The assessment of international developments is broadly the same as in the March Report, where it was assumed that the economic slowdown will be relatively brief. This picture seems to be confirmed by the recent tendencies in financial markets, with rising bond rates and share prices. Moreover, credit spreads have generally become somewhat smaller.[1] However, prospects for the American economy remain uncertain and in view of a somewhat poorer outlook for consumption and investment, the forecast for 2001 has been revised marginally downwards. It is also judged that the slowdown will lead to effects in Europe and Japan that are somewhat greater than assumed earlier. Underlying inflation in the United States as well as the euro area has, however, exceeded market expectations (Fig. 7). All in all, growth in the OECD area is now expected to be somewhat lower and inflation marginally higher than was anticipated in the March Report (Table 3). Market growth for Swedish exports has been revised downwards to some extent for the period as a whole, while international export prices are judged to follow the earlier forecast.

The assessment of international developments is broadly the same as in the March Report.

Preliminary outcome data for 2001 Q1 showed that growth in the United States was considerably stronger than expected. Household consumption as well as the construction and housing sector have been comparatively strong and the steep decline that several indicators showed earlier seems to have been broken, at least for the time being (Fig. 8). But signs of a more marked slackening in the labour market do suggest that household consumption this year may be more subdued than assumed earlier (Fig. 9). High energy prices are also judged to have a negative effect on consumption. Moreover, a falling inflow of orders and poorer prospects for profits and exports are expected to result in investment in the rest of this year being somewhat lower than forecast earlier.

1 The difference between the interest rates for bonds with different degrees of risk.

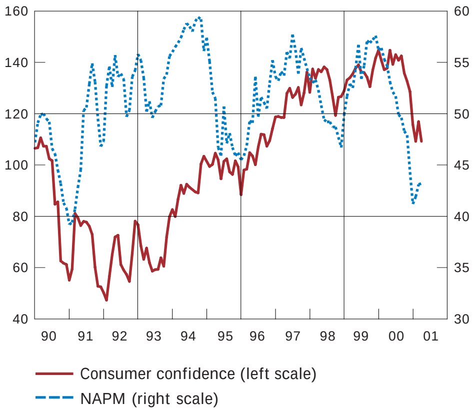
Figure 7. CPI and core inflation in the United States and the euro area and the price of crude oil. Percentage 12-month change and USD/barrel



Note. Core CPI defined for the euro area as the HICP excluding energy and seasonally-dependent food products, for the United States as the CPI less energy and all food products; the two are therefore not entirely comparable.

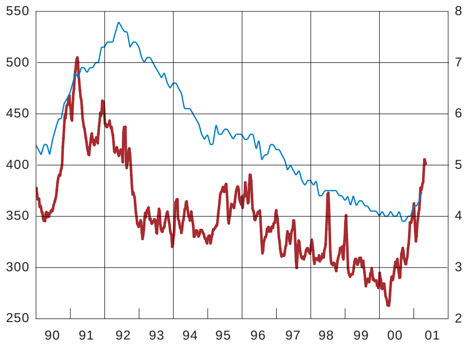
Sources: U.S. Bureau of Labor Statistics, Eurostat and Hanson & Partners AB.

Figure 8. United States: consumer confidence and purchasing managers index (NAPM). Index



Sources: The Conference Board and the National Agency of Purchasing Managers.

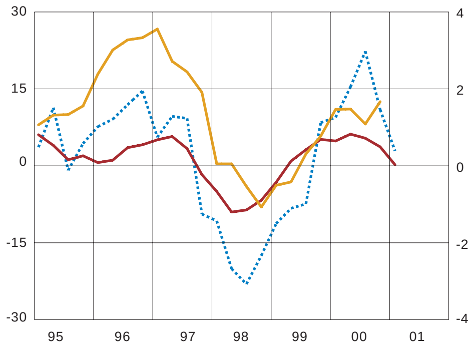
Figure 9. United States: unemployment and applications for unemployment insurance. Thousands per week and per cent of labour force



Applications (left scale)
Unemployment (right scale)

Sources: U.S. Bureau of Labor Statistics and Department of Labor.

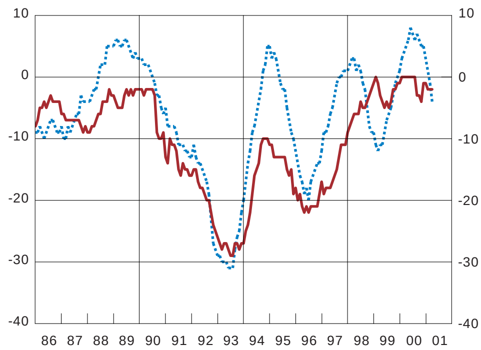
Figure 10. Japan: manufacturing output, machinery orders and GDP. Percentage 12-month change and annual rate



Manufacturing output, 12-month change (left scale)
Machinery orders, 12-month change (left scale)
GDP, annual rate (right scale)

Sources: Economic Planning Agency and Ministry of International Trade and Industry.

Figure 11. Euro area: consumer and business confidence. Net balance



Consumer confidence
Business confidence

Source: Eurostat.

Table 3. International conditions. Percentage annual change and annual level

	GDP				CPI			
	2000	2001	2002	2003	2000	2001	2002	2003
U.S.A.	5.0 (5.0)	1.9 (2.0)	2.7 (2.7)	3.2 (3.2)	3.4 (3.4)	2.7 (2.4)	2.3 (2.3)	2.4 (2.4)
Japan	1.7 (1.7)	1.0 (1.2)	1.7 (2.0)	2.0 (2.0)	-0.6 (-0.6)	-0.8 (-0.5)	-0.2 (0.0)	0.5 (0.5)
Germany	3.0 (3.0)	2.0 (2.4)	2.3 (2.5)	2.5 (2.5)	2.0 (2.0)	2.0 (1.7)	1.5 (1.5)	1.5 (1.5)
France	3.4 (3.4)	2.6 (2.8)	2.8 (2.8)	2.8 (2.8)	1.9 (1.9)	1.8 (1.7)	1.7 (1.7)	1.6 (1.6)
U.K.	3.0 (3.0)	2.5 (2.6)	2.5 (2.5)	2.6 (2.6)	2.1 (2.1)	2.1 (2.2)	2.4 (2.4)	2.4 (2.4)
Italy	2.9 (2.9)	2.3 (2.5)	2.5 (2.5)	2.6 (2.7)	2.5 (2.5)	2.3 (2.0)	1.9 (1.9)	2.0 (2.0)
Denmark	2.8 (2.8)	2.0 (2.0)	2.2 (2.2)	2.2 (2.2)	2.7 (2.7)	2.3 (2.3)	2.0 (2.0)	2.1 (2.1)
Finland	5.7 (5.7)	4.2 (4.3)	3.5 (3.5)	2.7 (2.7)	3.0 (3.0)	2.5 (2.5)	2.1 (2.1)	2.3 (2.3)
Norway	1.8 (1.8)	1.2 (1.2)	1.6 (1.6)	1.8 (1.8)	3.1 (3.1)	2.9 (2.7)	2.4 (2.4)	2.1 (2.1)
Euro12	3.4 (3.4)	2.4 (2.6)	2.7 (2.7)	2.8 (2.8)	2.3 (2.3)	2.2 (2.0)	1.8 (1.8)	1.9 (1.9)
Sweden's TCW export markets	3.3 (3.3)	2.2 (2.4)	2.5 (2.6)	2.7 (2.7)	2.3 (2.3)	2.1 (2.0)	1.9 (1.9)	1.9 (1.9)
OECD 19	3.8 (3.8)	2.0 (2.2)	2.5 (2.6)	2.8 (2.8)	2.3 (2.3)	1.9 (1.8)	1.7 (1.8)	1.9 (1.9)
	2000	2001	2002	2003				
Market growth for Swedish exports	10.8 (10.8)	6.9 (7.3)	7.8 (8.0)	8.1 (8.5)				
OECD area manufactured export price in national currency	1.2 (1.2)	1.3 (1.3)	1.0 (1.0)	1.2 (1.2)				
Crude oil price (USD/barrel Brent Blend)	28.4 (28.4)	26.3 (25.9)	23.9 (23.9)	22.2 (22.2)				

Note. In the United Kingdom CPI stands for RPIX and in Germany, France, Italy, Denmark and Finland for HICP. In Norway GDP refers to the mainland economy. The figures in parentheses are the assessments in the March Inflation Report.

