

Reports from the Central Bank of Norway No. 4/2004

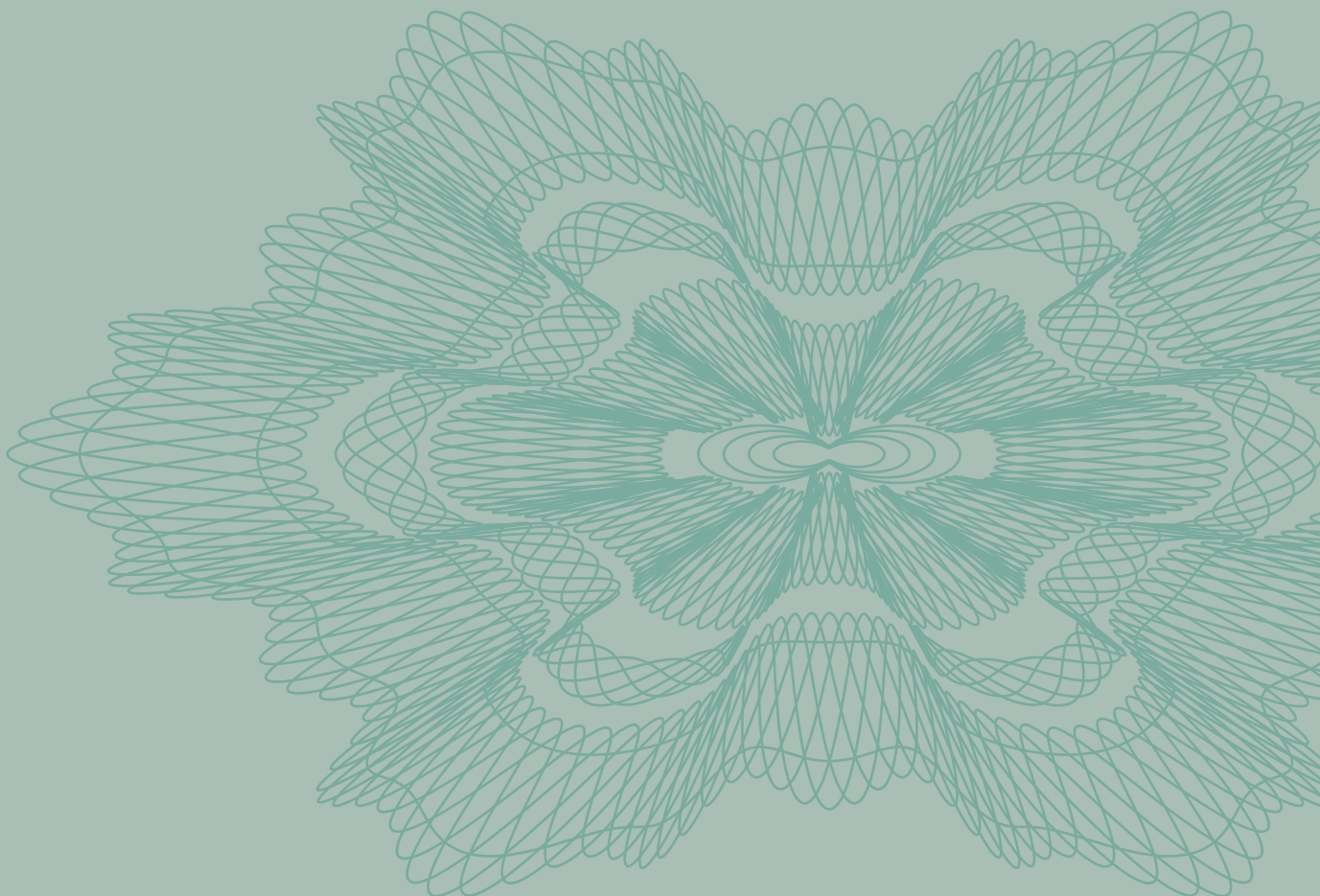


Inflation Report

with monetary policy assessments

3
04

November



Norges Bank's Inflation Report

Norges Bank's *Inflation Report* is published three times a year, in February/March, June/July and October/November. Sections 1–4 of the report contain an analysis of developments in inflation, output and demand three years ahead. Norges Bank's Executive Board adopted a monetary policy strategy based on these analyses at its meetings on 12–13 October and 3 November for the period to the next *Inflation Report*, which will be published on 16 March. The strategy is published in Section 5. The Executive Board monetary policy meetings will be held on 3 November, 15 December and 2 February.

The *Inflation Report* is published three times a year, and together with *Financial Stability*, is part of Norges Bank's series of reports. The report is also available on Norges Bank's website:
<http://www.norges-bank.no>.

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Monetary policy in Norway

Objective

The operational target of monetary policy is low and stable inflation, with annual consumer price inflation of approximately 2.5 per cent over time.

In general, direct effects on consumer prices resulting from changes in interest rates, taxes, excise duties and extraordinary temporary disturbances are not taken into account.

Implementation

Norges Bank operates a flexible inflation targeting regime, so that weight is given to both variability in inflation and variability in output and employment.

Monetary policy influences the economy with long and variable lags. Norges Bank sets the interest rate with a view to stabilising inflation at the target within a reasonable time horizon, normally 1–3 years. The more precise horizon will depend on disturbances to which the economy is exposed and how they will affect the path for inflation and the real economy ahead.

The decision-making process

The key interest rate is set by Norges Bank's Executive Board. Decisions concerning interest rates and other important changes in the use of instruments will normally be taken at the Executive Board's monetary policy meeting every sixth week. The analyses in Norges Bank's *Inflation Report*, together with assessments of price and cost developments and conditions in the money and foreign exchange markets, form a basis for monetary policy decisions.

The main features of the analysis in the *Inflation Report* are presented to the Executive Board for discussion at a meeting about three weeks before the *Report* is published. On the basis of the analysis and discussion, the Executive Board assesses the consequences for interest rate setting and adopts a monetary policy strategy for the period to the next *Inflation Report*. Their assessments are published in Section 5 of the *Inflation Report*.

Communication of the interest-rate decision

The monetary policy decision is announced at 2pm on the day of the meeting. The Bank gives a press conference at 2.45pm on the same day. The press release provides an account of the main features of economic developments that have been of importance for the decision on interest rates and the Executive Board's assessments. The press release and the press conference are available on <http://www.norges-bank.no>.

Reporting

Norges Bank reports on the conduct of monetary policy in the *Inflation Report* and the *Annual Report*. The Bank's reporting obligation is set out in §75c of the Constitution, which stipulates that the Storting shall supervise Norway's monetary system, and in §3 of the Norges Bank Act. The *Annual Report* is submitted to the Ministry of Finance and communicated to the King in Council and to the Storting in the Government's Kredittmeldingen (Credit Report). The Governor of Norges Bank provides an assessment of monetary policy in an open hearing before the Standing Committee on Finance and Economic Affairs in connection with the Storting deliberation on the Credit Report.

Inflation Report 3/2004

with monetary policy assessments

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The cut-off date for the Inflation Report was 3 November 2004
Sections 1–4 are based on information in the period to 28 October 2004

Editorial

Challenges to monetary policy

Inflation has been low this year and considerably lower than our inflation target of 2½%. A slower rise in costs after several years of relatively high wage growth in Norway has also paved the way for renewed brisk growth in mainland enterprises. Employment is rising. The Norwegian economy now appears to be close to a normal level of capacity utilisation.

The projections in this report are based on the assumption that the interest rate moves in line with forward interest rates. This implies that Norges Bank maintains the key interest rate at the current level in the period to summer 2005, with a gradual increase thereafter. On the basis of available information – including possible effects of alternative interest rate setting – such developments seem to provide a reasonable balance between the objective of bringing up inflation while avoiding excessive growth in output and employment.

Inflation is expected to be somewhat higher in the coming quarters and then gradually approach the inflation target of 2½%. With the current low level of inflation, Norges Bank must give particular weight to conditions that might delay an increase in inflation.

Oil prices are high. Oil futures prices have also increased sharply in recent months. Thus far, the rise in oil and commodity prices has not influenced general price and cost pressures in the world economy, but growth in output and employment seems to be moderating.

Capital outflows through the Government Petroleum Fund increase when government petroleum revenues rise. Oil companies also hold the bulk of their financial assets in foreign currency, and higher revenues in these companies thus result in an increase in capital outflows. In the Government's budget proposal, the use of petroleum revenues remains virtually unchanged between 2004 and 2005. At the same time, the current account deficit for the mainland economy is now rising. In spite of this, the krone exchange rate has appreciated recently. This reflects short-term capital inflows and may indicate that foreign exchange market operators expect that the use of petroleum revenues will increase in the years ahead. A levelling off or a fall in oil prices and a stable use of petroleum revenues could reverse these short-term capital flows.

Svein Gjedrem

3 November 2004

Summary

Inflation has been low this year. Inflation edged up in September, and was broadly in line with the projection in the previous report. Inflation is still being restrained by the fall in prices for imported consumer goods in spite of the krone depreciation last year and the international rise in producer and commodity prices. This is ascribable to a rising share of imports from low-cost countries. Strong competition and high productivity growth in many industries in Norway have also exerted downward pressure on inflation.

Growth in the Norwegian economy has picked up markedly. Low interest rates, the global recovery and higher petroleum investment are boosting activity. A rise in imports has curbed the effect of high domestic demand on production. We have also assumed that potential growth will increase somewhat more than normal this year. Nevertheless, economic growth now appears to be higher than growth in potential output. The output gap is projected to be marginally negative this year.

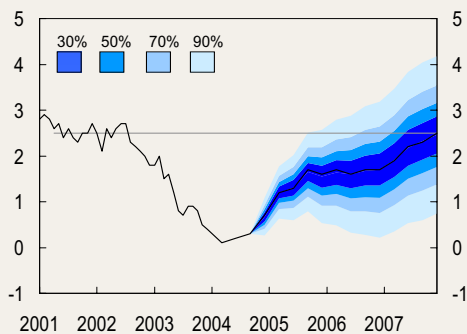
So far, employment has shown a moderate increase, partly reflecting rationalisation in many enterprises in recent years. As a result, they have been able to increase production without increasing their workforce.

Growth in the world economy has been strong over the past year, particularly in the US and China. Moreover, the recovery has gradually broadened. Looking ahead, growth among our trading partners is projected to moderate, but resource utilisation is expected to increase gradually. Increased global activity has led to rising commodity prices. Oil prices are high. There are still expectations of an increase in international interest rates, but market participants have lowered their growth and interest rate expectations as a result of high oil prices.

The operational objective of monetary policy is annual consumer price inflation of close to 2.5% over time. Inflation is considerably lower than this. The monetary policy stance is therefore expansionary. The key rate has stood at 1.75% since March this year, well below what is considered to be a normal level.

The projections in the *Inflation Report* are based on the technical assumption that the interest rate moves in line with forward interest rates. The assumption implies that the interest rate will remain at the current level up to summer 2005, followed by a gradual increase through the projection period. The krone exchange rate is assumed to shadow developments in the forward exchange rate, which implies a fairly stable exchange rate in the period ahead. Forward interest rates are now lower than in June, while the krone exchange rate is stronger.

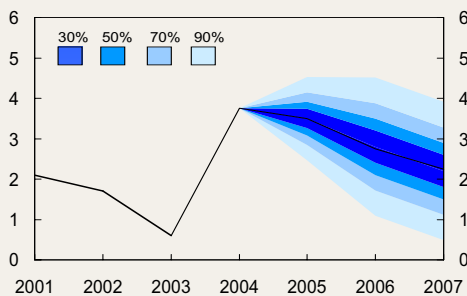
Chart 1 Projections and uncertainty for CPI-ATE.¹⁾ 12-month change. Per cent. Jan 01 – Dec 07



¹⁾ The bands in the fan indicate different probabilities for developments in the CPI-ATE. Probabilities are based on the difference between projected and actual developments in underlying inflation in the period 1997 – 2004.

Sources: Statistics Norway and Norges Bank

Chart 2 Projections and uncertainty for growth in mainland GDP.¹⁾ Annual change. Per cent. 2001 – 2007



¹⁾ The bands in the fan indicate different probabilities for growth in mainland GDP. Probabilities are based on the difference between projected and actual developments in mainland GDP in the period 1994 – 2004. The difference is estimated on the basis of the national accounts (NA) published on 11 March 2004. Revisions of the national accounts could result in changes in these projection errors.

Sources: Statistics Norway and Norges Bank

Growth in the Norwegian economy is also expected to be high next year. The global cyclical upturn will continue to generate positive impulses to internationally exposed industries in Norway and petroleum investment is expanding sharply. Public expenditure growth remains high and the interest rate will remain low given the assumption in this report. Increased capacity utilisation will provide a further boost to investment activity in mainland enterprises. On the other hand, a strong real krone exchange rate will lead to a loss of market shares for the Norwegian business sector both at home and abroad.

Growth is projected to slow gradually from 2006, approaching and then falling to a little less than growth in potential output. Monetary policy is assumed to be somewhat less expansionary. At the same time, growth in the world economy is expected to slow and petroleum investment is projected to fall gradually from a high level. The projections suggest that the household debt burden will gradually increase to a relatively high level, which could act as a drag on household demand.

Total resource utilisation in the economy will nevertheless rise over the next two years, and the output gap is projected to be positive ahead. Productivity growth is projected to slow to a level more closely in line with the average for the last 25 years. Demand for labour will pick up and unemployment is projected to fall in the coming years.

Inflation is projected to show a marked increase over the next year. In the short run, the depreciation of the krone in 2003 will continue to exert upward pressure on imported consumer goods. A pronounced fall in prices for some goods and services last autumn is expected to be reversed to some extent. In the somewhat longer term, inflation will show a more gradual rise. Higher resource utilisation in the Norwegian economy will lead to somewhat higher wage growth and will also make it possible for enterprises to increase their operating margins. However, inflation will still be restrained by low external price impulses. There are prospects that inflation will reach the inflation target towards the end of the projection period.

There is uncertainty associated with the projections (see Charts 1 and 2). Our projections are based i.a. on our analysis of relationships in the economy, the assumed exchange rate and a technical assumption about the interest rate. There is considerable uncertainty surrounding these factors.

1 | Recent developments

Inflation broadly in line with projections

Inflation, as measured by the CPI-ATE, was lower in summer than projected in the previous *Inflation Report*. Prices for clothing and footwear in particular showed a weaker-than-expected trend. In September, inflation edged up to an annualised 0.5%, approximately as expected (see Chart 1.1). After adjusting the CPI-ATE for the introduction of maximum rates for day-care places, which has a one-off effect on inflation, and the effects of interest rates on house rents, inflation was $\frac{3}{4}$ in September.

Low inflation is also reflected in the price indices in the national accounts, producer prices and wholesale prices. However, some of these prices have been affected by the rise in commodity prices, and show a somewhat stronger increase (see Chart 1.2). Information from Norges Bank's regional network also indicates a very moderate rise in the business sector's selling prices.

Inflation in Norway is still being depressed by low external price impulses, reflecting low inflation internationally and increased imports from low-cost countries. The rise in prices for imported goods has also been dampened by strong competition in retail trade. However, the negative contribution from external prices has declined over the past year as a result of the krone depreciation in 2003 and higher commodity prices.

The rise in prices for domestically produced goods and services has slowed and for the past few months has remained slightly above 1%. The rise in prices for services with wages as a dominant cost factor has remained relatively high. The rise in prices for other services has decelerated over the past year, partly as a result of increased competition and high productivity growth. The rise in house rents has also slowed. Prices for goods produced in Norway may have been curbed by a growing share of imported intermediate goods. This may in turn have intensified competition for Norwegian subcontractors.

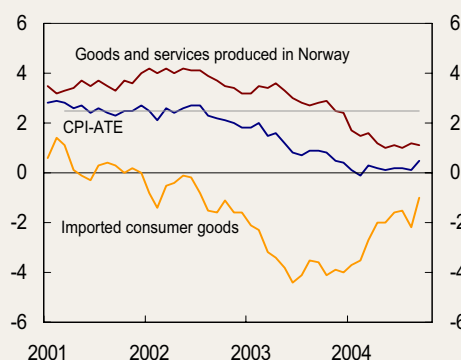
A more detailed account of consumer price movements in recent months is presented on page 13 of this report.

Strong growth in the Norwegian economy

The growth rate in the Norwegian economy is higher than our projections for growth in potential output. In the first half of 2004, mainland GDP was 3.6% higher than one year earlier. Total output is probably still slightly below the potential output level (see Chart 1.3).

The economy is being stimulated by low interest rates, the global recovery and increased petroleum investment. A rise in imports has dampened the effects of high domestic demand on production.

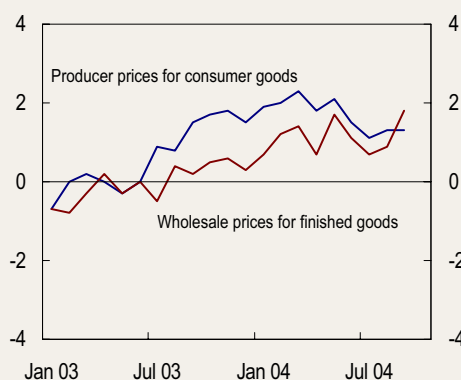
Chart 1.1 CPI-ATE¹⁾. Total and by supplier sector.²⁾ 12-month change. Per cent. Jan 01 – Sept 04



¹⁾ CPI-ATE: CPI adjusted for tax changes and excluding energy products.
²⁾ Norges Bank's calculations.

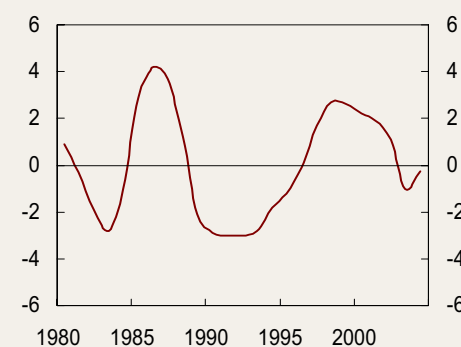
Sources: Statistics Norway and Norges Bank

Chart 1.2 Price index for wholesale prices and producer prices. 12-month change. Per cent. Jan 03 – Sept 04



Source: Statistics Norway

Chart 1.3 Projections for the output gap.¹⁾ Annual figures. Per cent. 1980 – 2004



¹⁾ The output gap measures the difference between actual and potential mainland GDP.

Sources: Statistics Norway and Norges Bank

Chart 1.4 Employed persons according to LFS. In millions. Seasonally adjusted. Monthly figures. Jan 98 – Aug 04

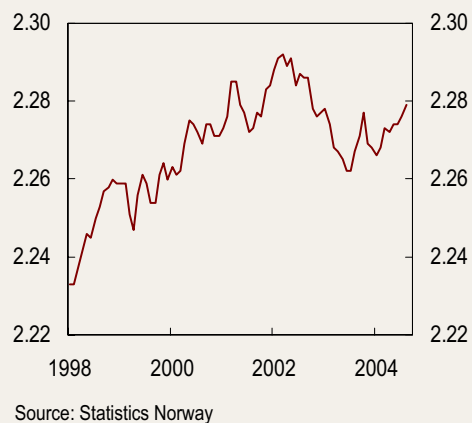


Chart 1.5 Oil futures prices. USD per barrel. Light, sweet crude. Monthly figures. Jan 01 – Oct 04¹⁾

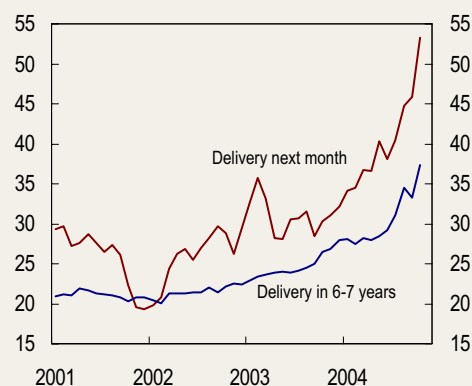
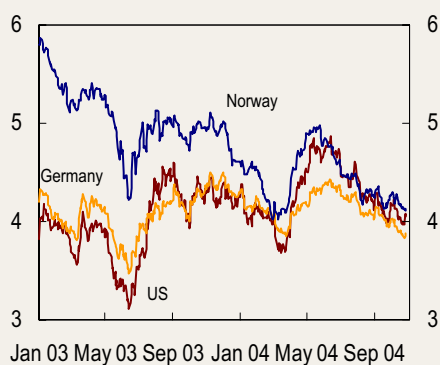


Chart 1.6 Yield on government bonds with 10 years' residual maturity. Daily figures. 1 Jan 03 – 28 Oct 04



Overall household demand is increasing strongly. Low interest rates, strong growth in real wages and increasing housing wealth are stimulating private consumption. Housing starts have increased appreciably. Growth in household borrowing remains high.

Mainland fixed investment has also begun to pick up, particularly in service sectors. A high level of activity and new entrants in retail trade have boosted investment in commercial buildings. Reports from Norges Bank's regional network also point to a rise in business investment. Corporate earnings have improved, and demand for credit is rising from a low level. A number of business sentiment surveys show greater optimism in the business sector.

Employment growth has picked up, but somewhat less than projected in *Inflation Report 2/04* (see Chart 1.4). The moderate rise in employment, together with a sharp increase in output, indicates that the business sector is still reaping benefits from efficiency measures. Reports from the regional network point to growth in employment in construction, retail trade and other services in the near term. A number of business sentiment surveys also indicate that employment will pick up in the period ahead, particularly in service industries.

Low external price impulses

Global activity remains high. In the past year, global growth has been the strongest for several decades. Growth has been particularly strong in the US and China. The upturn has gradually become more broad-based.

Key rates in a number of countries have been raised since *Inflation Report 2/04*. The Federal Reserve has raised its key rate twice, by a total of $\frac{1}{2}$ percentage point. The Bank of England has raised its key rate by $\frac{1}{4}$ percentage point since the previous *Inflation Report*, while Canada and New Zealand have raised their key rates by $\frac{1}{2}$ and $\frac{3}{4}$ percentage point respectively.

High demand abroad has pushed up commodity prices. Oil prices are high, and oil futures prices have also increased markedly in recent months (see Chart 1.5). Thus far, the marked rise in prices for oil and other commodities has not led to a pronounced increase in underlying inflation internationally. Foreign producer and export prices have also risen less than in previous periods of sharp rises in commodity prices. Low wage growth, strong competition and reduced use of oil and other commodities in production may be reasons for this.

However, high commodity prices have dampened growth expectations. Coupled with lower-than-expected employment growth in the US, this has led to a downward adjustment of interest rate expectations for the US and the euro area since the previous report. Long-term interest rates have also declined (see Chart 1.6).

For the Norwegian economy, high oil prices increase the likelihood that petroleum investment will be higher this year and next than assumed earlier. The increase in commodity prices has improved the profitability of many Norwegian export companies. The depreciation of the dollar has to some extent offset the effect of higher commodity prices on profits.

Low inflation among Norway's trading partners probably implies a continued moderate rise in their export prices and hence relatively subdued price impulses to the Norwegian economy.

Lower forward interest rates

The projections for the period ahead are based on the technical assumption that the interest rate will move in line with forward interest rates. Forward rates have fallen appreciably, and are on average 1 percentage point lower than assumed in *Inflation Report 2/04*. The assumption implies a gradual rise in interest rates from a low level through the projection period (see Chart 1.7).

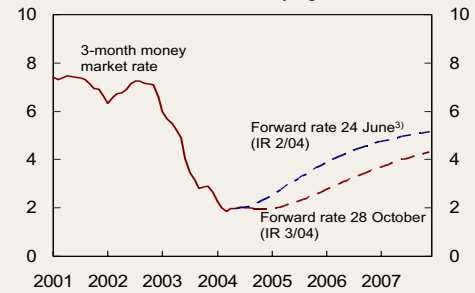
We also assume that the krone exchange rate will move in line with the forward exchange rate. Since June, the krone has appreciated by 2%. The forward exchange rate implies an approximately unchanged exchange rate through the projection period (see Chart 1.8).

Interest rates have fallen somewhat more in Norway than internationally. The market now expects the first ¼ percentage point rise in the interest rate in Norway in summer 2005 (see Chart 1.9). A key rate of a little less than 2½% is expected at the end of 2005. Expectations have been lowered by 1 percentage point since July.

Like the major international currencies, the Norwegian krone remained relatively stable from end-June to mid-October. However, the dollar has recently depreciated against most currencies, including the Norwegian krone. Interest rate expectations in Norway have been lowered. In isolation, this could have contributed to a somewhat weaker krone. Expectations that the interest rate has reached a trough, coupled with high oil prices and expectations of persistently high oil prices, appear to have underpinned the krone exchange rate, however.

High oil prices will result in an increase in the current account surplus from 2003 to 2004. In isolation, this points to a stronger krone. However, the effect on the krone exchange rate is being offset by higher long-term capital outflows through the Government Petroleum Fund. In the period July to November foreign exchange for NOK 47bn will be purchased for the Fund (see box on page 53). Moreover, oil companies probably hold a large share of their increased cash surplus in foreign currency (see box on page 54). In addition, a deterioration of the balance of trade for mainland Norway will result in higher commercial demand for foreign exchange and reduced demand for the Norwegian krone.

