

# Inflation Report

2005:4

# Contents

FOREWORD	5

- SUMMARY **7**
- DETERMINANTS OF INFLATION 13
   The financial markets 13
   International developments 16
   Economic developments in Sweden 22
  - Inflation expectations 30
- INFLATION ASSESSMENT 43
  Risk assessment 49
- BOXES IN PREVIOUS INFLATION REPORTS 53

Вох

The stance of fiscal policy 31

# Foreword

The objective of the Riksbank's monetary policy is to keep inflation at 2 per cent, with a tolerance for deviations from this level of +/- 1 percentage point. 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. Any divergent opinions regarding the inflation outlook will thus be recorded in the separate minutes of the Board meeting on 1 December, to be published on 15 December 2005.

This Inflation Report reproduces the main features of the presentations and discussions at the Executive Board meetings on 14 and 24 November. 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 its monetary policy.

These analyses are based on the assumption that the repo rate will develop in line with the financial markets' expectations, as reflected in implied forward rates. These forecasts extend three years ahead. It is important to point out that an interest rate path in line with forward interest rates should not be interpreted as the monetary policy assumption that the Executive Board considers most probable.

The Inflation Report begins with a summary. That is followed by a discussion of the key determinants of inflation. Finally, the Riksbank gives its collective assessment of inflation prospects in the main scenario and the key risks surrounding this assessment. The report also contains a box on fiscal policy.

Stockholm, December 2005 Lars Heikensten GOVERNOR OF SVERIGES RIKSBANK

# Summary

After a temporary slowdown at the beginning of the year, growth has picked up again, both in Sweden and in the world economy as a whole. At the same time, inflation has risen. In Sweden there are signs that manufacturing activity and the labour market will be slightly more robust than expected. GDP growth is expected to be somewhat higher this year and next year. Rising capacity utilisation and a gradual increase in cost pressures are expected to lead to higher inflation. Two years ahead, inflation is expected to be in line with the target, given that interest rates rise at roughly the rate indicated by implied forward rates. These expectations have been adjusted upwards somewhat compared with the October Inflation Report, particularly with regard to the latter part of the forecast period. Higher international producer prices and a weaker krona will contribute to higher inflation than anticipated in the previous report, but this will be counteracted by a lower oil price. The risk that inflation will be higher than in the main scenario is judged to be greater than the risk that inflation will be lower, due to the uncertainty over the short-term krona exchange rate.

#### **■■** Continued strong international growth.

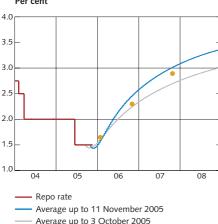
Global growth rose last year. After a temporary slowdown at the beginning of the year, growth has picked up again. The assessment in the October Inflation Report was that GDP growth would slow down somewhat. Nevertheless, global capacity pressures were expected to increase. On the whole, the assessment remains the same in this report. Preliminary GDP figures for Q3 indicate that international growth is increasing in line with the forecast in the previous Inflation Report. In the United States, growth has been high despite the high oil price and the natural disasters that have befallen during the autumn. In Asia, and particularly in Japan, growth appears to be supported to an increasing degree by higher domestic demand. In the euro area the main stimulation to the still relatively modest growth comes from stronger international manufacturing activity.

While international economic recovery continues to improve, the oil price remains high. However, the oil price has fallen more than expected since October, and a downward revision has been made to the forecast. As before, the price is expected to fall over the coming years.

Inflation has been unexpectedly high in both the United States and the euro area. International producer prices have also risen slightly more than expected. This is connected in particular with the upturn in the oil price having made a greater impact on inflation than was previously assessed. An upward revision has therefore been made in the forecast for international price pressure in 2005 and 2006.

Figure 1. Implied forward rates (15-day average) and repo rate expectations according to Prospera's most recent survey.

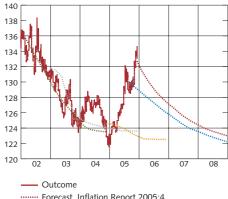
Per cent



Sources: Prospera Research AB and the Riksbank.

Prospera average 2 November 2005

Figure 2. TCW exchange rate. Index. 18 November 1992 = 100



Forecast, Inflation Report 2005:4
Forecast, Inflation Report 2005:3
Forecast, Inflation Report 2004:4
Forecast, Inflation Report 2003:1
Forecast, Inflation Report 2002:1

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

Source: The Riksbank.

#### ■■ Rising long-term interest rates and weak krona.

Long-term interest rates are still low, seen from an historical perspective, although they have recently risen slightly, particularly in the euro area. A 15-day average (up to 11 November) of implied forward rates - which is the assumption for the repo rate on which the forecasts in this Inflation Report are based – shows that the agents in the financial market are now expecting a slightly higher repo rate, particularly towards the end of the forecast period, compared with when the previous report was published (see Figure 1).

The assessment in the October Inflation Report was that the krona would strengthen in the near future. However, the krona has weakened instead. It is genuinely difficult to explain short-term fluctuations in exchange rates. It appears as though the krona weakening is to some extent linked to expectations of monetary policy in Sweden and abroad. However, it should be noted that there is no stable relationship between exchange rate fluctuations and interest rate differentials in a longer perspective, which makes it difficult to justify the large fluctuations in exchange rates observed recently. The krona is still expected to strengthen, measured in terms of the TCW index, as a result of Sweden's relatively good growth conditions and current account surplus. Moreover, implied forward rates in Sweden and abroad indicate that the interest rate differential will gradually be eliminated, which also indicates a stronger exchange rate in future. However, unexpectedly weak developments justify a weaker exchange rate forecast, particularly this year (see Figure 2).

#### ■■ Growth expected to rise in Sweden.

Recent statistics confirm the picture of continued good economic growth in Sweden, following the slowdown earlier this year. Monthly statistics on foreign trade and the National Institute of Economic Research's most recent quarterly business tendency survey indicate that manufacturing activity may be slightly stronger than expected. A weaker exchange rate also supports this. At the same time, the slightly faster upswing in interest rates in line with implied forward rates has the opposite effect. All in all, however, some upward revision has been made in the forecast for GDP in 2005 and 2006.

Stronger growth in Swedish export markets in future should lead to a more rapid growth in exports than has been seen this year. As in October, the assessment is that expansionary economic policy will contribute to an increase in public sector activities and a rise in household consumption, particularly in 2006. Large corporate profits and low interest rates also point to continued good growth in investment. However, there is reason to assume that investment activity will gradually slow down. All in all, GDP growth is estimated to be 2.4 per cent this year and 3.2 per cent next year. Growth will then slow down and is expected to amount to 2.2 per cent in 2008.

Total resource utilisation is expected to rise from the current level, but to be relatively moderate even towards the end of the forecast period. The expected upturn in interest rates will contribute to this.

There appears to have been some improvement in the labour market situation for some time now. According to the labour force survey, employment has risen slightly more than expected and some upward revision has been made to the forecast for this year. At the same time, the labour supply has also increased somewhat more rapidly. The forecast for unemployment therefore remains unchanged compared with the October Inflation Report.

Wage increases in the economy remain relatively low. According to the most recent statistics, the construction sector, trade, hotels and restaurants have had the highest registered wage increases in the business sector; around 3.5 per cent. As the labour market improves and capacity utilisation increases, the rate of wage increase is expected to rise during the forecast period.

#### ■■ Inflation in line with expectations.

Since the previous Inflation Report was produced, outcomes for CPI and underlying inflation (UND1X) in September and October have been published. The annual rate of increase measured as CPI and UND1X amounted to 0.5 per cent and 0.8 per cent respectively in October, which was in line with the earlier forecast. Inflationary pressures in the economy have been low for a long time. High productivity growth and increased competition, partly due to globalisation, have contributed to this.

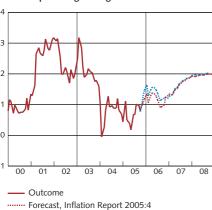
The domestic inflation rate is expected to rise only slowly during the forecast period. Normal cyclical patterns indicate that productivity growth will fall and the rate of wage increase will rise the further the economy progresses in the economic cycle. This would indicate rising unit labour costs and increased inflationary pressures.

# ■■ Imported inflation is expected to rise.

Excluding oil products, prices of imported goods and services (UNDIMPX) have dropped since the beginning of 2003. Even when oil products are included, the average rate of imported inflation has only been marginally above zero over the past ten years.

It is difficult to determine how significant the price-dampening effects of increased competition in the world market and at home will prove to be in the long run. Rising international capacity pressures indicate that price reductions will not continue at the same rate they have maintained for the past two years. As before, prices of imported goods and services are expected to cease falling and begin to rise again. The reason for this is that rising global capacity utilisation is expected to lead to rising international prices, and this together with increased domestic cost pressures will lead to cost increases, which through various stages of the pipeline will push up prices of imported goods.

Figure 3. UND1X. Annual percentage change



Sources: Statistics Sweden and the Riksbank.

..... Forecast, Inflation Report 2005:3

All in all, inflation is expected to rise gradually and to amount to 1.9 per cent and 2.3 per cent for UND1X and CPI respectively two years ahead (see Table 1).

Compared with the assessment in the October Inflation Report, the forecast for inflation in the main scenario remains largely unchanged. The weaker exchange rate and slightly higher international prices lead to higher inflationary pressure, but these are counteracted by the downward revision to the forecast for oil prices. Given the present situation in the rent negotiations - where most indications are that the rent increases next year will be lower than in previous years - a downward revision is made in the forecast for rents, and thereby for domestic inflation, in 2006. The inflation forecast is also affected by interest rates being expected to be slightly higher than was assumed in the October report.

#### ■■ Risks of higher inflation now assessed to be greater.

Growth prospects for the world economy and the Swedish economy now appear to be slightly less uncertain than was assessed in October. The continuing high oil price and its potential contagion effects are still assessed as a risk factor that could push up inflation and hold down growth. Uncertainty remains regarding the effects of the large deficits in the US budget and current account, and what consequences these might have for the dollar rate and for interest rates. Important domestic risk factors are, as before, productivity growth and increased competition. In addition, there is a risk that the krona, particularly in the short term, will not strengthen as anticipated, despite the fundamental factors still indicating a stronger krona. If the exchange rate does not strengthen as expected, inflation may be higher than anticipated. The Riksbank's overall assessment is that the risks of higher inflation are now greater than the risks of lower inflation.

Table 1. Inflation forecasts in the main scenario. Annual percentage change

	Annual average					12-month rate			
	2004	2005	2006	2007	2008	Dec. 05 Dec. 06 Dec. 07 Dec. 08			
CPI	0.4	0.4 (0.5)	1.4 (1.5)	2.1 (2.1)	2.3	0.8 (1.1) 2.0 (1.7) 2.3 (2.3) 2.4			
UND1X	0.8	0.8 (0.8)	1.2 (1.4)	1.6 (1.6)	2.0	1.2 (1.5) 1.3 (1.2) 1.9 (1.9) 2.0			
UNDINHX	1.6	1.0 (1.0)	1.4 (1.5)	2.3 (2.3)	2.7	1.1 (1.3) 1.7 (1.7) 2.6 (2.6) 2.8			
UNDIMPX	-0.8	0.2 (0.2)	0.7 (0.9)	0.3 (0.2)	0.3	1.3 (1.8) 0.4 (0.1) 0.4 (0.3) 0.3			

Note. The figures in parentheses are the forecasts in the previous Inflation Report. UND1X is CPI inflation excluding household mortgage interest expenditure and the direct effects of changes in indirect taxes and subsidies. UND1NHX refers to prices of mainly domestically-produced goods and services in UND1X. UND1MPX refers to prices of mainly imported goods and services in UND1X.

Sources: Statistics Sweden and the Riksbank.

Table 2. Risk-adjusted inflation forecasts. Annual percentage change

		Annual	average		12-month rate		
	2005	2006	2007	2008	Dec. 06	Dec. 07	Dec. 08
CPI	0.5 (0.5)	1.5 (1.5) 2	2.2 (2.1)	2.4	2.0 (1.7)	2.4 (2.3)	2.5
UND1X	0.8 (0.8)	1.2 (1.4) 1	.7 (1.6)	2.1	1.4 (1.2)	2.0 (1.9)	2.1

Note. The figures in parentheses are the corresponding figures in the previous Inflation Report. The table gives the mean values of the probability distributions for the inflation forecasts in Figures 49 and 50.

Sources: Statistics Sweden and the Riksbank.

Table 3. Key figures.
Per cent and annual percentage change

Key figures	2004	2005	2006	2007	2008
GDP OECD-19	3.1	2.5 (2.4)	2.4 (2.4)	2.5 (2.6)	2.6 (2.6)
CPI OECD-19	2.0	2.4 (2.3)	2.4 (2.1)	2.1 (2.1)	2.1 (2.1)
Crude oil price Brent, USD/barrel, annual aver	age 38	54 (55)	54 (58)	53 (57)	52 (55)
Market growth for Swedish exports	8.2	4.6 (4.6)	5.6 (5.5)	5.7 (5.7)	5.7 (5.7)
Exchange rate, TCW index, annual average	126.0	128.5 (127.6)	128.9 (127.1)	125.4 (124.4)	123.5 (122.7)
Repo rate, implied forward rate,					
annual average	2.1	1.7 (1.7)	2.1 (2.0)	2.8 (2.6)	3.2 (2.9)
GDP	3.7	2.4 (2.3)	3.2 (3.0)	2.5 (2.5)	2.2 (2.2)
Persons in employment*	** -0.5	0.6 (0.4)	1.1 (1.1)	0.6 (0.6)	0.2 (0.2)
Open unemployment.	** 5.9	5.9 (5.9)	5.0 (5.0)	4.6 (4.6)	4.6 (4.6)
Hourly wage in economy as a whole	3.3	3.3 (3.3)	3.6 (3.6)	3.9 (3.9)	4.1 (4.1)
Unit labour costs in business sector*	-1.1	1.0 (1.1)	1.1 (1.1)	1.8 (1.8)	2.1 (2.1)
Public financial saving, percentage of GDP	1.5	1.6 (1.6)	1.1 (1.1)	0.7 (0.7)	1.2 (1.2)

 $<sup>^{\</sup>star}\text{Calendar-adjusted data.} \ ^{\star\star}$  Historical data have been spliced by the Riksbank.

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

# Determinants of inflation

#### The financial markets

Since the October Inflation Report was published, long-term rates have risen in the euro area and in Sweden. The krona has weakened, both in nominal terms and real terms. The implied forward rate that reflects expectations of the repo rate is slightly higher than at the time of the October Inflation Report, mainly in the longer term. Swedish long-term rates are expected to be higher, primarily due to international developments. The krona is still expected to strengthen, but to be weaker than was forecast in October.

#### ■■ Slightly higher repo rate assumption in the forecast.

As in the previous Inflation Report, the forecasts depicted in this Inflation Report are based on the assumption that the reportate will develop in line with implied forward rates. A 15-day average up to 11 November has been used to reduce the effect of temporary fluctuations in the prices in the financial markets. Compared with the average implied forward rates used in the October Inflation Report, the current forward rate is approximately 0.4 percentage points higher at the end of 2008 (see Figure 1). Compared with the October report, forward rates are mainly higher during 2007 and 2008. The upturn in forward rates and bond yields is primarily due to an international upturn in interest rates and partly reflects expectations of tighter monetary policy abroad. It could also be due to interest rates having been unusually depressed for a time and to the start of a gradual normalisation of interest rates.

According to this report, implied forward rates will amount to 2.5 per cent at the end of next year and to around 3.5 per cent at the end of the forecast period. The expectations reported in surveys are roughly in line with implied forward rates (see Figure 1).

#### ■■ Continued interest rate rises in USA.

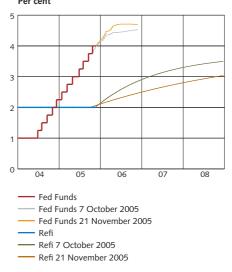
In the United States the Federal Reserve has continued to raise its key rate, which is now at 4 per cent. Expectations of future interest rate raises have been brought forward somewhat (see Figure 4). Pricing in the money market now indicates that a couple more increases can be expected up to the middle of next year. In the euro area, too, the financial markets' view of monetary policy has changed and expectations of coming refi rate increases have been raised and brought forward. It is mainly high CPI outcomes in the United States and in the euro area that have contributed to increased inflation concerns and an expectation of higher key rates.

#### ■■Continued rise in long-term rates.

Bond rates in the euro area have declined from the middle of last year up to September this year. The 10-year bond rate in the United States is at roughly the same level as when the monetary policy tightening

Figure 4. Monetary policy expectations in the euro area and the United States according to implied forward rates and Fed Funds futures.