Source: The Riksbank.

The effects elsewhere from the American slowdown are judged to have been somewhat greater than assumed in the March Report. This is particularly evident in Japan, where the weak tendencies for exports and manufacturing have led to a deterioration in growth prospects and business confidence (Fig. 10). In the euro area, too, industrial activity has continued to slacken and the fall to date this year has exceeded expectations. Forward indicators and business surveys suggest that activity will slow even more in the months ahead (Fig. 11). The differences between the euro countries in terms of export markets and product mixes are becoming increasingly marked. As a result, it seems that the global economic slowdown is hitting Germany, like Sweden, more heavily than France, for example.

The effects elsewhere from the American slowdown are judged to have been somewhat greater than assumed in the March Report.

The prospects for domestic demand are still fairly good in Europe but are worse in Japan. In the euro area the labour market situation is expected to remain comparatively favourable in the forecast period. Together with tax cuts and, in time, a lower oil price, this is assumed to lead to household optimism being maintained. In Japan there is uncertainty about the proposed package of reforms; it is judged to be positive for growth in the longer run, as well as for confidence, but in the next few years the reforms may lead to lower GDP, for example as a result of more bankruptcies and increased unemployment.

The uncertainty about developments in the United States remains pronounced.

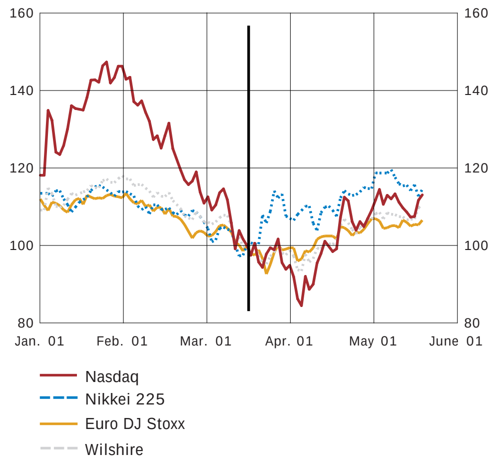
Global stock markets have been fluctuating widely since the March Report (Fig. 12). Most share price indexes have risen but the uncertainty about future trends is judged to have subdued economic activity, particularly in the United States. Bond rates have turned upwards as a result of the Federal Reserve's more expansionary stance and expectations that the American economy will soon be recovering. Despite the sudden slowdown and lower instrumental rate, the dollar has remained strong against the euro. This is judged to mean that American exports will be somewhat weaker than assumed earlier. Survey data suggest that in time the dollar is expected to weaken successively against the euro, mainly because the euro is considered to be fundamentally under-valued.

Notwithstanding the global slowdown, inflation has moved up somewhat more than expected in the United States as well as the euro area.

The uncertainty about developments in the United States remains pronounced. However, the assessment in the March Report that growth in the United States will pick up again towards the end of this year still holds, partly in view of the monetary policy realignment. Survey data and financial market prices point to expectations that the American instrumental rate will be cut by up to another 25 basis points this year. Contributions to a recovery are also foreseen from the dollar's expected depreciation, the rapid stock adjustments and a continuation of comparatively favourable increases in productivity and real wages. All in all, the picture is largely in line with the March forecast. A recovery is also foreseen next year in the euro area, partly in view of more favourable international activity. The ECB has lowered the instrumental rate 0.25 percentage points since the March Report and market expectations point to further cuts of 25–50 basis points this year. A recovery in Japan is not foreseen until late in the forecast period, driven both by the commitment to adhere to the zero interest rate policy until prices have stopped falling and by a persistently weak exchange rate.

Notwithstanding the global slowdown, inflation has moved up somewhat more than expected in the United States as well as the euro area. This is partly due to factors of a more occasional nature, for example increased prices for energy and food, but it also comes from rising inflationary pressure in the services sector. Services prices in the United States seem to be increasing on a broad front, which may be related in part to rising wage costs. In the euro area, where wages have risen only moderately, inflation in the services sector is also rising slightly, partly due to increased indirect taxes and higher administrative prices. There has also been some price rise for non-energy related manufactured goods, apparently due above all to indirect effects of earlier oil price increases and the weak euro. In the United States as well as the euro area, lower oil prices and a weaker demand situation are expected to lead to a future fall in inflation, an assessment that is reflected in persistently low inflation expectations. In Japan it is judged that prices will fall marginally this year and next, followed by a slight increase in 2003. Unlike consumer prices, international export prices are expected to follow the assessment in the March Report.

Figure 12. Stock exchange indices.
Index: 15 March 2001=100

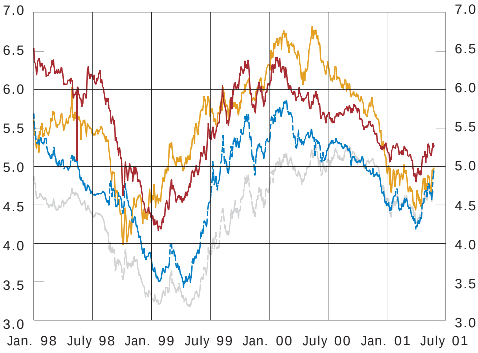


Note. The vertical line is the cut-off date for the March Inflation Report.

Sources: Wilshire Associates and Hanson & Partners AB.

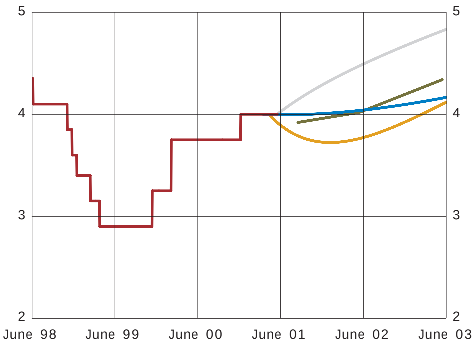
Monetary conditions, inflation expectations and import prices

Figure 13. Five-year bond rates in selected countries.
Daily quotations, per cent



Source: The Riksbank.

Figure 14. Repo rate and expected rate implied by forward interest rates and survey data.
Daily quotations, per cent



Sources: Statistics Sweden and the Riksbank.

Monetary conditions have become somewhat more expansionary since the March Report, mainly in that short-term real interest rates have fallen and the real exchange rate has been weaker. With the weak krona, moreover, the import price trend this year is expected to be somewhat stronger than forecast in March.