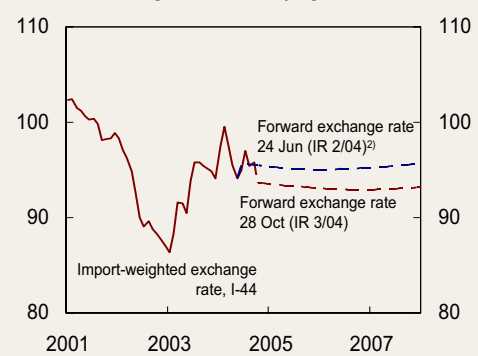
Chart 1.7 Assumption for the money market rate¹⁾. Forward interest rates.²⁾ Monthly figures. Per cent



¹⁾ The money market rate is normally about ¼ percentage point higher than the sight deposit rate.
²⁾ 3-month money market rate to end-September 2004. The assumption for the money market rate is estimated on the basis of interest rates in the money and interest rate swap market at the specified date. The interest rate scenario has been adjusted for the fact that credit risk increases with the period to maturity.
³⁾ There is some deviation from the assumption published in IR 2/04 because of a change in the estimation method.

Source: Norges Bank

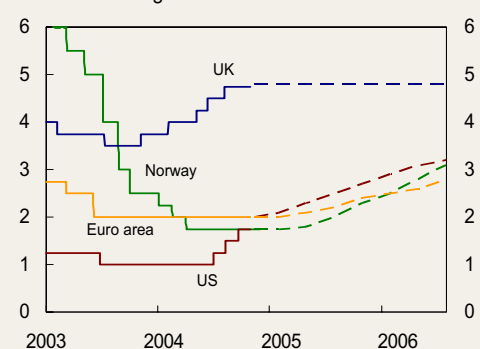
Chart 1.8 The krone exchange rate (I-44)¹⁾. Forward exchange rate. Monthly figures



¹⁾ A rising curve denotes a weaker krone exchange rate.
²⁾ There is some deviation from the assumption published in IR 2/04 because of a change in the estimation method.

Source: Norges Bank

Chart 1.9 Interest rate expectations. Actual developments and expected key rate¹⁾ at 28 Oct 04. 2 Jan 03 – 1 Aug 06



¹⁾ FRA and futures contracts adjusted for the estimated difference between 3-month money market rates and the key rate.

Sources: Reuters and Norges Bank

Recent developments in inflation

Consumer price inflation adjusted for tax changes and excluding energy products (CPI-ATE) was very low up to end-summer (see Chart 1). From August to September, the year-on-year rise moved up from 0.1% to 0.5%.

The rise in prices for domestically produced goods and services has decreased in recent years from an annual rise around 4% in mid-2002 to 1.1% in September this year. It is particularly prices for “other services” which have fallen. The fall in prices for imported consumer goods has decelerated through 2004 (see Chart 2).

The consumer price index (CPI) rose by 1.1% in the year to September. Other price statistics also convey a general picture of low inflation in Norway.

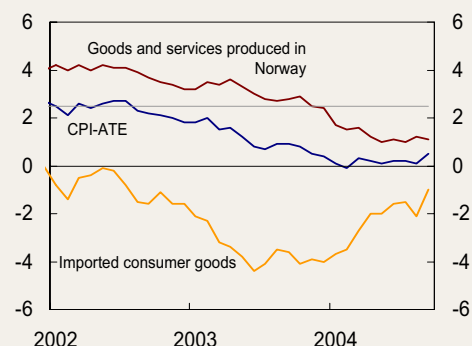
Reduced fall in prices for imported consumer goods

The fall in prices for imported consumer goods has slowed over the past year. Partly owing to the depreciation of the krone last year, the fall in prices for clothing and footwear has been more subdued than earlier (see Chart 3). The fall in prices for audiovisual equipment has also moderated. These prices fell by 5.9% in the year to September. The rate of increase in car prices has picked up over the past year and the year-on-year rise was 1.3% in September.

Lower rise in prices for domestically produced goods and services

The prices for domestically produced goods have risen by around 1% the last six months. Prices for services with wages as a dominant cost factor have increased by about 5% over the past six months, but slowed to 4.2% in September (see Chart 4). Prices for “other services” fell markedly in autumn 2003 and the annual rate of change is still negative, primarily reflecting developments in airfares. House rent inflation has been low over the past six months, partly reflecting the decline in interest rates. Annual house rent inflation was 1.6% in September. The rise in food prices has also decreased and was down to 0.6% in September (see Chart 5). The low rise in food prices can be seen in relation to stronger

Chart 1 CPI-ATE¹⁾. Total and by supplier sector.²⁾ 12-month change. Per cent. Jan 02 – Sept 04

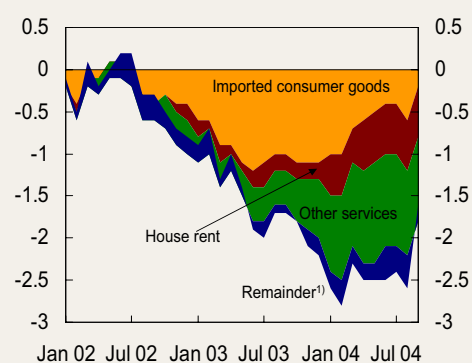


¹⁾ CPI-ATE: CPI adjusted for tax changes and excluding energy products

²⁾ Norges Bank's estimates

Sources: Statistics Norway and Norges Bank

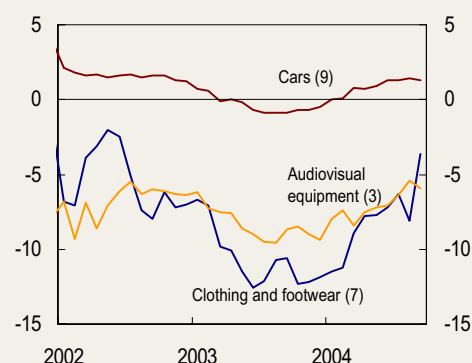
Chart 2 Contribution to the fall in the CPI-ATE from Dec 01 to Sept 04. Percentage points



¹⁾ Agricultural products, fish products, consumer goods produced in Norway, services with wages as dominant factor

Sources: Statistics Norway and Norges Bank

Chart 3 Prices for some imported consumer goods.¹⁾ 12-month change. Per cent. Jan 02 - Sept 04



¹⁾ Percentage share of CPI-ATE in brackets.

Sources: Statistics Norway and Norges Bank

competition in the retail sector, partly reflecting new entrants in the market. A higher rise in wholesale food prices than in consumer prices may indicate somewhat lower margins in retail trade. Stronger competition has also resulted in increased cooperation with foreign suppliers. This may have led to a slower rise in prices and rationalisation among Norwegian suppliers. Moreover, domestic producer prices have probably been influenced by international trade rules for the food industry.

With some exceptions, other price statistics confirm the picture of low inflation. The price index for private consumption in the national accounts increased by 1.3% from the second quarter of 2003 to the second quarter of this year. Price indices for investment also show little increase. Prices for traditional exports and imports rose by 5.6% and 5.5% respectively during the same period. This must be seen in connection with the depreciation of the krone last year and higher commodity prices.

The rise in producer prices for consumer goods and prices for manufactured goods, measured by domestic wholesale prices, has moved up and was 1.3% and 1.9% higher in September than one year earlier (see Chart 1.2, page 10).

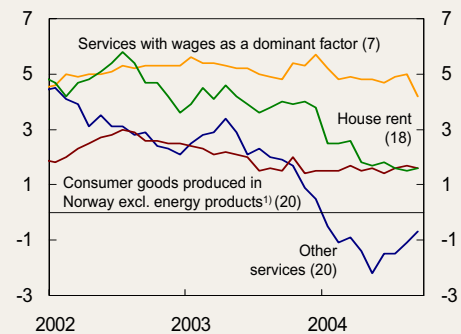
Indicators of underlying inflation

The CPI-ATE is an indicator of underlying inflation, but also other measures provide information. The Regulation on Monetary Policy states that “in general, the direct effects on consumer prices resulting from changes in interest rates, taxes, excise duties and extraordinary temporary disturbances shall not be taken into account”. The regulation notes that other factors may have a temporary effect on inflation than the factors for which the CPI-ATE is adjusted.

The introduction of maximum day-care rates, which has a one-off effect on inflation, and the effects of interest rates on house rents are estimated to push down inflation by $\frac{1}{4}$ percentage point on an annual basis. If the CPI-ATE is adjusted for these two factors, inflation was about $\frac{3}{4}$ % in September.

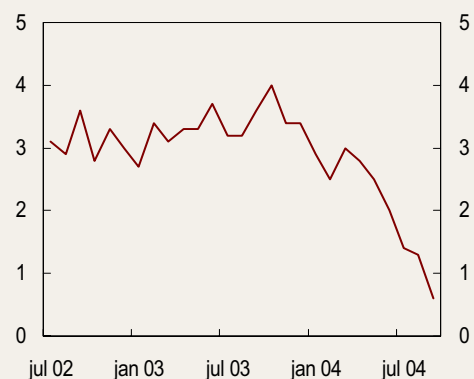
A *trimmed average* is estimated by excluding the largest and smallest price movements when inflation is calculated. A *weighted median* is estimated by sorting price changes for the individual goods and

Chart 4 Prices for goods and services produced in Norway¹⁾. 12-month change. Per cent. Jan 02 – Sept 04



¹⁾ Adjusted for tax changes and excluding energy products. Percentage share of CPI-ATE in brackets. Norges Bank's estimates.
²⁾ Excluding agricultural and fish products.
 Sources: Statistics Norway and Norges Bank

Chart 5 Prices for food and non-alcoholic beverages. 12-month change. Per cent. Jul 02 – Sept 04



Source: Statistics Norway

services in ascending order, and then choosing the median value, taking into account the weights. These alternative indicators place less emphasis on the most pronounced positive and negative price changes and can provide additional information about underlying inflation.

Inflation measured by the weighted median varies somewhat from one month to the next, but shows decelerating inflation from early 2003 (see Chart 6). The year-on-year rise moved up to 1.7% in September. The trimmed average also shows falling inflation through 2003. In September, inflation measured by the trimmed average was 1.0%.

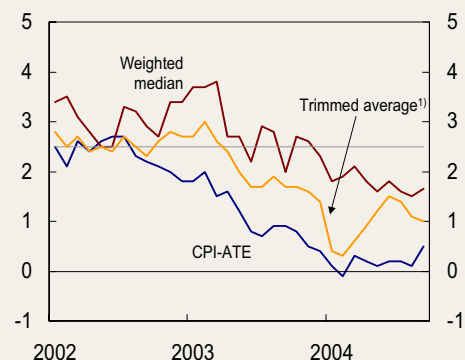
The median and the trimmed averages show higher inflation than the CPI-ATE because the largest negative contributions to inflation have been greater than the largest positive contributions. These technical measures therefore eliminate more of the negative than the positive impulses to inflation. Airfares and audiovisual equipment have shown the largest negative price changes.

Overall, these indicators point to an underlying annual rate of increase in consumer prices in the range ½ - 1 ½ %. CPI-ATE inflation is at the lower end of the interval for underlying inflation.

Higher CPI inflation

Consumer prices including tax changes and energy products (CPI) have been influenced by wide variations in energy prices (see Chart 7). Electricity prices fell in the beginning of 2004, but have risen since May, rising at an annual rate of 1.8% in September. Electricity prices partly depend on water reservoir levels. Very high and rising oil prices led to sharply rising petrol prices as from May this year, and showed a year-on-year rise of 4.7% in September. In the year to September 2004, CPI inflation was 1.1%.

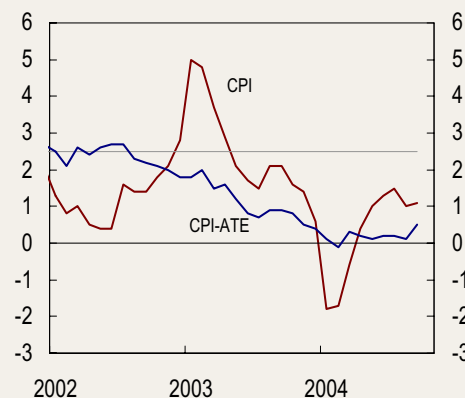
Chart 6 Three indicators of underlying price inflation. 12-month change. Per cent. Jan 02 – Sept 04



¹⁾ Price changes accounting for 20% of the weights are disregarded.

Sources: Statistics Norway and Norges Bank

Chart 7 CPI and CPI-ATE. 12-month change. Per cent. Jan 02 - Sept 04



Source: Statistics Norway

2 | International developments

Activity in the world economy remains solid (see Chart 2.1). Over the past year, global growth has been the strongest recorded for several decades. High private consumption in the US and strong investment growth in China have been the main driving forces, but the recovery has broadened to many countries. However, the growth peak appears to have been passed, and there are prospects that global growth will slow.

Inflation has slowed again after accelerating in the US, the euro area and the UK in the second quarter. High oil prices have still not translated into higher inflation, and underlying inflationary pressures remain moderate. On the other hand, high commodity prices have increased the uncertainty surrounding inflation in the period ahead. Expectations of an interest rate increase in the US and the euro area have nevertheless been lowered since June (see Chart 2.2).

Even though there are prospects of sustained growth in the world economy, there are several risks to the growth outlook, in particular as regards the effects of high oil prices. Moreover, imbalances in the global economy represent a considerable risk factor. How these imbalances are corrected will have a marked impact on developments in the world economy.¹ Higher growth in other regions, particularly in Europe, could lead to a gradual reduction of the current account deficit in the US. However, if the imbalances are corrected through a sharp slowdown in demand in the US or a marked and rapid dollar depreciation, the result may be a pronounced and perhaps prolonged downturn in the world economy.

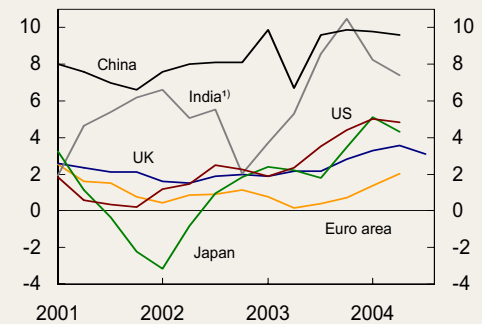
Very tight oil market results in high prices...

North Sea oil prices have varied between USD 34 and 52 per barrel since June, i.e. the highest levels observed. In real terms, oil prices are close to the level prevailing in the latter half of the 1970s, but considerably lower than the levels recorded in the first part of the 1980s (see Chart 2.3). However, contrary to earlier periods of sharply rising oil prices, the main reason behind the rise in oil prices is a surge in demand and limited excess production capacity.

Growth in oil demand has been particularly strong in regions where production is relatively energy-intensive, such as China and other non-OECD countries. China alone accounts for about 1/3 of global growth in oil demand this year.

Increased oil production to accommodate the strong growth in demand has led to a marked reduction in excess production capacity (see Chart 2.4). Normally, the surplus capacity,

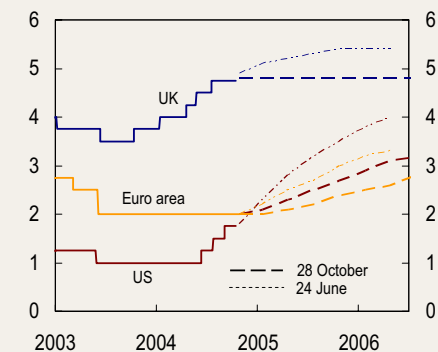
Chart 2.1 GDP. Quarterly figures. Annual change. Per cent. 01 Q1 – 04 Q3



¹⁾ Measured by factor price.

Sources: EcoWin, Statistics Japan, Office of National Statistics (UK), EUR-OP/Eurostat, Consensus Economics, Bureau of Economic Analysis (US) and Central Statistical Organisation (IN)

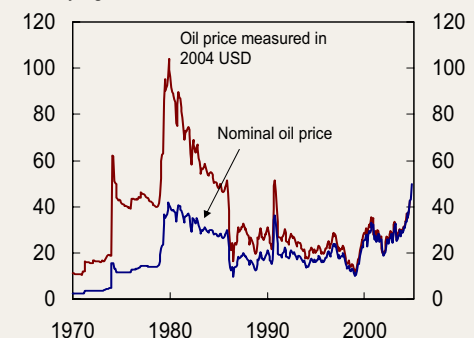
Chart 2.2 Interest rate expectations. Actual developments and expected key rate¹⁾ at 24 Jun and 28 Oct 04. 2 Jan 03 – 1 Jun 06



¹⁾ FRA and futures contracts adjusted for the estimated difference between 3-month money market rates and the key rate.

Sources: Bloomberg, Reuters and Norges Bank

Chart 2.3 Real oil price in 2004 USD¹⁾ and nominal oil price. Brent Blend in USD per barrel. Monthly figures

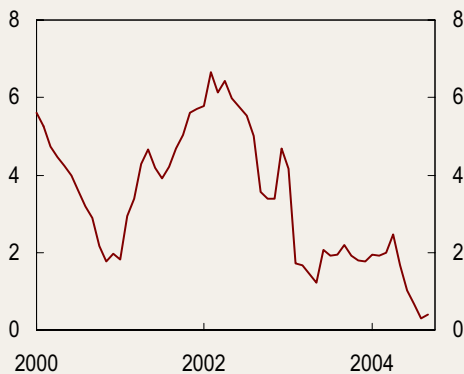


¹⁾ Average CPI in the US in the period Jan 04 – Sept 04.

Sources: EcoWin / Bureau of Labour Statistics and Norges Bank

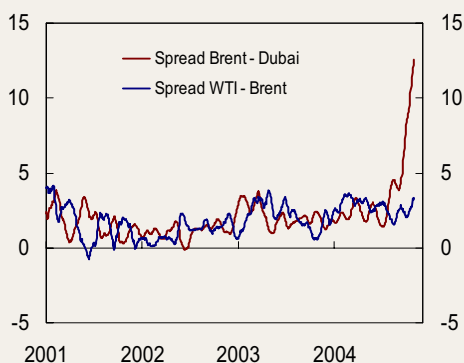
¹ See box in *Inflation Report 3/03*.

Chart 2.4 Idle production capacity in OPEC-10. Million barrels per day. Monthly figures. Jan 00 – Sept 04



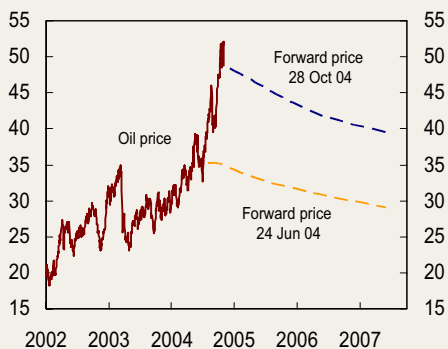
Source: International Energy Agency

Chart 2.5 Crude oil price spreads. USD per barrel. Daily figures. 14-day moving averages. 1 Jan 01 – 28 Oct 04



Source: EcoWin

Chart 2.6 Oil price¹⁾ in USD per barrel. Forward prices from 24 Jun 04 and 28 Oct 04. Daily figures. 1. Jan 02 – 28 Oct. 04



¹⁾ Brent Blend.

Sources: International Petroleum Exchange and Norges Bank

which is largely found in OPEC countries, functions as a buffer against temporary production disruptions. With little excess capacity, small production problems also have a considerable impact on prices. Production swings in Iraq, unrest in Nigeria and hurricanes in the Gulf of Mexico have had a fairly strong impact on oil prices.

The high level of oil prices also reflects imbalances between demand and supply of various grades of crude oil. Growth in demand for light products such as petrol, diesel and jet fuel has been highest. Stricter environmental requirements both in Europe and the US have also led to a shift in consumption towards low sulphur products. However, crude oil production has largely been increased in the Middle East, primarily consisting of heavy, high sulphur products. In addition, refinery capacity for these crude oil grades is already fully utilised. This mismatch has led to wide price differences between crude oil grades, such as the price difference between North Sea Brent and crude oil from Dubai (see Chart 2.5).

Prices for other energy products such as coal and natural gas have also increased. In the US and the UK, contracts in the natural gas market are similar to the Nordic electricity market. Wholesale prices for natural gas have risen markedly recently, particularly in the UK, partly reflecting seasonal variations, but also reflects the risk that domestic production will not be sufficient to meet demand should the winter be colder than normal. The rise in natural gas prices may lead to higher prices for electricity and heating oil, and higher costs for enterprises that use gas in production.

... but limited effects on the real economy so far

So far, high oil prices have had relatively limited effects on developments in the real economy internationally. The rise in prices primarily reflects strong demand for oil and to a lesser extent production cuts as has been the case during earlier price surges. Furthermore, energy-intensive production has declined in industrial countries and energy consumption now accounts for a smaller share of total private consumption. In isolation, this means that the impact of oil price changes is more moderate than earlier. If oil prices remain at the current high level over a longer period, however, there is a clear risk of a sharp slowdown in growth in the global economy.

Looking ahead, oil prices are assumed to decline in pace with futures prices (see Chart 2.6). Oil futures prices two years ahead have increased somewhat less than spot prices for oil since the previous *Inflation Report*. This implies a steeper fall in oil prices than assumed earlier. Oil futures prices 6 years ahead have risen by a little less than USD 10 since the previous report (see Chart 1.5 on page 11).

Moderate consumer price inflation in spite of high oil prices

Price developments internationally have been influenced by developments in commodity prices over the past year. In addition to oil prices, prices for metals and agricultural products, excluding food, have shown a sharp increase over a longer period (see Chart 2.7). This has in turn led to a pronounced rise in producer prices (see Chart 2.8). As a result of the increase in oil prices, consumer prices have to some extent followed producer prices, rising in the second quarter as a result of the surge in oil prices. In the euro area, inflation has also been influenced by an increase in user fees for health services and higher alcohol and tobacco taxes. However, the general rise in prices has edged down again in recent months (see Chart 2.9), and core inflation has been moderate in most countries.

These developments are in line with the general tendency observed in recent years, where changes in producer prices have had a smaller impact on consumer prices than earlier. Companies have to a limited extent passed on higher costs to prices and employees are awarded limited pay compensation for higher prices. An important factor is intensified competition, both at home and abroad. The introduction of an inflation target in many countries has probably also contributed in this respect by stabilising inflation expectations.

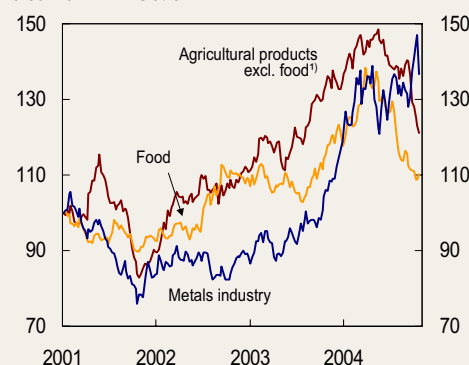
With spare capacity in the economy, high productivity growth and strong competition in product markets, it is less likely that high oil prices will have long-lasting effects on inflation ahead. On the whole, underlying inflation is expected to be fairly low ahead. Competition is expected to intensify further in several sectors, partly as a result of the elimination of import quotas for textiles and clothing in the US, the euro area and Canada.

Continued sizeable imbalances in the US economy

A rise in interest rates and high oil prices led to slower growth in the US in the second quarter this year, but growth is still high. Higher real disposable income, low interest rates and a strong increase in housing wealth have contributed to high growth in private consumption in recent years. In addition, strong productivity growth, rising profit margins and low funding costs have fuelled investment. Employment has increased (see Chart 2.10) and unemployment has declined, even though employment growth has been weak in relation to previous recoveries.

The recent depreciation of the dollar will, in isolation, contribute to higher growth in the US economy. However, several factors suggest slower growth in the period ahead. There are still prospects of further interest rate increases, and we have assumed some fiscal tightening from 2005. The

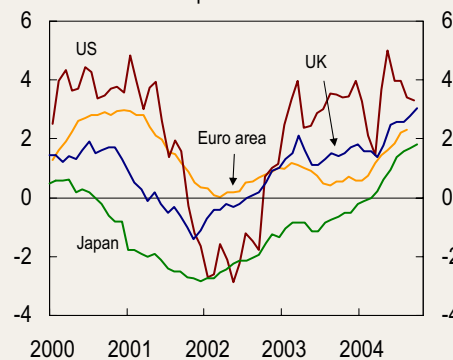
Chart 2.7 The Economist's commodity price indices. 5 Jan 01=100. Weekly figures. 5 Jan 02 – 22 Oct 04



¹⁾ This includes cotton, wool, soya beans and timber.