Per cent

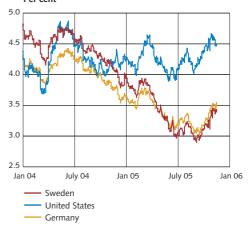


Note. Fed Funds Futures are priced in terms of the average key rate during the respective month.

Source: The Riksbank

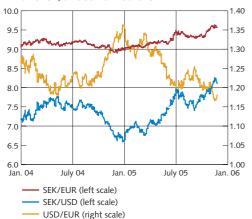
Figure 5. Yields on 10-year government bonds in Sweden, Germany and the United States.

Per cent



Source: The Riksbank.

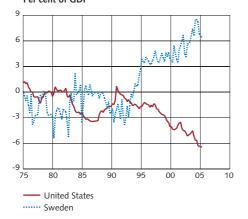
Figure 6. Exchange rate developments for SEK/EUR, SEK/USD and USD/EUR.



Source: The Riksbank.

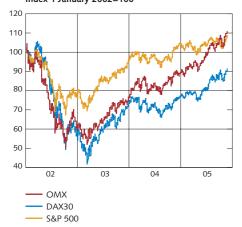
Figure 7. Current account balance for Sweden and the United States.

Per cent of GDP



Source: OECD.

Figure 8. Share price developments in Sweden, the United States and Germany. Index 1 January 2002=100



Sources: Federal Statistical Office, OMX, Standard and Poors, and the Riksbank.

began in June 2004 (see Figure 5). However, since the trough in September, 10-year rates in the euro area have risen by around 0.5 percentage points.

In Sweden, too, bond rates have risen (see Figure 5). Since the lowest observations in September, when the 10-year bond rate in Sweden was below 3 per cent, the rate has risen to around 3.4 per cent. During the autumn, rising international rates have led to an upturn in Swedish bond rates. The October Inflation Report contained a discussion of a number of factors that led to long-term interest rates being unusually depressed for a time, for instance, unusually large demand from pension funds and life insurance companies and the expectations of the implementation of Finansinspektionen's (the Swedish Financial Supervisory Authority) traffic light system.

As before, developments in implied forward rates indicate a gradual upturn in interest rates (see Table 4). During 2008 the key rate is expected to be just over 3 per cent in Sweden and the euro area.

### **■■** Krona expected to strengthen.

The krona has developed more weakly than was anticipated in the previous Inflation Report (see Figure 2). A slightly larger expected interest rate differential in relation to the rest of the world has probably been one of the reasons behind the weaker krona (see Table 4).

It is usually very difficult to foresee short-term fluctuations in the krona. However, there are some factors that indicate the krona will strengthen during the forecast period. A stronger external position as a result of the current account surplus in recent years and the relative growth between Sweden and other countries all indicate this (see Figure 7). According to market pricing, the interest rate differential is expected to decline. However, recent developments justify a downward revision in the forecast for the competitiveness-weighted exchange rate (see Figure 2 and Table 4).

#### **■■** Strong stock market.

In Sweden, companies listed on the stock exchange have reported higher profits in Q3 than expected. This has contributed to continued strong growth in equity prices in Sweden. The OMX index has risen by around 25 points since the beginning of the year. This means that the index has increased by an average of 25 per cent a year since the trough in early 2003 (see Figure 8).

#### ■■ Lending to companies has increased.

It has been observed in earlier Inflation Reports that lending to households has increased significantly. The indebtedness has largely been used to finance housing purchases, while house prices have continued to rise. Last year, lending to companies also began to increase gradually, which was probably the result of companies

wishing to finance rising investment. Lending to companies is still increasing more slowly than lending to households (see Figure 9). In September, lending to households was around 12 per cent higher than during the same month last year, while corporate borrowing was around 8 per cent.

The rate of increase in house prices has not yet begun to slow down. During Q2 this year the annual rate of increase was slightly lower than in Q1, but Statistics Sweden's Real Estate Price Index showed some increase in the growth rate during Q3. According to this index, house prices rose by over 10 per cent on an annual basis during Q3 this year. Given the economic upturn and gradually rising interest rates forecast in the main scenario, the increase in house prices is expected to slow down over the coming period.

#### **■■** Expansionary financial conditions.

Although there has been some increase in nominal rates recently, real interest rates nevertheless remain low (see Figure 10). The krona has weakened recently, both in real and nominal terms. At present, financial conditions can therefore be said to be very expansionary on the whole.

Table 4. Summary of financial forecasts. Annual average

	2004	2005	2006	2007	2008
Key rate acc. implied					
forward rates in Swede	n 2.1	1.7 (1.7)	2.1 (2.0)	2.8 (2.6)	3.2 (2.9)
Key rate acc. implied					
forward rates in EMU	2.0	2.0 (2.0)	2.4 (2.2)	2.9 (2.5)	3.2 (2.7)
Key rate acc. implied					
forward rates in USA	1.3	3.3 (3.2)	4.5 (4.2)	4.5 (4.2)	4.5 (4.2)
10-year rate in Sweden	4.4	3.4 (3.4)	3.7 (3.6)	4.3 (4.1)	4.7 (4.5)
Exchange rate,					
TCW index	126.0	128.5 (127.6)	128.9 (127.1)	125.4 (124.4)	123.5 (122.7)

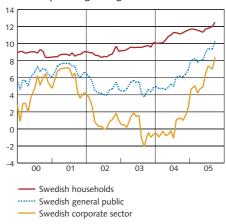
Note. The figures in parentheses are the forecasts in the previous Inflation Report. The implied forward rates are calculated as a 15-day average up to 11 November 2005.

Source: The Riksbank.

#### Revised forecasts since the October Inflation Report

- The implied forward rates are higher, particularly towards the end of the forecast period.
- The krona is expected to be weaker.

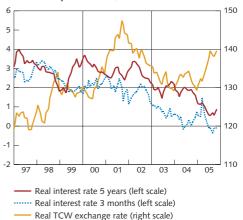
Figure 9. All credit institutions' lending to the general public in Sweden, sector breakdown. Annual percentage change



Note. Owing to a change in the reporting system, some adjustment has been made to the figures from Statistics Sweden.

Sources: Statistics Sweden and the Riksbank.

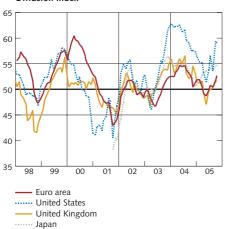
Figure 10. Real interest rate with 5-year and 3-month maturity respectively and real TCW-weighted exchange rate. Per cent respective index, 18 November 1992=100



Note. When calculating real interest rates, inflation expectations have been taken from the National Institute of Economic Research's Consumer 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: The National Institute of Economic Research, Prospera Research AB and the Riksbank.

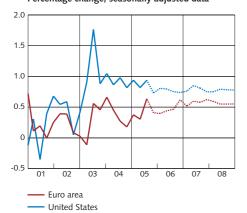
Figure 11. PMI in manufacturing: United States, Japan, United Kingdom and euro area. Diffusion index



Note. 50 denotes unchanged economic activity.

Sources: Institute for Supply Management and NTC Research Ltd.

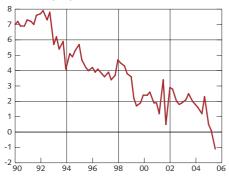
Figure 12. GDP in the euro area and the United States.
Percentage change, seasonally adjusted data



Note. The figure refers to the quarterly percentage change. The broken line represents the Riksbank's forecasts.

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

Figure 13. Households' saving ratio in the United States. Percentage of disposable income, seasonally adjusted data



Source: US Department of Commerce.

# International developments

International economic activity has continued to strengthen in line with the assessment in the October Inflation Report. The economic expansion in the United States, China and the rest of Asia are still characterising global developments. Next year, global economic activity is expected to enter a calmer phase where growth in China and the United States slows down. The high oil prices have long had a surprisingly limited impact on consumer prices. However, the recent inflation trend shows that oil prices have now had slightly greater effects on inflation than was forecast in the October Inflation Report.

#### ■■ International economic activity continuing to strengthen.

International GDP growth was strong last year. After a decline in international economic activity at the beginning of the year, the rapid economic expansion has continued. Recently, it has primarily been manufacturing activity that has shown strong growth. International purchasing managers indices continue to indicate an upturn (see Figure 11).

The strong growth in Asia and continued strong growth in the United States mean that global GDP growth is expected to amount to 3.9 per cent this year. A substantial contribution to world growth will come from countries such as China and India, while growth in the OECD area will be lower. Next year growth is expected to further slow down somewhat in Asia and the United States, while growth in the euro area will be higher (see Figure 12). All in all, world growth is expected to amount to 3.7 per cent next year. In 2007 and 2008, growth is expected to be 3.5 per cent.

#### **■■** Continued strong growth in the United States.

The US economy grew by 3.6 per cent in the first half of this year compared with the corresponding period last year. During Q3 this year, growth in the US economy remained strong, despite hurricanes and the effects of a high oil price. However, there are signs that consumption growth will now slow down somewhat. Retail trade turnover has shown weak development in recent months. Household consumption, which increased by 3.9 per cent in annualised terms during Q3, increased at a slower rate in August and September. Consumption propensity among US households is thus still high and the savings ratio is now negative (see Figure 13).

Households' cutbacks in savings can be linked to the fact that they expect a continued favourable development in employment. In September, 1.6 per cent more persons were employed than in the same month last year. The strong labour market is expected to keep consumption up despite higher interest rates and a continued high oil price. The large profits in the corporate sector and rising prices in

the asset markets are expected to contribute positively to domestic demand. However, growth is expected to slow down somewhat, partly as a result of slightly less expansionary economic policy and partly as a result of investment growth, which was very strong in 2004, becoming slightly subdued this year and over the coming years. Productivity growth, which has already slowed down this year, is expected to slow down further over the coming years. The US economy is expected to grow by 3.6 per cent this year and then by just over 3 per cent a year.

#### **■■** Economic upturn in Japan and rest of Asia continues.

Economic developments in Asia have been in line with the previous assessment. The Japanese economy grew by 2.2 per cent during the first three quarters of 2005, compared with the corresponding period in 2004. Growth in domestic demand is strong, while growth in exports and public sector consumption has slowed down. The labour market situation has improved gradually since 2002 and unemployment is now at the lowest figures since 1998. At the same time, Japanese companies have increased their profitability. Restructuring and reduced costs have led to higher company profits and stronger balance sheets. Investments have also increased slightly this year and the upturn is expected to continue over coming years. This year the Japanese economy will grow by around 2 per cent. Next year, however, growth is expected to be more subdued and during the remainder of the forecast period Japanese GDP growth should amount to around 1.6 per cent.

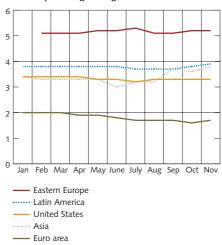
In China, economic growth remains strong. Manufacturing output has increased by around 10 per cent a year since 2003. The economic expansion has continued at the same high rate so far this year and the production increase was almost 10 per cent in Q3 compared with the corresponding quarter last year.

The recovery in the Japanese economy and the strong economic expansion in China are expected to support growth in several smaller Asian countries. During the course of the year, market analysts have gradually revised up their assessment of growth in Asia for 2006 (see Figure 14). However, higher intermediate costs, mainly due to the high oil price, will slow down the growth rate in this region somewhat.

#### **■■** Economic activity in euro area about to improve.

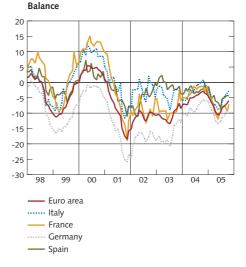
Economic growth in the euro area has been weak for a long period of time. The assessment in the October Inflation Report was that economic activity in this area would gradually improve during Q2 this year. The preliminary calculations of GDP growth for Q3 this year, indicate that this has been the case. Manufacturing activity in the euro area has strengthened. The confidence indicator for manufacturing in the region as a whole has continued to improve and the upturn applies to all of the large member states (see Figure 15). Although

Figure 14. Consensus Forecasts on different occasions: GDP growth 2006.
Annual percentage change



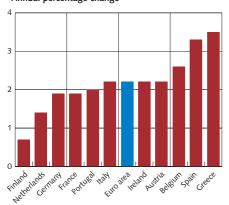
Source: Consensus Economics Inc.

Figure 15. Confidence indicators for the manufacturing industry in Germany, France, Italy, Spain and the euro area.



Source: Directorate General for Economic and Financial Affairs.

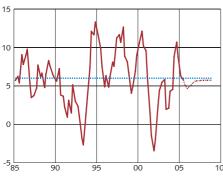
Figure 16. Harmonised inflation in the euro area in 2005.
Annual percentage change



Note. Average for annual harmonised consumer price inflation during the 10 first months of 2005.

Source: Eurostat.

Figure 17. Market growth for Swedish exports. Annual percentage change



Market growth for Swedish exportsHistorical average 1985-2004

Note. Aggregate of real goods imports in the countries that comprise Sweden's export market. The broken red line represents the Riksbank's forecasts.

Sources: National sources and the Riksbank.

surveys of households' expectations indicate increased optimism in most countries, there is uncertainty over when consumption will begin to recover. This applies in particular to Germany, where fiscal policy is expected to become tighter.

Unemployment in the euro area has fallen slightly since last summer and amounted to 8.4 per cent of the labour force in September. Resource utilisation in manufacturing is low and according to business tendency surveys is slightly lower than it was at the end of 2004 and still lower than the historical average since 1985.

The assessment is, as in October, that the growth rate in the euro area will be higher during 2006 than in 2005. Global economic activity is expected to continue strengthening, which will benefit exports in the euro area. Investment activity is expected to increase and as the labour market situation improves, household consumption will increase. This year growth in the euro area is expected to be 1.3 per cent, and at the end of the forecast period it should amount to around 2.3 per cent.

Inflation in the euro area has risen since the beginning of the year and amounted to 2.5 per cent in October. The differences in inflation rates between countries are substantial, however (see Figure 16).

## **■■** Economic activity slows down in the United Kingdom.

GDP growth in the United Kingdom has been slowing down since early 2004. This year GDP is expected to increase by 1.8 per cent. The main slowdown has been in household consumption growth. In recent months, retail trade sales have increased by only one per cent or so on an annual basis and the number of new cars being registered has been declining for a long period of time. Confidence indicators for households are slightly above the historical average, but have weakened in recent months. Over the coming years growth in the British economy is expected to increase once again, amounting to around 2.5 per cent a year during the latter part of the forecast period.

#### ■■ Increase in economic activity in Nordic countries continues.

Retail trade statistics and household surveys indicate so far that growth in consumption will remain strong in the Nordic countries and that optimism among households is at a high level. Households' consumption demand is also expected to grow at a strong rate. In Norway a strong krone and tighter fiscal policy are expected to subdue growth over the coming years. In Finland, manufacturing output has recovered significantly following the labour market conflict earlier this year. Manufacturing companies' assessment of order books is also more optimistic, for instance. The effects of the strike mean that growth in Finland is expected to be lower this year but higher next year, compared with the assessment made in the October

Inflation Report. The upward revision of the growth forecast for next year is also due to the expectation that exports will increase more than was estimated in October.

#### ■■ Swedish export market growth will improve.

Growth in the Swedish export market has been relatively low so far this year (see Figure 17). This is partly due to growth in the euro area having been weak. Swedish exports are still largely to European countries and are thus sensitive to economic developments in the euro area (see Table 6). Recently the export order intake has improved (see the section "Economic developments in Sweden") and as European economic activity strengthens, Swedish market growth is expected to increase. During 2007 and 2008 the Swedish export market is expected to grow in line with the historical average (see Figure 17).

#### ■■ Oil price remains high.

The oil price has declined since the peak levels in mid-August. In October the oil price averaged at just over 58 dollars a barrel, which was slightly lower than the Riksbank had forecast in the October Inflation Report. The oil price has fallen further during November. However, it is still at a high level given that stocks of crude oil are relatively large and that demand for oil has gradually been revised down during the autumn. Forward prices are now slightly lower than at the time of the previous Inflation Report (see Figure 18). Given these factors, the oil price forecast has been revised down for the whole forecast period. The oil price is expected to fall gradually from its present levels and amount to around 50 dollars a barrel at the end of 2008.