The five-year real interest rate has risen since the March Report. The main explanation is that Swedish nominal long-term interest rates, like their international counterparts, have risen in connection with international portfolio rearrangements from the fixed income market to the stock market (Fig. 13). The unexpectedly high outcomes for inflation in March and April also seem to have contributed to the increase in Swedish long interest rates. A further increase in the nominal long-term interest rates is foreseen in time, in keeping with the international trend, while inflation expectations remain at around 2 per cent. The real five-year interest rate would then move up almost one percentage point in the forecast period to about 3.2 per cent, which is the same as forecast earlier.

A future appreciation of the krona is assumed.

The shorter real interest rates, on the other hand, have fallen about 0.7 percentage points, thereby tending to make monetary conditions somewhat more expansionary than at the time of the March Report. The downward movement comes from somewhat lower nominal interest rates as well as higher inflation expectations.

Lending to the non-bank public is still developing strongly. However, monetary aggregates – both notes and coins (M0) and the broader concept (M3) – are rising considerably more slowly. The implied forward interest rates indicate that the expectations in April of an imminent repo rate cut have now given way to expectations of a higher instrumental rate some months from now (Fig. 14). According to survey data, market uncertainty is pronounced; some players count on the next step being a cut, others foresee an increase. As in the March Report, during the forecast period the real three-month interest rate is expected to be virtually unchanged.

In terms of the nominal TCW exchange rate, today the krona is marginally stronger than at the cut-off date for the March Report. In the meantime, the TCW index has fluctuated between 132 and 136. A major factor behind the movements is probably the recent international financial unrest, which tends to be disadvantageous for the krona. Additional explanations may be various currency outflows in connection with portfolio rearrangements as well as stock market developments, not least in the telecom sector. Short-term interest rates in Sweden are still below those in most other countries but the differential has now decreased and so has its expected magnitude in the coming years.

Together with the low inflation in Sweden, the weak exchange rate has contributed to a relative price shift that stimulates export demand (Fig. 15).

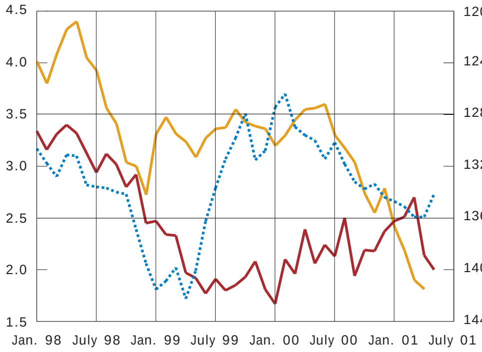
In view of the fundamentally sound situation in the Swedish economy with, for example, a budget surplus and price stability, it is judged – as in the March Report – that the exchange rate, instead of remaining weak, will appreciate in the future. Moreover, the krona is assumed to benefit from, for instance, a smaller short-term interest rate differential with the rest of the world and the euro's expected appreciation against the dollar. Moreover, the tendency for flow-related factors to weaken the krona is expected to diminish. A stabilisation of stock markets and somewhat better economic prospects for Swedish exports can also contribute to an appreciation of the krona in the coming year if developments otherwise follow the main scenario. Partly in view of the weak initial position, however, the appreciation is assumed to bring the krona up to a lower level than foreseen in the March Report. In the main scenario the TCW index is judged to average 130.4 in 2001, 125.6 in 2002 and 123.6 in 2003. The May survey from Statistics Sweden shows that money market players count on the TCW index reaching 128 one year from now and 126 after two years.

Oil and petrol prices have been revised upwards for the short term.

The barrel price of oil has risen somewhat more than expected since the March Report, to almost USD 28 in May. A further increase is assumed in the coming quarter, which represents some upward revision of the short-term path in the earlier forecast. The price of petrol has risen sharply and the future increase is also assumed to be larger than envisaged earlier. The risks associated with the oil price that were mentioned in the March Report are now judged to be balanced. Oil price options do admittedly indicate an upside risk for the price of oil one to two quarters ahead (Fig. 16) but the risks, which are judged to be primarily connected with rising world market prices for petrol, are allowed for in the main scenario. Any effects on the oil price from the price of petrol are judged to be of a seasonal nature and therefore do not affect the picture of risks for the oil price one to two years ahead.

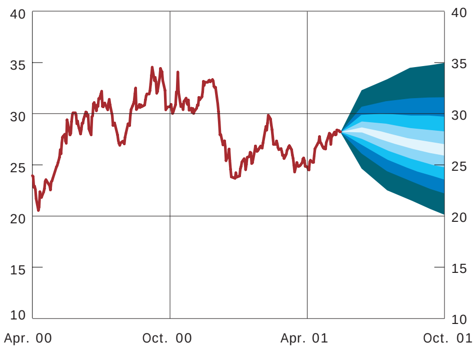
The forecast path of international prices for manufactured exports in foreign currency is unchanged. All in all, the weaker exchange rate and the higher price of petrol are judged to lead to a consumer price rise for imported goods that is larger in the forecast period than foreseen in the March Report (Fig. 17).

Figure 15. Real interest and exchange rates. Per cent and index: 18 November 1992=100



Source: The Riksbank.

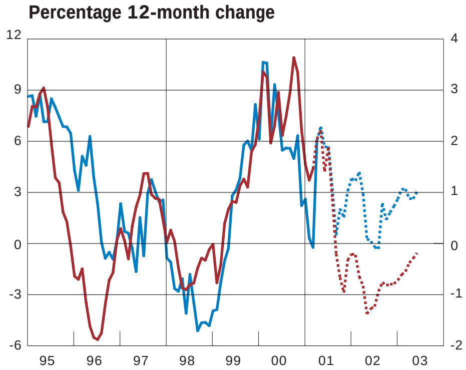
Figure 16. Crude oil price (Brent) and the uncertainty interval calculated from option prices on 16 May 2001. USD/barrel



Note. The bands represent the 10, 30, 50, 70 and 90 per cent probabilities of the oil price being within the respective range in the future.

Sources: IPE and the Riksbank.

Figure 17. Import prices to producers and consumers. Percentage 12-month change



Note. CPI goods that are mainly imported include a considerable proportion of services, for example transportation and retail trade. 2001–03 forecast.

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

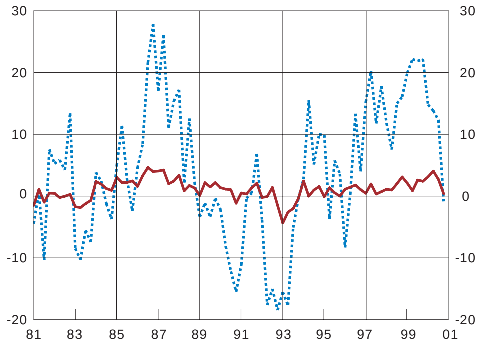
Demand and supply

SUMMARY

Economic growth in Sweden has slackened, mainly as a result of weaker international activity. However, the situation is favourable for coping relatively well with the effects of the loss of external demand. This has to do with the combination of good underlying conditions for growth and a low rate of price increases. Another important factor in this context is saving. External payments show a surplus and so does the public sector. This is accompanied by a good financial situation in the household and corporate sectors.