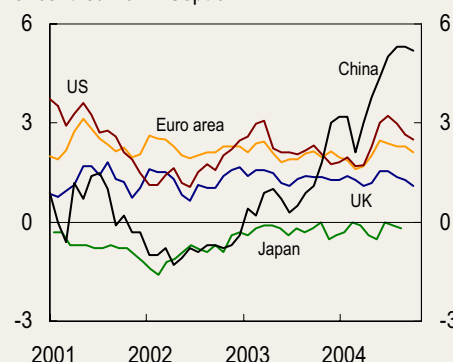
Sources: *The Economist* and EcoWin

Chart 2.8 Producer prices. 12-month change. Per cent. Jan 00 – Sept 04



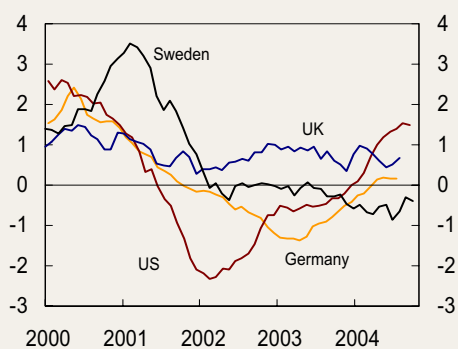
Sources: EcoWin, EUR-OP/Eurostat, Bureau of Labor Statistics (US), Statistics Japan and Office of National Statistics (UK)

Chart 2.9 Consumer prices. 12-month change. Per cent. Jan 01 – Sept 04



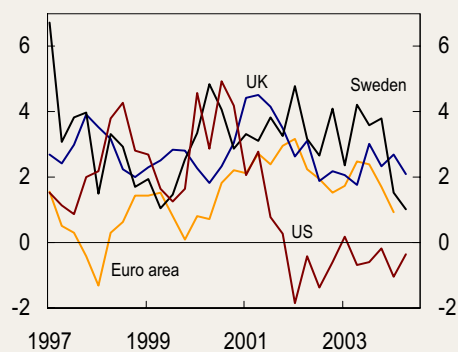
Sources: EcoWin, EUR-OP/Eurostat, Statistics Japan, Office of National Statistics (UK), Bureau of Labor Statistics (US) and National Bureau of Statistics (CHN)

Chart 2.10 Employment. 12-month change. Per cent. Jan 00 – Sept 04



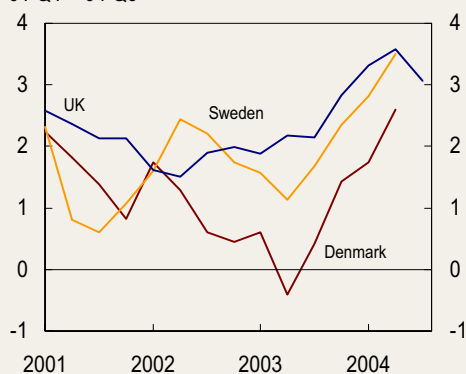
Sources: EcoWin, Bureau of Labor Statistics (US), Federal Statistical Office (DE), Office of National Statistics (UK) and Statistics Sweden (SE)

Chart 2.11 Unit labour costs. Change on same quarter previous year. Per cent. 97 Q1 – 04 Q2



Sources: Bureau of Labor Statistics (US), Office of National Statistics (UK), Statistics Sweden (SE) and EUR-OP/Eurostat

Chart 2.12 GDP in the UK, Sweden and Denmark. Quarterly figures. Annual growth. Per cent. 01 Q1 – 04 Q3



Sources: EcoWin, Office of National Statistics (UK), Statistics Denmark (DK) and Statistics Sweden (SE)

risk of a more pronounced slowdown than assumed seems to have increased. The household saving ratio has fallen to a very low level. The household debt burden is high, which has increased the vulnerability of households to changes in house prices and a weakening of the labour market. Persistently high oil prices may also have a dampening impact on growth in the US economy.

Export-led growth in the euro area

After expanding at a brisk pace in the first six months of the year, growth in the euro area has shown signs of moderating in recent months. The main contribution to growth is still net exports, while growth in domestic demand has edged down again. Relatively weak growth in real disposable income, combined with continued high unemployment, has acted as a drag on private consumption. In addition, housing wealth has contributed less to growth in private consumption than in the US and the UK. House price inflation has been moderate in many countries, while the scope for mortgage refinancing at a lower interest rate is limited. However, there are considerable differences between euro area countries. In some countries, there is a risk of a fall in house prices, which may translate into lower growth in private consumption.

Looking ahead, we expect growth to pick up somewhat. Corporate profitability has improved as a result of higher productivity growth and more moderate growth in labour costs (see Chart 2.11). Investment is now low in relation to corporate earnings, which should stimulate investment and, in turn, employment. However, slower global growth and the appreciation of the euro will have a dampening impact on export growth. The projections are based on an increase in interest rates in line with market expectations.

Brisk growth in the UK, Sweden and Denmark

Following a long period of strong growth, there are signs of a turnaround in the UK economy (see Chart 2.12). Preliminary national accounts figures show that industrial production fell markedly in the third quarter, while service production remained firm. Private consumption growth and house price inflation also seem to have slowed, which has contributed to a weakening of pound sterling. The labour market is still very tight. Growth is expected to be weaker in the coming years than this year, partly reflecting the increase in interest rates and weaker global growth. In Sweden, growth has picked up further. Net exports have made the strongest contribution to growth, while the impetus from domestic demand has been marginally positive. This has led to some improvement in labour market conditions. A moderate increase in private consumption and an expansionary fiscal stance are expected to fuel growth in the period ahead. Growth is nevertheless expected to moderate, partly as a result of weaker external growth. In Denmark, low interest rates and tax cuts have boosted growth in domestic demand.

In addition, strong global growth has led to solid growth in net exports. Low interest rates and an expansionary fiscal stance this year are expected to result in continued, solid growth in the coming years.

Asia of growing importance to the world economy

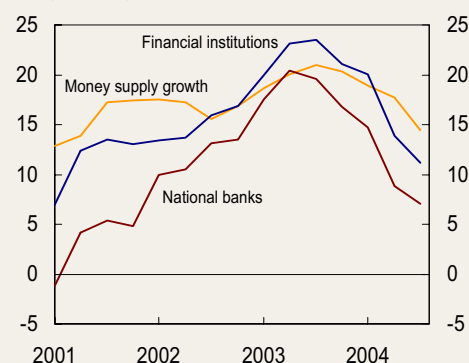
Over the past three years, China has accounted for about a fourth of total growth in the world economy, measured by purchasing power adjusted GDP. Growth in imports to China has accounted for about a third of total growth in the volume of global imports. Buoyant demand growth in China has pushed up oil prices and other commodity prices. At the same time, strong growth in China's industrial production has pushed down prices for many manufactured goods, and has intensified competition in many sectors. Looking ahead, the global economy will therefore be heavily influenced by developments in activity in China, and how industrial countries adapt to increased globalisation.

In the past year, the Chinese authorities have implemented a number of administrative measures to prevent the economy from overheating. For example, interest rates have been increased somewhat, borrowing has been restricted for some vulnerable industries such as the cement and steel industries and approval requirements for new industrial projects have been tightened. In spite of these measures, activity in the Chinese economy remains high. Credit growth has slowed somewhat (see Chart 2.13), but domestic investment remains high. Private consumption has also picked up, partly as a result of higher real disposable income. Looking ahead, growth is still expected to slow somewhat as the tightening measures start to have an impact and high commodity prices curb demand.

In Japan, the recovery has broadened. In addition to strong growth in net exports, growth in private consumption and private investment has been solid. Structural changes in the financial industry have improved the financial strength of this sector. Weaker global growth is expected to curb growth somewhat ahead. In addition, some fiscal tightening is expected, while the central bank has indicated that monetary policy will remain expansionary until there are clear signs of a pick-up in inflation.

Strong global growth, particularly in China, has also fuelled growth in many of the other emerging economies in Asia. The improvement in the international ICT sector has been an important factor behind the upturn. Domestic demand has gradually picked up, supported by an expansionary monetary and fiscal stance in several countries. Looking ahead, growth is expected to remain strong, but developments depend on global growth. Many Asian countries are particularly vulnerable to a sharp slowdown in the Chinese economy.

Chart 2.13 Growth in the money supply and in credit in China. Quarterly figures. Annual growth. Per cent. 01 Q1 – 04 Q3



Sources: EcoWin, the Peoples Bank of China and the National Bureau of Statistics

Table 2.1 GDP estimates
Percentage change from previous year

	2004	2005	2006	2007
US	4¼	3	3	3
Japan	4¼	2	1¾	1½
Germany	1½	1¾	2	2
France	2½	2¼	2½	2½
UK	3¼	2½	2½	2½
Sweden	3¼	2¾	2¼	2¼
Norway's trading partners ¹⁾	2¾	2½	2½	2½
Euro area ²⁾	2	2	2¼	2½

¹⁾ Export weightings
²⁾ Weights from Eurostat

Source: Norges Bank

3 | Domestic developments

Table 3.1 Key aggregates for Norway 2004 - 2007. Percentage change from previous year

	2004	2005	2006	2007
Mainland demand	4¼	4	3½	2¼
Private consumption	5	4½	3¾	2½
Public consumption	2	1¾	1½	1½
Fixed investments	5¾	5	5	2¾
Petroleum investments	12½	15	5	-7½
Traditional exports	4	4½	3	3
Imports	8½	6	4	1¾
Mainland GDP	3¾	3½	2¾	2
Employment	¼	1¼	1¼	½
LFS unemployment ¹⁾	4½	4	3¾	3¾

¹⁾ Percentage of labour force

Source: Norges Bank

Growth in the Norwegian economy picked up during the second half of 2003. Low interest rates have contributed to strong growth in private consumption and housing investment. Activity has picked up in service industries and the construction sector. High petroleum investment, the global economic recovery and a weaker krone through 2003 have improved conditions for manufacturing. Profitability is improving for mainland enterprises. There are signs of renewed growth in investment in a number of industries. Imports have expanded markedly. Employment has started to edge up and mainland GDP growth is projected at 3¾% in 2004.

It is assumed that growth in potential output will be higher than normal in 2004 as a result of increased competition and rationalisation in many sectors. This will contribute to fairly high growth in the Norwegian economy without the emergence of constraints on the supply of labour or productive capital. The high rate of growth in output nevertheless implies that the output gap will approach zero towards the end of 2004.

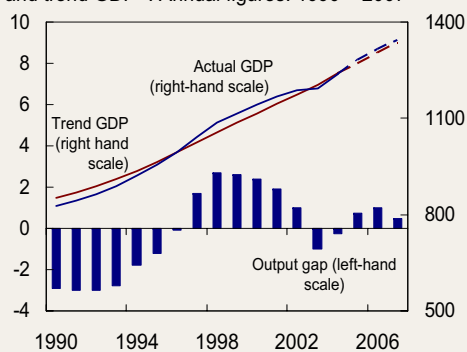
Monetary policy will continue to stimulate activity in the Norwegian economy. The projections for the period to 2007 are based on the technical assumption that the interest rate will move in line with forward interest rates. The assumption implies a gradual rise in the interest rate from a low level through the projection period. We assume that the krone exchange rate will move in line with the forward exchange rate. This implies that the krone exchange rate will be fairly stable in the period ahead (see Section 1 for further discussion).

Growth is expected to remain high in 2005. Household demand is still rising and is fuelling activity in retail trade and service industries. Petroleum investment and external growth are providing impetus to manufacturing. As excess capacity in the enterprise sector is reduced, employment and investment will pick up at a faster pace.

An increase in interest rates, relatively high household debt, slower global growth and a decline in petroleum investment will lead to a gradual slowdown in growth later in the projection period. Growth is projected to slow, approaching or falling slightly below projected potential growth.

The output gap is expected to increase in 2005 and 2006 and to decline somewhat in 2007 (see Chart 3.1).

Chart 3.1 Projections for output gap¹⁾, actual GDP²⁾ and trend GDP²⁾. Annual figures. 1990 – 2007³⁾



¹⁾ The output gap is a measure of the difference between actual and potential mainland GDP. Difference in per cent.
²⁾ Mainland Norway. In billions of NOK. Constant 2001 prices.
³⁾ Projections for 2004 -2007

Sources: Statistics Norway and Norges Bank

Strong growth in household demand

In the first half-year, private consumption was 5% higher than in the same period one year earlier. According to the quarterly national accounts, growth in private consumption was weak in the second quarter, but retail trade was probably affected by the transport workers' strike in the spring. In the third quarter, the goods consumption indicator was 3.7% higher than one year earlier. Housing starts have increased sharply.

Household confidence as to their personal finances and the national economy became increasingly positive through the summer, and households view the prospects ahead as highly favourable. According to TNS Gallup's consumer confidence indicator for the third quarter, household confidence with regard to their personal finances in the year ahead is at the highest level since the survey was first conducted in 1992 (see Chart 3.2).

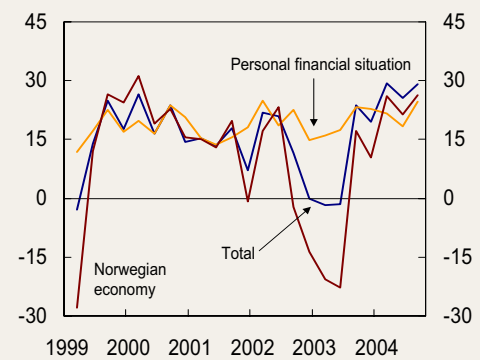
Household disposable income has been heavily influenced by large dividend payments in 2002 and 2003. High income from dividends is largely reinvested in companies and as a result the saving ratio is projected to increase by an additional 2-3 percentage points in these years. As in *Inflation Report 2/04*, extraordinary income of this kind, which probably has little influence on consumption growth, is excluded when calculating the saving ratio and disposable income ahead.

Growth in household real disposable income will be fairly high this year (see Chart 3.3). Later in the projection period, employment will rise and a tighter labour market will result in somewhat higher wage growth. The Government has proposed personal income tax cuts for 2005. The effect on real disposable income will be partly offset by higher inflation as a result of an increase in VAT. Growth in real disposable income is projected at 3¾% in 2005.

Debt accumulation in the household sector has been approximately 11% in the last year (see Chart 3.6). Debt has risen at a markedly faster pace than income. This may reflect high turnover in the housing market and high house prices. The projections are based on a gradual increase in the interest rate in line with forward interest rates. Combined with increasing household debt, this will gradually lead to slower growth in household disposable income. Since the debt burden has increased, particularly for low- and middle-income households, a rise in interest rates may have a stronger impact on consumption.

Overall, consumption growth is projected at 5% in 2004, approximately in pace with growth in real income. In isolation, low interest rates and rising housing wealth point to stronger growth in consumption in 2004. We assume that households will smooth consumption somewhat over time

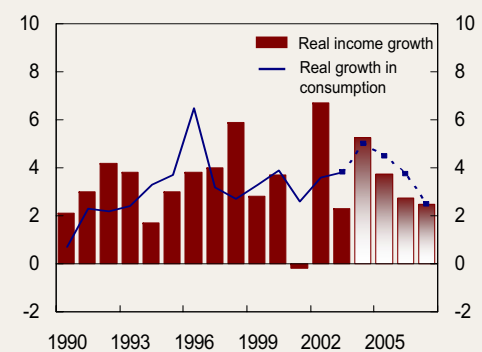
Chart 3.2 Consumer confidence indicator.¹⁾ Unadjusted figures. 99 Q1 – 04 Q3



¹⁾ Provides an indication of the share with a positive assessment of the current situation and outlook for the future less the share with a negative assessment.

Source: TNS Gallup

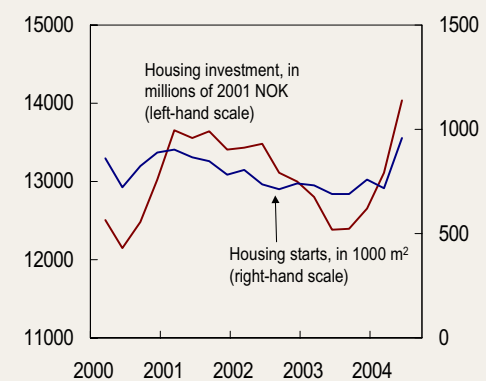
Chart 3.3 Real growth in households' disposable income and consumption. Annual figures. Per cent. 1990 – 2007¹⁾



¹⁾ Projections for 2004 – 2007.

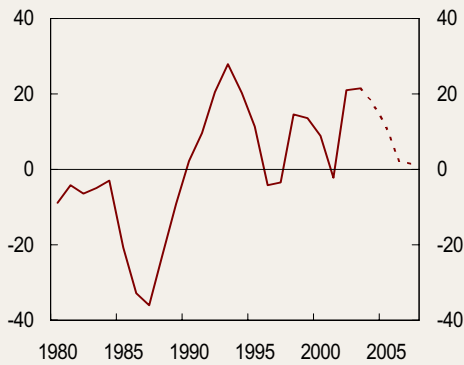
Sources: Statistics Norway and Norges Bank

Chart 3.4 Housing investment and housing starts. Seasonally adjusted. 00 Q1 – 04 Q2



Sources: Statistics Norway and Norges Bank

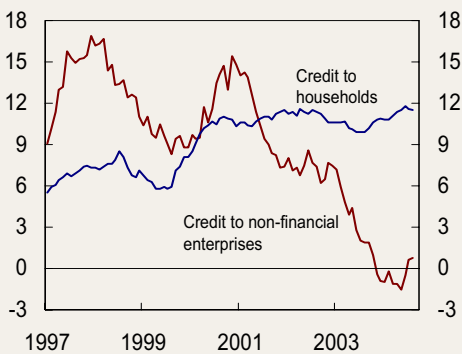
Chart 3.5 Households' net lending.¹⁾ In billions of NOK. Annual figures. 1980 – 2007²⁾



¹⁾ Adjusted for extraordinary share dividends 2002-2003.
²⁾ Projections for 2004-2007.

Sources: Statistics Norway and Norges Bank

Chart 3.6 Growth in credit to households and enterprises.¹⁾ 12-month change. Per cent. Jan 97 – Aug 04



¹⁾ From domestic sources (C2)

Source: Norges Bank

and that the saving ratio will decline gradually over the next two years. The prospect of reduced unemployment may in isolation improve job security and reduce the saving ratio. Consumption is projected to grow approximately in pace with real disposable income in 2007.

Housing starts have increased markedly and more than assumed in *Inflation Report 2/04* (see Chart 3.4). The prospect of fairly low interest rates ahead, a further fall in unemployment, solid growth in real income and lower property taxes will stimulate demand for new dwellings. With further sharp growth in residential construction, the supply of dwellings will probably exceed underlying demand. It is therefore assumed that growth in housing investment will gradually slow and level off during the projection period.

The projections for household disposable income, consumption and investment indicate a gradual fall in household net lending up to 2006 and a levelling off in 2007 (see Chart 3.5). In 2004, the increase in funding requirements is primarily ascribable to brisk growth in housing investment. Norges Bank's household financial accounts, which are based on financial market statistics, confirm that household net financial investment fell markedly in the first half of 2004. The projected fall in net financial investment in the period ahead reflects low interest rates and high house prices.

Business investment is picking up

After a fall in investment in 2002 and 2003, there are now signs of a pick-up in investment in a number of industries. Investment in retail trade and business services rose by 10% between the first half of 2003 and the first half of 2004. Commercial building starts in the retail sector have increased markedly in recent months. Manufacturing investment has also shown growth. Imports of capital goods such as office and IT equipment have increased sharply. Corporate borrowing has started to rise (see Chart 3.6).

Many companies have reduced costs in recent years by means of workforce reductions and rationalisation. This, combined with higher demand both in Norway and abroad and higher prices for many export products, has improved profitability. According to Norges Bank's business climate survey, business leaders consider profitability to be improving.

Improved profitability, increasing capacity utilisation and continued export growth will contribute to growth in manufacturing investment ahead. Information from our regional network indicates that development projects in the petroleum sector are generating positive spillover effects for mainland manufacturing. A number of large investment projects in manufacturing will be completed this year and

next, however, and this may reduce investment growth ahead. The continuing relocation of production activity may also curb investment growth in Norwegian manufacturing. Such relocation decisions will be influenced by how flexible the Norwegian labour market proves to be.

Output has increased markedly in service industries. Demand for these industries' services is expected to be high in the years ahead, suggesting further growth in investment. The contacts in retail trade and services industries in our regional network report that companies are planning to increase investment in 2005.

Commercial property accounts for a large share of investment in service industries. This market is still characterised by overcapacity and low rental prices, which may dampen investment. Information from our regional network indicates, however, that the market may have bottomed out. Non-residential property prices rose by 9% between the second half of 2003 and the first half of 2004 (see Chart 3.7).

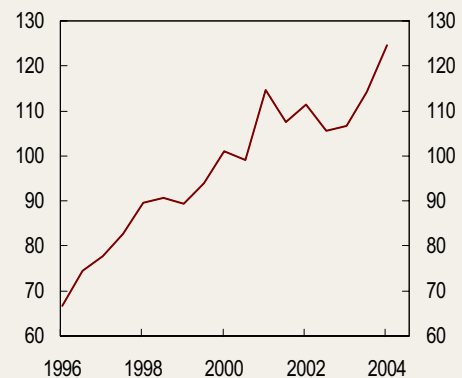
In 2003 investment as a share of gross product in the service industries was at its lowest level since 1993. The projections for investment growth in the service sector imply that the investment share will increase, but that investment will account for a smaller share of GDP than over the last 10 years (see Chart 3.8). It is likely that the high level of investment towards the end of the 1990s partly reflected excessive optimism in some service industries in Norway as in other countries.

Petroleum investment expanded at a brisk pace last year and it appears that the growth will continue this year and next. Large development projects such as Snøhvit, Ormen Lange and Kristin are supporting the strong growth in investment. Activity related to these major projects will decline in the next few years and no new comparable development projects have been approved thus far. Nevertheless, the prospect of continued higher oil prices is expected to contribute to sustaining a high level of investment towards the end of the projection period. In particular, development of previously marginal and smaller areas of existing fields may show an increase. However, investment projections a few years ahead are very uncertain.

Strong growth in imports

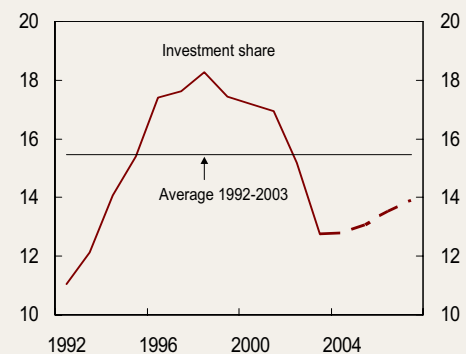
In the first three quarters of 2004, the volume of traditional merchandise imports was 11% higher than in the same period of 2003. This reflects sharp growth in private consumption, increasing investment and a continued rise in the share of imports (see Chart 3.9). The rise in the share of imports must also be seen in relation to low prices for imports from many low-cost countries and weak competitiveness in Norwegian import-competing industries. This also reflects a shift in the

Chart 3.7 Price index for office and commercial property. Index. 1st half of 2000=100. 1st half of 1996 – 1st half of 2004



Source: Statistics Norway

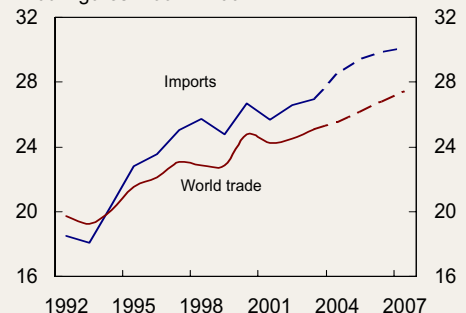
Chart 3.8 Investment in service industries as a share of value added. Per cent. Annual figures. 1992 – 2007¹⁾



¹⁾ Projections for 2004 - 2007.

Sources: Statistics Norway and Norges Bank

Chart 3.9 Imports to mainland Norway¹⁾ as a share of mainland GDP and global exports as a share of global GDP. Per cent. Annual figures. 1992 – 2007²⁾

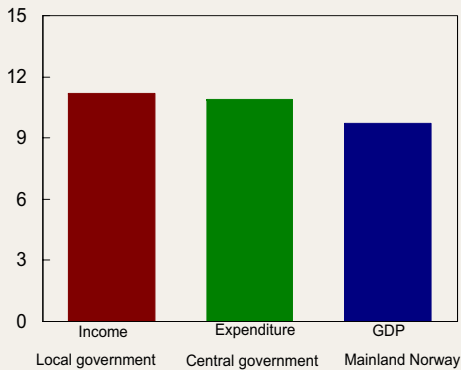


¹⁾ Imports are determined residually from supply and use of goods and services for mainland Norway.

²⁾ Projections for 2004 - 2007.

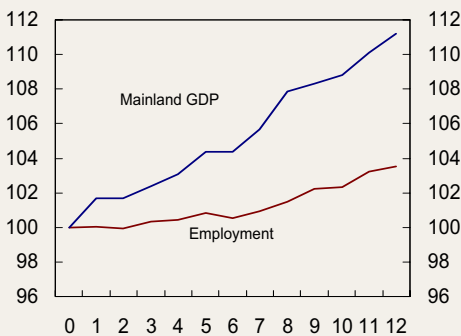
Sources: IMF and Norges Bank

Chart 3.10 Local government revenues, underlying spending growth over the central government budget and mainland GDP. Percentage change in value from 2003 to 2005



Source: The Ministry of Finance

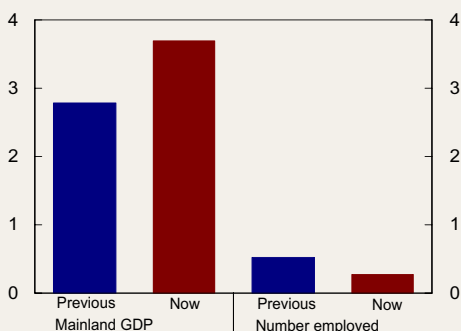
Chart 3.11 Average employment developments in this and the two previous cyclical upturns.¹⁾ Index. Seasonally adjusted. Quarterly figures



¹⁾ We have estimated that the previous cyclical upturns began in 1982 Q4 and 1991 Q4. The current cyclical upturn started in 2003 Q2. Projections from 2004 Q3 onwards.

Sources: Statistics Norway and Norges Bank

Chart 3.12 Developments in employment and output four quarters after the start of a cyclical upturn¹⁾. Mainland Norway. Per cent



¹⁾ We have assumed that the previous cyclical upturns began in 1982 Q4 and 1991 Q4. The current cyclical upturn started in 2003 Q2.

Sources: Statistics Norway and Norges Bank

international division of labour due in part to the removal of trade barriers. Growth in imports is expected to continue in the period ahead, although growth is expected to slow due to somewhat lower domestic demand.

Traditional goods exports have picked up. This must be seen in connection with the global recovery and increased capacity in the production of metals. However, growth in exports is lower than growth in imports among our trading partners. Further growth in traditional exports is projected in the period ahead, but it is assumed that Norwegian companies will continue to lose market shares. This must be seen in relation to a high cost level and a relatively strong krone.