#### **■■** Rising inflation.

Underlying inflation has slowed down in the OECD area in recent years (see Figure 19). This is partly due to increased international competition from low-cost countries such as China and India. At the same time, rising output in these countries has contributed to increased demand for oil, which has resulted in a higher oil price. Until the summer, oil prices had had limited impact on total inflation. However, recent developments indicate there has been a change. The impact of the oil price on consumer prices in, for instance, the United States and the euro area has instead been somewhat higher than was previously assumed and total inflation has increased at a relatively rapid rate (see Figure 20).

Like consumer prices, international producer prices have risen as a consequence of the high oil prices. The assessment is that the rate of increase in producer prices will slow down in future when the oil price falls. However, this slowdown will be moderate, as global capacity utilisation is expected to increase (see Figure 21).

Figure 18. Oil price, Brent crude.
USD per barrel

80
70
60
50
40
30
20
97 98 99 00 01 02 03 04 05 06 07 08

— Outcome

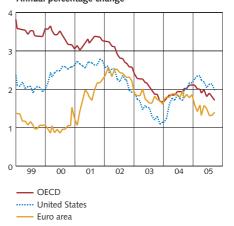
..... Forecast, Inflation Report 2005:4 ..... Forecast, Inflation Report 2005:3

Forward rates, average up to 21 November 2005Forward rates, average up to 7 October 2005

Sources: International Petroleum Exchange and the Riksbank.

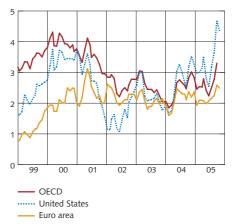
Figure 19. CPI excluding energy and food in the United States, the euro area and the OECD.

Annual percentage change



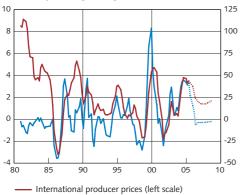
Source: OECD.

Figure 20. CPI in the United States, the euro area and the OECD.



Sources: Bureau of Labor Statistics, Eurostat and the OECD.

Figure 21. International producer prices of manufactured products and oil and metal price index. Annual percentage change



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

Oil and metal price index (right scale)

Sources: OECD and the Riksbank.

Table 5. International conditions. Annual percentage change

GDP	2004	2005	2006	2007	2008
United States	4.2	3.6 (3.6)	3.2 (3.3)	3.2 (3.2)	3.1 (3.1)
Germany	1.6	1.0 (0.8)	1.4 (1.3)	2.0 (2.0)	2.3 (2.3)
United Kingdom	3.2	1.8 (1.9)	2.1 (2.1)	2.4 (2.4)	2.5 (2.5)
Denmark	2.4	2.0 (1.8)	2.1 (2.1)	2.0 (2.0)	2.0 (2.0)
Finland	3.3	1.8 (2.0)	2.7 (2.2)	2.3 (2.3)	2.3 (2.5)
Norway	3.4	3.5 (3.5)	2.8 (2.8)	2.5 (2.5)	2.5 (2.5)
Euro 12	2.0	1.3 (1.2)	1.8 (1.7)	2.2 (2.2)	2.3 (2.4)
TCW-weighted	2.6	1.8 (1.8)	2.1 (2.0)	2.3 (2.3)	2.4 (2.4)
OECD -19	3.1	2.5 (2.4)	2.4 (2.4)	2.5 (2.6)	2.6 (2.6)
CPI	2004	2005	2006	2007	2008
United States	2.7	3.4 (3.2)	3.1 (2.7)	2.5 (2.5)	2.5 (2.5)
Germany	1.8	2.0 (2.0)	2.2 (2.0)	1.7 (1.5)	1.7 (1.5)
United Kingdom	1.3	2.1 (2.1)	2.0 (2.1)	2.2 (2.2)	2.3 (2.3)
Denmark	0.9	1.7 (1.7)	2.0 (2.0)	1.8 (1.8)	1.8 (1.8)
Finland	0.1	0.9 (1.2)	1.6 (1.7)	1.7 (1.7)	1.7 (1.4)
Norway	0.5	1.5 (1.5)	2.1 (2.1)	2.5 (2.5)	2.5 (2.5)
Euro 12	2.1	2.2 (2.1)	2.4 (2.0)	2.0 (1.8)	2.0 (1.8)
TCW-weighted	1.6	2.0 (2.0)	2.2 (2.0)	2.0 (1.9)	2.0 (1.9)
OECD -19	2.0	2.4 (2.3)	2.4 (2.1)	2.1 (2.1)	2.1 (2.1)
	2004	2005	2006	2007	2008
GDP World	5.0	3.9 (3.9)	3.7 (3.7)	3.5 (3.5)	3.5 (3.5)
Market growth for					
Swedish exports	8.2	4.6 (4.6)	5.6 (5.5)	5.7 (5.7)	5.7 (5.7)
Global PPI	2.4	3.4 (3.1)	2.2 (2.0)	1.4 (1.4)	1.5 (1.5)
Crude oil price, annual average					
(USD/barrel Brent Blend)	38	54 (55)	54 (58)	53 (57)	52 (55)

Note. The figures in parentheses are the forecasts in the previous Inflation Report. CPI refers to HICP for Germany, the United Kingdom, Denmark, Finland and the euro area. 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. Market growth for Swedish exports refers to growth in imports of goods for around 70 per cent of the countries that are recipients of Swedish exports. The forecast is a weighted average of each country's share of Swedish goods exports 2003-2004. 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.

Sources: International Petroleum Exchange, OECD and the Riksbank.

Table 6. Contribution to Swedish export market growth. Per cent

	Weight	2004	2005	2006	2007	2008
Nordic countries	20.4	2.5	1.4 (1.5)	1.5 (1.5)	1.5 (1.5)	1.5 (1.5)
UK	7.7	0.7	0.3 (0.3)	0.5 (0.5)	0.5 (0.5)	0.5 (0.5)
Euro 12	27.5	2.8	1.6 (1.4)	1.9 (1.7)	1.9 (1.9)	1.9 (1.9)
United States	11.2	1.8	1.0 (1.2)	1.3 (1.4)	1.4 (1.4)	1.4 (1.4)
Asia	3.2	0.4	0.2 (0.2)	0.4 (0.4)	0.4 (0.4)	0.4 (0.4)
Total	70.1	8.2	4.6 (4.6)	5.6 (5.5)	5.7 (5.7)	5.7 (5.7)

Note. The weights refer to shares of Swedish goods exports 2003-2004. The figures in parentheses are the forecasts in the previous Inflation Report.

Sources: OECD and the Riksbank.

# Revised forecasts since the October Inflation Report

- The oil price forecast has been revised down by around 4 dollars a barrel during the forecast period.
- The forecasts for international consumer prices (OECD-19) and global producer prices are being revised upwards this year and next year.

# Economic developments in Sweden

The latest data indicate that economic activity on the whole is continuing to strengthen in line with the forecast in the previous Inflation Report. However, indicators of new orders and foreign trade suggest that growth in manufacturing activity is stronger than expected. The forecast for GDP growth has thus been revised up slightly. In addition it seems that employment, too, will be somewhat higher than anticipated. Like in the previous Inflation Report, strong domestic demand coupled with a more modest rate of productivity growth is expected to result in a rise in labour demand in the period ahead. Resource utilisation is forecast to pick up mainly at the start of the forecast period, but subsequently to rise at a slower pace.

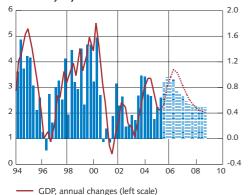
#### ■■ Somewhat stronger economic upswing.

Output in the economy increased rapidly last year but slowed around the turn of the year. The developments since then suggest that growth has picked up again (see Figure 22). High growth in productivity has underpinned the last two years' relatively firm GDP growth and low inflation. A productivity upswing enables companies to maintain production levels with a smaller contribution from labour than before. It also entails a slower rise in companies' costs. The high productivity, which has depressed costs in the corporate sector, and stiffer competition have restrained price increases in the economy.

According to the latest quarterly business tendency survey of the National Institute of Economic Research (NIER), economic prospects have improved in the third quarter and forward-looking indicators are signalling optimism ahead of the fourth quarter. The positive outlook applies to both the manufacturing and construction industries as well as to the private services industry. The supply of labour is still deemed to be good even though some industries such as construction are beginning to report increasing labour shortages. A rise in growth is also supported by the time-series and indicator models used by the Riksbank to try to predict, with the aid of a large number of indicators, GDP growth in the short term. Compared with the second quarter, the indicators and models point to a pick-up in the growth rate in the third and fourth quarters. <sup>1</sup>

New data releases suggest that GDP growth will turn out somewhat stronger at the end of this year and in early 2006, compared with the October Inflation Report. The forecast thereafter is broadly unchanged. The forecasts are based on the assumption that the repo rate evolves in line with implied forward interest rates, which point to higher interest rates on average and therefore to somewhat less expansionary monetary policy compared with the previous Report. But it is chiefly in the latter part of the forecast period that interest

Figure 22. GDP. Quarterly and annual changes in per cent, seasonally adjusted data



GDP, quarterly changes (right scale)

Note. The broken line and dashed columns represent

the Riksbank's forecasts.

Sources: Statistics Sweden and the Riksbank.

<sup>1</sup> For a discussion of the Riksbank's indicator models see the box "GDP indicators" in Inflation Report 2005:3.

rate levels, according to market prices, are anticipated to be higher. At the same time, the Riksbank expects the exchange rate to be weaker, compared with the previous Report, which in turn stimulates exports and therefore counters the effects of less expansionary monetary policy. Overall, the economy is forecast to grow at a comparatively firm rate during the forecast period. Growth in GDP is expected to be 2.4 per cent this year, thereafter rising to 3.2 per cent in 2006. In the following years, growth is estimated to slacken somewhat, to stand at 2.2 per cent in 2008 (see Table 7). Resource utilisation is thus projected to rise initially at a relatively fast rate.

Table 7. GDP by expenditure. Annual percentage change

2004	2005	2006	2007	2008
1.8	2.2 (2.2)	2.9 (2.7)	2.9 (2.9)	2.5 (2.5)
0.1	0.5 (0.5)	1.8 (1.8)	0.7 (0.7)	0.5 (0.5)
5.1	7.3 (7.3)	5.5 (5.5)	4.8 (4.8)	3.0 (3.0)
-0.3	-0.1 (-0.2)	0.1 (0.0)	0.0 (0.0)	0.0 (0.0)
10.8	3.7 (3.6)	5.7 (5.3)	5.7 (5.7)	5.6 (5.6)
6.4	4.0 (4.0)	6.0 (5.7)	6.5 (6.5)	6.0 (6.0)
3.7	2.4 (2.3)	3.2 (3.0)	2.5 (2.5)	2.2 (2.2)
1.9	2.6 (2.6)	3.0 (3.0)	2.6 (2.6)	2.1 (2.1)
2.3	0.2 (0.2)	0.4 (0.3)	0.2 (0.1)	0.3 (0.3)
	1.8 0.1 5.1 -0.3 10.8 6.4 3.7	1.8 2.2 (2.2) 0.1 0.5 (0.5) 5.1 7.3 (7.3) -0.3 -0.1 (-0.2) 10.8 3.7 (3.6) 6.4 4.0 (4.0) 3.7 2.4 (2.3) 1.9 2.6 (2.6)	1.8 2.2 (2.2) 2.9 (2.7) 0.1 0.5 (0.5) 1.8 (1.8) 5.1 7.3 (7.3) 5.5 (5.5) -0.3 -0.1 (-0.2) 0.1 (0.0) 10.8 3.7 (3.6) 5.7 (5.3) 6.4 4.0 (4.0) 6.0 (5.7) 3.7 2.4 (2.3) 3.2 (3.0) 1.9 2.6 (2.6) 3.0 (3.0)	1.8     2.2 (2.2)     2.9 (2.7)     2.9 (2.9)       0.1     0.5 (0.5)     1.8 (1.8)     0.7 (0.7)       5.1     7.3 (7.3)     5.5 (5.5)     4.8 (4.8)       -0.3     -0.1 (-0.2)     0.1 (0.0)     0.0 (0.0)       10.8     3.7 (3.6)     5.7 (5.3)     5.7 (5.7)       6.4     4.0 (4.0)     6.0 (5.7)     6.5 (6.5)       3.7     2.4 (2.3)     3.2 (3.0)     2.5 (2.5)       1.9     2.6 (2.6)     3.0 (3.0)     2.6 (2.6)

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

Sources: Statistics Sweden and the Riksbank.

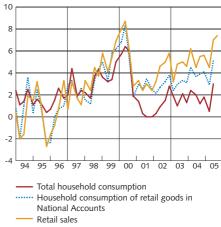
#### **■■** Continued firm consumption growth.

In the second quarter this year, consumption increased by 1.1 per cent on the previous quarter. Data releases during the autumn, including retail sales figures and the NIER's consumer survey, suggest that the high growth in consumption continued during the third quarter.

For several years now, turnover in the retail sector according to the retail sales index has increased much faster than households' goods consumption according to the National Accounts (see Figure 23). This discrepancy seems to be explained to some degree by differences in product composition between the two measures. For instance, households' consumption of services in recent years has risen much slower than their goods consumption. However, in the second quarter this year services consumption picked up again. Some of the retail sales data also comprise sales to companies. Moreover, the differences reflect the fact that various methods are used to calculate the changes at fixed prices. <sup>2</sup>

The Riksbank expects household consumption this year to rise by fully 2 per cent. Higher employment and real wage growth are anticipated to lead to a pick-up in the rate of increase in household incomes and thereby also in consumption in the coming years (see

Figure 23. Retail sales and household consumption.
Annual percentage change

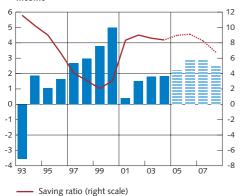


Note. Non-calendar-adjusted data. Sources: NIER and Statistics Sweden.

<sup>2</sup> The retail sales index at fixed prices is calculated as an index with a fixed base year (2000), while the fixed price calculations in the National Accounts are performed with a chain-weighted index, i.e. with a rolling base year. In practice, that means that the retail sales index has increased faster than a corresponding chain-weighted index since groups of goods with falling relative prices, which often show high volume growth, have a larger weight in an index with a fixed base year.

Figure 24. Households' consumption and saving ratio.

Annual percentage change and per cent of disposable income



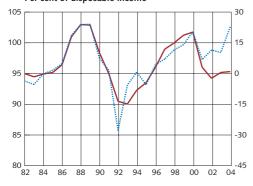
Note. The broken line and dashed columns represent the Riksbank's forecasts.

Sources: Statistics Sweden and the Riksbank.

Consumption (left scale)

Figure 25. Household consumption and change in the value of real wealth.

Per cent of disposable income

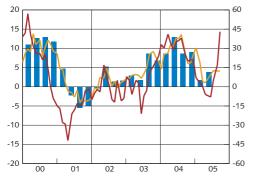


Consumption ratio (left scale)Value change (right scale)

Note. Real wealth refers to households' holdings of houses and tenant-owned apartments. Value changes in the housing stock are calculated as stock changes in absolute figures minus transaction changes.

Sources: Statistics Sweden and the Riksbank.

Figure 26. Goods exports according to National Accounts and monthly data and new export orders. Annual percentage change and balance



New export orders (right scale)

Goods exports, monthly data (left scale)

Goods exports, National Accounts (left scale)

Note. The monthly data for goods exports are expressed as a three-month moving average. The export price index has been used to deflate monthly exports of goods.

Sources: NIER, Statistics Sweden and the Riksbank

Figure 24). Moreover, expansionary fiscal policy is forecast to boost household disposable incomes, primarily in 2006. Towards the end of the forecast period, higher interest rates and a less rapid rate of increase in incomes, partly due to greater fiscal restraint, are expected to dampen consumption growth slightly. Compared with the previous Inflation Report, the forecast for household consumption next year has been raised somewhat owing to more favourable growth in household incomes.

#### ■■ Uncertain relationship between house prices and consumption.

Historically, there has been a clear relationship between households' consumption ratio (consumption in relation to disposable incomes) and developments in their wealth. In particular, growth in the value of households' real wealth (houses and tenant-owned apartments) has covaried with the consumption ratio (see Figure 25). One possible explanation is that housing prices have boosted household wealth, creating scope for households to raise their consumption ratio.

According to this view, developments in house prices in the period ahead will be important for the consumption forecast.

At the same time, the relationship between household real wealth and the consumption ratio has been weaker during this decade than before. One possible explanation is that the sharp equity market decline that began in 2000 has caused households to have high saving in financial assets in order to restore their wealth and that this has countered the positive effect on consumption of rising house prices. The weak labour market has probably also created uncertainty among households over future incomes and thus contributed to the low consumption ratio. A continued rise in equity prices and an improvement in the labour market are expected to cause households to scale back their saving, thus resulting in an increase in the consumption ratio. House price developments and their effects on consumption are a source of uncertainty, though.