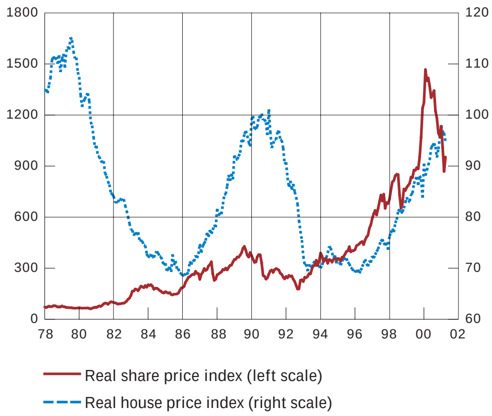
The forecast for the Swedish economy is not substantially different from the assessment in the March Report. A slight downward revision of this year's total demand and GDP growth is followed by minor upward adjustments for 2002 and 2003. This year's somewhat weaker international demand trend contributes to lower export growth but import growth is also judged to be slower. The adjustments are mainly connected with a revision of consumer demand, for which the profile in the forecast period is now judged to be smoother. After some slowdown this year, a resumption of the increase in labour supply and employment is foreseen in 2002 and 2003. The growth forecast implies that total resource utilisation is judged to be high without giving rise to appreciable inflationary imbalances in the coming years.

Figure 18. Household purchases of durable and non-durable goods. Percentage annual change



Source: Statistics Sweden.

Figure 19. Real share and house price indexes. Index: January 1976=100



Sources: Statistics Sweden and the Riksbank.

DEMAND

Table 4. Demand and supply in the main scenario. Percentage annual change

	2000	2001	2002	2003
Household consumption	4.1	2.4 (3.0)	2.5 (2.3)	2.4 (2.1)
Public authorities consumption	-1.7	1.1 (1.1)	1.0 (1.0)	1.0 (1.0)
Gross fixed capital formation	4.5	5.0 (5.7)	4.5 (4.5)	6.9 (6.9)
Stockbuilding	0.6	-0.4 (-0.5)	-0.1 (0.0)	0.0 (0.0)
Exports	9.8	5.9 (6.5)	6.1 (6.2)	6.3 (5.5)
Imports	9.7	6.1 (7.1)	6.1 (6.4)	6.5 (5.8)
GDP	3.6	2.2 (2.4)	2.5 (2.4)	2.9 (2.7)

Note. 2001–03 forecast; the figures in parentheses are the assessment in the March Report. Stockbuilding is represented by the contribution to GDP growth in percentage points.

Sources: Statistics Sweden and the Riksbank.

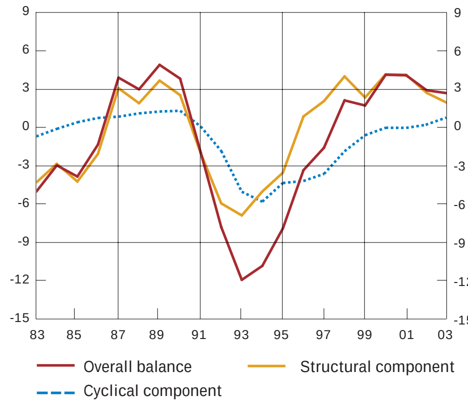
New statistics since the March Report indicate that the development of *household consumption expenditure* is unexpectedly weak. The growth of retail turnover has gone on declining and so have new car sales and indicators of household confidence. The development of household real disposable income is also judged to be weaker this year, mainly as a result of higher consumer prices. Together with a somewhat sharper curb on households' financial wealth, the lower disposable income warrants some downward adjustment of this year's forecast growth of consumption.[2] Purchases of

2 In that the calculation of disposable income does not allow for realised capital gains but includes a deduction for households' tax payments on capital income, it is difficult to assess how income is actually developing. Thus, to the extent that households realise capital gains, the actual development of household real income is underestimated.

durable goods have been rising strongly for three years and the level in the coming years will probably remain high but tend to fall somewhat. The largest contribution to the growth of total consumption expenditure will accordingly come instead from non-durable goods and services (housing and food, for example), which tend to vary considerably less over time (Fig. 18). With a development of disposable income that is somewhat stronger than foreseen earlier and some recovery in household wealth, some upward adjustment has been made to the consumption forecast for the coming two years. Another reason for this is that lending to the non-bank public is still high, while the ratio of household debt to income is low.

The *public finances* continue to show large surpluses, mainly due to high saving in the pension system. Some fall in the public sector financial surplus is assumed in the forecast period at the same time as a growing proportion of the surplus is explained by cyclically-related factors (Fig. 20). As in the March Report, it is assumed that the Government will compensate households for the earlier increase in personal social security contributions by continuing to cut income tax in the coming two years.

Figure 20. Consolidated public sector financial balance.
Per cent of GDP



Note. 2001-03 Riksbank forecast. The cyclical balance is calculated from output gap estimates obtained with the Unobserved Components method.

Sources: Statistics Sweden and the Riksbank.

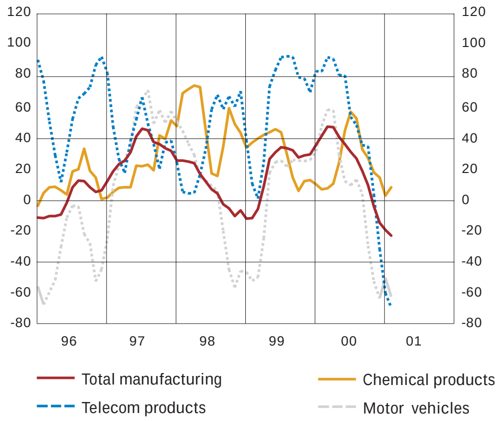
Manufacturing activity weaker than expected.

The latest information indicates that manufacturing activity is weakening somewhat faster than expected earlier. The April business tendency survey shows a clear fall-off in the order inflow and the volume of production. Moreover, the trade statistics indicate that both exports and imports of goods fell in real terms in 2001 Q1. The tendencies are explained by a weakening of international demand that has been particularly marked for exports that are important for Sweden, for example telecom products and motor vehicles (Fig. 21).

Exports have been stimulated in recent years in that prices for Swedish manufactured exports have risen more slowly than international export prices.[3] Some fall in the relative export price is assumed this year, in keeping with the assessment in the March Report. The competitive situation is judged to remain good and partially counter the effects of the weaker international demand for Swedish goods. In the rest of the forecast period, exports are expected to recover, partly as a result of rising world market demand.

The weaker manufacturing activity and somewhat more subdued prospects for consumption are assumed to affect this year's *investment* in manufacturing and the rest of the corporate sector. Manufacturing investment is also assumed to be weak next year and then recover in 2003. A large revision of the investment forecast was made in the March Report and since then there has been no new information to warrant a change in the time profile of investment in the forecast period. The construction of networks for the third generation of mobile phones is expected to have some positive effect on the development of investment, particularly in the latter part of the forecast period.

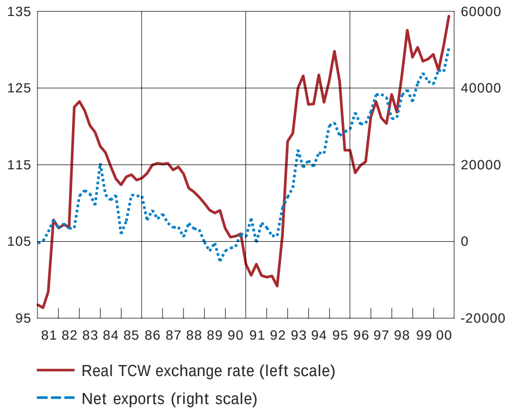
Figure 21. Export order inflow.
Net balance, moving three-month average



Note. Net balance is the proportion of firms reporting an increase less the proportion reporting a decrease.

Source: National Institute of Economic Research (business tendency surveys).