Fiscal stimulus continues

Fiscal policy in 2004 appears to be somewhat more expansionary than assumed in the Revised National Budget. The structural, non-oil budget deficit as a share of trend mainland GDP is projected to increase by 0.7 percentage point from 2003 to 2004. This is 0.3 percentage point higher than estimated in the Revised National Budget.

The central government budget proposal for 2005 implies a further increase in the structural, non-oil budget deficit. Measured as a share of trend mainland GDP, the deficit will increase by 0.4 percentage point from 2004, or more than NOK 6bn.

According to the estimate in the budget proposal, underlying, nominal spending will increase by close to 11% between 2003 and 2005. Local government revenues are estimated to rise by slightly more than 11% in nominal terms during the period. This is somewhat higher than nominal mainland GDP growth in the same period (see Chart 3.10).

The projections are based on the assumption that public consumption at constant prices will increase by 2% in 2004 and 1¾% in 2005. From 2006 it is assumed that nominal growth in general government expenditure will be approximately the same as nominal growth in general government revenues and that the real tax level will remain unchanged. Based on these assumptions, real growth in general government consumption is put at 1½% in each year.

Improvement in the labour market

According to Statistics Norway's labour force survey (LFS), the number of persons employed in the third quarter of 2004 was 0.5% higher than in the same quarter of 2003. Employment growth in the past year has mainly occurred in retail trade, commercial services, education and health and social services. Manufacturing employment is still falling.

Reports from our regional network suggest moderate growth in employment in the near term. The number of new vacancies advertised in the media is still low. It appears, however, that there is considerable demand for labour in the construction sector.

Companies often wait to increase employment until the recovery has gained a firm footing. Chart 3.11 shows average output growth and employment growth during this period and earlier periods of recovery in the Norwegian economy. In the first four quarters after the trough, employment growth has been fairly low.

Chart 3.12 also shows that employment growth in the current recovery has been weaker in relation to output growth than in the previous two recoveries. This indicates that companies are now reaping the benefits of rationalisation measures, which is in line with our assumption of stronger-than-normal growth in potential output in 2004. Employment growth is projected at $\frac{1}{4}\%$ in 2004 (see Chart 3.13).

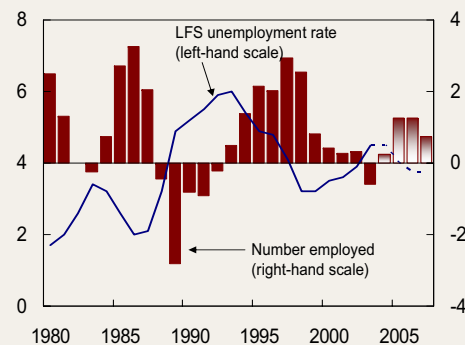
Economic growth is expected to continue. Excess capacity will be reduced gradually. At the same time, it is assumed that underlying productivity growth will slow somewhat. This implies stronger growth in demand for labour. Employment growth is projected at $1\frac{1}{4}\%$ both in 2005 and 2006.

Experience shows that the labour supply increases when economic activity picks up. For example, the number of full-time students varies with economic cycles (see Chart 3.14). Labour force growth is thus expected to be somewhat stronger than the demographic growth in the labour force from 2005 to the end of the projection period.

Labour force growth is being curbed, however, by an increasing number of disability pensioners and changes in the age composition of the population, with a growing number of persons in age groups with lower labour force participation rates. Overall labour force participation is therefore not expected to change significantly in the period ahead. Labour force participation is projected at $72\frac{1}{2}\%$ in 2007 or $\frac{1}{4}$ percentage point lower than in 2003 (see Chart 3.15).

The projections for employment and the labour supply imply a decline in unemployment. Unemployment, as measured by the Labour Force Survey (LFS), is projected at $4\frac{1}{2}\%$ in 2004 and 4% in 2005. Unemployment is projected at $3\frac{3}{4}\%$ in 2006 and 2007 (see Chart 3.13).

Chart 3.13 Change in employment on previous year. Per cent. Unemployment¹⁾ as a percentage of the labour force. Annual figures. 1980 – 2007²⁾

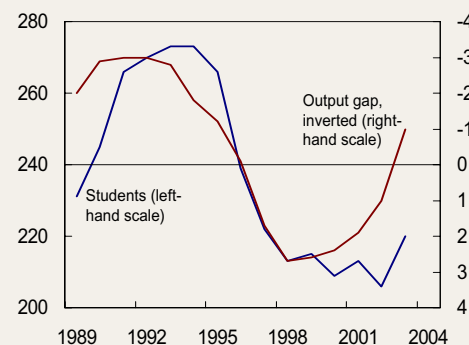


¹⁾ LFS unemployment.

²⁾ Projections for 2004 - 2007.

Sources: Statistics Norway and Norges Bank

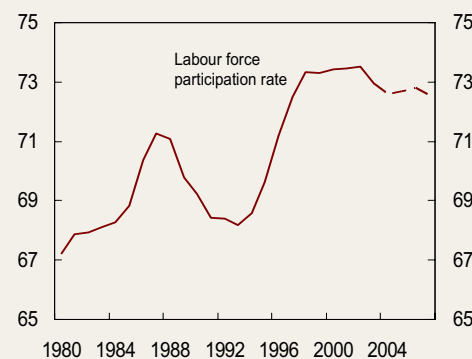
Chart 3.14 Number of persons outside the labour force who are students, in 1000s, and estimated output gap¹⁾. Annual figures. 1989 – 2003



¹⁾ The output gap is a measure of the difference between actual and potential mainland GDP. Difference in per cent.

Sources: Statistics Norway and Norges Bank

Chart 3.15 Labour force as a percentage of population aged 16 – 74 (labour force participation rate) Per cent. Annual figures. 1980 – 2007¹⁾



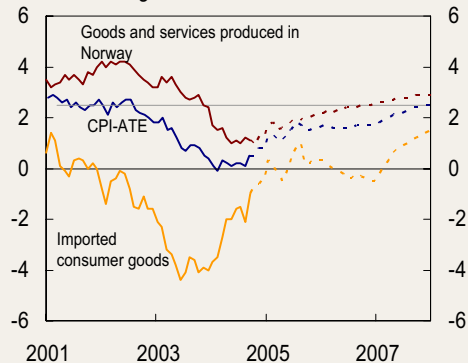
¹⁾ Projections for 2004 - 2007.

Sources: Statistics Norway and Norges Bank

4 | Inflation

4.1 Inflation outlook

Chart 4.1 CPI-ATE. Total and by supplier sector.¹⁾ 12-month change. Per cent. Jan 01 – Dec 07²⁾

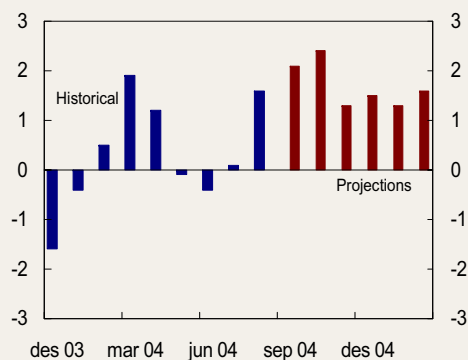


¹⁾ Norges Bank's calculations.

²⁾ Projections from Oct 04 - Dec 07.

Sources: Statistics Norway and Norges Bank

Chart 4.2 CPI-ATE. Seasonally adjusted monthly change. 3-month moving average, annualised. Dec 03 – Feb 05¹⁾



¹⁾ Projections from Sept 04 – Feb 05.

Sources: Statistics Norway and Norges Bank

Inflation measured by the CPI-ATE fell through 2003 and was very low up to August 2004. Inflation was lower than expected this summer, but in September the year-on-year rise moved up to 0.5%. This was approximately in line with the projection in *Inflation Report 2/04*, published in July.

Monetary policy is aimed at higher inflation. Norges Bank's sight deposit rate is set at 1.75%. The projections for the period ahead are based on the technical assumption that the interest rate will move in line with forward interest rates. The assumption implies a gradual rise in the interest rate from a low level through the projection period. In addition, we assume that the krone exchange rate will move in line with the forward exchange rate. This implies that the krone exchange rate will be fairly stable in the period ahead (see Section 1).

In the short term, consumer price inflation is expected to pick up relatively rapidly (see Chart 4.1). The depreciation of the krone through 2003 will continue to push up consumer prices. Adjusted for seasonal variations, monthly CPI-ATE inflation is projected to be somewhat higher in the period ahead than in the summer (see Chart 4.2). We also assume that the marked fall in prices for some goods and services last autumn will to some extent be reversed. Airfares, for example, have increased. Food prices, on the other hand, are likely to continue to rise at a slow pace.

Later in the projection period, inflation is expected to continue to edge up, albeit fairly slowly. The effects of the depreciation of the krone through 2003 will unwind and the impact of the somewhat stronger krone exchange rate now will begin to feed through. Higher prices for oil and other commodities will lead to stronger international price impulses to the Norwegian economy. The pass-through from higher commodity prices to trading partners' export prices appears, however, to have been more limited than in the wake of earlier periods of rising commodity prices.

Norwegian import prices are also being restrained by the steadily rising share of Norway's consumer goods imports from low-cost countries in Asia and Central Europe. In the projections, it is assumed that the shift in imports towards low-cost countries will continue in the period ahead, but that it will gradually become more moderate later in the projection period. An increase in global resource utilisation will also gradually contribute to somewhat stronger price impulses to the Norwegian economy.

Domestic price impulses will largely depend on the relationship between demand for Norwegian goods and services and the resources available to meet this demand.

There are a number of indications that the Norwegian economy can sustain high growth in output and demand in the near term without a substantial rise in domestic inflation. Keener competition, as a result of new entrants and changes in framework conditions, is affecting an increasing number of industries. Many enterprises have rationalised production, with an attendant increase in productivity.

Our projections imply relatively high output growth several years ahead. The output gap is projected to become clearly positive in the course of 2005 and to remain positive until the end of the projection period. Unemployment will fall to below 4%. We assume that over time this will translate into higher wage growth and higher margins in retail trade and other sectors. With prospects of relatively low wage growth in other countries and a rise in labour immigration as a result of the EEA enlargement, wage growth will only show a relatively moderate rise. Strong competition may limit the possibility of increasing margins.

On the basis of our assumptions, CPI-ATE inflation is projected to edge up gradually in the period from 2005 to 2007. There are prospects that inflation will not approach the target until the end of the projection period.

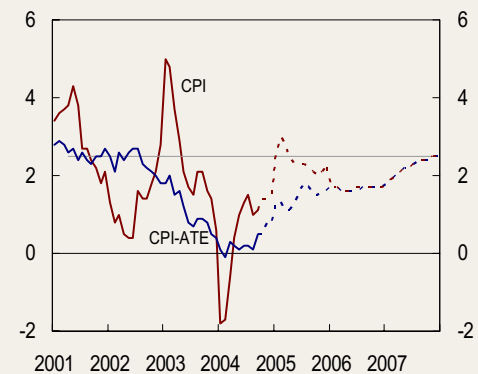
The consumer price index including tax changes and energy products (CPI) has risen by 1.1% since September 2003 (see Chart 4.3). A higher rate of increase in the CPI than in the CPI-ATE partly reflects the sharp rise in petrol prices. We assume that the Government's proposal to increase VAT by 1 percentage point will contribute to pushing up CPI inflation by about ½ percentage point from the beginning of 2005. In Statistics Norway's calculations of the CPI-ATE, it will be assumed that the increase in VAT will have full effect on the CPI in January. How rapidly the rate changes will feed through to selling prices is uncertain. Uncertainty regarding developments in the CPI and the CPI-ATE in the first months of the year is therefore higher than normal. Later in the projection period, the two indices are expected to rise at the same pace.

4.2 Price impulses

Stronger price impulses from international markets

The rise in prices for imported consumer goods has been considerably lower than the rise in the total CPI since 1995 (see Chart 4.4). This partly reflects weak external price impulses, and partly high productivity in the retail trade sector, which has resulted in low growth in distribution and selling costs. The appreciation of the krone in 2002 has also dampened the rise in prices for imported consumer goods.

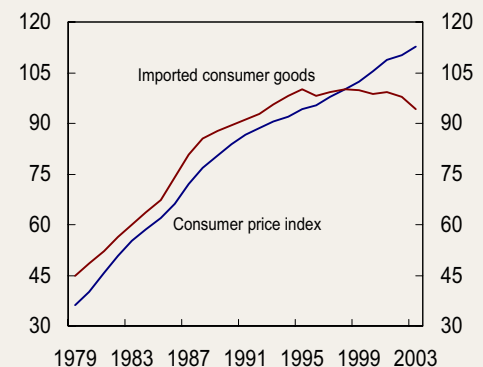
Chart 4.3 CPI and CPI-ATE. 12-month change. Per cent. Jan 01 – Dec 07¹⁾



¹⁾ Projections from Oct 04 - Dec 07.

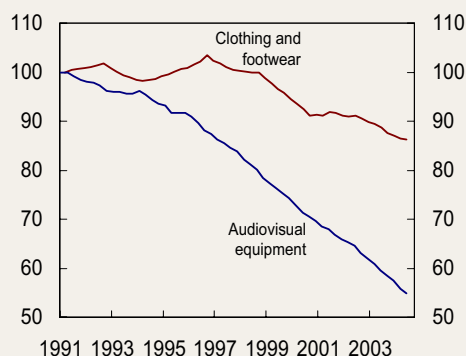
Sources: Statistics Norway and Norges Bank

Chart 4.4 CPI and prices for imported consumer goods. Index. 1998=100. Annual figures. 1979 – 2003



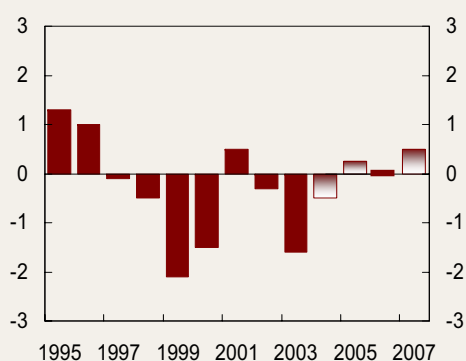
Source: Statistics Norway

Chart 4.5 Estimated price developments for some imported consumer goods, measured in foreign currency. Quarterly figures. Index. 91 Q1=100. 91 Q1 – 04 Q2



Sources: EcoWin and Norges Bank

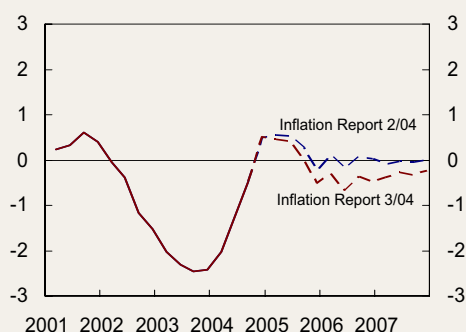
Chart 4.6 Indicator of external price impulses to imported consumer goods measured in foreign currency. Annual figures. 1995 – 2007¹⁾



¹⁾ Projections for 2004 -2007.

Source: Norges Bank

Chart 4.7 Contribution of the exchange rate to the change in prices for imported consumer goods. Based on historical exchange rates and the forward exchange rate in *Inflation Report 2/04* and *3/04*. Percentage points. Quarterly figures. 01 Q1 – 07 Q4



Source: Norges Bank

External price impulses to the Norwegian economy, as measured here, are now increasing. Higher prices for oil and other commodities have translated into higher producer prices among our trading partners. Our projections are based on the assumption that this will contribute to higher prices for imports to Norway. Inflation abroad will also edge up gradually as capacity utilisation increases.

External price impulses to the Norwegian economy have been restrained as a result of the increase in the share of imports from low-cost countries such as China and Central European countries. In recent years, this has contributed to falling consumer prices for clothing and footwear, for example (see Chart 4.5). According to reports from our regional network, there is still a potential for increasing the share of imports from low-cost countries. However, we have a limited basis for assessing how long this trend will last. Our projections are based on the assumption that towards the end of the projection period prices for clothing and footwear will move more in line with prices for other imported consumer goods.

Prices for audiovisual equipment have exhibited a marked downward trend since the mid-1990s, both in Norway and in other countries, reflecting high productivity growth and strong international competition. The international fall in prices for IT, telecommunications and audiovisual equipment is likely to persist for a longer period. Our projections are based on the assumption that prices for these goods will continue to fall throughout the projection period.

After several years of declining international prices for our imported consumer goods, these prices are expected to increase by ¼% in 2005, primarily reflecting higher commodity prices. Prices for these goods are expected to remain approximately unchanged in 2006 on the assumption that commodity prices level off, while they are expected to increase by ½% in 2007 (see Chart 4.6).

Prices for imported consumer goods in the CPI-ATE are also affected by domestic conditions. On average, approximately half of the price of an imported consumer good is its cost. The rest of the price paid by the consumer consists primarily of margins and costs associated with sales and distribution in Norway. The increase in these costs appears to have been modest in recent years, partly due to strong competition and productivity growth in retail trade. In many industries, mergers and chain store cooperation have resulted in lower purchasing costs and improved economies of scale for distribution and inventories. Our projections are based on the assumption that productivity growth in retail trade will also gradually moderate. Combined with higher wage growth and higher margins, this will contribute to a pick-up in selling prices for imported consumer goods.

Continued positive contribution from the exchange rate to import prices

The depreciation of the krone in 2003 will for a period continue to exert upward pressure on the year-on-year rise in prices for imported consumer goods.

Measured by the import-weighted index I-44, the krone is now approximately 2% stronger than at end-June 2004. The forward exchange rate implies an approximately unchanged exchange rate through the projection period. In this scenario, the positive contribution from the krone exchange rate will unwind in spring 2005, becoming marginally negative (see Chart 4.7).

Increased competition curbs inflation

Normally, costs and margins will increase more in periods of high growth in output and demand. New entrants and changes in operating parameters have, however, led to keener competition in a number of industries. In a survey conducted among firms in our regional network, 80% report that competitors' prices are an important pricing factor. In some sectors, stronger competition has resulted in increased pressure on margins.

Growth in unit labour costs has also slowed in the past year (see Chart 4.8), which has exerted downward pressure on prices for domestically produced goods and services. We assume that increased competition and rationalisation will result in stronger-than-normal growth in potential output in 2004. This will contribute to a continued subdued rise in prices for domestically produced goods and services for a period ahead.

Low inflation has not affected long-term inflation expectations

Inflation, as measured by the CPI-ATE, has been below the inflation target of 2.5% since August 2002. Other price indices also show a low rise in prices. Given the assumptions underlying the projections in this report, inflation will run below target for most of the projection period. If inflation remains below target for a longer period, inflation expectations may be affected. If this occurs, it may be more difficult to bring inflation back to the target.

Inflation expectations can be measured in various ways. In the TNS Gallup expectations survey, various participants are interviewed about their inflation expectations 1, 2 and 5 years ahead. The survey suggests that inflation expectations are firmly anchored around the inflation target in the long term (see Chart 4.9). In the short term, inflation is expected to be lower than the inflation target. In the third quarter

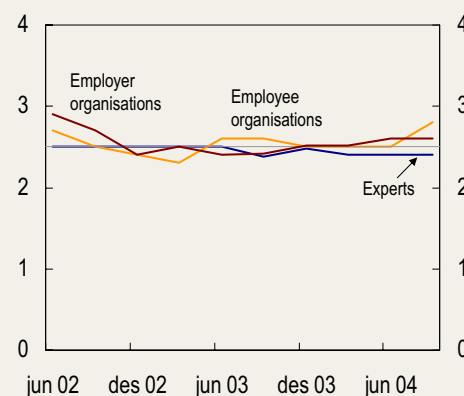
Chart 4.8 Labour costs per produced unit¹⁾ and domestic price inflation²⁾. Change on same period previous year. Per cent. Jun 1980 – Sept 04



¹⁾ Labour costs in relation to gross product. Mainland Norway excl. the energy sector. 4-quarter moving average.
²⁾ Adjusted for tax changes and excluding energy products. Monthly figures.

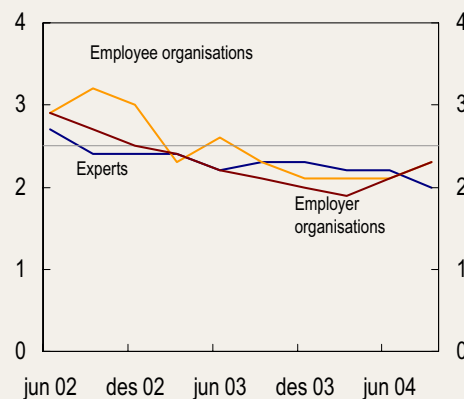
Sources: Statistics Norway and Norges Bank

Chart 4.9 Expected consumer price inflation in 5 years. Per cent. Quarterly figures. 02 Q2 – 04 Q3



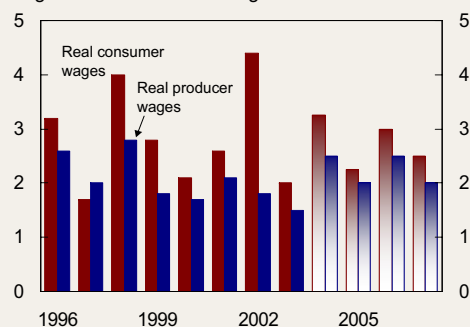
Source: TNS Gallup

Chart 4.10 Expected consumer price inflation in 2 years. Per cent. Quarterly figures. 02 Q2 – 04 Q3



Source: TNS Gallup

Chart 4.11 Growth in real consumer and producer wages.¹⁾ Per cent. Annual figures. 1996 – 2007²⁾



¹⁾ Consumer price inflation for goods and services produced in Norway is used as a deflator for producer wages. The CPI is the deflator for consumer wages.

²⁾ Projections for 2004 -2007.

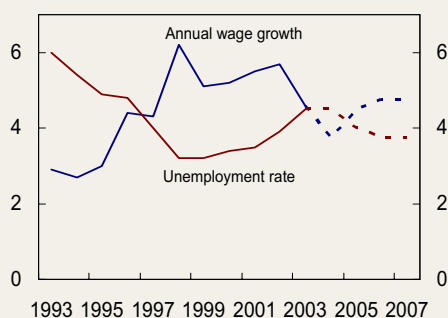
Sources: Technical Reporting Committee on Income Settlements, Statistics Norway and Norges Bank

of 2004, both the panel of experts and the social partners expected consumer price inflation to be lower than 2% one year ahead. At the two-year horizon, they expect consumer price inflation to increase somewhat, but still remain below target (see Chart 4.10).

Wage growth is edging up

Annual wage growth in 2004 appears to be about 3¾%. Nominal wage growth is lower than it has been for several years. Given the low level of consumer price inflation, however, this year's wage settlement implies that real wage growth will be relatively strong (see Chart 4.11). Prices charged by Norwegian firms for their goods and services are rising more than the CPI, which is being pushed down by lower prices for imported goods. High productivity growth this year also implies that corporate profitability will improve.

Chart 4.12 Annual wage growth¹⁾ and unemployment rate (LFS). Per cent. Annual figures. 1993 – 2007²⁾



¹⁾ Average for all groups. Including cost of additional vacation days

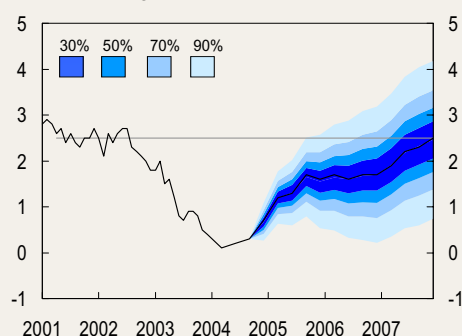
²⁾ Projections for 2004 -2007.

Sources: Technical Reporting Committee on Income Settlements, Statistics Norway and Norges Bank

The projections imply that employment will gradually rise and that unemployment will fall. This normally results in higher wage growth. The proposed increase in VAT may contribute to pushing up the CPI by about ½ percentage point in 2005. In isolation, this will reduce real wage growth. On the other hand, a reduction in income taxes has been proposed, and this may reduce demands for pay compensation. The prospect of relatively low wage growth abroad and an increase in labour immigration as a result of EEA enlargement may restrain wage growth in the period ahead.

Annual wage growth is projected at 4½% in 2005 (see Chart 4.12). Unemployment, measured by LFS, is expected to fall to 3¾% in 2006 and 2007. Annual wage growth is expected to edge up to 4¾% in these years as a result of a tighter labour market and higher inflation expectations.

Chart 4.13 Projections and uncertainty for CPI-ATE¹⁾. 12-month change. Per cent. Jan 01 – Dec 07



¹⁾ The bands in the fan indicate different probabilities for developments in the CPI-ATE. Probabilities are based on the difference between projected and actual developments in underlying inflation in the period 1997 – 2004.

Sources: Statistics Norway and Norges Bank

The Government has indicated that it will propose some minimum standards for occupational pensions that will apply to all employees who do not already benefit from more advantageous schemes. The impact on companies' costs is uncertain. An occupational pension scheme that is not matched by lower wage increases may result in higher-than-projected labour cost growth.

4.3 Risks to the inflation outlook

There is uncertainty associated with the projections. Our projections are based i.a. on our analysis of relationships in the economy, the assumed exchange rate and a technical assumption about the interest rate. There is considerable uncertainty surrounding these factors. Charts 4.13 and

4.14 show the uncertainty surrounding the projection for inflation and mainland GDP growth, estimated on the basis of previous deviations between projections and actual developments.