#### ■■ Marked improvement in new export orders.

Export growth was dampened sharply around the turn of the year, owing to the fall-off in international economic activity. However, there are signs that growth has picked up recently. Monthly data for goods exports in the third quarter are one such indication (see Figure 26). The NIER's latest quarterly business tendency survey points to a marked improvement in new export orders in manufacturing. Moreover, the krona exchange rate has been weaker than anticipated, which is favourable for Swedish exports. The Swedish export market is forecast to grow at a relatively firm rate in the next few years and this is expected to result in relatively robust growth in Swedish exports. Compared with the forecast in the previous Inflation Report,

<sup>3</sup> For a more detailed discussion, see the box "Households' consumption, debt and saving" in Inflation Report 2005:3.

the upswing in exports is projected to be somewhat stronger, above all in the near term.

## ■■ Import growth to pick up.

As demand growth picks up, import growth is also expected to rise. Gradually slacker growth in investment will slightly hold back the increase in imports, though. Monthly data for goods imports suggest that developments in the third quarter were roughly in line with the October forecast. Because exports have a sizeable import content, the somewhat stronger export growth is estimated to result in slightly higher imports next year compared with the forecast in the previous Report.

#### ■■ Strong but gradually weaker investment growth.

The investment upswing that began last year has continued in 2005. Growth in business investment has been comparatively firm and residential investment has increased rapidly. Public sector investment, on the other hand, has risen slowly (see Figure 27).

Low interest rates coupled with strong balance sheets and good profitability in the corporate sector suggest that investment will continue to pick up at a fairly fast pace for some time yet. Public sector investment is expected to begin to increase more markedly again after the recent years' weakness, due in part to greater investment scope for local governments and to central government investment in infrastructure. However, as interest rates rise and companies become more satisfied with the level of their output capacity, the rate of increase in gross fixed capital formation is anticipated to be dampened.

#### **■■** Expansionary fiscal policy.

In the previous Inflation Report, the forecast for general government net lending in 2006 was revised down somewhat on account of the proposals in the Government's Budget Bill. General government net lending as a share of GDP is estimated to decrease in the period ahead. Towards the end of the forecast period the public finances are assumed to begin to strengthen again as a result of measures taken to meet the target of a surplus of 2 per cent in the general government finances over the business cycle. A detailed analysis of the public finances is given in the box "The stance of fiscal policy".

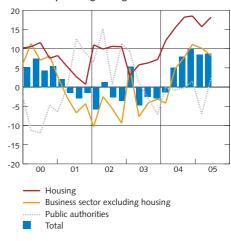
The fiscal policy measures presented in the autumn budget are expected to mean that public consumption will increase mainly in 2006, with relatively small effects thereafter. The Riksbank's assessment is that local governments, due to their favourable finances, will boost their consumption comparatively strongly in 2006.

#### **Employment somewhat stronger than anticipated.**

The number of employed to date this year has risen by a little less

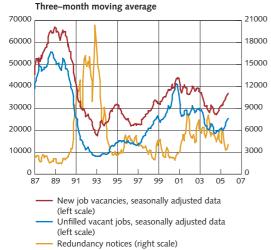
Figure 27. Gross fixed capital formation: total and broken down by sector.

Annual percentage change



Sources: Statistics Sweden and the Riksbank

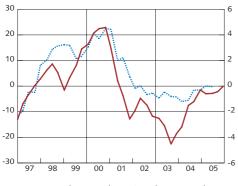
Figure 28. New and unfilled vacant jobs with a duration of more than 10 days and redundancy notices.



Source: National Labour Market Board.

Figure 29. Hiring plans and number of employed in the business sector.

Balance and annual percentage change

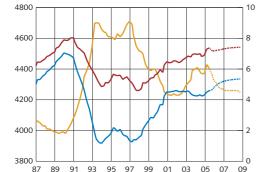


 Hiring plans according to NIER business tendency survey (left scale)

Number of employed according to National Accounts (right scale)

Note. Hiring plans aggregated by the Riksbank. Sources: NIER, Statistics Sweden and the Riksbank.

Figure 30. Labour force, number of employed and open unemployment.
1000s of persons and per cent of the labour force, seasonally adjusted data



Labour force (left scale)

Employed (left scale)

Open unemployment (right scale)

Note. The historical series have been spliced by the Riksbank. The broken lines represent the Riksbank's forecasts.

Sources: Statistics Sweden and the Riksbank

than 0.5 per cent compared with the corresponding period last year. <sup>4</sup> That was somewhat more than forecast in the previous Inflation Report and therefore has prompted a slight upward revision of the employment forecast for the current year (see Table 8).

Table 8. Labour market forecast. Annual percentage change

	2004	2005	2006	2007	2008
Number of hours worked*	-0.3	0.6 (0.6)	1.6 (1.4)	0.7 (0.7)	0.2 (0.2)
Average hours worked by the employed*	-0.3	0.1 (0.1)	0.5 (0.3)	0.1 (0.1)	0.0 (0.0)
Number of employed**	-0.5	0.6 (0.4)	1.1 (1.1)	0.6 (0.6)	0.2 (0.2)
Labour force**	0.2	0.6 (0.4)	0.1 (0.1)	0.3 (0.3)	0.1 (0.1)
Open unemployment, per cent of labour force**	5.9	5.9 (5.9)	5.0 (5.0)	4.6 (4.6)	4.6 (4.6)
Labour market policy programmes, per cent of labour force**	2.4	2.7 (2.7)	3.6 (3.6)	3.3 (3.3)	3.0 (3.0)

\*Calendar-adjusted data. \*\* Historical data have been spliced by the Riksbank.

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

Sources: Statistics Sweden and the Riksbank

Developments in the number of new job vacancies and redundancy notices also point to an upturn in the labour market (see Figure 28). So far this year almost 8,000 fewer people have received notice of redundancy, compared with the same period last year. In addition, the NIER's latest quarterly business tendency survey showed continued positive hiring plans in parts of the private services industry, particularly in the category 'other business services'. In the construction sector, almost one-third of the surveyed companies reported a shortage of labour.

Domestic demand is expected to increase comparatively quickly at the start of the forecast period. At the same time, productivity growth is estimated to be more subdued in comparison with the recent years' strong performance. That may contribute to higher demand for labour. Taken together, the somewhat stronger demand in relation to the previous Inflation Report is anticipated to result in slightly higher growth in the number of hours worked in 2006 (see Table 8). The fastest rise in hours worked is expected to be in the construction sector and the private services industry. In the public sector, too, hours worked are forecast to increase strongly in 2006.

The number of people in the labour force to date this year has increased by almost 0.5 per cent on the same period last year. The latest quarterly outcome was somewhat stronger than estimated in the October Report. The forecast for the current year has therefore been revised up slightly (see Table 8). The supply of labour normally increases when economic conditions improve and employment rises.

<sup>4</sup> However, this outcome is from the new EU-harmonised Labour Force Surveys (LFS), which differ from the previous surveys. That means that the data are not directly comparable over time. The new LFS began to be published in April this year. Estimates of changes compared with dates prior to April 2005 are based on a splice, performed by the Riksbank, of the new LFS series with the aid of the changeover effects, calculated by Statistics Sweden.

As expected, open unemployment fell in September and October. The recorded unemployment rate was unusually high during the summer months. This was due in some measure to the change in the LFS. <sup>5</sup> Since employment will rise and the labour force not grow by as much, open unemployment will fall during the forecast period (see Figure 30). Developments in total unemployment will not be as positive, however, owing to a higher number of participants in labour market policy programmes in 2006.

#### ■■ Slight dampening of productivity growth.

Growth in business sector productivity dropped slightly in the first half of the year (see Figure 31). This development mainly reflects the slowdown in manufacturing, but is also probably due to the fact that the scope for companies to continue to boost output without adding to their workforces is beginning to become more limited.

A slight recovery in manufacturing activity in the short term is expected to be manifested in somewhat more robust business sector productivity growth in the coming year. The composition of demand in the period ahead will shift towards domestically-oriented sectors, including services industries, where productivity and productivity gains generally are lower. All in all, productivity growth is forecast to be dampened by both cyclical factors and composition effects during the latter part of the forecast period.

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

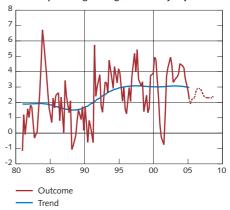
In order to make an overall assessment of resource utilisation in the whole economy, several different factors have to be aggregated; e.g. GDP growth in relation to potential growth, i.e. econometric estimates of total resource utilisation in the economy, the output gap; as well as survey data regarding companies' views on capacity utilisation and labour shortages.

Capacity utilisation in manufacturing was relatively high around the turn of the year according to both the NIER's and Statistics Sweden's surveys (see Figure 32). The high resource utilisation did not reflect a shortage of labour, though, but rather utilisation of plant and machinery. However, the sharp upswing in manufacturing investment has been accompanied by a slight drop in capacity utilisation during the year.

Neither do services industries seem to perceive a general scarcity of labour even though some sub-sectors have begun to report increasing labour shortages, e.g. in the category 'other business services' and computer companies (see Figure 33). Just over one-third of construction firms reported a shortage of labour, according to the NIER's latest quarterly business tendency survey. The picture of moderate resource utilisation at present is also supported by different estimates of the output gap (see Figure 34).

Figure 31. Actual and trend productivity growth in the business sector.

Annual percentage change, seasonally adjusted data

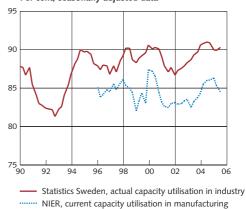


Note. The trend has been estimated using the Hodrick-Prescott filter. The broken line represents the Riksbank's forecast.

Sources: Statistics Sweden and the Riksbank.

Figure 32. Capacity utilisation in industry according to Statistics Sweden and the NIER.

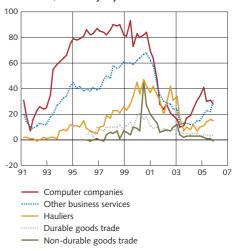
Per cent, seasonally adjusted data



Sources: NIER and Statistics Sweden.

Figure 33. Proportion of firms reporting a shortage of labour.

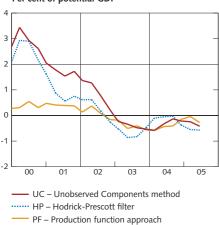
Per cent, seasonally adjusted data



Source: NIER.

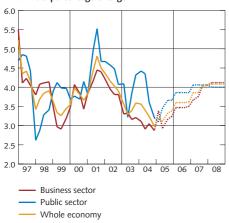
<sup>5</sup> In the new LFS the definition of job-seeker has been changed, which affects the recorded unemployment rate especially during the summer months.

Figure 34. Econometric estimates of the output gap.
Per cent of potential GDP



Source: The Riksbank.

Figure 35. Hourly wages. Annual percentage change



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

Sources: National Mediation Office and the Riksbank.

Compared with the October Report, the forecast for GDP growth has been revised up slightly and the supply of labour is forecast to increase at a somewhat faster rate. The Riksbank's view of resource slack has not changed significantly. Aggregate demand is expected to pick up relatively quickly next year but the upswing will gradually be dampened somewhat, partly owing to less expansionary economic policy. Resource utilisation will thus continue to rise but at a slower pace.

#### ■■ Rate of wage increases to rise slowly.

The rate of wage increases is showing no signs of picking up. To date this year, wages in the business sector have risen by around 3 per cent on the corresponding period last year according to preliminary estimates (see Figure 35). Most sectors are reporting wage increases either equivalent to or lower than in 2004. The exceptions are the construction sector and trade, hotels and restaurants, which have seen wage rises of around 3.5 per cent so far this year. In the public sector, wages have only increased by some 1.8 per cent. However, that partly reflects the fact that wage increases for the period April-August have not yet been paid in all local governments. Large upward revisions are thus to be expected in the public sector.

A somewhat improved labour market situation due to stronger economic activity is expected to result in a gradual pick-up in the rate of wage increases throughout the forecast period. Even though individual sectors may have difficulty finding labour with specific skills, most companies are reporting that the supply of labour is good. Consequently, the rate of wage increases is not anticipated to rise sharply. The healthy financial position of local governments in combination with an increased shortage of labour may contribute to a higher rate of wage increases in the public sector. At the end of the forecast period, wage growth in the whole economy is expected to be just over 4 per cent (see Figure 35).

Table 9. Wages and unit labour costs in the business sector. Annual percentage change, calendar-adjusted data

-	2004	2005	2006	2007	2008
Hourly wage, NMO	3.0	3.2 (3.3)	3.5 (3.5)	3.9 (3.9)	4.1 (4.1)
Hourly wage, NA	2.7	3.7 (3.7)	3.8 (3.8)	4.2 (4.2)	4.4 (4.4)
Other wage costs, contribution	0.8	-0.3 (-0.3)	0.0 (0.0)	0.1 (0.1)	0.1 (0.1)
Labour costs, NA	3.6	3.4 (3.4)	3.8 (3.8)	4.3 (4.3)	4.5 (4.5)
Productivity	4.7	2.3 (2.3)	2.7 (2.7)	2.5 (2.5)	2.3 (2.3)
Unit labour costs	-1.1	1.0 (1.1)	1.1 (1.1)	1.8 (1.8)	2.1 (2.1)

Note. NMO is the National Mediation Office's short-term wage statistics and NA is the National Accounts. Productivity has been calculated on the basis of employee's hours worked. The figures in parentheses are the forecasts in the previous Inflation Report.

Sources: National Mediation Office, Statistics Sweden and the Riksbank.

#### **■■** Rising cost pressures.

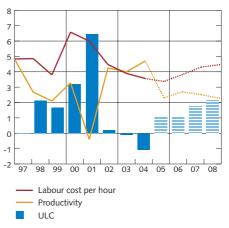
A combination of high productivity growth and slowly rising labour costs meant that unit labour costs in the business sector last year fell by around 1.1 per cent. During the first half of this year, productivity

growth has been dampened and it is also expected to be considerably lower in the period ahead than during 2002-2004 (see Figure 36). Coupled with higher wage increases and positive, albeit limited, contributions from other wage costs, cost pressures will therefore rise in the coming years. At the end of the forecast period, unit labour costs in the business sector are forecast to be increasing by fully 2 per cent (see Table 9).

#### Revised forecasts compared with the October Inflation Report

- The forecast for growth in exports in the short term has been revised up as a result of strong new statistics and a weaker exchange rate.
- The forecast for household consumption expenditure in 2006 has been revised up marginally, as has the forecast for growth in disposable incomes.
- The GDP forecast has been revised up somewhat for 2005 and 2006 because new data are pointing to a faster rise in manufacturing activity than previously estimated.
- Somewhat stronger growth prospects and higher outcomes have prompted a marginal upward revision in the forecast for employment and the number of hours worked. In addition, the forecast for the labour supply has been revised up owing to stronger outcomes than anticipated, which means that the forecast for unemployment is unchanged.

Figure 36. Unit labour costs in the business sector.
Annual percentage change, calendar-adjusted data



Note. The broken lines and the dashed columns represent the Riksbank's forecasts.

Sources: National Mediation Office, Statistics Sweden and the Riksbank

Figure 37. Actual CPI inflation and households' and companies' expectations of inflation one year ahead.

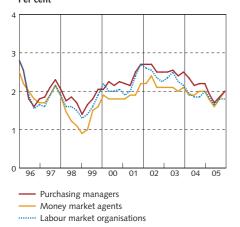
Annual percentage change



Note. The curves have been shifted ahead 12 months to coincide with the points in time to which the expectations refer. 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: NIER and Statistics Sweden.

Figure 38. 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 inflation target and the tolerance limits for the annual change in the CPI.

Source: Prospera Research AB.

# Inflation expectations

Companies' and households' expectations regarding price developments can affect actual inflation because they are a starting point for price and wage formation. They are therefore a significant element for the Riksbank to factor into its analysis. The expectations in turn are influenced by various factors such as the Riksbank's signalling and the outlook for both the economy as a whole and for key submarkets, e.g. the labour market. The current inflation rate also plays a certain role.

According to the National Institute of Economic Research's (NIER) latest measurement, households' expectations regarding the rate of increase in consumer prices one year ahead are anchored at the same level as in the previous Inflation Report, 1.6 per cent.

The inflation expectations of companies have risen slightly since July, according to the NIER. In July, expectations were 0.8 per cent one year ahead while in October they had risen to 1.1 per cent (see Figure 37).