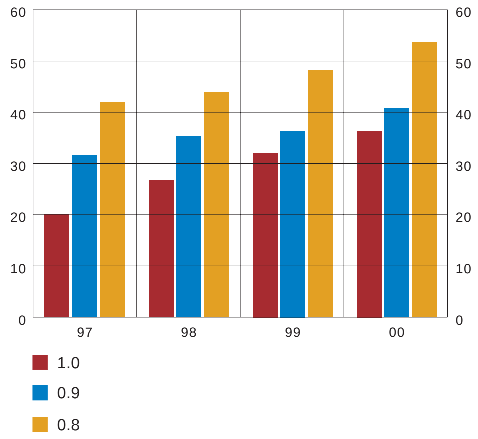
Figure 22. Real exchange rate and net exports.
Index: 18 November 1992=100 and SEK million



Sources: Statistics Sweden and the Riksbank.

3 Low inflation in Sweden and the comparatively weak exchange rate have been important factors behind the shift in the relative price.

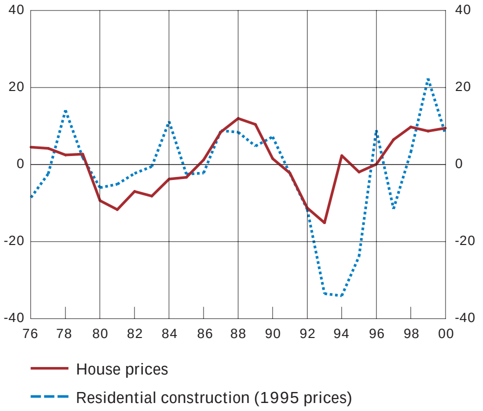
Figure 23. One- and two-family houses: ratio of market value to construction costs (*q*). Percentage of the population living in municipalities where *q* is >1.0, 0.9 or 0.8



Note. The ratio *q* can indicate how favourable conditions are for increased housing construction; a ratio around or above unity implies that investing in new construction is attractive.

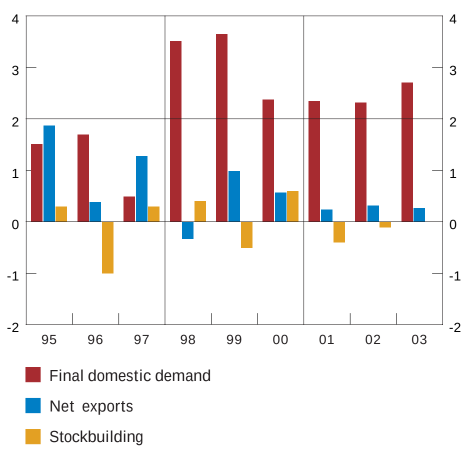
Source: IBF.

Figure 24. Real house prices and volume of residential construction. Percentage change



Source: Statistics Sweden.

Figure 25. Contributions to GDP growth. Percentage points



Note. 2001–03 forecast.

Sources: Statistics Sweden and the Riksbank.

However, the magnitude and timing of these investments are still difficult to assess. Besides the balanced financial situation in the corporate sector, with moderate liabilities in relation to output, another positive factor for corporate sector investment outside manufacturing is last year's large increases in prices and rents for commercial real estate in the metropolitan areas.

House-building attractive in many regions.

The assessment of residential investment is the same as in the March Report and implies an appreciable recovery from the very low levels in recent years. House prices have been rising faster than construction costs, which favours the continuation of a strong trend for residential construction. Even if the price rise were to slacken or cease, the conditions for increased residential investment would still be good (Fig. 23 and 24).

With the fall-off in exports and domestic demand, *import demand* is forecast to be lower than foreseen in the March Report. Mainly due to a comparatively restrained import trend, the contribution to GDP growth from net exports becomes somewhat larger during the forecast period (Fig. 25).

SUPPLY AND RESOURCE UTILISATION

Employment has been rising strongly. To date in 2001 the number in *employment* is an average of 125,000 persons or 3.1 per cent higher than in the corresponding period a year earlier. However, seasonally-adjusted data show that the increase has recently tended to slacken. A more subdued labour market situation is also indicated by some further fall in the number of new job vacancies in April and signs of less difficulty in filling existing vacancies (Fig. 26). As the increase in employment remained comparatively strong in April, some upward revision has been made to the forecast for 2001. In view of a lower level of economic activity, however, the growth of employment is expected to slow in the course of the year. But during 2002 and 2003 it is assumed that employment will pick up again in connection with stronger growth (Fig. 27).

A slackening of employment is expected in the rest of this year.

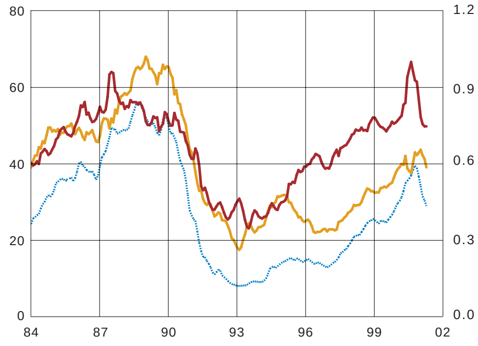
In the past, average *labour productivity* has tended to show a positive correlation with economic activity. This relationship has been particularly distinct in periods when GDP growth has fluctuated markedly (Fig. 28). Although the pattern of productivity in the economy may have changed in recent years, for example as a result of greater flexibility in working time and forms of employment, there are grounds for supposing that to some extent the pattern is still pro-cyclical. Against this background, productivity growth is judged to be somewhat lower this year as a consequence of a weaker development of production.

Productivity co-varies with economic activity.

The number of hours worked rose more slowly than employment last year, according to the National Accounts. The latest labour force surveys confirm this tendency. Average working time has accordingly decreased, which is at least partly due to increased absenteeism for sickness in recent years. A decreased use of overtime is now an additional explanation.

Labour supply is influenced not only by economic growth but also by demographic factors and political decisions, mainly measures of labour market policy. Shifts in the composition of the population towards relatively more individuals in the youngest and oldest age groups in the coming years point to some fall in labour force participation. In the Spring Economic Bill the Government proposes decreased appropriations for labour market measures this year and a reduced intake to the Adult Education Initiative. Together with assumed effects of measures for stimulating labour force participation, this will tend to raise labour supply. All in all, labour supply is judged to rise more slowly than employment, so that open *unemployment* falls during the forecast period from 4.2 to 3.9 per cent.

Figure 26. New job vacancies, number unfilled after 10 days and the ratio between them. Thousands



Note. The ratio can be interpreted as an indicator of difficulties in filling existing job vacancies. Seasonally-adjusted series expressed as moving three-month average.

Source: National Labour Market Board.

Table 5. Labour market forecast in the main scenario. Percentage annual change and per cent

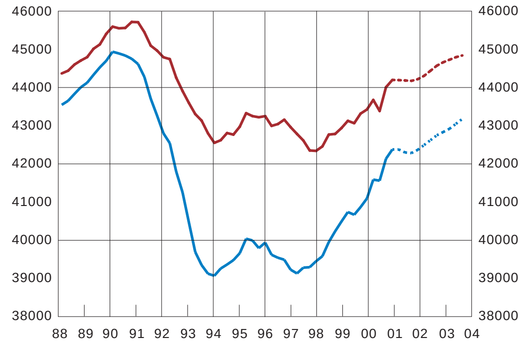
	1999	2000	2001	2002	2003
Nominal hourly wage	3.3	3.6	4.1 (4.1)	3.9 (3.9)	3.9 (3.9)
Labour productivity	1.4	2.1	1.1 (1.4)	1.8 (1.7)	1.9 (1.7)
Unit labour costs	2.2	2.0	3.0 (2.6)	2.1 (2.2)	2.0 (2.2)
Hours worked	2.7	1.5	1.1 (1.1)	0.7 (0.7)	1.1 (1.0)
Open unemployment	5.6	4.7	4.2 (4.2)	4.1 (4.2)	3.9 (4.0)

Note. The figures in parentheses are the assessment in the March Report.