If developments in the krone exchange rate differ from the assumed exchange rate in this report, the inflation outlook will be affected. The pass-through from the krone exchange rate to consumer prices is also uncertain. Our experience of how market participants set prices when monetary policy is based on inflation targeting is still fairly limited.

The marked rise in prices for oil and some other commodities has translated into higher export prices among our trading partners, but has not as yet resulted in substantially higher consumer prices in Norway. The effects may occur later and with greater intensity than we have assumed.

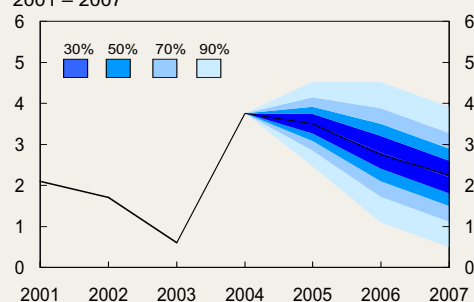
High oil and commodity prices may curb international growth. In 2004, the Chinese authorities introduced measures to curb economic growth and prevent an overheating of the economy. If growth in other countries slows markedly, demand and commodity prices may fall. This may also lead to lower inflation in Norway. On the other hand, a marked fall in oil prices may contribute to a depreciation of the krone which, in isolation, will lead to a period of higher inflation.

With low interest rates and solid growth in the economy, there are prospects of rising and relatively high capacity utilisation over the years ahead. It is uncertain how these developments will affect inflation. Strong competition may have made it more difficult for firms to pass on costs to selling prices, reducing firms' capacity to increase wages. On the other hand, experience shows that wage and price inflation can pick up rapidly when an economic turnaround takes place.

The expansionary effect of monetary policy on the real economy is uncertain. We have little experience of such low nominal interest rates. The projections imply that household debt will gradually rise to a relatively high level. It cannot be ruled out that households will choose to save more than we have assumed. Debt consolidation will contribute to weaker developments in the real economy and lower-than-projected price and wage inflation. On the other hand, high house prices and expectations of low interest rates for a longer period may result in higher-than-projected consumption growth.

Projections for potential output are uncertain. If potential output increases less than assumed, inflation may rise more than projected. On the other hand, the strong rate of growth in productivity and potential output in 2004 may continue for several years. Price inflation may then be lower than currently projected.

Chart 4.14 Projections and uncertainty for growth in mainland GDP.¹⁾ Annual change. Per cent. 2001 – 2007

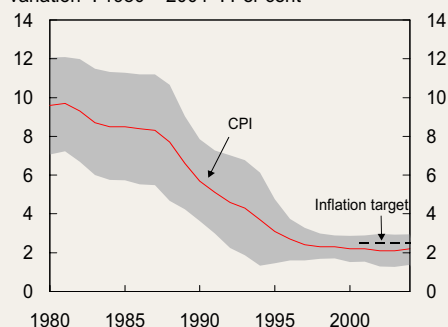


¹⁾ The bands in the fan indicate different probabilities for growth in mainland GDP. Probabilities are based on the difference between projected and actual developments in mainland GDP in the period 1994 – 2004. The difference is estimated on the basis of the national accounts (NA) published on 11 March 2004. Revisions of the national accounts could result in changes in these projection errors.

Sources: Statistics Norway and Norges Bank

5 | Monetary policy assessments

Chart 5.1 CPI. Moving 10-year average¹⁾ and variation²⁾, 1980 – 2004³⁾. Per cent



¹⁾ The moving average is calculated 7 years back and 2 years ahead
²⁾ The band around the CPI is the variation in the period, measured as +/- one standard deviation.
³⁾ Projections for 2004 – 2006 from this report form the basis for this estimate.

Sources: Statistics Norway and Norges Bank

Norges Bank's operational conduct of monetary policy is oriented towards low and stable inflation. The operational objective of monetary policy is annual consumer price inflation of approximately 2.5% over time.

Monetary policy influences the economy with long and variable lags. Norges Bank sets the interest rate with a view to stabilising inflation at the target within a reasonable time horizon, normally 1–3 years. The more precise horizon will depend on disturbances to which the economy is exposed and how they affect the path for inflation and the real economy ahead.

Norges Bank operates a flexible inflation targeting regime, so that both variability in output and employment and variability in inflation are given weight. Chart 5.1 shows average inflation measured by the consumer price index (CPI).¹ The grey area in the chart illustrates inflation variability. Both inflation and inflation variability declined through the 1980s and 1990s. When monetary policy is oriented towards stabilising inflation around the target, inflation variability can be low in the period ahead.

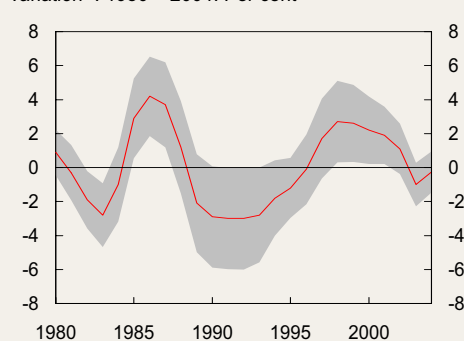
Developments in the output gap provide a basis for assessing output stability. Chart 5.2 illustrates that output variability has been moderate over the past ten years compared with variability at the end of the 1980s and beginning of the 1990s. Flexible inflation targeting may contribute to continued low variability in the output gap, but variability in both inflation and output also depends on the magnitude of the disturbances to which the economy is exposed.

The projections are based on the technical assumption that the interest rate moves in line with forward interest rates observed at the end of October. Moreover, we assume that the krone exchange rate shadows the forward exchange rate (see Charts 5.3 and 5.4). In connection with *Inflation Report 2/04*, the Executive Board stated that the inflation outlook might imply that the interest rate should be kept unchanged for a longer period than assumed in the report. Forward interest rates have fallen since the publication of the July report, while the forward exchange rate is stronger.

In general, the outlook for economic developments has not changed substantially since the publication of *Inflation Report 2/04*. However, the projections now point to a somewhat more pronounced cyclical path than in July. Output growth is projected to be somewhat higher up to 2006, whereas assessments of potential output ahead are approximately unchanged. The output gap, as assessed

¹ Over time, movements in the CPI coincide with movements in underlying inflation (CPI-ATE).

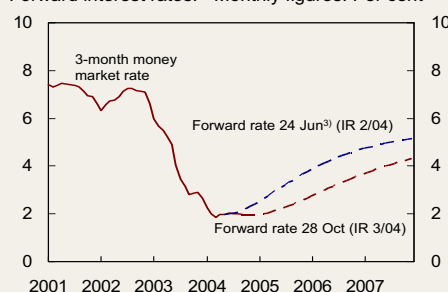
Chart 5.2 Projections for the output gap, level¹⁾ and variation²⁾, 1980 – 2004. Per cent



¹⁾ The output gap measures the difference between actual and trend mainland GDP.
²⁾ The band shows the variation in the output gap measured by \pm one standard deviation. The variation is estimated as average standard deviation in a 10-year period, 7 years back and 2 years ahead.

Sources: Statistics Norway and Norges Bank

Chart 5.3 Assumption for the money market rate¹⁾. Forward interest rates.²⁾ Monthly figures. Per cent



¹⁾ The money market rate is normally about ¼ percentage point higher than the sight deposit rate.
²⁾ 3-month money market rate to end-September 2004. The assumption for the money market rate is calculated on the basis of interest rates in the money and interest rate swap market at the specified time. The interest rate scenario has been adjusted for the fact that credit risk increases with the period to maturity.
³⁾ There is some deviation from the assumption published in IR 2/04 because of a change in the estimation method.

Source: Norges Bank

here, will therefore be higher in 2005–2007 than projected earlier (see Chart 5.5). The inflation projections have been revised down to some extent since the previous report. See box on page 49 of this report for further details concerning changes in the projections. CPI-ATE inflation is projected to pick up from 2005 to 2007. There are prospects that inflation will reach the inflation target at the end of the projection period.

5.1 Monetary policy since 1 July

As a result of the prospect of low inflation and moderate growth in output and employment, the key rate (the sight deposit rate) was reduced by a total of 5.25 percentage points between December 2002 and March 2004. The key rate has been kept unchanged at 1.75% since then.

Inflation has been substantially lower than the inflation target for a long period. The year-on-year rise in the CPI-ATE slowed gradually from the summer of 2002 to February 2004, when it reached its lowest level of -0.1%. Inflation varied between 0.1% and 0.3% through spring and summer before rising to 0.5% in September. Monetary policy is aimed at higher inflation.

Inflation Report 2/04 and monetary policy meeting 1 July

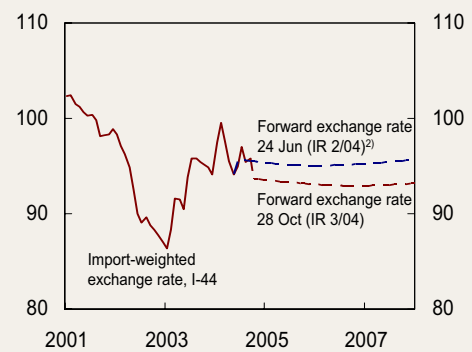
On the basis of the analyses in *Inflation Report 2/04*, the Executive Board's assessment in July was that the sight deposit rate should be in the interval 1¼ - 2¼% at the beginning of November 2004 (see Chart 5.6). The interval was conditional on projections for economic developments in the July *Inflation Report*.²

The projections in *Inflation Report 2/04* were based on the technical assumption that the interest rate would move in line with forward interest rates observed at the end of June (see Chart 5.3). This implied a gradual rise in the key rate to around 5% in the period to end-2007. The krone exchange rate was assumed to shadow the forward exchange rate, indicating a virtually unchanged exchange rate over the next three years (see Chart 5.4).

Developments in line with forward interest and exchange rates implied that inflation might pick up through the projection period, but remain below target throughout the period up to summer 2007. The output gap was expected to be marginally positive in 2005–2007 (see Chart 5.5).

In its monetary policy assessments and strategy for the period ahead, the Executive Board pointed out that monetary policy should be aimed at increasing inflation at a somewhat faster pace than projected in the *Inflation Report*.

Chart 5.4 The krone exchange rate (I-44)¹⁾. Forward exchange rate. Monthly figures. Jan 01 – Dec 07

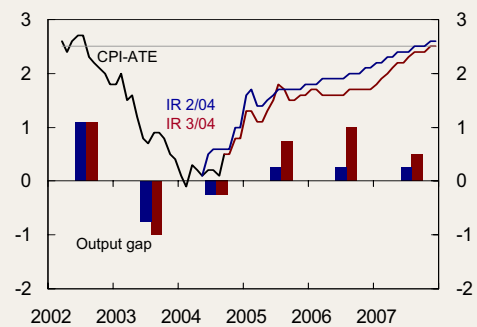


¹⁾A rising curve denotes a weaker krone exchange rate.

²⁾There is some deviation from the assumption published in IR 2/04 because of a change in the estimation method.

Source: Norges Bank

Chart 5.5 Projections for the CPI-ATE¹⁾ and the output gap²⁾ in *Inflation Report 2/04* (blue) and *3/04* (red). Per cent

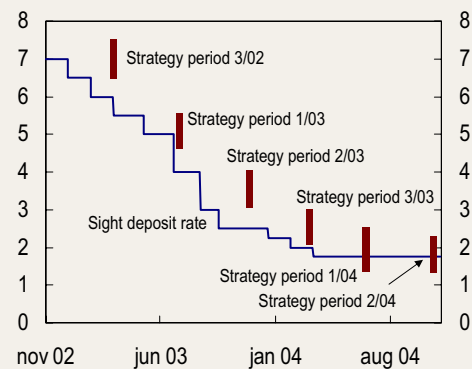


¹⁾ CPI-ATE: CPI adjusted for tax changes and excluding energy products.

²⁾ The output gap measures the difference between actual and trend mainland GDP.

Sources: Statistics Norway and Norges Bank

Chart 5.6 Interval for the sight deposit rate at the end of each strategy period and actual developments. Daily figures. 1 Nov 02 – 2 Nov 04



Source: Norges Bank

² The Executive Board's monetary policy assessments and strategy ahead for the period from 1 July until the beginning of November are presented in Section 5.2 in *Inflation Report 2/04*.

If the key rate was kept unchanged for a longer period than implied by forward rates, inflation might be higher through the second half of 2005 and 2006 and reach the target more quickly than projected. The output gap might then be somewhat higher than projected. Such an interest rate path might provide a better balance between the objective of reaching the inflation target and the objective of stability in the real economy than a path based on forward interest rates and the forward exchange rate.

The Executive Board also indicated that uncertainty concerning the effects of previous monetary policy easing and the unusually low interest rate implied that caution should be exercised with regard to further interest rate reductions. With the prospect of continued low inflation for a period ahead, wide deviations from projected developments would be required before the interest rate should be increased.

The key rate was kept unchanged at the monetary policy meeting on 1 July. This was in keeping with the monetary policy strategy that was approved and published on the same day. It was emphasised in the press release that the global cyclical recovery had gained a firmer footing and that activity in the Norwegian economy had picked up following sluggish growth in the first half of 2003. Developments in credit growth were giving ambiguous signals. Enterprises were reducing their debt, while growth in household borrowing was strong. The krone had depreciated by about 2½% since the previous monetary policy meeting.

The Executive Board pointed out that inflation in Norway is low and that it is important to be particularly vigilant as regards developments in consumer prices. The prospect of continued low inflation in Norway implied that we should not be the frontrunner when interest rates were increased in other countries. At the same time, it was important to avoid imbalances in the real economy.

The Executive Board did not see any clear alternative to an unchanged interest rate and stated in the press release that the inflation outlook might imply an unchanged interest rate for a longer period than implied by the interest rate assumptions in *Inflation Report 2/04*.

Monetary policy meeting 11 August

Measured by the import-weighted index I-44, the krone exchange rate was stable for a long period following the monetary policy meeting in July, but the krone appreciated in the days prior to the monetary policy meeting in August and was about 1½% stronger than at the beginning of July. Overall, prices had risen somewhat less in June and July

than projected in the *Inflation Report*. It was deemed that this was partly due to temporary factors.

New information since the previous monetary policy meeting did not significantly change the *Inflation Report's* assessments of developments in the real economy. The Executive Board pointed out that underlying growth in private consumption in Norway had probably been fairly high in the second quarter. Manufacturing output had picked up somewhat and there were prospects that the positive trend would continue. There were signs that employment rose somewhat in the spring months. Activity was high in the housing market. Household borrowing showed higher growth in June. Oil prices rose through the summer months and were now considered to be a new risk factor. It was pointed out that the effects of oil price developments on the Norwegian economy are mixed, but that higher foreign exchange revenues do not have a direct impact on balance in the foreign exchange market.

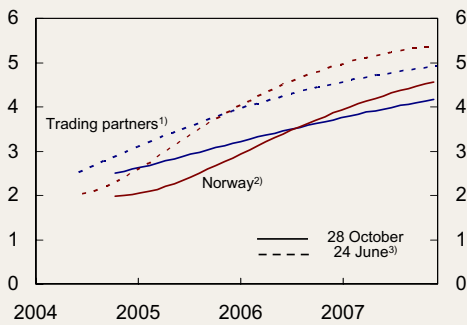
At the monetary policy meeting on 11 August, the key rate was kept unchanged, and the Executive Board did not see any clear alternative to an unchanged rate. The Executive Board pointed out that the aim of monetary policy is higher inflation, but avoiding imbalances in the real economy is also important. New information since the previous monetary policy meeting did not imply any significant change in the monetary policy assessments. It was still the Executive Board's assessment that the inflation outlook might imply an unchanged interest rate for a longer period than assumed in the projections in the *Inflation Report*.

Monetary policy meeting 22 September

The krone depreciated somewhat in the period to the monetary policy meeting on 22 September. New information indicated that growth in the Norwegian economy would be somewhat stronger in the period ahead than projected in *Inflation Report 2/04*. Preliminary figures from Statistics Norway showed solid growth in the Norwegian economy. There were prospects of continued strong growth in petroleum investment next year. Activity in the housing market remained buoyant and commercial building starts had picked up. The household debt burden was high and rising. There were signs of rising credit demand in the enterprise sector. Oil prices had remained at a high level.

Inflation, however, had not increased as expected. Consumer prices adjusted for tax changes and excluding energy products (CPI-ATE) showed a year-on-year rise of 0.1% in August, and the rise in prices over the past three months was lower than projected in the *Inflation Report*. According to TNS Gallup's expectations survey, inflation expectations two years ahead had been lowered, while inflation expectations five years ahead were stable at a little less than 2½%. Markedly lower-than-projected inflation

Chart 5.7 Forward interest rates. Monthly figures. Per cent. Jun 04 – Dec 07



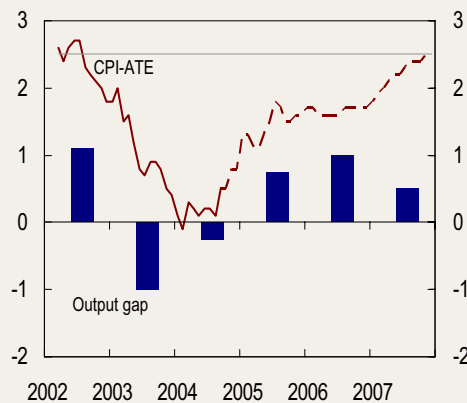
¹⁾ Estimated as a weighted average of the forward rates for the euro area, the US, Sweden and the UK.
²⁾ Not adjusted for credit risk premia.
³⁾ There is some deviation from the assumption published in IR 2/04 because of a change in the estimation method.
 Source: Norges Bank

might, if this reflected structural changes in the goods and service markets, indicate lower inflation also over a period ahead.

The Executive Board pointed out that in the conduct of monetary policy emphasis is also placed on avoiding imbalances in the real economy and that developments in aggregate demand warranted caution with regard to further interest rate reductions. Prospects of continued low inflation in Norway implied that we should lag behind other countries in setting interest rates at a more normal level.

Low price inflation in preceding months pointed, in isolation, to lower interest rates, but there were also signs that growth in the Norwegian economy might be somewhat higher than projected. The Executive Board came to the conclusion that it was appropriate to keep the key interest rate unchanged. In reaching its decision, the Executive Board weighed the objective of bringing inflation back to target and stabilising inflation expectations against the risk that output growth might eventually be too high.

Chart 5.8 Projected CPI-ATE and output gap with forward interest rates. Per cent



Sources: Statistics Norway and Norges Bank

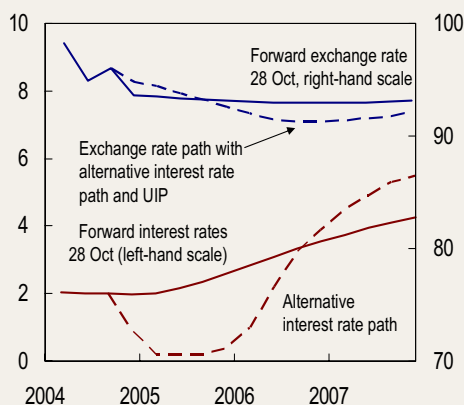
5.2 Monetary policy assessments and strategy ahead

The objective of monetary policy is consumer price inflation of 2½% over time. Inflation is now substantially lower, and the monetary policy stance is therefore expansionary.

Assessment of different interest rate paths

Forward interest rates at the end of October show that market participants expect the sight deposit rate to remain unchanged in the period to summer 2005, followed by a gradual increase (see Chart 5.3). Interest rates abroad are expected to be higher than in Norway up to mid-2006 (see Chart 5.7). The forward exchange rate is fairly stable through the projection period (see Chart 5.4).

Chart 5.9 Assumptions: forward interest rates and alternative interest rate path. Quarterly figures



Source: Norges Bank

The projections based on current forward interest rates (baseline scenario) imply that inflation will remain considerably lower than 2½% for a period ahead. Inflation is expected to reach 2% at the beginning of 2007. According to the projections, the inflation target will be reached at the three-year horizon. The output gap, as assessed here, will be positive in 2005–2007. According to forward interest rates, the key rate will not be increased until inflation in Norway has picked up and interest rates abroad increase. Capacity utilisation will decline towards the end of the projection period (see Chart 5.8).

Even though the projections in Chart 5.8 indicate that inflation will reach the target, there are prospects that inflation will remain well below target for a period ahead. As an alternative, monetary policy could therefore be

oriented with a view to increasing inflation at a faster pace. Chart 5.10 illustrates an alternative path where the interest rate is reduced by 1¾ percentage points in the short term and is then increased more quickly and to a higher level than in the forward interest rate path (see Chart 5.9). This is necessary if inflation is not to be substantially above target further ahead.

The calculations are based on the assumption that economic agents are forward-looking and that they are confident that interest rate setting will stabilise inflation at the target over time. Under the assumption that the forward interest rate path will bring inflation up to target three years ahead, market participants might be of the view that a more expansionary monetary policy today would have to be followed by a more pronounced increase in interest rates further ahead if inflation is not to be above target. Movements in the krone exchange rate reflect the expected interest rate differential against other countries. With this assumption, the effect of a lower interest rate on the krone exchange rate will be fairly limited because market participants will expect a sharper rise in interest rates at a later time. In these calculations, inflation is about ¼ percentage point higher than in the forward interest rate path through 2006. The impact on total output, on the other hand, might be more pronounced. The output gap may reach 1¾% in 2006, but declines in 2007. This path for inflation and capacity utilisation could probably also be achieved by keeping the interest rate unchanged for a longer period than in the forward interest rate path.

In both paths, inflation remains low over the next year. This is largely related to past factors that monetary policy cannot influence.

The alternative interest rate path results in an output gap that is higher than in the baseline scenario. Inflation picks up somewhat faster in the middle of the period. It is uncertain, however, what effect an interest rate reduction will have on the krone exchange rate. If capacity utilisation in the economy had been substantially lower than projected, or there were prospects that inflation would not reach the target, there would be no basis for expecting interest rates to rise to the same extent further ahead. A reduction in the interest rate would then have had a greater impact on the exchange rate and inflation.

The calculations for the alternative interest rate path reflect mechanisms that are embodied in a simple macroeconomic model.³ The results depend, for example, on assumptions as to how economic agents form their expectations.

³ Husebø, T.A., S. McCaw, K. Olsen and Ø. Røisland: "A small calibrated macromodel to support inflation targeting at Norges Bank", Norges Bank Staff Memo no. 3/2004. See www.norges-bank.no.

Chart 5.10 Projections for the CPI-ATE and the output gap with forward interest rates (red) and with a decline in the interest rate followed by a more rapid increase (blue). Per cent. Quarterly figures

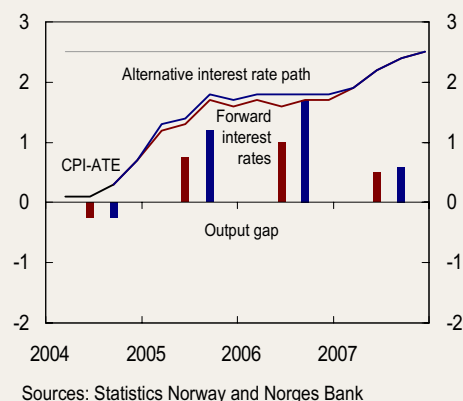
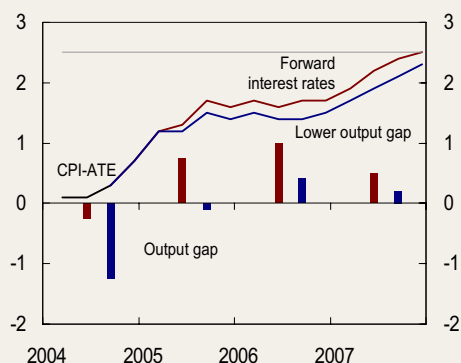


Chart 5.11 Projected CPI-ATE and output gap with forward interest rates (red) and with lower output gap in 2004 (blue).¹⁾ Per cent. Quarterly figures



¹⁾ Projection based on forward interest rates.

Sources: Statistics Norway and Norges Bank

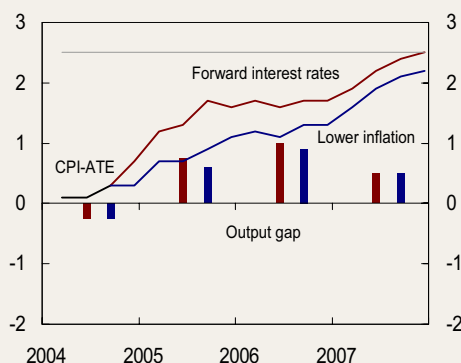
Growth in demand for Norwegian goods and services is now strong. With full capacity utilisation and lower productivity growth ahead, inflation will gradually pick up. However, the current level of capacity utilisation and productivity growth ahead are decisive for developments.

Robustness and consequences of new information

The monetary policy strategy for the next four months should be robust to both assessments of the current situation in the Norwegian economy and the possibility that relationships in the economy may be incorrectly described. The monetary policy strategy is robust when it results in acceptable inflation and acceptable developments in the real economy under alternative, albeit not unrealistic, assumptions concerning the economic situation and the functioning of the economy. Alternatively, a robust monetary policy may entail hedging against particularly unfavourable outcomes. However, the risk associated with this strategy is that unreasonable emphasis is placed on rather improbable events.