Prospera's survey of inflation expectations, published in mid-November, points to marginally higher inflation expectations than in the previous survey in October (see Figure 38 and Table 10).

Table 10. Inflation expectations according to Prospera's survey in November 2005, unless otherwise specified.

Per cent, average

Expected inflation rate in	1 year	2 years	5 years
Money market agents	1.6 (1.3)	2.0 (1.8)	2.0 (1.9)
Employer organisations	1.6 (1.6)	1.8 (1.9)	2.1 (2.1)
Employee organisations	1.5 (1.4)	1.8 (1.7)	2.0 (1.9)
Purchasing managers, trade	1.7 (1.6)	1.9 (1.7)	2.1 (1.8)
Purchasing managers, manufacturing	1.9 (1.8)	2.1 (2.0)	2.2 (2.1)
Households (Consumer Survey) in October (September)	1.6 (1.6)		
Companies (Business Tendency Survey) in October (July)	1.1 (0.8)		

Sources: NIER and Prospera Research AB.

# The stance of fiscal policy

■his box analyses the fulfilment of the Government's budget policy targets during the period 1997-2007. Also, the different indicators used by the Riksbank, the National Institute of Economic Research and the Ministry of Finance to measure the stance of fiscal policy are compared. With the aid of these, we arrive at an estimate for the fiscal stance in recent years and over the forecast period. Overall, fiscal policy is deemed to have been highly expansionary in 2002, contractionary in 2004, while the stance in 2003 is more difficult to judge. In 2006, it is expected to be expansionary after having been neutral in 2005. On the whole, the different budget policy targets can be considered to have been met to date. However, the accumulated effect of the stimulatory measures implemented in the central government budget in recent years, coupled with the additional steps announced in the autumn Budget Bill, means that in the absence of budget consolidation measures the surplus target is not expected to be fulfilled from 2006 and onwards.

## The budget policy situation

Fiscal policy has been governed for some time now by three medium-term targets for budget policy. In 1997, the Riksdag (the Swedish parliament) decided to introduce a surplus target for the general government sector, with effect from 2000. The target was that general government net lending should be 2 per cent on average over a business cycle. The target was introduced step by step during a transition period by setting up annual surplus targets. For 1997, it was decided that the deficit in the government finances was not to exceed 3 per cent of GDP. For 1998, the aim was to achieve a balanced budget. These targets were to be attained irrespective of the economic situation. For 1999 and 2000, the targets were a surplus of 0.5 and 1.5 per cent of GDP, respectively.6

The principal aim of the surplus target, as it is applied and defined by the Government today, is to strengthen, via lower government debt, the public sector's position up to around 2015 ahead of the strains that will be placed on the government finances thereafter by demographic factors. A budget surplus in normal cyclical conditions also lessens the risk of incurring a substantial deficit during a protracted economic slowdown. According to one of the Maastricht criteria, a deficit in the government finances must not exceed 3 per cent of GDP.

1997 also saw the introduction of an expenditure ceiling for central government spending, with the overall objective of supporting the surplus target. The expenditure to which the target applies - called the expenditure subject to the ceiling - comprises all central government expenditure, excluding interest on the government debt, and expenditure related to the old-age pension system. The expenditure ceiling for an individual year, which normally is established three years in advance, prevents temporary rises in revenue from being used to finance increased spending. It also contributes to preventing a trend rise in government expenditure as a share of GDP and helps to ensure that consolidation measures are implemented if expenditure risks exceeding the ceiling.

To further bolster the surplus target, a balanced-budget requirement was brought in for local governments; if a local government is running a deficit one year the local government has to re-balance its finances within two years.

The adoption of budget policy targets has fostered long-term sustainability in the government finances and thereby also has boosted confidence in economic policy as a whole; the degree of discipline in fiscal policy can influence the conditions for monetary policy over and above the more direct effects that fiscal policy has on, for instance, aggregate demand and inflation.<sup>7</sup> Accordingly, the Riksbank has

See Stabiliseringspolitik i valutaunionen (Stabilisation policy in the monetary union) (SOU 2002:16), pp. 137-138.

<sup>7</sup> See the box "The significance of fiscal policy for monetary policy" in Inflation Report 2004:4 for a more detailed discussion of this aspect.

good reason to regularly monitor developments in the government finances and the fulfilment of the budget targets.

The expenditure ceiling

The expenditure subject to the ceiling has been below the ceiling every year since it was adopted in 1997 (see Table B1). Nonetheless, the Riksbank's view is that the expenditure ceiling system has not been applied fully according to the Budget Act's intentions. The difference between the expenditure subject to the ceiling and the expenditure ceiling - the budgeting margin - is supposed to be a buffer both against uncertainty in economic developments and against factors that may cause unforeseen increases in expenditure, such as increased sick leave. The budgeting margin has been very small, with the exception of 1997. That is because it has been used to increase spending. The expenditure ceiling has also been circumvented by giving new benefits in the form of tax reductions, e.g. a tax reduction for companies supplying their staff with a PC (SEK 2.4 billion), reduced social security contributions for small companies (SEK 1.2 billion), increased central government support to the local government sector by crediting the local government's tax accounts (SEK 9 billion) and employment subsidies to companies that hire long-term unemployed (SEK 3.8 billion).8 These procedures risk undermining the purpose of the expenditure ceiling.

The Riksbank's assessment is that the expenditure ceiling will be met in the next

couple of years as well, although the budgeting margin is expected to remain small.

Discretionary fiscal policy during the forecast period

The Government has announced measures that will weaken the government finances by SEK 27 billion in 2006 and SEK 5 billion in 2007. The Riksbank's forecast is based on an assumption that the Government in 2007, in addition to the already announced measures, will implement further steps that increase expenditure subject to the ceiling and reduce revenue. This forecast is justified by the experiences of recent years, where expenditure subject to the ceiling has turned out considerably higher than originally planned the closer one gets to the budget year in question, and where the expenditure ceiling, as noted above, also has been sidestepped through new benefits in the form of tax reductions. At the same time, it should be stressed that the estimate for discretionary fiscal policy for the forecast years is highly uncertain.

Net lending of general government and sub-sectors

Table B2 shows developments in net lending since 1997 and the Riksbank's forecasts for the years 2005 - 2008. With the exception of isolated years, the surplus in the government finances has mainly arisen in the old-age pension system and is expected to do so during the forecast period as well. From 2004 onwards, local government net lending is forecast to show a small surplus owing to previous local government tax hikes,

Table B1. Central government expenditure ceiling. SEK billion

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Expenditure ceiling	723	720	753	765	791	812	822	858	870	907	949
Expenditure subject											
to ceiling	698	718	751	760	786	812	819	855	869	905	942
Budgeting margin	25	2	2	5	5	0	3	3	1	2	7

Sources: NIER and the Riksbank.

See "Redovising av skatteutgifter" (Account of tax expenditure), appendix 2 to the 2005 Spring Fiscal Policy Bill (prop. 2004/05:100). The figures are for 2005 and in some cases are accumulated amounts.

Table B2. Net lending of general government and sub-sectors and accumulated budget balance in the local government sector.

Per cent of GDP and SEK billion

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total	-1.0	1.9	2.3	5.0	2.6	-0.5	-0.2	1.5	1.6	1.1	0.7	1.2
Central government	-1.1	0.5	4.2	2.6	7.4	-1.8	-1.8	-0.6	-0.8	-1.1	-1.4	-1.1
Old-age pensionsystem	0.5	1.3	-2.0	2.2	-4.6	1.9	1.9	1.9	2.0	2.0	2.0	2.0
Local governmentsector	-0.5	0.2	0.1	0.2	-0.2	-0.5	-0.2	0.2	0.4	0.2	0.1	0.3
Accumulated budget balance in local government sector						-7	-8	-6	5	7	4	9

Sources: Statistics Sweden and the Riksbank.

restraint in spending, higher central government grants and a pick-up in resource utilisation that contributes to higher revenue. The balanced-budget requirement for local governments has been achieved with a lag but is judged to be met throughout the forecast period.

Central government net lending has been negative since 2002 and is expected to remain so throughout the forecast period. The stimulatory measures announced in the Budget Bill for 2006 and the Riksbank's assumption regarding additional measures in 2007 support this view. However, a large uncertainty factor as regards developments in central government net lending in the coming years is the impact of the new rule requiring companies to pay a standard rate of interest on funds moved to their tax allocation reserves. On account of this new rule, companies in 2004 decided to reverse a relatively large share of these tax allocation reserves for taxation, which increased corporate tax revenue. It is now less profitable to allocate funds to the reserves which, all other things being equal, points to higher corporate tax revenue this year and in the next few years as well even if no reversals are made. At the same time, many companies have brought forward reversals that would have been done in the coming years instead if no rule change had been made. The size of the reversals and the corporate tax revenue in the period ahead also depends on companies' financial position and interest rate developments. It is difficult to estimate the net effect of all these different factors on net lending.

As regards the distribution of net lending

between the different sub-sectors it should be noted that the increase in local government net lending to some extent, via higher central government grants, has come at the price of lower central government net lending. In 2001, the distribution of general government net lending was also affected by large transfers between the old-age pension system and the central government, due to the change in the pension system.

The surplus target and estimates of the cyclically adjusted budget balance

During the period 1997-2000, the annually established surplus targets were exceeded by a good margin (see Table B2). The strong improvement in the government finances in the years 1997 - 1998 was a result of the introduction of the surplus target, the more austere budget process, the programme of consolidation (carried out between 1994 and 1998) and surprisingly high growth. In 1998, a marked rise in employment also contributed to the improvement in the government finances. Furthermore, in 1999, but even more so in 2000, unexpected and temporarily very high tax receipts from corporate profits and capital gains added to the large surpluses in the government finances.

Since 1998, the central government budget has been highly expansionary almost every year. The reforms concerning the central government budget during the period 1998-2006 total just over SEK 200 billion. However, central government net lending, expressed as

<sup>9</sup> See the box "Expenditure cuts and reforms" in *The Swedish Economy*, March 2003, NIER, and Budgetpropositionen för 2006 (The Budget Bill for 2006), Ministry of Finance.

a share of GDP, has decreased relatively little in relation to the overall size of these reforms. One explanation for that may be the introduction of the new budget process, which even in the absence of regulatory changes can improve the underlying balance since nominal expenditure is not automatically adjusted for inflation in the same way as before. Another possible explanation is that revenue has been relatively high for several years, partly due to temporary factors (see also below).

The surplus target, as it is defined from 2000, can be evaluated by calculating the general government sector's annual net lending for a whole business cycle. If net lending is 2 per cent on average, the surplus target has been met. During the period 2000-2004, net lending averaged 1.7 per cent. Since the period does not cover an entire business cycle it is difficult to determine whether this surplus has been consistent with the target. Resource utilisation is judged by many to have been relatively low for the greater part of this period, though, suggesting that average net lending of 1.7 per cent has been consistent with the target. However, when assessing the fulfilment of the surplus target and whether the central government will run an underlying deficit in the period ahead it should be remembered that the temporarily high tax receipts around the years 2000 and 2004 as well as low interest expenditure on the government debt have helped to push up average net lending during this period.

Estimates of underlying surpluses or deficits in the government finances are usually made using calculations of the cyclically adjusted budget balance. This is commonly defined as the financial position of the general government in the event of normal resource utilisation, given no changes in tax and spending rules. It shows, in other words, the difference between the general government sector's revenue and expenditure when the business cycle is midway between a boom and a recession. The cyclically adjusted base is obtained balance is derived by subtracting from actual

net lending the component that is judged to be attributable to cyclical factors (the cyclical balance). An annual cyclically adjusted balance of around 2 per cent indicates that the surplus target has been fulfilled. One advantage of this measure is that it enables surplus target fulfilment to be forecast without the forecast period covering a whole business cycle. At the same time, calculations of the cyclically adjusted balance are highly uncertain because it is difficult to estimate both resource utilisation and the cyclical sensitivity of the government finances. Estimates of the cyclically adjusted balance should therefore be interpreted with great caution.

Table B3 shows how the cyclically adjusted balance has developed between 2004 and 2007, according to the method used by the Riksbank in its analyses for the European Central Bank (referred to here as the ESCB method). A comparison is also made with the Government's estimate.

The Government calculates cyclically adjusted net lending on the basis of an estimated output gap and an "aggregated" budget elasticity that is assumed to be 0.7. That means that if the (estimated) output gap changes by 1 percentage point, the cyclical component of net lending as a share of GDP is judged to change by 0.7 percentage points. An example may illustrate how the cyclically adjusted balance is estimated using this method. Assume that net lending amounts to 3.4 per cent of GDP during an economic boom and that the output gap is estimated to be 2 per cent of GDP. The cyclical component of net lending will then amount to 1.4 per cent of GDP  $(0.7 \times 2=1.4)$ . The estimate of the cyclically adjusted balance therefore becomes 2 per cent

The ESCB method instead decomposes a number of tax and expenditure bases into a trend and a cyclical part (using a HP filter). The cyclical component of each tax and expenditure base is obtained by multiplying the "gap" that the decomposition results in by an estimated

elasticity that shows how the tax or expenditure varies with each "gap". For instance, if actual private consumption, which is the principal base for indirect taxes (e.g. VAT), is above the estimated trend value in a particular year, this is interpreted to mean that the revenue from indirect taxes in this year is higher than "normal", i.e. that there is a positive "cyclical component" in the indirect taxes. Consequently, this method does not estimate the cyclically adjusted balance on the basis of an assessment of the aggregate output gap. One advantage of this method compared with the "aggregated" method based on an estimated output gap is that it, at least in some measure, takes account of "composition effects"; i.e. that different kinds of macroeconomic shocks can affect the tax and expenditure bases in different ways. The benefit of the "aggregated" method, on the other hand, is that it is somewhat more transparent and the results are directly based on a total measure of economic conditions.11

Both the ESCB method and the Government's estimate indicate that the surplus target was fulfilled in 2004 and that it also will be fulfilled in 2005. Unexpectedly high corporate tax revenue, surprisingly moderate public sector consumption and lower-than-expected interest expenditure on the government debt have contributed to a considerably higher cyclically adjusted balance for these years compared with the forecasts presented by the Riksbank in a box in Inflation Report 2004:4. At the same time, there is some uncertainty over whether the improvement in the government finances, in relation to previous estimates, is due to inaccurate forecasts of the underlying budget balance or whether the improvement can largely be explained by temporary factors. Provided that the current fiscal stance remains unchanged, i.e. that no decisions are made regarding cutbacks, the surplus target is not expected to be attained

during the coming two years. The expansionary reforms announced in the autumn Budget Bill, coupled with previous measures that also have weakened the central government budget balance, contribute to this.

Table B3. The cyclically adjusted budget balance. Per cent of GDP

	2004	2005	2006	2007
ESCB method	2.1	2.3	1.3	0.5
Government's estimate	2.1	2.1	1.0	1.1

Sources: Ministry of Finance and the Riksbank.

As noted above, the Riksbank's forecast is based on an assumption that the Government will take further budget-weakening steps for 2007, in addition to those already announced. Even without that assumption it is not anticipated to be possible to fulfil the surplus target in the period ahead, as also indicated by the Government's own estimates. In the Budget Bill for 2006, the Government explains that it expects to fall short of the surplus target largely because of discretionary stabilisation policy that has been warranted by the weak growth in the labour market. 12 However, a closer study of the discretionary fiscal policy in the Government's budget shows that the deterioration in the central government finances is not due to temporary stabilisation policy only but also to more permanent balance-weakening reforms on the revenue and expenditure sides; e.g. the income tax cut for households (as compensation for employees' contributions to the new pension system) that has been implemented in several steps in recent years, the reforms in healthcare, the school system and care services, and the higher ceilings in the national health insurance and parental insurance schemes. 13 The Government's own forecasts for the cyclically adjusted budget balance show that the surplus target is not achieved even when resource utilisation is judged to be normalised in 2007 and 2008 and when the target for open

<sup>11</sup> See Boije, R. (2004), "The general government structural budget balance", Sveriges Riksbank Economic Review 1, for a more detailed description of these methods.

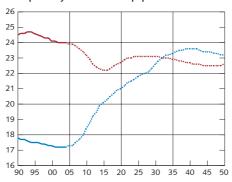
<sup>12</sup> See Prop. 2005/06:1, *Budgetpropositionen för 2006* (the Budget Bill for 2006), Ministry of Finance.

<sup>13</sup> At the same time, from a stabilisation policy perspective it may be justified to implement permanent reforms at a time that helps to improve economic conditions provided that it does not jeopardise the budget policy targets.