Sources: Statistics Sweden and the Riksbank.

The development of unemployment provides an indication of changes in *resource utilisation*. Other evidence can be obtained from business tendency surveys. All in all, resource utilisation is judged to be high but at a level which, by itself, ought not to generate an appreciable increase in inflationary pressure.

Figure 27. Labour supply and employment. Hundreds of persons



Note. Seasonally-adjusted series; 2001–03 forecast.

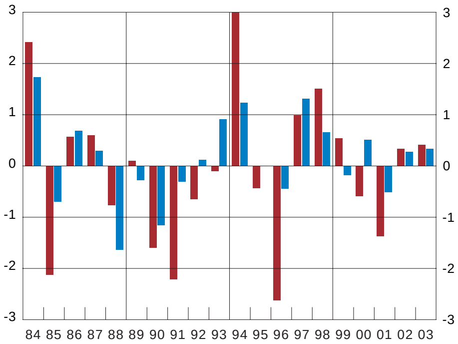
Sources: Statistics Sweden and the Riksbank.

Capacity utilisation falls in manufacturing and the services sector.

According to the two most recent quarterly surveys from the National Institute of Economic Research, in the past six months *capacity utilisation* in manufacturing has fallen 4 percentage points. This impression is supported by the continued fall in the proportion of firms reporting production factors, such as labour shortages, as the primary obstacle to increased output. The survey data also suggest that delivery times are shortening, which likewise points to lower manufacturing activity.

In construction and the service sectors it is mainly labour shortages that can act as constraints on production. In construction, however, survey data show, for example, that the number of employees went on rising in 2001 Q1. The picture of activity in the services sector still varies somewhat but there are growing signs that the slowdown in manufacturing activity has spread to service industries. Still, the overall picture is that capacity utilisation has fallen and so have labour shortages.

Figure 28. Change in GDP growth rate and productivity growth. Percentage points



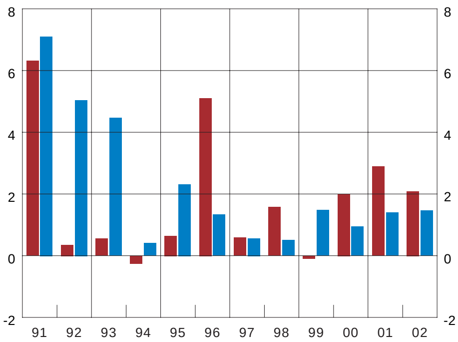
Change in GDP growth

Change in productivity

Note. Productivity growth shown as the percentage divergence from the historical trend.

Sources: Statistics Sweden and the Riksbank.

Figure 29. Unit labour costs in Sweden and the euro area. Percentage change



Sweden

Euro area

Note. Sweden 2000–02 forecast by the Riksbank.

Sources: OECD and the Riksbank.

The Riksbank also uses econometric estimates to calculate the output gap, which is a measure of resource utilisation in the economy as a whole. These estimates suggest that resource utilisation is high but approximately at a level that is sustainable in the longer run.

Neither do the present revisions of growth occasion any change in the appraisal of capacity utilisation in the remainder of the forecast period. However, this assessment is uncertain and rests, for example, on the potential growth rate for the Swedish economy being 2.0–2.5 per cent a year.

The round of wage negotiations is more or less over. New agreements have been concluded for employees in, for instance, the commercial sector, construction, the hotel and restaurant industry, and the public sector, for example. For many of the agreements, the *wage increases* are calculated to be largest in the early part of the period. The agreements that have now been finalised are relatively close to the level of the earlier settlements, which tends to contain compensatory wage drift in the future. All in all, neither the most recent agreements nor the assessment of total resource utilisation call for any revision of either the level or the profile of the earlier forecast of average wage increases. As productivity growth is judged to be weaker than foreseen earlier, this year's increase in unit labour costs is somewhat stronger (Fig. 29). All in all, unit labour costs are judged to rise somewhat less than domestic inflation, which points, for instance, to some increase in the profit share in the coming years.

Table 6. Wage settlements and calculated negotiated increase in wage costs.

Sector	No. of employees	Duration of agreement	Total increase (%)
1. Local government, blue-collar	450,000	April 01–March 04[a]	11.5
2. Engineering, blue-collar	220,000	Feb. 01–March 04[a]	8.5
3. Engineering, white-collar	160,000	Feb. 01–March 04[a]	7.0
4. Local government, white-collar	150,000	April 01–March 05	8.9
5. Central government, white-collar	120,000	April 01–March 02	2.6
6. Commercial employees	120,000	April 01–March 04	11.6
7. Central government, white-collar	66,000	April 01–March 02	Decided locally
8. Construction, blue-collar	60,000	April 01–April 04	8.1
9. Services firms, white-collar	50,000	April 01–April 04[a]	8.4
10. Commercial firms, white-collar	50,000	April 01–April 04[a]	8.4
11. Manufacturing, white-collar	50,000	April 01–April 04[a]	8.2
12. Local government, white-collar	45,000	April 01–March 05[b]	Decided locally[c]
13. Haulage etc. employees	45,000	March 01–Dec. 01	3.1
14. Central government, white-collar	40,000	April 01–March 02	2.8
15. Hotel and restaurant employees	40,000	April 01–March 04	11.4

Note. The agreements are listed in descending order of size. The total increase refers to wages and costs for higher minimum wages, wage reviews, compensation for unsocial hours, weekend pay and shorter working time; it does not include any wage drift or changes in employers' contributions. [a]Can be cancelled in the final period. [b]Can be cancelled after this date. [c]Minimum 2.0 per cent for county council employees in the first year.

The employers/employees were represented in the negotiations by: 1. Fed. of County Councils, Ass. of Local Authorities/Municipal Workers' Union. 2. Ass. of Engineering Industries/Metalworkers' Union. 3. Ass. of Engineering Industries/Union of Clerical & Technical Employees in Industry, Ass. of Graduate Engineers. 4. Fed. of County Councils, Ass. of Local Authorities/Union of Local Govt. Officers, Ass. of Graduates in Social Science, Public Administration, Economics & Social Work, Ass. of Managerial & Professional Staff. 5. Agency for Govt. Employers/Public Employees' Negotiating Council. 6. Commercial Employers' Ass./Commercial Employees' Union. 7. Agency for Govt. Employers/Conf. of Professional Ass. 8. Construction Federation/Building Workers' Union. 9. Almega Business Services Ass./Salaried Employees' Union. 10. Commercial Employers' Ass./Salaried Employees' Union. 11. Almega Industrial & Chemical Ass., Employers' Ass. of Building Material Manufactures, Food Federation/Union of Clerical & Technical Employees in Industry, Ass. of Graduate Engineers. 12. Fed. of County Councils, Ass. of Local Authorities/Alliance of 12 professional associations. 13. Road Transport Employers' Ass./Transport Workers' Union. 14. Agency for Govt. Employers/Union of Service & Communication Employees. 15. Hotels & Restaurants Ass./Hotel & Restaurant Workers Union.

Sources: The negotiating parties and the Riksbank.