In Charts 5.11–5.13 we have analysed possible effects on inflation and production based on some alternative assumptions about the functioning of the economy and the current economic situation. In the calculations, the interest rate is kept at the same level as forward interest rates. It has thus not been taken into account that the interest rate is changed as a result of a change in the outlook for inflation and production.⁴

Chart 5.12 Projected CPI-ATE and output gap with forward interest rates (red) and with lower inflation to 2005 Q1 (blue).¹⁾ Per cent. Quarterly figures

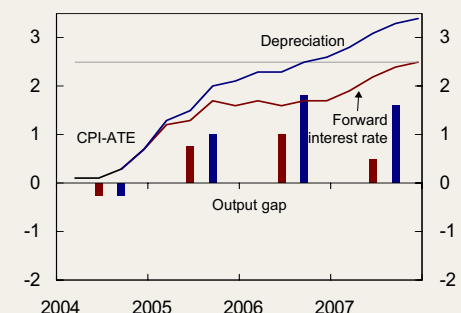


¹⁾ Projections based on forward interest rates.

Sources: Statistics Norway and Norges Bank

- *Production capacity.* There is considerable uncertainty associated with the level of the output gap. If the current output gap is substantially lower than assumed, inflation may be lower than in the baseline scenario (see Chart 5.11). In isolation, this may warrant a more expansionary monetary policy, although an unchanged interest rate for a longer period than implied by forward rates may be preferable to a sharp reduction in the interest rate now.
- *Inflation over the next few months.* Inflation has been low for a long period. Inflation may be lower than expected in the strategy period. Chart 5.12 illustrates the effect of an inflation rate that is ½ percentage point lower in the first quarter of next year than projected at this time. Inflation may then remain well below target throughout the projection period. In this case, an interest rate at the lower end of the strategy interval or an interest rate that is kept unchanged for a longer period than in the forward rate path would result in higher inflation.

Chart 5.13 Projected CPI-ATE and output gap with forward interest rates (red) and with a depreciation of the nominal krone exchange rate approaching 2 per cent annually (blue).¹⁾ Per cent. Quarterly figures



¹⁾ Projection based on forward interest rates. The exchange rate path is based on relative labour costs in common currency gradually approaching their historical average.

Sources: Statistics Norway and Norges Bank

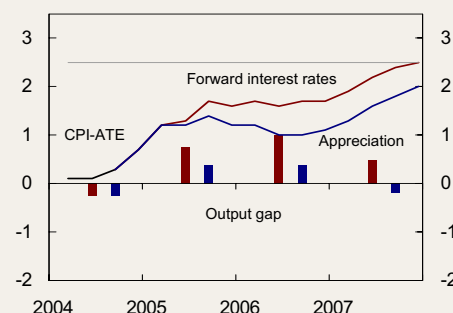
⁴ The analysis are based on the same model as in Chart 5.10.

- *Exchange rate.* The forward exchange rate has been used as a basis in the baseline scenario. Alternatively, the exchange rate may be determined by developments in the real krone exchange rate. Measured by relative prices in a common currency, the real exchange rate is now approximately the same as the average since 1970. Measured by relative labour costs in a common currency, the real exchange rate is strong. In Chart 5.13, we have assumed that the nominal krone exchange rate depreciates by close to 2% annually, so that over time the real krone exchange rate based on labour costs approaches its historical average. Inflation will then increase more rapidly than is the case when the forward exchange rate is applied. This would be advantageous given the objective of reaching the inflation target, but may imply that the interest rate should be increased at a somewhat earlier time than indicated by forward interest rates in order to prevent inflation from becoming too high further ahead.

These analyses indicate that a strategy whereby the interest rate is kept approximately unchanged over the next four months is fairly robust. Other analyses that are based on alternative assumptions concerning the relationship between capacity utilisation and inflation and the interest rate's effect on inflation and output also indicate this. Monetary policy must be assessed regularly in relation to new information. If developments in the strategy period deviate substantially from the projections and the assumptions underlying the analysis, this may imply that we should make use of the strategy interval for the sight deposit rate or, in the event of particularly large deviations, move outside the interval. Any interest rate reactions, however, must be based on an analysis of the background for and duration of the deviations.

The krone has appreciated in recent weeks. Market participants appear to see a relationship between high oil prices and the krone exchange rate. With sizeable changes in oil prices, capital outflows through the Government Petroleum Fund will help to stabilise the exchange rate. Moreover, oil companies probably hold a large portion of their cash surplus in foreign currency (see box on page 54). At the same time, a deterioration in the balance of trade for mainland Norway from 2003 to 2004 will contribute to increased commercial demand for foreign currency and reduced demand for the Norwegian krone. A continued rise in oil prices may nevertheless lead to expectations of a higher use of petroleum revenues domestically than assumed earlier. Such expectations may, for a given interest rate level, contribute to a stronger krone. With a stronger krone exchange rate, inflation may be substantially lower than projected (see Chart 5.14).

Chart 5.14 Projected CPI-ATE and output gap with forward interest rates (red) and 5 per cent appreciation of the nominal krone exchange rate (blue).¹⁾ Per cent. Quarterly figures



¹⁾ Projection based on forward interest rates. It is assumed that NOK appreciates 5% in 2005 Q1 and remains at this strong level through the projection period.

Sources: Statistics Norway and Norges Bank

There is also a risk of slower-than-expected economic growth abroad and lower-than-expected international interest rates. If interest rate expectations in Norway are not lowered to the same extent, the krone may appreciate and inflation may remain below target. Weaker global growth may thereby provide a basis for a lower interest rate.

Uncertainty concerning the effects of previous monetary policy easing and the unusually low interest rate imply that we exercise caution with regard to further interest rate reductions. However, with the prospect of continued low inflation for a period ahead, wide deviations from projected developments would be required before the interest rate should be increased. Prospects of continued low inflation in Norway imply that we should lag behind other countries in setting interest rates at a more normal level.

Particular weight must be given to factors that may delay an increase in inflation. Substantially lower-than-projected inflation may provide a basis for considering interest rate reductions. If inflation does not increase as expected, this may signal structural changes that will lead to lower inflation also for a period ahead.

Interest rate setting in the light of simple monetary policy rules

Interest rate setting may also be seen in the light of simple monetary policy rules for interest rate setting. These rules will not capture all details in the projections, but may provide a rough indication of whether the current interest rate level is adapted to the economic situation. The rules must be interpreted with caution and provide only approximate indications of the appropriate interest rate level.

A common feature of many simple interest rate rules is that the interest rate is set with a view to keeping inflation around a specific target over time, at the same time that the interest rate shall contribute to stabilising output. Interest rate calculations based on some rules are shown in Chart 5.15. Alternatively, interest rate setting may be seen in the light of Norges Bank's historical response pattern (see box on page 47).

The Taylor rule, which places emphasis on the output gap and inflation, indicates that monetary policy is well adapted to the economic situation. The Orphanides rule places emphasis on developments in GDP growth and inflation. The rule indicates that monetary policy is now a little too expansionary because growth in Norway is high. The Taylor rule and the Orphanides rule do not take into account that inflation is influenced by the difference between international and Norwegian interest rates and the exchange rate. The rules therefore have some limitations as

Monetary policy rules

The Taylor rule:

$$\text{Interest rate} = \text{inflation target} + \text{equilibrium real interest rate} + 1.5 \cdot (\text{inflation} - \text{inflation target}) + 0.5 \cdot \text{output gap}$$

The rule was presented in 1993 by Professor John B. Taylor at Stanford University (see Taylor J.B. (1993): "Discretion versus policy rules in practice", Carnegie-Rochester Conference Series on Public Policy 39, pp. 195-214). In Chart 5.15 we have used the CPI-ATE as a measure of inflation.

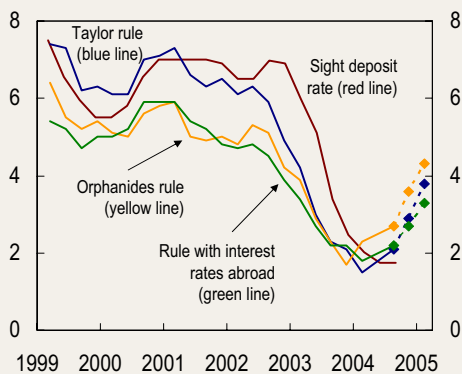
The Orphanides rule:

The Taylor Rule is vulnerable to errors in the estimation of the output gap. Athanasios Orphanides, who is a researcher and adviser in the Federal Reserve, therefore proposes the alternative of replacing the output gap with the difference between actual growth and trend growth in the economy (the growth gap). See Orphanides A., R.D. Porter, D. Reifschneider, R. Tetlow and F. Finan (2000) "Errors in the measurement of the output gap and the design of monetary policy", Journal of Economics and Business, vol. 52, pp.117-141.

Rule with interest rates abroad:

$$\text{Interest rate} = 0.5 \cdot \text{Taylor rate} + 0.5 \cdot \text{Money market rate among Norway's trading partners.}$$

Chart 5.15 Sight deposit rate, Taylor rule, Orphanides rule and rule with interest rates abroad. Quarterly figures. 99 Q1– 05 Q1



Source: Norges Bank

a reference for a small, open economy. A higher interest rate now would have increased the likelihood of an appreciation of the krone and thereby persistently low inflation.

The rule involving interest rates abroad results in a somewhat lower interest rate than the other rules. This is because the interest rate level among our trading partners is low. In isolation, this implies that the interest rate in Norway must be kept at a low level.

The rules show that monetary policy should now be expansionary as a result of low inflation. The rules also indicate that the interest rate should gradually increase when it is certain that inflation is moving up towards the target.

One limitation of the rules is that they do not take explicit account of inflation expectations. There may thus be reason to exercise caution with regard to increasing the interest rate before we see that the increase in inflation has taken hold, particularly after a period when inflation has been lower than expected earlier.

Assessments

Monetary policy influences the economy with long and variable lags. The easing of monetary policy between December 2002 and March 2004 has provided a fairly strong stimulus to the Norwegian economy. Uncertainty concerning the effects of earlier easing and the unusually low interest rate imply that caution should be exercised in interest rate setting.

For a period, enterprises have reduced their debt, but this trend may now have been reversed. Growth in household borrowing is high. Household debt as a percentage of disposable income is about as high as the peak level recorded prior to the banking crisis (see box on page 48). If the debt build-up persists, it may be demanding for households to service their debt further ahead when interest rates are more normal or high. This may be a source of instability in demand and output in the longer run. A substantially lower interest rate involves the risk of higher debt growth.

The analysis indicates that a sight deposit rate in the interval 1¼–2¼% in mid-March 2005 will, given the outlook for inflation and output, provide a reasonable balance between the objective of reaching the inflation target and the objective of stability in the real economy. The interval appears to be fairly robust to alternative assumptions concerning the functioning of the economy.

Conclusions – monetary policy strategy

- Norges Bank's operational conduct of monetary policy is oriented towards low and stable inflation. The operational objective of monetary policy is annual consumer price inflation of approximately 2.5% over time.
- Monetary policy influences the economy with long and variable lags. Norges Bank sets the interest rate with a view to stabilising inflation at the target within a reasonable time horizon, normally 1–3 years. The more precise horizon will depend on disturbances to which the economy is exposed and how they affect the path for inflation and the real economy ahead.
- The interest rate will normally be changed gradually so that we can assess the effects of interest rate changes and other new information about economic developments.
- The projections based on market expectations (forward interest rates) seem to provide a reasonable balance between the objective of increasing inflation and at the same time avoiding excessive growth in the real economy. It is the Executive Board's assessment that the economic outlook implies a monetary policy approximately in line with current forward interest rates through the strategy period.
- Norges Bank's projections for economic developments imply a sight deposit rate in the interval 1¼–2¼% in mid-March 2005.
- The monetary policy strategy is conditional on economic developments that are approximately as projected in the strategy period. The interest rate should be assessed regularly on the basis of new information emerging during the strategy period that is of significant importance for the outlook for inflation and output.
- Developments in the krone exchange rate have an influence on inflation. Any interest rate reactions must be based on an analysis of the background for exchange rate movements and an assessment of the duration of the exchange rate change.
- Particular weight must be given to factors that may delay an increase in inflation.
- Uncertainty concerning the effects of previous monetary policy easing and the unusually low interest rate imply, on the one hand, that we exercise caution with regard to further interest rate reductions. On the other hand, with the prospect of continued low inflation for a period ahead, wide deviations from projected economic developments would be required before the interest rate should be increased. Prospects of continued low inflation in Norway imply that we should lag behind other countries in setting interest rates at a more normal level.

Boxes

Overview of boxes in Inflation Reports 2000-2004

3 / 2004:

Recent developments in inflation
Estimated relationship for interest rate setting
Developments in household debt
Preliminary evaluation of projections in Inflation Report 2/04
Norges Bank's foreign exchange purchases for the Government Petroleum Fund
The current account surplus and demand for the Norwegian krone

2 / 2004

Recent price developments
Increase in number of working days in 2004
Financial stability
Norges Bank's estimate of the output gap
A change in inflation expectations?
Preliminary evaluation of the projections in Inflation Report 1/04
What are the factors behind the rise in oil futures prices?

1 / 2004:

Low external price impulses to the Norwegian economy
The pass-through from the krone exchange rate to prices for imported consumer goods ()*
The effects of the reduction in interest rates on household income
The exchange rate for the krone and exchange rate expectations

3 / 2003:

Direct effects of interest rates on house rents ()*
Imbalances in the US
Assumptions concerning the exchange rate
Flexible inflation targeting and indicators of pressures in the real economy

2 / 2003:

Low growth in consumer prices
Evaluation of inflation reports in inflation-targeting countries
Why is household debt growth remaining high?
Levels of real capital in enterprises still too high?

1 / 2003:

Factors behind developments in the exchange rate ()*
The output gap
Imported price inflation and the exchange rate – the UK experience
Evaluation of Norges Bank's projections for 2001 and 2002

3 / 2002:

The Scandinavia model of inflation – revisited

2 / 2002:

Why has the krone exchange rate appreciated
New expectations survey
Why have clothing prices fallen?
The impact of higher oil prices
How does the krone exchange rate influence the CPI? ()*

1 / 2002:

Evaluation of Norges Bank's projections for 2000
Wage growth ()*
Have Norges Bank's interest rate decisions been anticipated?

3 / 2001:

Consumer price inflation adjusted for changes in real taxes and energy prices
Why has the rise in prices for imported consumer goods been low?
Uncertain oil prices and pressure on OPEC
Growth potential of the Norwegian economy

2 / 2001:

New regulation on monetary policy
Underlying inflation
Assessment of risks to the inflation projection
Effects of a sharper slowdown in the global economy

1 / 2001:

What are the effects on Europe of a cyclical downturn in the US?
The impact of interest rates on private consumption ()*

4 / 2000:

Price developments in Norway, Sweden and the euro area
Effects of a change in interest rates ()*
Uncertainty associated with the inflation projections
Evaluation of Norges Bank's projections for 1999

3 / 2000:

Low price inflation for imported consumer goods
Which factors influence the krone exchange rate?
Interest rates and expectations

(*) = Boxes with special discussion of the effects of monetary policy and the functioning of the economy

Estimated relationship for interest rate setting

Norges Bank operates a flexible inflation targeting regime, so that weight is given to both variability in inflation and variability in output and employment. The outlook for these key variables is influenced by current information about economic developments.

Several simple rules for interest rate setting are found in the literature. The rules can be used as rough indicators of whether the interest rate is adapted to the economic situation. Common to these interest rate rules is that the interest rate is set with a view to keeping inflation around a specific target over time, at the same time that the interest rate should contribute to stabilising output. One example is the Taylor rule, where the interest rate depends on inflation's deviation from the inflation target and the output gap. The Taylor rule will not capture all factors that are given weight in interest rate setting, and the parameters in the rule are not based on the experience of Norwegian monetary policy.

External analysts and observers will over time seek to form a broader picture of how the central bank reacts to new information than that which emerges from simple rules. In order to understand the response pattern in monetary policy, observers may estimate the relationship between the interest rate and developments in macroeconomic variables. Such a relationship may be thought of as the "average pattern" in interest rate setting.¹

In actual interest rate setting emphasis is placed on many indicators that have a bearing on developments in inflation and output. An estimated equation will not capture all relevant factors. In particular, it does not capture separate assessments at the various monetary policy meetings. An estimated equation for interest rate setting will thus be a considerable simplification and only provide an indication of how the interest rate on average has reacted to a selection of variables. Moreover, the estimation results will depend on the data period and the econometric method. We have estimated a simple equation that captures Norges Bank's

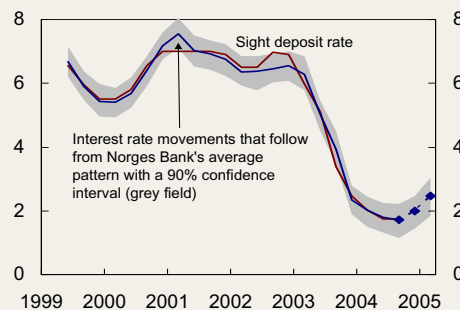
¹ A number of studies of various central banks' reaction functions have gradually emerged in the economic literature, see for example "Material for assessing monetary policy 2001 - 2003" in Inflation Report 1/2004, Sveriges Riksbank, www.riksbank.se, Gerdesmeier, D. and B. Roffia (2003) "Empirical estimates of reaction functions for the euro area", ECB Working Paper no. 206, and Nelson, E. (2000) "UK monetary policy 1972-97: A guide using Taylor rules, Working Paper 120, Bank of England and Kuttner, K. N. (2004) "The role of policy rules in inflation targeting", Federal Reserve Bank of St. Louis, vol. 86, nr. 4, pp. 89-111.

average response pattern from 1999 to the third quarter of 2004.²

The chart below shows the interest rate path that follows from the average pattern of Norges Bank, as estimated here, and developments in the sight deposit rate. The estimated equation includes developments in inflation, wage growth, Norges Bank's projections for mainland GDP growth and external money market rates. The equation also implies that the interest rate in the previous period is of importance.

Given the projections in this report, the estimated equation indicates that the sight deposit rate will increase by $\frac{3}{4}$ percentage point in the first quarter of 2005, primarily because inflation is projected to rise. An interpretation may be that Norges Bank has normally changed the interest rate when it was certain that inflation has moved up or down. The chart illustrates, however, that the interest rate in periods has deviated from the estimated average pattern. There may often be good reasons for these deviations. The risk that the krone exchange rate will move in an undesirable direction and bring inflation further from the target may, for example, imply that the average response pattern should not be followed. This risk may vary over time, for example depending on themes in the foreign exchange market. An increase in interest rates in line with the estimated equation in the period ahead may increase the probability of an appreciation of the krone and thereby persistently low inflation.

Chart 1 The sight deposit rate and interest rate movements that follow from Norges Bank's average pattern for the setting of interest rates.¹⁾ Quarterly figures. 99 Q2 – 05 Q1



¹⁾ The interest rate movements are explained by developments in inflation, projected growth in mainland GDP, wage growth and 3-month interest rates among trading partners.

Source: Norges Bank

² For further discussion, see Bernhardsen T. and G. Bårdsen: "Sammenhengen mellom styringsrenten og makroøkonomiske variable: Noen enkle ligninger for Norge" (The relationship between the key rate and macroeconomic variables: Some simple equations for Norway), Staff Memo No. 2 2004. See www.norges-bank.no.

Developments in household debt

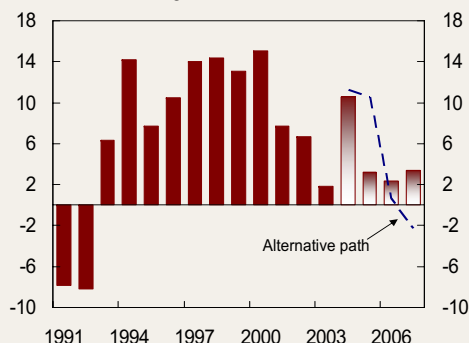
Household debt is still growing at a fast pace and far more rapidly than household income. At the end of the second quarter this year, household debt as a percentage of disposable income was close to the peak in the late 1980s. The interest rate decline since December 2002 has increased households' capacity to service their growing debt. But if households base their behaviour on expectations of a persistent very low interest rate level, a pronounced rise in interest rates later may increase the risk of financial problems and a subsequent fall in demand. It is therefore important that long-term investments are not based on the assumption that interest rates will remain low.

Growth in debt is closely connected with developments in house prices. In recent months house prices have increased substantially. We have projected house prices and the household debt and interest burden on the basis of the baseline scenario and the alternative interest rate path discussed above in Section 5.2 (see Chart 1–3).¹ Assuming a monetary stance in line with the baseline scenario, house prices will rise moderately in 2005–2007. In 2007, the household debt burden will be well over the levels in the late 1980s, while the interest burden will be moderate. Compared with the baseline scenario, the alternative interest rate path will result in a marked rise in house prices and household debt at the beginning of the period, and thereafter a slower rise. This also applies to disposable income. As a result, developments in the household debt burden are fairly similar in the two scenarios. The interest rate paths result in wider differences in the household interest rate burden.

The projections above are based on historical relationships between interest rates, house prices and household debt. According to the historical analysis, household expectations regarding economic developments have a direct effect on house price inflation and an indirect effect on debt growth. In the projections, we have assumed that these expectations are constant. A marked change in household expectations in a positive or negative direction could result in a different path for house price inflation and debt growth than presented here.

¹ The projections are based on estimated models for house prices and household debt. The models are described in greater depth in *Financial Stability* 1/04 (house prices) and the article "What influences the growth of household debt?" by D.H. Jacobsen and B.E. Naug in *Economic Bulletin* 2/2004 (www.norges-bank.no).

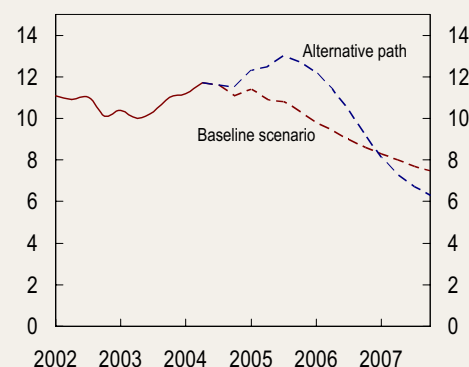
Chart 1 Change in house prices. Per cent. Annual figures. 1991 – 2007¹⁾



¹⁾ Projections for 2004 – 2007

Sources: Norwegian Association of Real Estate Agents, Association of Real Estate Agency Firms, Finn.no, ECON

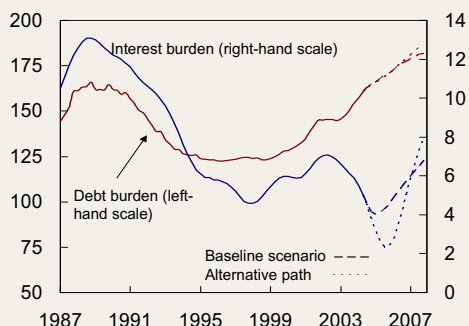
Chart 2 Household gross debt (C2). Percentage change over 4 quarters. 02 Q1 – 07 Q4¹⁾



¹⁾ Projections for 04 Q3 – 07 Q4

Source: Norges Bank

Chart 3 Household debt and interest burden.¹⁾ Per cent. 87 Q1 – 07 Q4²⁾



¹⁾ Debt burden: loan debt as a percentage of disposable income less the return on insurance claims. Interest burden: interest expenses after tax as a percentage of liquid disposable income plus interest expenses.

²⁾ Projections for 04 Q3 – 07 Q4

Source: Norges Bank

Preliminary evaluation of projections in Inflation Report 2/04

In *Inflation Report 2/04*, the Norwegian economy was described as being in an upturn. Mainland GDP growth was projected to be higher than growth in potential output in 2004 as a result of the expansionary monetary stance and the international upswing. The output gap was projected to be marginally positive from 2005. We expected inflation to edge up from June, and to remain fairly stable up to autumn. Inflation, measured by the CPI-ATE, was projected at 1½% at the beginning of 2005, and was expected to reach the inflation target in summer 2007.

Since *Inflation Report 2/04* was published in July, output growth in the Norwegian economy has been approximately in line with projections, but employment growth has been somewhat slower than projected. Inflation was lower than projected through the summer, but picked up in September. In September, the year-on-year rise in the CPI-ATE was approximately in line with the projection in *Inflation Report 2/04*. Prices for imported consumer goods moved fairly closely in line with projections up to July, but in August they fell at a considerably faster rate than projected. A sharp rise in clothing and footwear prices in September pushed up prices for imported consumer goods towards the rate of increase projected in the previous report. The rise in prices for domestically produced goods and services has been slightly weaker than projected (see Chart 1). In particular, the rise in food prices has decelerated in recent months.

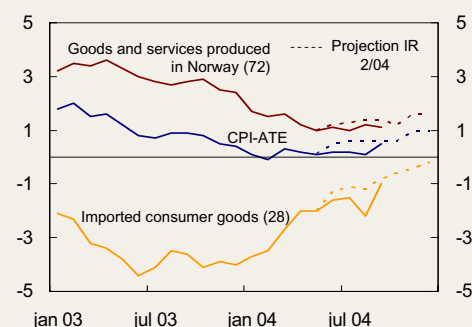
In Chart 2, actual inflation is compared with the inflation projection in *Inflation Report 2/04*, and predictions based on a simple time series model that captures trend growth and seasonal variations in the CPI-ATE. The time-series model predictions were approximately in line with our projections, and yielded a higher rate of increase in the period June to August than actual CPI-ATE inflation.

Changes in the projections from Inflation Report 2/04 to 3/04

The projections in *Inflation Report 2/04* and 3/04 were based on the assumption that interest rates follow forward interest rates. We further assume that the krone exchange rate follows the forward exchange rate. The forward interest rates on which

the projections in this report are based are about 1 percentage point lower than the forward interest rate in the previous report. In the previous report the forward exchange rate implied a virtually unchanged krone exchange rate. The krone exchange rate is 2% stronger than in June, and the forward exchange rate now also implies an unchanged krone exchange rate through the projection period (see Charts 3 and 4). In isolation, a stronger exchange rate implies lower inflation.