Note. The broken lines represent Statistics Sweden's forecasts. Source: Statistics Sweden.

Figure B1. Proportion under 20 and over 64 years, respectively. Per cent of the population



unemployment has been met (re-defined in terms of the new EU-harmonised Labour Force Survey data); and even then the Government has assumed, for the end of the forecast period, that the budgeting margin below the expenditure ceiling will be considerably wider than has been the outcome in recent years, i.e. it is assumed that the budgeting margin will not be used for new expenditure reforms, unlike in previous years. This leads to the conclusion that discretionary budget consolidation measures are likely to be required if the surplus target is to be met in the period ahead.

To sum up, this discussion shows that the Government's budget policy targets on the whole have been achieved to date even though local governments have fulfilled the balanced-budget requirement with a lag and the expenditure ceiling has not been applied fully according to the Budget Act. The estimates for the cyclically adjusted balance in 2004 and 2005 have been revised up because the government finances have developed more favourably than previous forecasts. However, there are signs that this upswing may be temporary to some extent. Forecasts for the cyclically adjusted balance indicate that, in the absence of discretionary consolidation measures, it may prove difficult to attain the surplus target from 2006 onwards (allowing for the uncertainty that exists in this measure). Central government net lending, in particular, is too low. That is because the central

government budget has been expansionary since 1998 which, in accumulated terms, is deemed to have contributed to an underlying (structural) deficit in the central government finances. These tendencies are worrying, not least given that the demographic situation has been relatively favourable for the government finances in recent years but will no longer be so from 2008 onwards (see Figure B1). <sup>14</sup> The less-thanstrict application of the budget policy targets also risks contributing to a gradual erosion of their purpose. In the long run, this could make it more difficult to manage the future strain on the government finances resulting from demographic developments.

#### Fiscal policy indicators

The Riksbank, the National Institute of Economic Research (NIER), the Ministry of Finance and international institutions such as the European Commission, the OECD, the IMF and the ECB use various fiscal policy indicators both to measure whether the government finances are sustainable over the medium term (usually a business cycle) and to get an idea of the fiscal stance. The term 'stance' usually means whether discretionary fiscal policy decisions that affect public sector expenditure and revenue have a contractionary or expansionary effect on the economy. Such indicators are sometimes also used together with changes in the official interest rate to analyse the policy mix, i.e. the overall stance of fiscal and monetary policy.15

Common to the indicators usually used to measure the fiscal stance is that they first and foremost seek to measure the impact on net lending of discretionary decisions. It should be noted, however, that even in the absence of discretionary decisions fiscal policy has an indirect effect on the economy and net lending through automatic stabilisers. In Sweden, consumption and income are taxed relatively highly, and transfers are largely based on the

<sup>14</sup> The share of the population over 64 years will begin to rise in 2008. The negative effect of this on the government finances will be slightly lessened, however, by the fact that the proportion of the population under 20 years is projected to decrease until around 2015. After 2015, though, both of these shares are forecast to increase over a long period.

<sup>15</sup> For instance, the European Commission and the NIER perform such analyses. See *Public Finances in EMU – 2005* and *The Swedish Economy*, August 2005.

principle of loss of income, e.g. unemployment benefit. The tax and benefit system thus contributes automatically to bolstering demand during economic declines, while the opposite applies during booms. Automatic stabilisers can have a considerable impact on net lending and the economy, often much larger than the effect of discretionary decisions. The change in net lending due to both discretionary decisions and automatic stabilisers can be seen as the total fiscal policy effect or impulse on the economy.

This section aims to describe the fiscal stance indicators used by the Riksbank, the NIER and the Ministry of Finance, how they differ, their respective advantages and drawbacks, and what this means for the interpretation of the indicators' results. The different indicators are then also used to arrive at an overall assessment of the stance of fiscal policy during the period 2002 - 2007.

It should be pointed out that it is not possible on the basis of simple indicators to say how fiscal policy (or monetary policy) affects the economy more precisely. For that end, considerably more complex analysis tools are required. That is because a given change in general government net lending (or the reporate) can have different effects on the economy depending on what other changes have occurred during the same period.

The indicators used by the Riksbank, the NIER and the Ministry of Finance

The various indicators usually used to gauge the discretionary stance of fiscal policy and its impact on net lending can essentially be divided into three different categories.

(i) One method is to calculate – on the basis of current rules for tax, benefits and other expenditure – the effects on net lending of changes in tax rates, benefit levels or public consumption. As regards changes in the tax

rates, for instance, these are multiplied by the relevant tax bases. The calculation is performed statically, i.e. it is assumed that the bases are not affected by the changed taxes (or the changed expenditure). When the effects on net lending of all the rule changes are totalled and related to GDP, this gives a measure of the fiscal stance. The Ministry of Finance uses this method to calculate the size of the central government's discretionary fiscal policy in the Budget Bill. <sup>16</sup> Thus, the indicator does not include the other components of the public sector. However, the Ministry of Finance uses a different indicator for that (see below).

(ii) The impact on net lending due to changes in policy also can be estimated with more mechanical methods. The NIER assumes that direct and indirect taxes as well as social security contributions, given unchanged rules, are proportional to the respective tax and contribution base. If the tax or contribution shares are changed from one year to the next it is interpreted to be the result of discretionary fiscal policy measures. For other revenue, the norm used is that these, given unchanged policy, constitute over time a constant share of the nominal potential gross domestic product. A change in the share between two years is interpreted as the result of discretionary measures. As regards expenditure, it is assumed that unemployment benefit, given unchanged rules, is proportional to the number of unemployed. For public consumption and other expenditure, the norm applied is that these, given unchanged policy, constitute a constant share of the nominal potential gross domestic product. If the expenditure shares change between two years it is interpreted as the result of discretionary measures. When the deviations from the norm share for each revenue and expenditure category are totalled, this gives what the NIER calls the policy-dependent change in net lending. 17, 18

<sup>16</sup> See Prop. 2005/06:1, The Budget Bill for 2006, Ministry of Finance, Sweden's Economy, appendix 2.

<sup>17</sup> The indicator is based on a method proposed by Braconier, H. & Holden, S., "The Public Budget Balance – Fiscal Indicators and Cyclical Sensitivity in the Nordic Countries", WP 67, NIER. On the basis of this indicator, a new method for calculating the cyclically adjusted budget balance has also been developed. See Braconier, H. & Forsfält, T., (2004), "A New Method for Constructing a Cyclically Adjusted Budget Balance: The Case of Sweden", WP 90, NIER.

<sup>18</sup> The Swedish National Financial Management Authority uses a similar method for the central government budget balance. See Braconier, H., Andreasson, P. & Jönsson, H. (2001), "Budgetpolitisk indicator" (Budget policy indicator), Budgetprognos 2001:3.

A simplified example shows how the NIER's indicator should be interpreted. The principal tax base for indirect taxes is composed of total private consumption. Let us assume that indirect taxes expressed as a share of total private consumption (the implicit tax ratio) is 20 per cent initially. If private consumption totals SEK 1,200 billion, indirect taxes in this example will be SEK 240 billion. If private consumption increases by SEK 10 billion and indirect taxes at the same time rise by SEK 2 billion, this is interpreted, with the NIER's indicator, to mean that discretionary fiscal policy (concerning indirect taxes) is unchanged. However, if taxes increase by more or less than SEK 2 billion (in which case the implicit tax ratio has changed), it is interpreted as a result of discretionary political decisions.

(iii) The stance of fiscal policy can also be measured by the change in the primary cyclically adjusted balance. Primary here means that the effect of changes in interest expenditure and interest income has been excluded. A decrease in the primary cyclically adjusted balance between two points in time is interpreted to mean that discretionary fiscal policy is expansionary while an increase is taken to signify contractionary policy. Both the Ministry of Finance and the Riksbank use the change in the (primary) cyclically adjusted balance as an indicator of the fiscal stance (including the local government sector and the old-age pension system).

Advantages and drawbacks of the different indicators

Method (i) is likely the one that gives the best precision as regards the impact on net lending due to discretionary measures since it is based on actual changes in tax rates and "benefit rates" and the relevant tax and expenditure bases. As noted above, the Ministry of Finance only makes such detailed calculations for the policy changes that concern the central

government budget. It would be simple to also include the local government sector in the calculation as regards changes in local government tax rates. On the other hand, it is difficult to estimate discretionary changes in local government consumption (as described above, the NIER estimates such changes by assuming that local government consumption, in the absence of new decisions, constitutes a constant share of the nominal potential gross domestic product). Another complicating factor is the central government grants received by local governments. These grants can be used to boost local government consumption, in which case they are likely to contribute to higher total demand in the economy. To the extent that they instead are used to consolidate local government budgets, they only result in a re-allocation of total general government net lending.

The advantage of using the NIER's mechanical method or the change in the primary cyclically adjusted balance is that these indicators cover the whole public sector and not just the central government budget. Furthermore, the NIER's method also captures "composition effects". One problem with the NIER's indicator, however, is that the tax and expenditure shares can change for other reasons than rule adjustments, e.g. demographic or behavioural changes. For example, if consumers increase their consumption of goods with a higher VAT rate, it will be interpreted as a result of a discretionary tax hike. Moreover, household income tax is progressive and not proportional, as the norm presupposes.

A big problem with using the change in the primary cyclically adjusted balance as an indicator of the fiscal stance is that it often captures economic changes that affect actual net lending but that are not a result of discretionary fiscal policy. This happens, for instance, in the event of large demographic changes, behavioural changes or when the methods used to estimate the cyclically adjusted balance do not take account of the fact that the government finances are

<sup>19</sup> If this effect is not excluded, a change in the cyclically adjusted balance caused by a change in the net interest amount may be incorrectly interpreted as discretionary policy.

influenced to different degrees by different kinds of economic shocks. For a country like Sweden, which taxes assets to a large extent, sharp variations in asset prices could have a relatively big impact on net lending. If this is not factored in when estimating the cyclically adjusted balance, a change in this could be incorrectly interpreted as the result of discretionary fiscal policy measures. It is also one likely explanation for why many measures of the cyclically adjusted balance covary with actual net lending.<sup>20</sup>

If the aim is to use the change in the primary cyclically adjusted balance as an indicator of the impact on net lending due to all discretionary decisions, including normally occurring stabilisation policy measures (e.g. labour market policy measures), it is important that the estimated cyclical component of net lending only captures the effect of automatic stabilisers. In practice it is often difficult to take this problem into account, which means that the change in the cyclically adjusted balance (at best) can be interpreted as the effect of discretionary decisions excluding stabilisation policy measures.<sup>21, 22</sup>

The various indicators have their respective merits and weaknesses. Since the indicators have to be estimated and thus cannot be compared with historical outcomes, it is not possible to use statistical methods to determine which indicator has the best precision. That suggests that there is reason to employ several different methods.

How has the fiscal policy stance varied over time according to these indicators?

Table B4 shows the picture that the Riksbank, the NIER and the Ministry of Finance give of the fiscal stance from 2002-2007, as estimated using the indicators described above. All indicators factor in the effects of the proposals in the autumn Budget Bill. As noted previously, however, the Riksbank's forecast, unlike those of the NIER and Ministry of Finance, is based on an assumption that the Government will take further budget-weakening steps for 2007, in addition to those already announced. This, different views of economic conditions back in time and differences in macro forecasts mean that the results from the indicators cannot be compared straight off.<sup>23</sup>

Table B4. Indicators of the fiscal policy stance 2002-2007. Change in per cent of GDP

	2002	2003	2004	2005	2006	2007
National Institute of Economic Research						
Policy-dependent change in net lending	-1.9	0.0	1.0	0.0	-0.7	0.2
Ministry of Finance						
Discretionary fiscal policy in the central government budget	-1.8	-0.5	-0.4	-1.3	-1.0	-0.2
Change in primary structural balance	-2.4	-0.3	0.7	-0.2	-1.0	0.3
ESCB						
Change in primary structural balance	-2.1	0.7	1.3	0.1	-1.1	-0.8

Note. ESCB only excludes interest expenditure on the central government debt, not interest income on debt securities. The NIER excludes interest income as well. The Ministry of Finance excludes net capital income, including dividends from state-owned companies and the Riksbank.

Sources: Ministry of Finance, NIER and the Riksbank.

<sup>20</sup> Another explanation is that the methods usually used to estimate the cyclically adjusted budget balance do not consider the fact that fiscal policy in itself influences resource utilisation. This specific problem can be solved by estimating the cyclically adjusted balance with the aid of a structural VAR model (SVAR). See, for example, Bouthevillain, C & Quinet, A., (1999), "The Relevance of Cyclically Adjusted Public Balance Indicators – the French Case, in *Indicators of Structural Budget Balances*, Banca d'Italia.

<sup>21</sup> In principle, this problem could be managed by simulating the effect of automatic stabilisers in a general equilibrium model (with a comprehensive description of public sector revenue and expenditure) while holding discretionary policy unchanged. For example, the European Commission has performed such simulations in its QUEST model. See *Public Finances in EMU – 2001*, which also contains references to other studies.

<sup>22</sup> If, on the other hand, the aim is to use the level of the cyclically adjusted balance as an indicator of net lending under normal resource utilisation or the change in it as an indicator of how "permanent" reforms affect the underlying balance, it is not a problem if the cyclical balance includes discretionary stabilisation policy measures.

All indicators show that fiscal policy was expansionary in 2002: net lending decreased by roughly 2 per cent of GDP due to the expansionary policy. Reforms in the central government budget, e.g. reductions in income tax on work and measures in healthcare, the school system and care services explain the bulk of the expansionary policy that year.

For 2003, both Ministry of Finance indicators point to somewhat expansionary fiscal policy. The NIER's indicator shows a neutral policy whereas the ESCB's method indicates fiscal tightening. So, for that year the indicators provide slightly different pictures of the fiscal stance. It is difficult to determine the reasons for this without a more in-depth comparison of the indicators.

For 2004, the NIER's indicator and the change in the primary cyclically adjusted balance according to both the Ministry of Finance's and the ESCB's method point to relatively tight fiscal policy in spite of stimulatory measures in the central government budget. That indicates that 2004 had relatively large contractionary discretionary measures that are not evident in the effects of the announced steps in the central government budget. What factors can explain this difference?

The Ministry of Finance's two indicators differ by just over 1 percentage point for 2004. According to the Ministry, some three-tenths of the difference is explained by higher net lending in the local government sector (mainly due to local government tax hikes) and fourth-tenths by increased corporate tax revenue partly owing to interest on tax allocation reserves. Actual public expenditure in 2004 was much lower than implied by the norms applied by the NIER when calculating expenditure for an unchanged policy. In addition, corporate tax revenue was higher than the NIER's norm for an unchanged policy. These deviations are thus interpreted as the result of contractionary fiscal policy. So these factors explain why the indicators that cover the

entire public sector reflect contractionary fiscal policy in 2004 in spite of expansionary measures in the central government budget.

Despite a considerably expansionary fiscal stance in the central government budget, the other indicators on the whole point to neutral discretionary fiscal policy for 2005. For this year, too, improved local government saving and/or higher corporate tax revenue may explain a large part of the difference between these indicators and the aggregate effect of the rule changes concerning the central government budget.

All indicators show that fiscal policy will be expansionary in 2006, which is consistent with the additional measures announced by the Government for that year.

For 2007, the Riksbank predicts, as noted above, that fiscal policy will be more expansionary than indicated by the measures announced by the Government to date. That means that the cyclically adjusted balance is projected to decrease in 2007. In the absence of budget-weakening steps over and above those already announced by the Government, fiscal policy in the same year is instead forecast to be neutral or slightly contractionary.

Revisions of the indicators over time

Even though the precision of the different indicators cannot be tested, it might be interesting to see how the estimates of the indicators for a certain year have changed over time. Table B5 shows how the outlook on the fiscal stance for 2004 has been revised between different forecasting occasions. To improve the comparability of the indicators, the compared forecasts are those that have been presented in or in conjunction with the Budget Bill (BB) and that have factored in the reforms announced in the Bill.

Both Ministry of Finance indicators showed, at the time the forecasts were prepared in autumn 2002, that fiscal policy would be

<sup>23</sup> At the same time, it should be pointed out that different estimates of resource utilisation do not necessarily affect the forecast for the cyclically adjusted balance since these differences also influence the forecast for actual net lending.