Deregulations, political decisions and transitory effects

Factors of a more transitory nature are affecting price movements during at least parts of this year. Electricity prices, for example, have moved up sharply from a low level in recent months; this has to do with transitory supply and demand factors as well as with certain changes in methods for measuring prices. The comparatively small snowfall this winter has reduced the supply of hydroelectric power, which is relatively cheap, at the same time as many households have switched from oil to electricity for domestic heating. Expectations of low precipitation and a decreased production of nuclear power mean that the price of electricity may be high in the coming year but that it subsequently falls back to a somewhat lower level.

Growing price pressure has also been noted in the telecom market. Telia, the dominant operator, raised subscription charges about 20 per cent in March, for example. A number of broadband operators have also raised subscription prices markedly but as this item is not yet included in the CPI, the increases do not affect registered inflation. The growing price pressure from the electricity and telecom sectors adds to CPI inflation in the forecast period.

Price developments have been affected by transitory factors.

Foot-and-mouth disease has pushed meat prices up; the contribution to CPI inflation in April was 0.2 percentage points. Fruit and vegetable prices have also risen strongly. However, these factors affect CPI inflation only in the very short run.

The price of petrol has risen sharply of late in Sweden, mainly on account of the strong dollar and rising world market prices for petrol. The petrol price is judged to go on rising in the near future and then fall back successively after the summer.

The subsidies for certain prescribed medicines were abolished in April and this adds almost 0.1 percentage point to the CPI as well as to underlying inflation.

The contribution to the CPI from house mortgage interest expenditure in April was largely as expected. During the forecast period the path of interest rates is assumed to be somewhat lower than foreseen in the March Report.

All in all, then, a number of factors have contributed to the recent rapid increase in inflation. It is judged that for a number of these factors, the effect on inflation will not be permanent; they include a part of the price movements for food, petroleum products and electricity. Their effect on inflation will already have ceased one to two years from now.

Table 7. Direct CPI effects from indirect taxes, subsidies and interest expenditure. Percentage points

	Dec. 2001	June 2002	June 2003
Indirect taxes and subsidies	0.0 (0.0)	0.1 (0.1)	0.1
House mortgage interest expenditure	0.0 (0.1)	0.1 (0.1)	0.2
Total effect	0.1 (0.1)	0.1 (0.1)	0.2

Note. The forecasts in the March Report are shown in parentheses for comparison. This table shows only direct effects of changes to indirect taxes.

Sources: Statistics Sweden and the Riksbank.

The risk spectrum

The assessment of the uncertainty and the spectrum of risks in the prospects for inflation is presented in this chapter.

The inflation forecast in the main scenario is the path the Riksbank considers most probable, given the assumption of an unchanged repo rate in the coming twenty-four months. But as inflation forecasts are uncertain, an assessment of various alternative paths for inflation is also presented. These paths are combined in the form of a risk spectrum that is of importance for the formation of monetary policy.

The uncertainty associated with international prospects remains large.

In the March Report it was considered that the balance of risks for inflation was somewhat on the downside in the forecast period. It was judged that the downside risks associated with international prospects were not fully offset by upside risks from the development of domestic inflation and the exchange rate.

The uncertainty associated with *international prospects* remains large. Even with some downward revision of growth in the main scenario, there is still considered to be a risk of growth being even weaker. There are many unknowns about the depth and duration of the economic slowdown in the United States, where the risks are judged to be predominantly on the downside. There continues to be an imbalance between national saving and domestic investment in the American economy. Financing the investments has required an increased net inflow of foreign capital, leading to a growing deficit on the current account.

A gradual correction of the saving imbalances is foreseen in the main scenario. Historically, current-account deficits in the United States have been corrected slowly and gradually rather than quickly and abruptly. However, the combination of a decline in manufacturing, a weak stock market and a deteriorating labour market could cause American households to reduce consumption and raise saving, so that the saving imbalances are corrected more quickly than assumed in the main scenario. Such rapid corrections have occurred in several other countries where the gap between private saving and investment was large. Moreover, the high rate of investment in recent years, not least in the IT sector, may slacken more quickly than in the main scenario if the capital stock turns out to be unduly large. At the same time, a reassessment of the prospects for growth and profits in the United States could tend to break the inflow of foreign capital, leading to a correction of the current-account deficit, exchange rate adjustments and decreased global growth.

The consequences of this in Europe could be appreciable, both directly through exports to the United States and indirectly via USA-dependent economies in Asia and Latin America that have already shown signs of weakening.

Another source of downside uncertainty is the situation for employment in Europe. The slowing of the fall in unemployment in the euro area in the past six months has led to an increased risk of private consumption being weaker. In Japan, too, there are weaknesses in the financial sector, for example, that could generate an economic downturn that is more marked than assumed in the main scenario.

International prospects are judged to constitute a downside risk for the Swedish economy that is approximately as large as in the March Report.

Lower growth is often associated with lower inflation but underlying inflation still has an upward trend in the United States as well as Europe. It is conceivable that labour market bottlenecks in both the United States and the euro area, as well as a period of weaker productivity growth in the United States, could result in price pressure being higher than assumed in the main scenario. That could lead to higher import prices in Sweden. It could also reduce the future scope for monetary policy in the United States and thereby contribute to international growth being weaker, with a corresponding retardation of inflation.

The downside risks for international growth are judged to be somewhat larger than foreseen in the March Report. At the same time, however, there are certain upside risks for international inflation. All in all, this means that international prospects are judged to constitute a downside risk for the Swedish economy that is approximately as large as in the March Report.

The upside risk associated with the krona's exchange rate is about as large as at the time of the March Report.

The Swedish *krona* has remained weak since the March Report. In view of the fundamentally favourable conditions in the Swedish economy, however, the main scenario envisages that the krona appreciates during the forecast period. It is conceivable, however, that the path of the krona will be weaker than expected. The largest risk of the krona remaining weak in the future has to do with the risk of international activity slackening still more. Moreover, other factors that have contributed to the krona remaining weak up to now may continue to work against an appreciation for a time.

All in all, the exchange rate constitutes much the same upside risk for inflation in Sweden as it did in the March Report.

The risks for inflation connected with *domestic demand and the relationship between growth and inflation* in Sweden are somewhat more on the upside than foreseen in the March Report. The inflation forecast in the main scenario has admittedly been revised upwards in view of the unexpectedly high domestic inflation but this has been done mainly for the coming year. It is conceivable that the higher registered inflation is partly a sign that resource utilisation is more strained than assumed in the main scenario. Moreover, domestic demand may become stronger than the main scenario allows for. That could result mainly from private consumption being somewhat higher, for example in connection with larger tax cuts than foreseen in the main scenario. Employment has continued to rise remarkably rapidly, which could also be a sign that growth has been underestimated.

The risks for inflation connected with domestic demand and the relationship between growth and inflation in Sweden are somewhat more on the upside than foreseen in the March Report.

In the short run there are additional upside risks. They concern the risk of price movements associated with BSE and foot-and-mouth disease, the abolition of subsidies for certain prescribed medicines, transitory effects of increased petrol prices and the end of downward price effects from the deregulation of electricity and telecom markets. However, these risks are judged to affect inflation during only a limited period and cease to apply after one to two years.