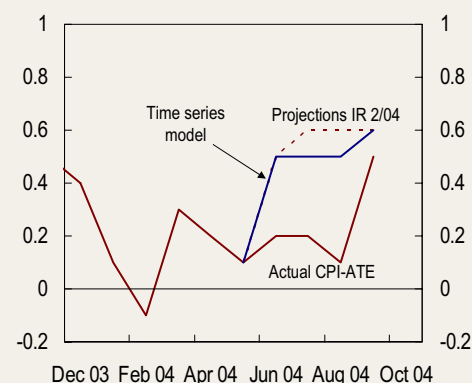
Chart 1 CPI-ATE¹⁾. Total and by supplier sector.²⁾ Actual price inflation and projections IR 2/04. 12-month change. Per cent. Jan 03 - Dec 04



¹⁾ CPI-ATE: CPI adjusted for tax changes and excluding energy products.
²⁾ Norges Bank's estimates. Percentage share of CPI-ATE in brackets.

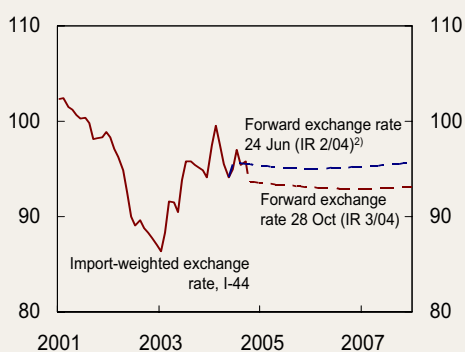
Sources: Statistics Norway and Norges Bank

Chart 2 CPI-ATE. Projections IR 2/04, projections from time series model and actual price movements. 12-month change. Per cent. Dec 03 - Sept 04



Sources: Statistics Norway and Norges Bank

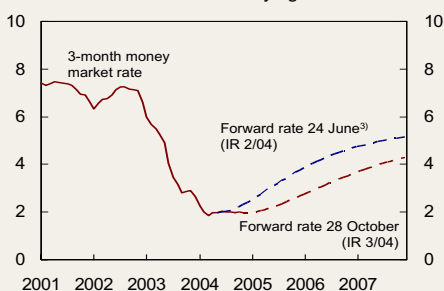
Chart 3 The krone exchange rate (I-44)¹⁾. Forward exchange rates. Monthly figures



¹⁾A rising curve denotes a weaker krone exchange rate.
²⁾There is some deviation from the assumption published in IR 2/04 because of a change in the estimation method.

Source: Norges Bank

Chart 4 Assumption for the money market rate¹⁾. Forward interest rates.²⁾ Monthly figures. Per cent



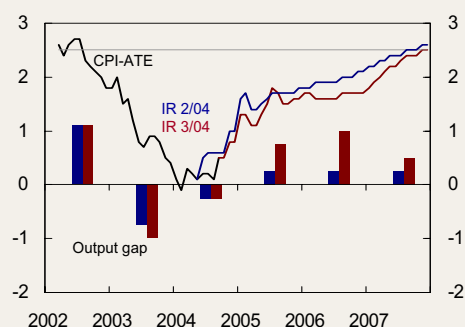
¹⁾ The money market rate is normally about ¼ percentage point higher than the sight deposit rate.

²⁾ 3-month money market rate to end-September 2004. The assumption for the money market rate is calculated on the basis of interest rates in the money and interest rate swap market at the specified time. The interest rate scenario has been adjusted for the fact that credit risk increases with the period to maturity.

³⁾ There is some deviation from the assumption published in IR 2/04 because of a change in the estimation method.

Source: Norges Bank

Chart 5 Projections for the CPI-ATE¹⁾ and the output gap²⁾ in *Inflation Report 2/04* (blue) and *3/04* (red). Per cent



¹⁾ CPI-ATE: CPI adjusted for tax changes and excluding energy products.

²⁾ The output gap measures the difference between actual and trend mainland GDP.

Sources: Statistics Norway and Norges Bank

International developments have generally been in line with projections in the previous report, but oil prices have surged. There are also prospects that oil prices will remain higher than expected in the previous report. Higher commodity prices have translated into higher export prices among our trading partners. In isolation, this will result in a somewhat higher rate of increase in prices for imported consumer goods measured in foreign currency.

The main features of economic developments ahead, as projected in this report, are broadly in line with the picture described in the previous report. The projections now point towards a somewhat more pronounced cyclical path than in the July report. The main changes in the projections are indicated below.

Lower output gap in 2003

Norges Bank's projection for the output gap in 2003 has been lowered by a quarter percentage point (see Chart 5). The output gap is an uncertain variable. Different methods for calculating the output gap give different results. Somewhat weaker-than-expected employment growth may indicate that excess capacity in the business sector has been somewhat higher than assumed earlier. Low domestic inflation implies that there has been more spare capacity in the Norwegian economy than we assumed in the previous report.

Higher growth in mainland GDP and lower unemployment

Growth in mainland GDP is projected to be somewhat higher in 2004 – 2006, while our assessments of potential output remain virtually unchanged. The output gap, as we assess it, is thus projected to be higher in the period than in the previous report. Brisk growth in housing starts this year implies that housing investment will be higher than previously projected. The investment survey for the petroleum sector points to higher-than-expected petroleum investment this year and next. As a result of lower interest rates, the projection for demand growth has been increased for 2005 and 2006 compared with the projections in the previous report. Higher demand growth pushes up employment growth somewhat in relation to the projections in the July report.

Inflation is revised down somewhat

Stronger growth in the real economy and a more positive output gap ahead than projected in the previous report will, in isolation, exert upward

pressure on inflation in the period ahead. Somewhat stronger international inflationary impulses as a result of higher oil and commodity prices will also push up consumer price inflation. However, there are a number of downside factors:

- The output gap for 2003 has been revised down somewhat. This implies that the pressures in the economy were weaker than assumed in the previous report.
- The rise in prices for domestically produced goods and services has been somewhat slower than projected in the July report. Intensified competition has restrained the rise in prices for domestically produced goods and services. The rise in food prices has, for example, slowed markedly since spring. Stronger competition will probably continue to curb price inflation for a period ahead.
- The projections for wage growth have not been changed since the previous report although in this report unemployment is projected to show a stronger decline in the period ahead. This partly reflects prospects of somewhat slower-than-projected inflation. We have assumed that a generally subdued rise in costs internationally will have a dampening impact on wage growth in Norway. Stronger competition from new EU members may have the same effect.
- The fall in prices for audiovisual equipment is now assumed to continue through the entire projection period. This implies a small downward adjustment of projected price impulses, particularly towards the end of the projection period, compared with the previous report.

- Owing to a somewhat stronger krone, the projection for the rise in prices for imported consumer goods in 2006 and 2007 has been revised down (see Chart 6).

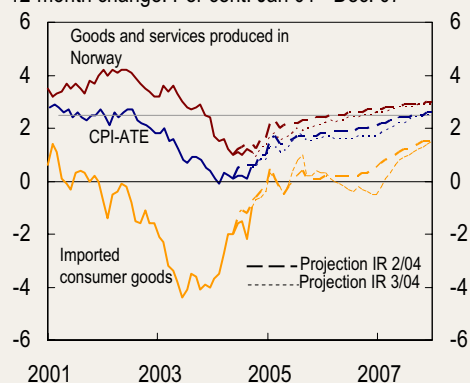
Other institutions' projections

The Ministry of Finance, Statistics Norway and Norges Bank all project strong growth in the economy and higher inflation in the coming year. The Ministry of Finance has, in the National Budget for 2005, projected mainland GDP growth at 3.2% (see Chart 7). This is the same growth rate as projected in the Revised National Budget presented in spring 2004. Statistics Norway and Norges Bank have both revised up their projections for mainland GDP growth since summer and expect somewhat higher growth than the Ministry of Finance.

Norges Bank now projects mainland GDP growth at 3½% in 2005, which is half a percentage point higher than projected in the previous report. Statistics Norway has revised down its projection for mainland GDP growth in 2005 from 3.3% to 2.9%, while the Ministry of Finance has maintained its projection for mainland GDP growth of 3.1% in the National Budget for 2005, the same as in the Revised National Budget for 2004.

Inflation has been lower than projected by all three institutions and all the projections for CPI-ATE inflation in 2004 have been revised down (see Chart 8). In the National Budget, the Ministry of Finance has projected CPI-ATE inflation at 1¾% in 2005, which is 0.5 percentage point lower than the projection in the Revised National Budget for 2004. Statistics Norway has lowered its projection to

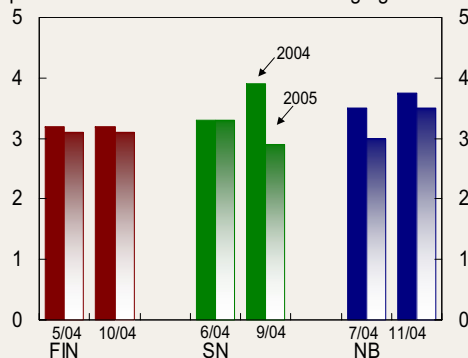
Chart 6 CPI-ATE. Total and by supplier sector.¹⁾ 12-month change. Per cent. Jan 01 - Dec. 07



¹⁾ Norges Bank's estimates.

Sources: Statistics Norway and Norges Bank

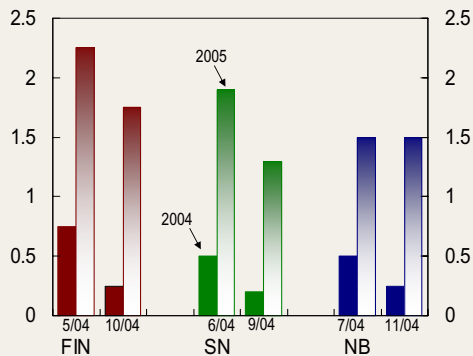
Chart 7 Mainland GDP. The last two projections published for 2004 and 2005. Percentage growth



Sources: Ministry of Finance (FIN): Revised National Budget 2004, National Budget 2005, Statistics Norway (SN): *Economic Survey* 3/2004 and 4/2004, Norges Bank (NB): *Inflation Report* 2/04 and 3/04

approximately the same extent, and the projection for CPI-ATE inflation in 2005 is now 1.3%. In this report, we project CPI-ATE inflation at 1½% in 2005, which is the same as in the previous report.

Chart 8 CPI-ATE. The last two projections published for 2004 and 2005. Percentage growth



Sources: Ministry of Finance (FIN): Revised National Budget 2004, National Budget 2005, Statistics Norway (SN): *Economic Survey* 3/2004 and 4/2004, Norges Bank (NB): *Inflation Report* 2/04 and 3/04

The Ministry of Finance’s projections were published on 11 May and 6 October 2004. Statistics Norway published its projections on 17 June and 16 September. *Inflation Report* 2/04 was published on 1 July this year. As the three institutions published their projections on different dates, the information on which the projections were based may vary.

Norges Bank's foreign exchange purchases for the Government Petroleum Fund

Foreign exchange for the Government Petroleum Fund is provided by transfers from the state's direct financial interest in petroleum activities (SDFI) and by Norges Bank's purchases in the market. Norges Bank purchases foreign exchange to the extent the SDFI's gross foreign exchange revenues are insufficient to cover the foreign exchange allocations to the Petroleum Fund. Foreign exchange from the SDFI and from Norges Bank's daily purchases accumulate through the month in the buffer portfolio, which is part of Norges Bank's foreign exchange reserves. At the end of each month, funds are transferred from the foreign exchange reserves to the Petroleum Fund.

In 2003, the foreign exchange transfers from the SDFI and Norges Bank's daily purchases exceeded the Fund's need for foreign exchange, resulting in an undesirable build-up of foreign exchange reserves. The system for foreign exchange transfers from the SDFI and for calculating Norges Bank's foreign exchange purchases was therefore changed from 2004. The purpose was to limit the foreign exchange inflows to Norges Bank to the outflows of foreign exchange to the Petroleum Fund over time, in order to stabilise the level of foreign exchange reserves.

The new method of calculation implies that foreign exchange flows are assessed for one month at a time. The Ministry of Finance determines the monthly allocation to the Petroleum Fund. In addition, an estimate of the SDFI's monthly foreign exchange revenues is drawn up. The transfer of foreign exchange from the SDFI cannot exceed the monthly allocation to the Petroleum Fund. If the monthly foreign exchange revenues from the SDFI are insufficient, Norges Bank purchases foreign exchange in the market. The size of Norges Bank's purchases is determined by the difference between the allocation to the Petroleum Fund and the estimated foreign exchange revenues from the SDFI.

Foreign exchange purchases for the Petroleum Fund may vary considerably from month to month. This is related both to changes in the monthly allocation to the Petroleum Fund as a result of

revised budget information and to fluctuations in the SDFI's foreign exchange revenues. If there are changes after the month's foreign exchange purchases have been announced, the purchases for the following month will be adjusted.

There is normally no allocation of funds to the Petroleum Fund in December. The international equity and fixed income markets are less liquid at the end of the year, and it is therefore undesirable to transfer capital that must be invested at this time. To minimise transaction costs for the state, however, all or some of the foreign exchange revenues from the SDFI may be added to the foreign exchange reserves in December. Norges Bank is unlikely to make foreign exchange purchases in December. The accumulation of foreign exchange reserves in December will reduce the need for daily purchases in the first quarter of the following year.

In February 2004, Norges Bank decided to reduce the unintentional build-up of foreign exchange in the buffer portfolio by transferring funds to the foreign exchange reserves' investment portfolio. The transfer to the investment portfolio began in March and will be completed in the course of 2004. After the monthly allocation to the Petroleum Fund, the buffer portfolio should from 2005 amount to approximately NOK 3.5bn. Since no allocations are made to the Petroleum Fund in December, the buffer portfolio may be somewhat larger at end-December and at the end of the following two months.

In the first half of 2004, the foreign exchange revenues from the SDFI were more than sufficient to cover the allocations to the Petroleum Fund. This was no longer the case when oil prices increased and the monthly allocations to the Petroleum Fund were revised up. As a result, Norges Bank had to resume its purchases of foreign exchange in the market from July 2004. Foreign exchange equivalent to a total of NOK 47bn will be purchased in the period July-November 2004. Daily purchases amounted to NOK 300m in July, NOK 150m in August, NOK 630m in September and NOK 430m in October. In November the daily purchases amount to NOK 640m.

The current account surplus and demand for the Norwegian krone

Norway is running a current account surplus. The surplus is a result of Norway's sizeable oil and gas exports. Mainland Norway is running a substantial current account deficit. As a result of high oil prices, the current account surplus is rising this year. It is normally assumed that an increase in the current account surplus will result in higher net demand for the domestic currency. Due to factors related to the petroleum sector, this relationship is not as straightforward for Norway.

Petroleum revenues generally provide substantial, but uneven currency inflows into Norway. A large part of the petroleum revenues accrue to the Norwegian state via taxes, the state's direct financial interest in petroleum activities (SDFI) and share dividends from Statoil. The portion of the state's petroleum revenues that is not spent over government budgets is invested abroad through the Government Petroleum Fund. The Fund thus acts as a buffer against the wide fluctuations in the krone exchange rate that might otherwise be the result of changes in petroleum revenues.

Both international and Norwegian oil companies operate on the Norwegian continental shelf. Oil company revenues are mainly in foreign currency. Some expenses are in the Norwegian krone, such as operating expenses, petroleum taxes and parts of the investments. Norwegian oil companies also pay dividends in the Norwegian krone. Probably only a small portion of the "cash surplus" remaining after expenses in the Norwegian krone have been paid is exchanged into the Norwegian krone.

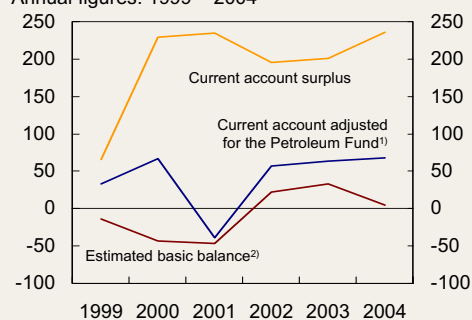
The effects of changes in the current account on net demand for the Norwegian krone can be illustrated by referring to the so-called basic balance. The basic balance is usually defined as the current account surplus less net long-term capital outflows. Net long-term capital outflows also include flows that are not related to the petroleum sector. These capital flows, however, do not vary in step with

petroleum revenues, and have not been taken into account here.

The basic balance has been estimated by deducting transfers to the Petroleum Fund¹ and oil companies' estimated cash surplus from the current account surplus. The underlying data for estimating oil companies' cash surplus are very limited. The estimations must therefore be regarded as rough estimates, which probably provide a more accurate picture of changes in the basic balance from one year to the next than the level of the basic balance.

The chart shows that even though the current account surplus will increase from 2003 to 2004 as a result of high oil prices, the adjusted basic balance is falling, contributing in isolation to a reduction in demand for the Norwegian krone.

Chart 1 Estimated basic balance. In billions of NOK. Annual figures. 1999 – 2004



¹⁾ Adjusted for annual allocation to the Government Petroleum Fund, and fixed income and dividend income for the Petroleum Fund.

²⁾ Adjusted for transfers to the Petroleum Fund and estimates of the oil companies' cash surplus.

Sources: Ministry of Finance, Statistics Norway and Norges Bank

¹ Transfers to the Petroleum Fund include the annual allocation to the Government Petroleum plus dividend and interest income in the Fund, since these forms of earnings are included in the current account surplus.

Monetary policy meetings in Norges Bank

with changes in sight deposit rate and a statement regarding the inflation outlook

Date	Sight deposit rate ¹	Change	Bias ²
Future meetings			
25 May 2005			
20 April 2005			
16 March 2005			
2 February 2005			
15 December 2004			
Previous monetary policy meetings			
3 November 2004	1.75	0	
22 September 2004	1.75	0	
11 August 2004	1.75	0	
1 July 2004	1.75	0	
26 May 2004	1.75	0	Downside bias
21 April 2004	1.75	0	Downside bias
11 March 2004	1.75	-¼	Downside bias
28 January 2004	2	-¼	Downside bias
17 December 2003	2.25	-¼	Downside bias
29 October 2003	2.5	0	Neutral bias
17 September 2003	2.5	-½	Neutral bias
13 August 2003	3	-1	Downside bias
25 June 2003	4	-1	Downside bias
30 April 2003	5	-½	Downside bias
05 March 2003	5.5	-½	Downside bias
22 January 2003	6	-½	Downside bias
11 December 2002	6.5	-½	Downside bias
30 October 2002	7	0	Neutral bias
18 September 2002	7	0	Neutral bias
07 August 2002	7	0	Upside bias
03 July 2002	7	+½	Upside bias
22 May 2002	6.5	0	Upside bias
10 April 2002	6.5	0	Neutral bias
27 February 2002	6.5	0	Neutral bias
23. Januar 2002	6.5	0	Downside bias

¹ The sight deposit rate is Norges Bank's key rate. The sight deposit rate is the interest rate on banks' deposits in Norges Bank. The sight deposit rate forms a floor for money market rates. By managing banks' access to liquidity, the central bank ensures that short-term money market rates are normally a little higher than the sight deposit rate.

² A *neutral bias* indicated that according to Norges Bank's assessment, with an unchanged interest rate (at the rate after the change approved the same day), the probability that inflation two years ahead would be higher than 2½ per cent was the same as the probability that it would be lower. A *downside bias* indicated that according to Norges Bank's assessment, with an unchanged interest rate (at the rate after the change approved the same day), the probability that inflation two years ahead would be lower than 2½ per cent was greater than the probability that it would be higher. An *upside bias* indicated that according to Norges Bank's assessment, with an unchanged interest rate (at the rate after the change approved the same day), the probability that inflation two years ahead would be higher than 2½ per cent was greater than the probability that it would be lower. As from the monetary policy meeting on 1 July 2004, Norges Bank will no longer publish a separate statement with an assessment of the inflation outlook.

Annex I Regional network

Norges Bank's regional network

Norges Bank's regional network was established in autumn 2002 and consists of enterprises, organisations and local authorities throughout Norway. In five rounds of talks each year, we engage in discussions with business and community leaders on financial developments in their enterprises and industries, with about 250 visits in each round. The contacts reflect the production side of the economy, both in terms of industry sector and geographic area. Approximately 1000 individuals in the network are contacted one to two times a year.

The purpose of the regional network is to obtain updated information on the state of the Norwegian economy. Regular communication with local contacts in Norway's business and community life provide us with information earlier and more frequently than available government statistics. It also provides us with supplementary information about areas not covered by other statistical sources, and we learn which issues are of particular concern

to enterprises. In addition, the regional network will provide us with insight into the effects of specific events and enable us to study relevant issues. Official statistics will continue to form the basis for our perception of the state of the economy, but the time lags and revisions associated with these statistics make supplementary sources such as our regional network useful.

The information obtained from the regional network, along with other available information on economic developments, will form a basis for Norges Bank's projections as presented in the *Inflation Report* and other published material.

We have divided Norway into seven regions, and have engaged regional research institutions/companies to be responsible for the network in their respective regions and to have meetings with contacts on behalf of Norges Bank. The following institutions have been selected:

Region North (Nordland, Troms and Finnmark)	Kunnskapsparken Bodø
Region Central Norway (North- and South-Trøndelag)	Center for economic studies at NTNU
Region North-West (Møre and Romsdal, Sogn and Fjordane)	Møreforskning Molde
Region South-West (Rogaland and Hordaland)	Rogalandsforskning
Region South (Aust- and Vest-Agder, Telemark and Vestfold)	Agderforskning
Region inland (Hedmark and Oppland)	Østlandsforskning
Region East (Buskerud, Akershus, Oslo and Østfold)	Asplan Viak

Summery of the contact round since Inflation Report 2/04

In the contact rounds since *Inflation Report 2/04*, about 290 regional network contacts have been interviewed. A national summary and summaries for each region will be available on Norges Bank's website on 4 November. The main points below are based on the regional reports from the institutions responsible for the various regions and do not necessarily reflect Norges Bank's view of economic developments.

- This round confirms that the economic recovery is continuing in Norway. All industries report increased demand. The outlook for the next six months is positive with a growth rate that is approximately the same or somewhat lower than in the previous period.
- The export industry reports somewhat slower growth after recording strong growth in the first half year, but developments are still positive. In domestically oriented industry, growth is picking up and is stronger than it has been since the regional network was established in autumn 2002. High activity in the building and construction sector is generating strong demand in manufacturing industries supplying goods to this sector.
- Manufacturing supplying goods to the petroleum sector also reports a pick-up in growth. Construction of onshore facilities in connection with the Snøhvit and Ormen Lange projects is generating strong demand for building and construction services. High activity in the petroleum sector is also creating jobs in the shipbuilding and engineering industries and increased demand for services for exploration activities.
- Growth is solid and rising in the building and construction sector. Buoyant activity in residential construction is making the main contribution, but the commercial building market is also showing signs of an upswing. All regions with the exception of Regions East and North report signs of improvement and a nascent rise in demand for commercial buildings.
- The corporate service sector reports continued recovery. The advertising industry is benefiting from strong growth in retail trade. The market for new issues and the number of stock exchange listings have picked up, resulting in increased demand for consultancy services. General growth in the business sector is also stimulating the travel industries.
- Retail trade reports a slight decline in the growth rate in this round, but demand is still rising. Some regions have registered slower growth for capital goods such as cars and brown and white goods. Demand for furniture, building supplies and household furnishings is strong. Household demand for services is also accelerating. Air travel has increased sharply. Otherwise, growth is somewhat more moderate in the travel industry. Volume growth is strong in the telecommunications industry. Lending growth remains solid, reflecting brisk activity in the housing market.
- There are signs of a moderate increase in private sector investment. Manufacturing is investing in particular in automated production processes. Retail trade is responding to increased demand by upgrading and expanding existing premises. Service industries' investment include IT equipment.
- Employment is rising in the building and construction sector, but a large portion of this increase is probably contract labour. Employment is rising moderately in retail trade, with the highest growth for consumer durables industry. Employment is also rising somewhat in service industries.
- All industries with the exception of household services report low and declining price inflation. Manufacturing prices are rising as a result of higher commodity prices. A number of contacts report, however, that intense competition is preventing them from increasing their own prices to the same extent. Profitability is still improving in all industries.