Table B5. Indicators of the fiscal policy stance in 2004, revisions over time. Change in per cent of GDP

National Institute of Economic Research ESCB Ministry of Finance							
Policy-dependent change in net lending		Change in primary structural balance		Discretionary measures in the central government budget		Change in primary structural balance	
	2004		2004		2004	2004	
December 2002	0.5	November 2002	0.3	BB for 2003	-0.3	-0.2	
December 2003	0.5	November 2003	0.2	BB for 2004	-0.2	0.1	
December 2004	0.8	November 2004	0.9	BB for 2005	-0.4	0.1	
October 2005	1.0	November 2005	1.3	BB for 2006	-0.4	0.7	

Sources: Ministry of Finance, NIER and the Riksbank.

expansionary in 2004, whereas the two other indicators at the time indicated that fiscal policy would instead be contractionary. Between 2002 and 2005 the forecast of fiscal policy austerity for 2004 has been revised up by 0.5-1.0 per cent of GDP, as measured by the indicators that cover the whole public sector. At the same time, the results show that this revision for 2004 cannot be due to the central government budget having become more contractionary over time owing to additional consolidation measures for that year. Instead, the discretionary fiscal policy in the central government budget for that year has become somewhat more expansionary over time, according to the indicator that measures the effect of rule changes in the central government budget. Lower public (mainly local government) consumption, higher local government taxes and larger-than-expected corporate tax revenue may explain a large part of the revision.24

To sum up, this discussion shows that it is important when analysing the stance of fiscal policy to not only take account of the direct effects of rule changes announced in the central government budget. Also, there is considerable uncertainty in the estimate of the fiscal stance for an individual year, both between different indicators and over time. That means that the prospects for conducting a forward-looking, fine-tuning stabilisation policy are not especially good. It also implies that it is important when evaluating the policy mix and the monetary policy decisions in, for example, autumn 2002, to use the estimates of the fiscal stance that were available then and that in retrospect have probably proved to be incorrect. Overall, fiscal policy turned out, at least according to the indicators presented here, much more contractionary in 2004 than predicted by the Riksbank, the NIER and the Ministry of Finance at the end of 2002.

<sup>24</sup> At the end of 2003, Statistics Sweden began to report tax revenue fully in accrual-based terms in the National Accounts, which in itself affects the distribution of tax revenue between years. The forecast of the accrual effects has been revised several times, making it difficult to analyse the cause of the changes in forecasts for a certain year over time.

# Inflation assessment

According to various measures of underlying inflation, the rate of price increase has fallen from the beginning of 2002 to 2004. However, this year the trend appears to have been broken and the underlying inflation rate has begun to rise somewhat, albeit from a low level. Inflation will rise gradually during the forecast period as capacity utilisation and domestic and international cost pressures rise. Compared with the forecast in the previous report, the inflation outlook in the main scenario remains largely unchanged. A weaker exchange rate and slightly higher international producer prices, compared with the assessment in the previous forecast, will be counterbalanced by a lower oil price and more subdued rent increases in 2006.

#### ■■ Inflation has developed as expected.

Since the October forecast, new inflation figures for the September and October have been published. The outcomes for CPI and underlying inflation according to UND1X have been in line with the Riksbank's forecasts. The annual rate of increase in CPI and UND1X amounted to 0.5 per cent and 0.8 per cent respectively in October. Imported inflation has been slightly higher than forecast, compared with the assessment in the October Inflation Report, partly as a result of unexpectedly high increases in clothing and shoe prices. The rate of price increase on mainly domestically-produced goods and services has been slightly lower than expected.

Several factors have contributed to inflation excluding energy prices developing weakly over the past three years. Regarded over a longer perspective, the krona has appreciated, which has a slightly delayed effect on inflation. Unit labour costs have fallen as a result of productivity improvements and moderate wage increases. Price trends in imported goods in CPI have been much lower than for largely domestically-produced goods and services during this period. One important explanation, in addition to the effects of the earlier krona appreciation, is that there has been a substitution of imports from countries with relatively high prices to countries where the prices are relatively low (see the box "Why are Swedish import prices so low?" in Inflation Report 2005:2). Clothes prices fell during 2004 and the EU's abolition of import quotas on clothing and textiles at the beginning of the year may have contributed to further pushing down clothes prices. The krona depreciation over the past six months, together with the reintroduction of limitations on Chinese clothing exports, has probably contributed to stopping the fall in clothes prices.

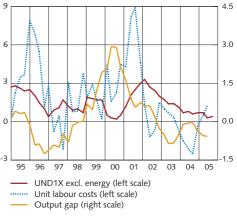
The stiffer competition in the food industry has led to falling food prices, which has held back domestic inflation. However, price reductions have been smaller than expected in 2005.

#### **■■** Continued high oil price.

The oil prices has been slightly lower than expected since the October Inflation Report was published and the assessment is that it will fall

Figure 39. UND1X excluding energy, unit labour costs in business sector and output gap.

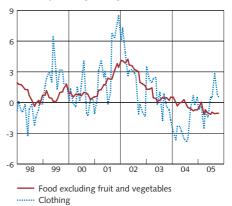
Annual percentage change and per cent of GDP



Note. The output gap is calculated according to the Hodrick-Prescott filter.

Sources: Statistics Sweden and the Riksbank.

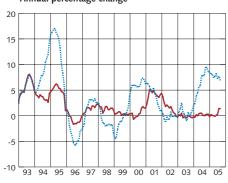
Figure 40. Price developments for food and clothing. Annual percentage change



Sources: Statistics Sweden and the Riksbank

Figure 41. Producer price index for domestic supply.

Annual percentage change



Note. The price index for domestic supply is an aggregate of the import price index and home market price index in the PPI.

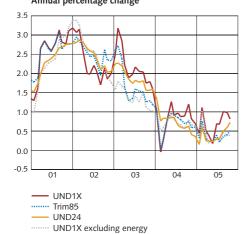
Source: Statistics Sweden.

...... Intermediate goods

Consumption goods

Figure 42. Different measures of underlying inflation.

Annual percentage change



Note. The alternative measures are calculated on the basis of CPI divided into around 70 subgroups. UND24 is aggregated using weights adjusted for the historical standard deviation for the deviation between the annual rate of increase in the total CPI and the respective subgroup over the past 24 months. In trim85 the 7.5 per cent most positive and negative yearly price changes each month have been excluded.

Sources: Statistics Sweden and the Riksbank.

further, in line with pricing in the forward market. However, the oil price is still relatively high and much higher than the Riksbank's forecasts from last year and the beginning of this year.

Consumer prices for oil products (petrol and fuel oil) have risen by more than 10 per cent over the past year. In October these prices contributed around 0.5 percentage points to UND1X inflation. In addition to these direct effects, a higher oil price is also expected to affect consumer prices indirectly via, for instance, rent increases and higher prices for air travel. Rising intermediate goods prices for companies may also gradually push up the rate of increase for producer prices of consumer goods, which in turn will generate higher prices for consumers. The rate of price increase on intermediate goods has risen over the past year and amounted to almost 7 per cent in September, compared with one year earlier (see Figure 41). Producer prices for consumer goods are still rising slowly and the rate of increase was measured at an annual rate of 1.4 per cent in September, which is nevertheless an upturn compared with the average over the past two years, when prices have on average remained unchanged.

#### ■■ The underlying inflation rate has increased slightly.

The Riksbank follows a number of measures of underlying inflation, which is not a clearly defined concept. Underlying inflation can be measured in different ways, but the purpose is to try to separate the common trend component for all prices that together comprise CPI. This measure of inflation often shows better covariation with, for instance, economic cycles or exchange rates over time. One common method is to exclude from CPI goods and services whose prices often fluctuate heavily as a result of transient factors, such as petrol, fuel oil, electricity and vegetables. It is also possible to use statistical methods to exclude or lessen the significance of groups of goods and services whose prices display sharp fluctuations. Figure 42 presents different measures of underlying inflation. All of the measures show that the underlying inflation rate declined from the beginning of 2002 to 2004. However, this year the trend appears to have been broken and the underlying inflation rate has begun to rise, albeit from very low levels.

The recent relatively rapid upturn in the rate of increase in consumer prices, according to CPI and UND1X, is thus largely linked to substantial price increases in a few groups of goods, such as oil products and clothing. As regards forecasting inflation in the period ahead, it is a matter of determining how much of the price increases is temporary and how much is due to longer-term changes in demand.

#### **■■** Rising domestic inflation.

As economic activity strengthens, the number of persons employed and the number of hours worked should increase. This in turn will lead to a slightly higher rate of wage increase and a slower increase in productivity, which will push up domestic cost pressures. Together with a rise in capacity utilisation during the forecast period, this

indicates that prices of domestically-produced goods and services will rise at a more rapid rate (see Figure 47).

Claims from municipal housing companies indicate that rent increases will be slightly lower during 2006, compared with the forecast in the previous report. This is expected to contribute to a slightly lower domestic inflation rate next year. The housing companies' total cost increases have been fairly low in recent years, which is partly due to low interest rates.

All in all, domestic inflation is expected to be 1.7 per cent, 2.6 per cent and 2.8 per cent, respectively, one, two and three years ahead.

#### ■■ Imported inflation to rise relatively quickly in 2006.

Excluding oil products, prices of imported goods and services (UNDIMPX) have fallen for two years (see Figure 43). In October the annual rate of change in non-oil UNDIMPX stood at -1.3 per cent.

The trends of increased global competition and substituting imports from countries with relatively high prices for imports from countries where the prices are relatively low is expected to continue to hold back imported inflation during the forecast period. However, there are reasons to believe that costs and thereby prices in low-cost countries will increase more rapidly in future as global capacity utilisation rises. The fact that the EU and China have signed an agreement on limiting Chinese clothing and textile exports may lead to higher prices on these products than was expected earlier, which would push up imported inflation. It is difficult to determine how significant the price-dampening effects of increased competition in the world market and at home will prove to be in the long run. There is reason to believe, however, that given the higher global capacity utilisation the price cuts will not continue at the same rate as during the past two years.

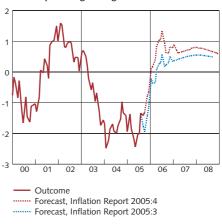
Import prices in the producer and consumer stages of the pipeline follow one another over time with producer price changes tending to precede consumer price changes. Recently, the rate of price increase has begun to rise in the producer stage, which indicates that consumer prices will rise at a more rapid rate in the near future (see Figure 44). As resource utilisation increases and cost pressures rise in Sweden, prices of imported goods are also expected to rise, as these are processed and distributed before being sold on the Swedish market.

All in all, imported inflation excluding oil is expected to rise relatively quickly in 2006 when the effect of price cuts for 2005 dissipates and no longer affects the inflation rate. This development is reinforced by the weakening of the krona, which is expected to affect imported inflation with some time lag. During 2007 and 2008 the rate of price increase will stabilise somewhat and imported inflation excluding oil is expected to amount to around 0.6 per cent towards the end of the forecast period (see Figure 43).

#### ■■ Lower oil prices during forecast period.

The high oil price in 2005 has had relatively large direct effects

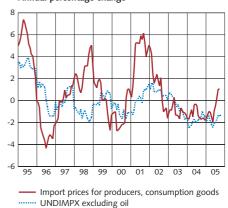
Figure 43. UNDIMPX excluding oil products. Annual percentage change



Sources: Statistics Sweden and the Riksbank.

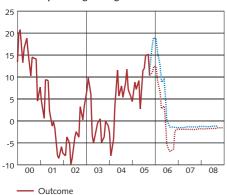
Figure 44. Import prices for producers and UNDIMPX excluding oil products.

Annual percentage change



Sources: Statistics Sweden and the Riksbank.

Figure 45. Oil products in UND1X. Annual percentage change



Sources: Statistics Sweden and the Riksbank.

Forecast, Inflation Report 2005:4
Forecast, Inflation Report 2005:3

on total imported inflation, including oil products. The oil price is expected to fall gradually, which will have a restraining effect on inflation towards the end of the forecast period (see Figure 45). Compared with the assessment in the previous report, the forecast for the oil price has been revised upwards a little. This will partly counteract the effects of the weaker exchange rate and higher international producer prices, which means that the forecast for total imported inflation remains largely unchanged compared with the assessment in October (see Table 11).

Table 11. Inflation forecasts in the main scenario. Annual percentage change

	Annual average					12-m	onth rate		
	2004	2005	2006	2007	2008	Dec. 05	Dec. 06	Dec. 07	Dec. 08
СРІ	0.4	0.4 (0.5)	1.4 (1.5)	2.1 (2.1)	2.3	0.8 (1.1)	2.0 (1.7)	2.3 (2.3)	2.4
UND1X	0.8	0.8 (0.8)	1.2 (1.4)	1.6 (1.6)	2.0	1.2 (1.5)	1.3 (1.2)	1.9 (1.9)	2.0
UNDINHX	1.6	1.0 (1.0)	1.4 (1.5)	2.3 (2.3)	2.7	1.1 (1.3)	1.7 (1.7)	2.6 (2.6)	2.8
UNDIMPX	-0.8	0.2 (0.2)	0.7 (0.9)	0.3 (0.2)	0.3	1.3 (1.8)	0.4 (0.1)	0.4 (0.3)	0.3

Note. The figures in parentheses are the forecasts in the previous Inflation Report. UND1X is CPI inflation excluding household mortgage interest expenditure and the direct effects of changes in indirect taxes and subsidies. UNDINHX refers 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.

Price rises on oil products have so far led to a clear upswing in intermediate goods prices and a more moderate increase in prices of consumer goods for producers and consumers. This indicates that the oil price upturn has not yet made a full impact on consumer prices. The effect of a delayed impact from the oil price may also be intensified by the currently weak exchange rate.

On the other hand, the rate of wage increase has dropped in the past year and inflation expectations are low, indicating that the effects on inflation of the past year's high oil prices will probably be limited.

#### ■■ Inflation will rise during forecast period.

To summarise, inflation is expected to rise during the remainder of 2005 and the beginning of 2006. Thereafter, inflation will slow down somewhat when the direct effects of the sharp rise in oil prices during 2005 no longer affect the annual inflation rate. Inflation will then rise gradually throughout the remainder of the forecast period as capacity utilisation rises and domestic and international cost pressures increase, but it is expected to be below 2 per cent for most of this period (see Figure 46). That applies under the assumption that the repo rate evolves in line with implied forward rates.

Compared with the forecast in the October Inflation Report, the inflation outlook remains largely unchanged (see Table 10 and Figure 3). A weaker exchange rate and slightly higher international producer prices will be counterbalanced by a lower oil prices and lower rent increases during the forecast period.

#### ■■ CPI inflation expected to be higher than UND1X inflation.

Over the past two years, CPI inflation has been lower than UND1X

inflation. One important difference between these two measures is that households' mortgage interest costs are excluded from UND1X inflation. The interest rate cost index in CPI depends partly on how mortgage interest rates develop and also on how prices develop in the housing stock the loans are used to finance. Over the past two years, the effects of lower interest rates have dominated over the effects of the rising value of the housing stock, resulting in lower mortgage costs for households. This effect is forecast to continue in the short run. During the forecast period, interest rates are expected to be higher than at present, while the rate of increase on house prices is expected to be moderate. All in all, this together with higher indirect taxes is expected to contribute to CPI inflation being slightly higher than UND1X inflation (see Table 12).

Table 12. Change in the CPI compared with UND1X. Annual percentage change and percentage points

	Dec. 05	Dec. 06	Dec. 07	Dec. 08
UND1X	1.2	1.3	1.9	2.0
Effects of changes in				
mortgage interest expenditure	-0.6	0.5	0.3	0.3
Effects of changes in				
indirect taxes and subsidies	0.4	0.2	0.2	0.2
=CPI	0.8	2.0	2.3	2.4

Note. The contributions may not sum up due to rounding.

Sources: Statistics Sweden and the Riksbank

#### ■■ Higher inflation under the assumption of a constant repo rate.

The main scenario is based on the repo rate following a 15-day average of implied forward rates up to 11 November 2005. According to this report, implied forward rates will amount to 2.5 per cent at the end of next year and to around 3.5 per cent at the end of the forecast period. Table 13 summarises the inflation forecast with the alternative assumption that the repo rate will be held unchanged at its present level until December 2007. With this more expansionary monetary policy, the inflation rate, measured as UND1X, rises more quickly than in the main scenario (see Figure 48). At the end of 2007, UND1X inflation is expected to be 2.2 per cent.

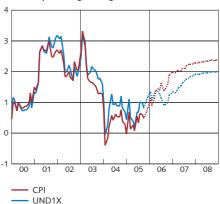
Table 13. Inflation forecasts under the assumption of a constant repo rate and comparison with the main scenario and the previous Inflation Report.