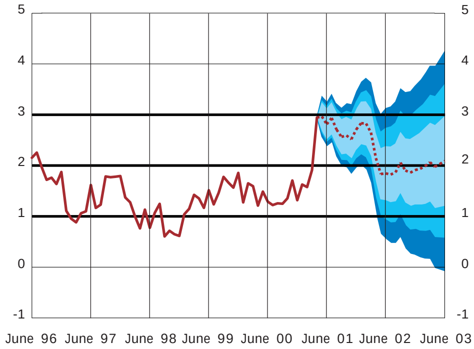
All in all, the downside risk in international prospects is countered by the upside risks from domestic inflation and the exchange rate. In other words, the risk spectrum for the forecasts for CPI as well as UND1X inflation is judged to be balanced both one and two years ahead. Thus, lower inflation than in the main scenario appears to be as probable as higher inflation. This is evident from Fig. 30, which shows the uncertainty in the forecast of underlying inflation, measured as the 12-month change in UND1X. As the risk spectrum is balanced, the uncertainty intervals are symmetrical around the forecast path in the main scenario.[4] The forecast of CPI inflation also shows a balanced risk spectrum (Fig. 31).

All in all, the risk spectrum for UND1X as well as CPI inflation is judged to be balanced both one and two years ahead.

The uncertainty in the assessment of both underlying and CPI inflation is greater than usual but approximately as large as it was judged to be at the time of the March Report.

As monetary policy decisions are based primarily on an assessment of price tendencies twelve to twenty-four months ahead, it is the inflation prospects for this time horizon that are particularly relevant. In the main scenario, the rate of inflation measured as the 12-month change in UND1X is expected to be 1.8 per cent in June 2002 and 2.1 per cent in June 2003. As the risk spectrum is balanced, the mean value of the assessments of UND1X inflation coincides with the assessment in the main scenario. The corresponding rates of CPI inflation are judged to be 1.8 per cent one year ahead and 2.2 per cent after two years (Table 8).

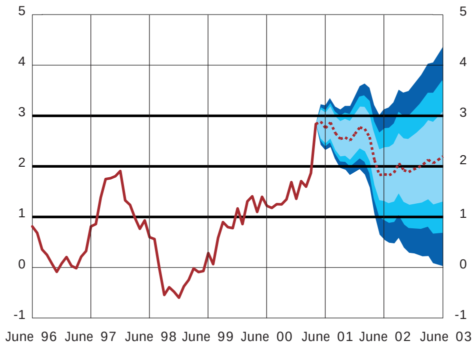
Figure 30. UND1X with uncertainty intervals. Percentage 12-month change



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

Sources: Statistics Sweden and the Riksbank.

Figure 31. CPI with uncertainty intervals. Percentage 12-month change



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

Sources: Statistics Sweden and the Riksbank.

4 For an account of how the uncertainty interval is derived, see Blix, M. & Sellin, P. (1999), Inflation forecasts with uncertainty intervals, *Quarterly Review 2*, Sveriges Riksbank; for a fuller analysis, more focused on models, see *idem* (1999), *Uncertainty bands for inflation forecasts*, Sveriges Riksbank Working Paper 65.

Table 8. Inflation forecasts including the risk spectrum.
Per cent

	Annual rate		12-month rate	
	2001	2002	June 2002	June 2003
CPI	2.5	2.1	1.8	2.2
UND1X	2.5	2.1	1.8	2.1

Note. The table gives the mean values of the inflation assessment's probability distributions (see Figs. 30 and 31).

Source: The Riksbank.

Table 9. UND1X inflation.
Percentage probability, 12-month rate

	UND1X<1	1≤UND1X<2	2≤UND1X≤3	UND1X>3	Total
2002 (June)	14	44	35	7	100
2003 (June)	20	27	28	25	100

Note. The figures show the probability of UND1X inflation being in the column's interval.

Source: The Riksbank.

Table 10. CPI inflation.
Percentage probability, 12-month rate

	CPI<1	1≤CPI<2	2≤CPI≤3	CPI>3	Total
2002 (June)	14	44	35	7	100
2003 (June)	18	26	29	27	100

Note. The figures show the probability of CPI inflation being in the column's interval.

Source: The Riksbank.

RECENT DEVELOPMENTS IN INFLATION

The 12-month change in consumer prices has moved up markedly in the past year and in April the rates of CPI and UND1X inflation were 2.8 and 2.9 per cent, respectively. While inflation's upward tendency is not confined to Sweden, the increase here is stronger than in many other countries.

An indication of how the analysis can be structured is given in Fig. 1 in Chapter 1 (p. 5), where price developments are arranged in two groups.

1. One group comprises 22 per cent of total household consumption, with house mortgage interest expenditure accounting for about 6 percentage points. Recent price increases have been particularly strong for most of the items in this group. There is a variety of explanations for this.

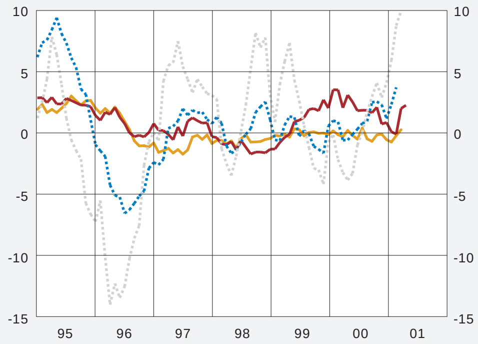
For one thing there is the aftermath of *previously regulated markets* being opened for competition. The deregulation meant that electricity and telecom prices, for example, fell sharply and this appreciably retarded the overall development of prices during 2000. A substantial proportion of this adjustment of the price level was probably of a one-off kind, making it reasonable to suppose that there will subsequently be a gradual return to price increases. Corresponding deregulations have not been made in other countries and that largely explains why inflation in Sweden, having previously been lower, is now more in line with that elsewhere.

For another thing, price movements are affected by *changes in the monetary stance*. House mortgage interest expenditure has fallen and, as discussed on a number of occasions, this has had a marked downward effect on the overall path of consumer prices. One cause of the lower interest expenditure is the Riksbank's earlier interest rate cuts. Their tendency to subdue the development of prices has now come to an end.

Finally, price developments, particularly in recent months, have been affected by *supply shocks*. Meat prices, for example, have been affected by BSE and foot-and-mouth disease, electricity prices have risen sharply because there was so little snow last winter and the price of petrol has gone up rapidly on account of production problems at the refineries, for instance. The effects of these supply shocks are not judged to be permanent.

2. The other group in Fig. 1 (p. 5) comprises the remaining 78 per cent of the goods and services in total

Figure B1. Import prices to producers and consumers.
Percentage annual change



Sources: Statistics Sweden and the Riksbank.

household consumption. Since the beginning of 1999 the prices in this group show a more general and gradual upward trend. This development has three main conceivable explanations. One is that the exchange rate has been weak during this period. Another is that the prise rise for inputs (electricity, oil and petrol, for example) may have affected other prices. Thirdly, resource utilisation has moved up appreciably in recent years.

Price developments for manufactured imports are illustrated in Fig. R1. These prices to producers show a comparatively clear co-variation with the *exchange rate*. To consumers, on the other hand, prices for manufactured imports excluding oil and petrol have been broadly unchanged in recent years. This suggests that the weak exchange rate has not had any major impact in the form of higher import prices for manufactured consumer goods.

Rapidly rising prices for *electricity and petroleum products* do, however, appear to have generated a marked pass-through to transport prices.

The remaining explanation – rising *resource utilisation* – is supported by the fact that the price rise is broad and comes from many different goods and services. Resource utilisation has moved up comparatively rapidly in recent years and a number of indicators point to the present level being high (for further details, see Chapter 2). Recently, moreover, this has found expression in, for example, higher unit labour costs and increased profits, mainly in sectors where competition is weak. Considerable price increases have been noted, for instance, in certain labour-intensive activities such as repair services and vehicle inspection.