Annual percentage change

		An	Annual average			12-month rate		
		2005	2006	2007	Dec. 05	Dec. 06	Dec. 07	
CPI	Constant repo rate	0.4	1.1	1.9	0.8	1.5	2.3	
	Main scenario	0.4	1.4	2.1	0.8	2.0	2.3	
	Constant repo rate, Inflation Report 2005:3	0.5	1.3	_	1.1	1.4	_	
UND1X	Constant repo rate	0.8	1.3	1.9	1.2	1.5	2.2	
	Main scenario	0.8	1.2	1.6	1.2	1.3	1.9	
	Constant repo rate, Inflation Report 2005:3	0.8	1.5	_	1.5	1.4	_	

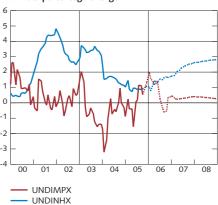
Sources: Statistics Sweden and the Riksbank.

Figure 46. Inflation, CPI and UND1X. Annual percentage change



Note. The broken lines represent the Riksbank's forecasts. Sources: Statistics Sweden and the Riksbank.

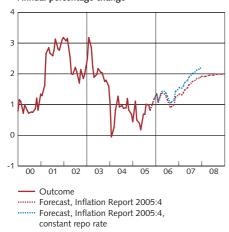
Figure 47. Inflation, UNDIMPX and UNDINHX. Annual percentage change



Note. The broken lines represent the Riksbank's forecasts. Sources: Statistics Sweden and the Riksbank.

Figure 48. UND1X, forecast under the assumption of a constant repo rate, and a repo rate development in line with implied forward rates.

Annual percentage change



Note. The broken lines represent the Riksbank's forecasts. Sources: Statistics Sweden and the Riksbank.

# Revised forecasts since the October Inflation Report

- Rents are expected to rise at a slightly slower rate, compared with the previous report, which will slow down domestic inflation in 2006.
- The krona is expected to be slightly weaker during the entire forecast period, which leads to slightly higher imported inflation. A lower oil price will have the opposite effect.

49

Risk assessment

The main scenario describes the path of inflation assessed by the Riksbank to be the most likely if the repo rate develops in line with implied forward rates, which reflect the financial markets' expectations of the repo rate. The forecasts are uncertain, however. When formulating monetary policy, the Bank also takes into consideration the risk that inflation can be higher or lower than assumed in the main scenario.

In the October Inflation Report the most important sources of uncertainty regarding inflation in Sweden were considered to be linked to international developments. This was mainly connected with the uncertainty over the consequences of the high oil price and the risk of lower growth and higher inflation. The deficit in the United States' current account and the corresponding surpluses in primarily the oil-exporting countries and the rapidly-growing economies in Asia, and the implications of adjustment to a long-term equilibrium for both growth and inflation, were also mentioned as risk factors.

Newly received data indicate that international economic activity is continuing to strengthen in line with the assessment in the October Inflation Report. With regard to Sweden, this new information has led to some upward revision of the forecast for GDP growth. While the oil price has had some impact in terms of higher inflation, it has fallen slightly faster than expected and the forecast has been revised downwards. All in all, the uncertainty over future developments in economic activity both in Sweden and abroad is judged to have declined somewhat, as a result of recent predominantly positive statistics.

The most important domestic uncertainty factors have long been productivity growth and increased competition. One risk factor that has increased in significance since the October Inflation Report is the krona exchange rate, which has been weaker than expected. The total assessment this time is that the probability of lower inflation than in the main scenario is less than the probability of higher inflation.

#### **■■** Reduced uncertainty over economic activity.

The assessment in the October Inflation Report was that growth in Sweden and abroad would slow down somewhat but remain high. The slowdown at the beginning of the year was assessed to have been transitory. The new information received largely confirms this picture. Growth in the United States has remained strong, despite hurricanes and a high oil price. In Sweden and elsewhere in the world, too, there have been a number of positive economic signals. The assessment is therefore that the risk of economic activity not strengthening as expected in the main scenario is now slightly lower than it was in October.

#### ■■ Uncertainty over consequences of high oil price.

However, the risks entailed by the high oil price still remain. The oil price has fallen more than was expected in the October Inflation Report, but pricing in the forward market shows that expectations are disposed towards a continued high, although slowly falling, oil price.

The assessment in the main scenario is that the high oil price will result in relatively moderate and very transient inflationary impulses and that the restraining effects on the real economy will be limited in Sweden and abroad. In recent years, the oil price has risen while oil production has increased, which indicates that the higher price is largely due to high global demand. This could explain why international economic activity has not yet shown any clear signs of a slowdown.

However, there is uncertainty over the contagion effects from the high oil price. The effect on inflation could be higher than estimated - which is indicated by recent developments in inflation in, for instance, the United States and the euro area - and the dampening effects on growth could become stronger. This applies to both the Swedish economy and the world economy in general. The risk of higher inflation as a result of the rise in oil prices remains.

#### ■■ International imbalances remain.

Factors that could also slow down economic activity internationally and in Sweden are the deficit in the US current account and the corresponding surpluses elsewhere, particularly some Asian countries and oil-exporting countries. These still entail a risk factor for the global economy. The deficits in the United States could precipitate a rise in interest rates that would hold back consumption and investment. As US households have to a greater extent taken out mortgages to increase their consumption, sensitivity to rising house prices has increased. Moreover, a decline in international willingness to invest in US assets could contribute to reduced capital inflows and a weaker dollar. A weakening of the dollar could put pressure on European companies' competitiveness, which would slow down growth in the euro area and Sweden. This could in turn lead to lower inflation than expected.

#### ■■ Increased global competition and high productivity.

Increased global competition has contributed to low inflation in Sweden in recent years. The adjustment towards lower prices has so far occurred gradually and it is possible that the price-dampening effect on imported goods and services could be larger than expected as imports gradually move to countries with lower costs and prices. Productivity developments are a risk factor in the assessment of Swedish inflationary pressures. Productivity has been surprisingly high for a number of years, which has affected employment and contributed to a low inflation rate. There are arguments both in

favour of productivity growth being strengthened and in favour of it being subdued during the forecast period. The Riksbank's assessment in the main scenario is that the robust productivity is to some extent due to the economic cycle and that it will gradually slow down as the labour market improves. However, the speed of this process may have been underestimated, which could generate higher cost and inflationary pressures than expected. If, on the other hand, productivity growth is more largely due to permanent growth improvements in the Swedish economy, there is a risk that inflation has been overestimated. The overall assessment is that the risk of stronger productivity growth and a lower inflation rate are roughly balanced by the risk of weaker productivity growth and a higher inflation rate.

#### ■■ Risk of delayed krona appreciation.

The krona has weakened since the beginning of the year, and this trend has continued after the publication of the October Inflation Report. It is difficult to explain short-term fluctuations in exchange rates. It appears as though the krona weakening is to some extent linked to expectations of monetary policy in Sweden and abroad. It is assumed in the main scenario that the krona will strengthen in future, measured in terms of the TCW index. As before, this assessment is based on Sweden having had relatively high growth and a strong international financial position in relation to other countries, and on the fact that this situation is expected to continue. However, there is a risk that it will take longer for the fundamental factors to make an impact on the krona rate. This could also mean that the inflation outcome is higher than anticipated in the main scenario.

To summarise, the Riksbank's assessment is now that the risks of higher inflation than in the main scenario are greater than the risks of lower inflation. This assessment is illustrated in Figures 49 and 50, which show the uncertainty surrounding the forecasts of UND1X and CPI inflation.

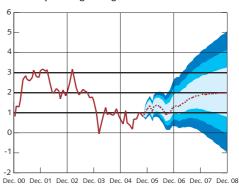
Table 14. Risk-adjusted inflation forecasts. Annual percentage change

	Annual average			12-month rate			
	2005	2006	2007	2008	Dec. 2006	Dec. 2007	Dec. 2008
СРІ	0.5 (0.5)	1.5 (1.5)	2.2 (2.1)	2.4	2.0 (1.7)	2.4 (2.3)	2.5
UND1X	0.8 (0.8)	1.2 (1.4)	1.7 (1.6)	2.1	1.4 (1.2)	2.0 (1.9)	2.1

Note. The table gives the mean values of the probability distributions for the inflation forecasts in Figures 49 and 50. The assessment in the previous Inflation Report is shown in brackets.

Source: The Riksbank

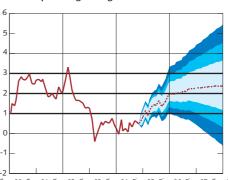
Figure 49. UND1X with uncertainty bands. Annual percentage change



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 50. CPI with uncertainty bands. Annual percentage change



Dec. 00 Dec. 01 Dec. 02 Dec. 03 Dec. 04 Dec. 05 Dec. 06 Dec. 07 Dec. 08

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

Table 15. UND1X inflation (12-month rate). Percentage probability of different outcomes

	UND1X<1	1< UND1X <2	2< UND1X <3	UND1X >3	Total
Dec. 2006	27	51	20	2	100
Dec. 2007	20	30	29	21	100
Dec. 2008	27	22	22	29	100

Note. The figures show the probability of UND1X inflation being within the given range.

Source: The Riksbank.

Table 16. CPI inflation (12-month rate). Percentage probability of different outcomes

	CPI<1	1< CPI <2	2< CPI <3	CPI >3	Total
Dec. 2006	5	40	44	11	100
Dec. 2007	12	25	32	31	100
Dec. 2008	20	20	23	37	100

Note. The figures show the probability of UND1X inflation being within the given range.

Source: The Riksbank

# Boxes in previous Inflation Reports

#### 2005:3

**GDP** indicators

Households' consumption, debt and saving Forecasts to 2007 under the assumption that the repo rate is held constant for two years

#### 2005:2

Future labour market developments – experiences in other countries and the significance of growth composition
Why are Swedish import prices so low?
Longer-term forecasts under the assumption that the repo rate evolves in line with implied forward rates

#### 2005:1

Changes in the Riksbank's forecasting methods
Recent developments in inflation
Longer-term forecasts under the assumption that the repo rate evolves
in line with implied forward rates
Material for assessing monetary policy 2002-2004

#### 2004:4

The signifi cance of fiscal policy for monetary policy Recent developments in inflation

#### 2004:3

Oil prices and monetary policy Recent developments in inflation Developments in the longer term

#### 2004:2

Indicators of resource utilisation
Recent developments in inflation
The exchange rate and imported inflation
Changes in calculation methods for the inflation rate

#### 2004:1

Calendar effects on production, hours and costs Economic activity and the labour market How persistent is the recent rise in productivity? Recent developments in inflation Material for assessing monetary policy 2001–2003

#### **2**003:4

Recent developments in inflation Wage negotiations 2004 Fiscal policy – 1990s, now and in the future

The Riksbank's monetary policy – target and indicators
Oil prices
Recent developments in inflation
Deflation – an outline of the problems

#### 2003:2

Recent developments in inflation

#### 2003:1

Recent developments in inflation
The price of electricity and inflation
The economic consequences of a military conflict in Iraq
Forecasting inflation with a rising inflation rate
Material for assessing monetary policy 2000-2002

#### 2002:4

Recent inflation

The SEK/EUR exchange rate
A model for indicating quarterly output changes
Relative wage developments and effects on wage formation from
the cancellation of the municipal workers' agreement
Forecasting inflation with a rising repo rate

## 2002:3

Recent inflation
Economic effects of the uncertain security policy situation
Life assurance companies
Stock markets in the United States
The house market
Shortages and matching problems in the labour market?
Forecasting inflation with a rising repo rate

## ■ 2002:2

Recent inflation
Has potential growth slackened?
Hours worked – a decomposition
Effects of temporarily lower productivity growth
Wage statistics and the status of agreements in spring 2002
Forecasting inflation with a rising repo rate

#### 2002:1

Recent inflation
Leading indicators point to a recovery
Perspectives on a recovery
Forecasting inflation with a rising repo rate
Monetary policy and simple rules

Recent inflation
Economic policy and inflation
The introduction of euro notes and coins
The relationship between growth and inflation
Forecasting inflation with a rising repo rate

#### 2001:3

Exchange rate pass-through
Price setting by Swedish firms
Has price flexibility changed?
Forecasting inflation with a rising repo rate
The terror attacks in the United States
The krona's path

#### 2001:2

Recent developments in inflation

#### 2001:1

Alternative scenarios for the US economy SEK and EUR volatility Implicit probability distributions and expected stock-market tendency The inflation forecasts and monetary policy

#### 2000:4

Structural change and price formation
Problems with the measurement of information technology's effect on growth in the United States, Sweden and Europe
Indicator statistics and business cycle turning points: an alternative approach Wage agreements and wage trends
Inflation and costs
An illustration of inflation forecasting with a rising repo rate

#### 2000:3

The CPI compiled with components weighted for standard deviations Crude oil price's impact on prices for petrol and heating oil The labour market and resource utilisation

Demography, capital intensity and labour productivity

Inflation in Sweden and the euro area

The concept of a real long-term equilibrium interest rate

An illustration of inflation forecasting with a rising reporate

#### 2000:2

The oil market's price expectations

Potential growth and inflation, an illustrative example

The cyclical position and factors of production

An illustration of inflation forecasting with a rising repo rate

The Riksbank's forecasts 1993–98

Market repo-rate expectations Real interest rate and monetary policy Household wealth and private consumption Inflation effects of shortening working hours An illustration of inflation forecasting with a rising reporate

Oil price and inflation in Sweden, with a selection of oil price forecasts

Asset prices

Current labour market duality and regional imbalances Determinants of growth Wage formation and the inflation target Prices and competition in Sweden's food sector An illustration of inflation forecasting with a rising repo rate

#### 1999:3

Prices in the past year and the Riksbank's forecasts Effects of a global stock market fall Output gap, capacity utilisation and inflation An illustration of inflation forecasting with a rising repo rate Has the relationship between the output gap and inflation changed?

#### **1999:2**

CPI outside lower tolerance limit due to transitory effects Monetary policy's economic impact Implied exchange rate probability distributions Factors behind the path of inflation A new economic era in the United States? Some reflections The SEK/EUR exchange rate Commodity prices and inflation Millennium effects on activity and inflation Inflation assessments and monetary policy Inflation in the 1990s

### **1**999:1

Monetary policy's economic impact Determinants of inflation Overview of ECB's monetary policy strategy Currency option prices as indicators of market expectations The fiscal stance Transitory effects and other supply shocks: a model approach Inflation assessments and monetary policy

Monetary policy's economic impact
Determinants of inflation
Historical volatility and future path of the krona
International prices and exchange rates: impact on the CPI
The construction sector
The 1998 wage agreements
Inflation outside the lower tolerance limit
Inflation assessments and monetary policy

#### **1998:3**

Underlying inflation
Monetary policy expectations
Raw materials prices and exchange rates
How is the Swedish economy affected by increasing international competition?
The krona's long-term path
Implied distributions of the OMX index
Inflation rates close to the lower tolerance limit
Inflation assessments and monetary policy

#### **1998:2**

Determinants of inflation
The euro area's economic importance for Sweden
Credibility effects in the mid 1990s
Underlying growth
Inflation forecast with uncertainty interval
Inflation rates close to the lower tolerance limit
Inflation assessments and monetary policy

#### **1**998:1

House mortgage interest costs Effects in Sweden of the crisis in Asia Inflation somewhat below the target

#### **1**997:4

Rented dwellings market The stock market and monetary policy Productivity, real wages and unemployment Households' inflation expectations

#### **1**997:3

Market and administrative prices in the CPI Effects of the output gap on inflation Monetary policy and inflation targeting

Has the inflation process changed? New version of the unobserved component method Determinants of the exchange rate

#### **1**997:1

New, harmonised measure of inflation Rigidities in the Swedish labour market

#### **1**996:4

M0 as an indicator of inflation How rapidly rising consumption affects inflation EMU expectations and Swedish bond rates

#### 1996:3

Determinants of private consumption
The output gap once more
Inflation forecasts among external observers

#### **1**996:2

A breakdown of the CPI Estimating potential GDP and the output gap Monetary policy transmission mechanism

#### **1**996:1

(no boxes)

#### **1**995:3

EU harmonisation of the CPI

#### **1**995:2

Relationship between producer and consumer prices Relationship between output gap and inflation Money supply and inflation

#### **■** 1995:1

Relationship between producer and consumer prices Aspects of the output gap Wage and price formation Budget consolidation in an international perspective

#### **1**994:3

Exchange rate and price formation
Central government debt and the debt equation

# ■ 1994:2 Capital utilisation

# **1**994:1

Asset prices as inflation indicators Profit margin indicators Debt consolidation by households and firms

# **1**993:3

Underlying inflation