Enterprises and organisations that have been contacted in the work on this Inflation Report

Adecco Norge AS
Adidas Norge AS
Adresseavisen ASA
Aetat Bergen
Aetat Elverum
Aetat Molde
Aetat Sør-Trøndelag
Aetat Telemark
Aetat Vestfold
AF gruppen ASA
Ahead frisør
Ajilon Norway AS
Aker Kværner ASA
Aker Langsten AS
Andenes Havfiskeselskap AS
APS Norway AS
Asplan Viak Trondheim AS
Aukra-Midsund Offshore AS
Autostrada AS
Avisa Nordland AS
Avisa Nordlys
B&T Låsservice AS
Bach Johansen håndverk AS
Bademiljø AS
Bakke El-installasjon AS
Barel AS
Bates AS
Berendsen tekstil service AS
Berg-Hansen reisebyrå Bodø AS
Berg-Hansen reisebyrå Vestfold AS
Big Horn Steak House Norge AS
Bilhuset AS
Bilia personbil AS
Bjølseth Caravan AS
Bergenhavøens Kommunale Kraftselskap AS
Block Berge Bygg AS
Bodø Bilskadesenter AS
Bohus Møbellhuset AS
Borregaard Industrier
Br. Reme AS
Bravida Norge AS
Brevik Construction AS
Bryggen Gastronomi AS
Brødrene Harsjøen
Entreprenørforretning
Braathens ASA
Buskerud Sentralsykehus
Byggekompaniet AS
Byggmester Fritzøe AS
Canal Digital Norge AS
Cap Gemini Ernst & Young Norge AS
City Syd AS
Clarion Hotel Ernst AS
Constructor Norge AS
Coop Jekta handelssenter
Coop NKL BA
Coop Nordfjord og Sunnmøre BA
Coop Porsanger BA
CSC Solutions Norge AS
Dale Bruk AS
Dale of Norway
Damm NW et Søn AS
DNB Eiendomsmegling AS
DNH-Den Norske Høytalerfabrikk AS
Dovre Entreprenør AS
E. A. Smith AS
Egersund Trål AS
Eiendomsmegler 1
Einar Valde AS
Elixia Norway AS
Elkem ASA Salten verk
Elsafe International AS
Eltek Energy AS
Engers Lefsebakeri
Erling Moen AS
Esso Norge AS
Exact Eiendomsmeglere AS
Expert ASA
Fagbokforlaget
Fame Fotografene AS
Fatland AS
Finnmark miljøtjeneste AS
Finnøy Gear & Propeller AS
Fokus Bank ASA
Fosen Mekaniske Verksteder AS
Furnes Hamjern Scandinavian Cast AS
Fædrelandsvennen AS
Gilde Bøndernes Salgslag BA
Glava AS
Gravdal Bokhandel
Gresvig ASA
Hafslund Sikkerhet Sør
Hagen Treindustri AS
Hands ASA
Harengus AS
Hatteland Group AS
Hedalm Boliger AS
Hedmark fylkeskommune
Helse Stavanger HF
Helse Sunnmøre HF
Hovden Møbel AS
HSD AS
Hunderfossen Familiepark AS
Hunton Fiber AS
Hvalsafari AS
H-vinduet Vatne AS
Hydro Automotive Structures AS
Hydro Polymers AS
Hydrotech Gruppen AS
Høgskolen i Bodø
IBM Norge
Iglo Holding AS
Ikon AS
Imas bil AS
Industriverktøy AS
Inmedia AS
Innovasjon Norge
Innoventi Reklamebyrå AS
Intra AS
ISS Norge AS
Ivar Mjåland AS
Hans H. Iversen AS
J. M. Nilsen AS
Jangaard Export AS
Jørstad AS
Kappahl AS
Karmsund Maritime Service AS
Keno Reklame AS
Kimek AS
Kitron Arendal AS
Kjell Arnesen AS
Klaastad Brudd DA
Komplett ASA
Kongsberggruppen AS
Kongssenteret
Kongsvinger kommune
KPMG Trondheim
Kraft Foods
Kristiansand kommune
Entreprenør M. Kristiseter AS
Krogsveen AS
Kruse Smith AS
Kvadrat Steen & Strøm
Kverneland Group
Kvikne's Hotel
Laerdal Medical AS
Landteknikk Fabrikk AS
Langset AS
Legra Industrier AS
Leonhard Nilsen sønner AS
Lindenes kommune
Lindorff AS
Linjegods AS
Loreal Norge AS
LPO arkitektur & design AS
Lycro AS
Lyse Energi AS
Macks Ølbryggeri AS
Malvik kommune
Marine Harvest
Maritime Hotell Flekkefjord
Maritime Pusnes AS
Masternes Transport
Mester Grønn AS
Miljøbygg AS
Moi Rør AS
Moss kommune
MTU Telecom AS
Møre og Romsdal fylkeskommune
Mørenot AS
NCC Norge AS
Neptun Apartement Hotell AS
Nera Networks AS
Nesseplast AS
Norsk institutt for naturforskning
Norcem AS
Nordan AS
Nordfjord Hotell
Nordia
Nordic Semiconductor ASA
Nordlaks AS
Nordlandsbanken ASA
Nordlys Hotell AS
Norene AS
Norsea AS
Norsk Sjømat AS
NORSVIN
Oasen
Onninen
Oracle Norge AS
Oras Trondheim AS
Orkla Media AS
Os Husdyrmerkefabrikk AS
Otta Sag og Høvlari AS
Pallin AS
Partner Mote AS
Partner Reisebyrå AS
Paulsen Eiendom AS
Per Aaland AS
Peterson Linerboard AS
Plantasjen AS
Poesi kaffe og the AS
Polimoon AS
Porsanger kommune
PricewaterhouseCoopers
Prognosesenteret AS
Qs Manager AS
Quality Hafjell Hotell AS
Quality Hotel Sogndal
Rainbow Hotels Bergen
Rambøll Norge AS
Rapp Bomek ASA
Refa Frøystad Group AS
Remøy Shipping AS
Revisorkonsult AS
Rica Arctic Hotel
Rica Hotel Norge AS
Rica Hotels Midt-Norge AS
Rica Maritim Hotel
Rieber & Søn ASA
Ringerike kommune
Ringnes AS
Ringsaker kommune
Rissa kommune
Rolls-Royce Marine AS
Room Norge
Rotanor Bokproduksjon AS
Rygge-Vaaler Sparebank
Rød Tråd AS
Sandefjords Blad AS
Sandnes kommune
Sandnessjøen Verkstedsenter AS
Sarpsborg kommune
SAS Ground Services
Savalen Fjellhotell AS
Scandic Hotel Arendal AS
Schlumberger
Servi Cylinderservice AS
Sikkerhetssenteret Aukra
Sisofflor AS
Sivesind KI AS
Skanska Bolig AS
Skedsmo kommune
Skeidar AS
Skipsteknisk AS
Skjalg A. Pettersen
Skretting AS
Sogn Billag AS
Solstrand Fjordhotell
Sparebank 1 Gruppen AS
Sparebanken Pluss
Sparebanken Vestfold
Sparebanken Volda Ørsta
St. Olavs hospital
Statens vegvesen Region Sør
Statens vegvesen Sør-Trøndelag
Statoil Stjørdal
Stavanger Aftenblad
Stavangerske AS
Stoa Storkjøp AS
Sult AS
Sunnmørsposten AS
Surnadal Transport AS
Surnadal Utvikling AS
Swix Sport AS
Systembygg Kirkenes AS
Sødra Cell Tofte AS
Sørensen Maskin AS
Sørhøy Distribusjon AS
T. Stangeland Maskin AS
Tanabygg AS
Tanum AS
TDC Norge AS
Technor ASA
Telenor Mobile AS
Thommessen Krefthing Greve Lund AS
TI Group Automotive Systems AS
Ticket.no
Tine BA
Tolga Granitt AS
Torgkvartalet kjøpesenter
Trehuseksperten AS
Trondheim kommune
Trondheim politikammer
Trondheimsfjorden interkommunale havn
Trygdeetatens innkrevingsentral
Tønsberg kommune
Umoe Mandal AS
Vetco Aibel Haugesund
Windy boats AS
X-Partner Nord AS
YIT Building Systems AS
Østereng & Benestad AS
Øyer kommune
AAS mek. Verksted AS

Annex II Statistics

Table 1 Main macroeconomic aggregates

Percentage change from previous year/quarter	GDP	Mainland GDP	Private consumption	Public spending on goods and services	Mainland fixed inv.	Petroleum inv. ¹⁾	Exports trad. goods	Imports
1997	5,2	4,9	3,2	2,5	11,8	24,9	7,6	12,4
1998	2,6	4,1	2,7	3,3	8,6	22,2	5,4	8,5
1999	2,1	2,7	3,3	3,2	-0,1	-13,1	2,2	-1,8
2000	2,8	2,5	3,9	1,3	-1,2	-23,0	5,1	2,7
2001	2,7	2,1	1,8	5,8	4,3	-4,1	1,5	0,9
2002	1,4	1,7	3,6	3,1	-2,5	-3,6	1,6	2,3
2003	0,4	0,6	3,8	1,4	-4,7	15,8	2,6	2,2
2003 ²⁾ Q1	-1,4	-1,0	0,2	0,8	-3,5	-2,3	1,2	0,8
Q2	0,3	0,6	1,4	0,5	-2,9	13,7	4,0	-0,9
Q3	1,0	1,3	1,1	0,2	-1,0	2,9	0,7	0,4
Q4	0,6	0,7	1,1	0,9	2,6	-6,8	1,8	2,1
2004 ²⁾ Q1	1,2	0,9	1,6	0,3	0,1	8,7	-1,3	3,2
Q2	1,2	0,8	0,2	1,5	3,9	1,3	-1,3	1,3
Level 2003, in billions of NOK	1564	1246	722	353	195	63	189	433

1) Extraction and pipeline transport

2) Seasonally adjusted quarterly figures

Table 2 Consumer prices

Twelve-month rise. Per cent		CPI	CPI-ATE ¹⁾	CPI-AT ²⁾	CPI-AE ³⁾	HICPI ⁴⁾
1997		2,6			2,3	2,6
1998		2,3			2,9	2,0
1999		2,3			2,3	2,1
2000		3,1			2,3	3,0
2001		3,0	2,6	3,2	2,4	2,7
2002		1,3	2,3	2,2	1,6	0,8
2003		2,5	1,1	2,5	1,0	2,0
2003	Jul	1,5	0,7	1,4	0,7	1,2
	Aug	2,1	0,9	2,1	0,9	1,8
	Sep	2,1	0,9	1,9	1,0	1,5
	Oct	1,6	0,8	1,6	0,9	1,3
	Nov	1,4	0,5	1,3	0,6	1,0
	Dec	0,6	0,4	0,5	0,5	0,1
2004	Jan	-1,8	0,1	-2,4	0,5	-1,4
	Feb	-1,7	-0,1	-2,3	0,4	-1,5
	Mar	-0,6	0,3	-1,1	0,7	-0,4
	Apr	0,4	0,2	-0,1	0,5	0,4
	May	1,0	0,1	0,6	0,5	1,0
	Jun	1,3	0,2	0,8	0,6	1,3
	Jul	1,5	0,2	1,1	0,6	1,6
	Aug	1,0	0,1	0,5	0,6	1,1
	Sep	1,1	0,5	0,6	0,8	1,1

1) CPI-ATE: CPI adjusted for tax changes and excluding energy products

2) CPI-AT: CPI adjusted for tax changes

3) CPI-AE: CPI excluding energy products

4) HICP: The Harmonised Index of Consumer Prices. The index is based on international criteria drawn up by Eurostat.

Table 3 Interest rates

Per cent		Norges Bank's key rate (average)	Money market rates NIBOR ¹⁾			Yield on govern- ment bonds ²⁾
			Sight deposit rate	1-week	3-month	
1997		3,4	3,6	3,7	4,2	5,9
1998		5,5	5,9	5,8	5,7	5,4
1999		6,3	6,9	6,5	6,0	5,5
2000		6,2	6,6	6,8	7,1	6,2
2001		7,0	7,2	7,2	7,1	6,2
2002		6,7	6,9	6,9	6,9	6,4
2003		4,2	4,4	4,1	4,0	5,0
2003	Jul	4,0	4,2	3,5	3,2	4,9
	Aug	3,4	3,5	3,1	3,2	5,0
	Sep	2,8	3,0	2,8	3,0	4,9
	Oct	2,5	2,9	2,9	3,1	4,9
	Nov	2,5	2,8	2,9	3,1	5,0
	Dec	2,4	2,7	2,6	2,8	4,8
2004	Jan	2,2	2,4	2,3	2,3	4,5
	Feb	2,0	2,2	2,0	2,1	4,3
	Mar	1,8	2,0	1,8	1,9	4,1
	Apr	1,8	2,0	2,0	2,2	4,7
	May	1,8	2,0	2,0	2,3	4,9
	Jun	1,8	2,1	2,0	2,4	4,7
	Jul	1,8	2,0	2,0	2,2	4,5
	Aug	1,8	2,0	2,0	2,2	4,3
	Sep	1,8	2,0	2,0	2,1	4,2
2004	08 Oct	1,8	2,0	2,0	2,1	4,2
	15 Oct	1,8	2,0	2,0	2,2	4,2
	22 Oct	1,8	2,0	2,0	2,1	4,2
	28 Oct ³⁾	1,8	2,0	2,0	2,1	4,1

1) NIBOR= Norwegian interbank offered rate.

2) Yield on representative 10-year government bond. The yield is calculated by weighting one or two government bonds with the residual maturity.

3) Average 25 - 28 October.

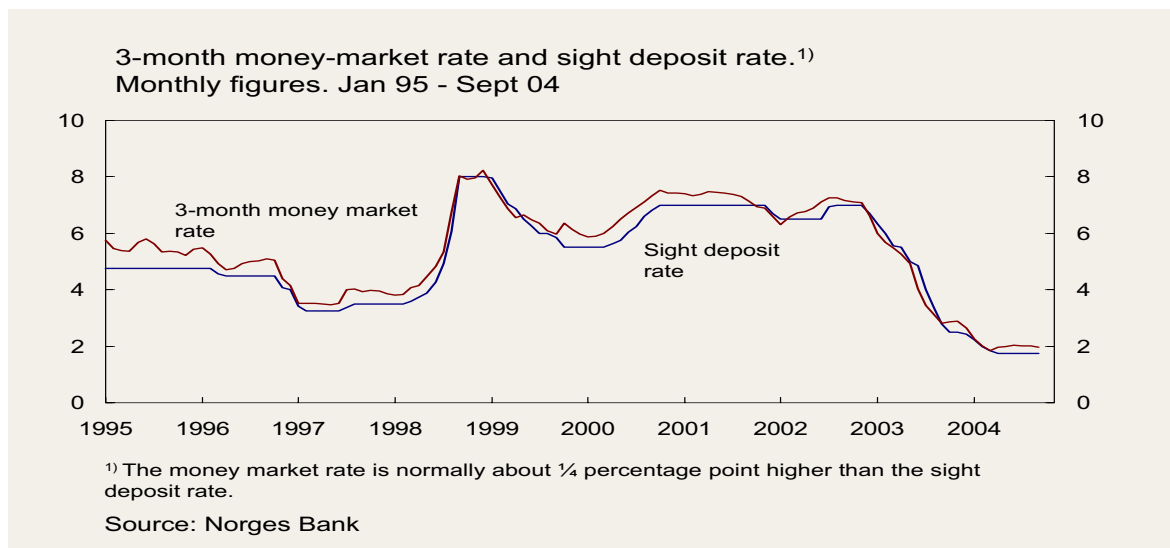


Table 4 International interest rates

		Short-term interest rates ¹⁾ for key currencies in the Euromarket					Interest rate differential NOK/trading-partners	Yield on government bonds ³⁾		
		USD	JPY	EUR	GBP	SEK		Trading-partners ²⁾	US	Germany
1997		5,2	0,5		6,8	4,2	4,1	-0,5	6,4	5,7
1998		4,8	0,5		7,3	4,2	4,2	1,5	5,3	4,6
1999		5,4	0,2	2,9	5,5	3,3	3,3	3,0	5,8	4,6
2000		6,5	0,3	4,4	6,1	4,0	4,4	2,2	6,1	5,3
2001		3,7	0,1	4,2	5,0	4,0	4,0	3,2	5,2	4,9
2002		1,8	0,0	3,3	4,0	4,2	3,2	3,6	4,6	4,9
2003		1,2	0,0	2,3	3,7	3,1	2,4	1,6	4,0	4,2
2003	Jul	1,1	0,0	2,1	3,4	2,8	2,1	1,2	4,0	4,1
	Aug	1,1	0,0	2,1	3,5	2,8	2,2	0,9	4,4	4,2
	Sep	1,1	0,0	2,1	3,6	2,8	2,2	0,5	4,3	4,3
	Oct	1,1	0,0	2,1	3,8	2,8	2,2	0,5	4,2	4,3
	Nov	1,1	0,0	2,1	3,9	2,8	2,2	0,5	4,3	4,5
	Dec	1,1	0,0	2,1	4,0	2,8	2,2	0,3	4,3	4,4
2004	Jan	1,1	0,0	2,1	4,0	2,7	2,2	0	4,1	4,3
	Feb	1,1	0,0	2,1	4,1	2,5	2,2	-0,3	4,1	4,2
	Mar	1,1	0,0	2,0	4,3	2,3	2,1	-0,4	3,8	4,0
	Apr	1,1	0,0	2,0	4,3	2,1	2,1	-0,2	4,3	4,2
	May	1,2	0,0	2,1	4,5	2,1	2,1	-0,3	4,7	4,3
	Jun	1,5	0,0	2,1	4,7	2,1	2,2	-0,3	4,8	4,4
	Jul	1,6	0,0	2,1	4,8	2,1	2,2	-0,3	4,5	4,3
	Aug	1,7	0,0	2,1	4,9	2,1	2,3	-0,3	4,3	4,2
	Sep	1,9	0,0	2,1	4,9	2,1	2,3	-0,4	4,2	4,1
2004	08 Oct	2,0	0,0	2,1	4,9	2,1	2,3	-0,4	4,2	4,0
	15 Oct	2,0	0,0	2,1	4,8	2,1	2,3	-0,4	4,1	3,9
	22 Oct	2,1	0,0	2,1	4,8	2,1	2,3	-0,4	4,0	3,9
	28 Oct ³⁾	2,1	0,0	2,1	4,8	2,1	2,3	-0,4	4,0	3,9

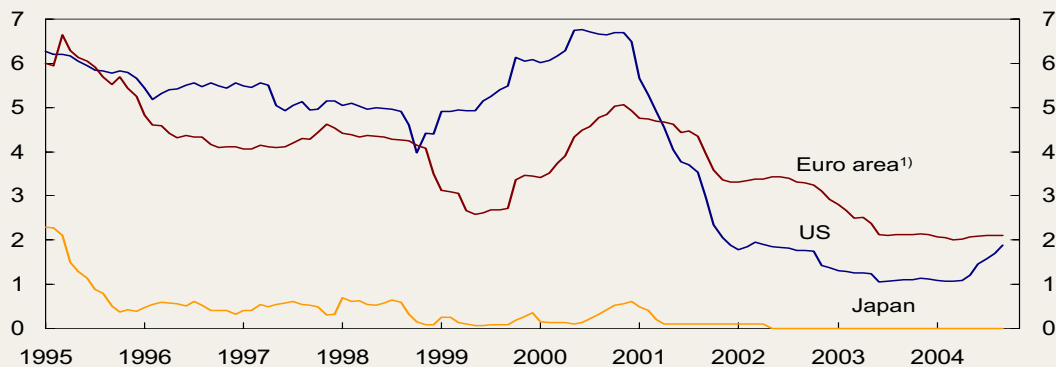
1) 3-month rates. Per cent

2) 3-month interest rates in Norway's 25 most important trading partners (geometrical average weighted with the OECD's current trade weights). Per cent

3) Yield on government bonds with a residual maturity of 10 years. Per cent

4) Average 25 - 28 October.

3-month rates in the US, the euro area and Japan. Per cent. Monthly figures. Jan 95 – Sept 04.



¹⁾Theoretical ECU rate up to December 1998.

Source: Norges Bank

Table 5 Exchange rates

		Effective exchange rates		Bilateral exchange rates		
		Import-weighted exchange rate ¹⁾	Trade-weighted exchange rate index ²⁾	NOK/EUR	NOK/USD	NOK/SEK
1997		99,2	101,0		7,1	92,7
1998		101,7	104,7		7,5	94,9
1999		100,4	105,6	8,3	7,8	94,4
2000		103,3	107,8	8,1	8,8	96,0
2001		100,2	104,4	8,0	9,0	87,0
2002		91,6	96,7	7,5	8,0	82,0
2003		92,8	99,5	8,0	7,1	87,7
2003	Jul	95,8	102,6	8,3	7,3	90,2
	Aug	95,8	102,4	8,3	7,4	89,4
	Sep	95,5	102,1	8,2	7,3	90,4
	Oct	95,1	102,3	8,2	7,0	91,3
	Nov	94,8	101,9	8,2	7,0	91,1
	Dec	94,1	101,6	8,2	6,7	91,3
2004	Jan	97,5	105,5	8,6	6,8	94,0
	Feb	99,5	107,8	8,8	6,9	95,6
	Mar	97,6	105,3	8,5	7,0	92,5
	Apr	95,6	103,0	8,3	6,9	90,5
	May	94,1	101,6	8,2	6,8	89,8
	Jun	95,0	102,7	8,3	6,8	90,6
	Jul	97,0	104,8	8,5	6,9	92,2
	Aug	95,4	103,1	8,3	6,8	90,7
	Sep	95,8	103,4	8,4	6,8	92,0
2004	08 Oct	94,8	102,3	8,3	6,7	91,6
	15 Oct	93,9	101,4	8,2	6,6	90,5
	22 Oct	93,8	101,4	8,2	6,6	90,6
	28 Oct ³⁾	93,2	100,9	8,2	6,4	90,7

- 1) Weights are calculated on the basis of imports from 44 countries which cover 97% of total imports. Current weights based on annual import shares.
- 2) Nominal effective krone exchange rate calculated on the basis of exchange rates for NOK against the currencies of Norway's 25 most important trading partners (geometrical average weighted with the OECD's current trade weights)
- 3) Average 25 - 28 October.

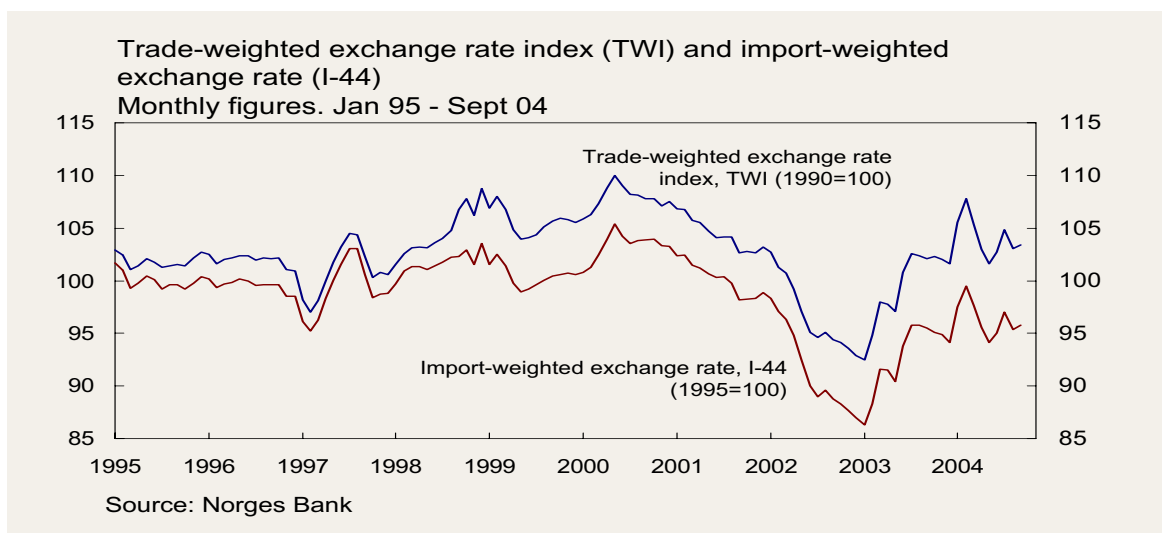
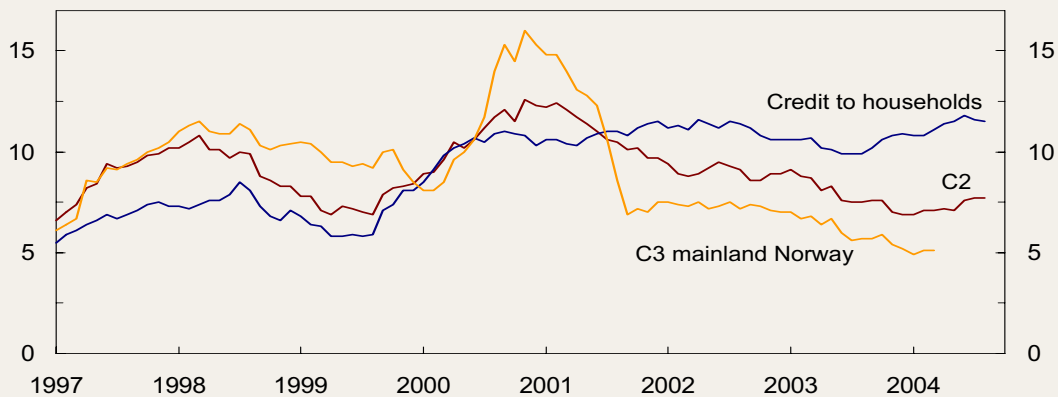


Table 6 Monetary aggregates

Annual growth/ twelve-month rise in per cent		Money supply	Domestic credit (C2)			Total credit (C3)	
		M2	Total	To households	To non- financial enterprises	Total	To Mainland- Norway
1997		2,2	8,8	6,7	13,8	9,0	8,7
1998		4,9	9,6	7,5	13,9	11,3	10,9
1999		6,5	7,6	6,6	9,6	10,6	9,6
2000		9,9	10,9	10,3	12,3	9,5	11,8
2001		9,2	11,0	10,9	10,5	8,3	10,8
2002		8,4	9,0	11,2	7,4	7,1	7,3
2003		4,4	7,9	10,4	2,9	5,5	6,1
2003	Jul	3,9	7,5	9,9	2,0	5,3	5,6
	Aug	4,6	7,5	9,9	1,9	5,3	5,7
	Sep	4,1	7,6	10,2	1,9	5,1	5,7
	Oct	2,8	7,6	10,6	1,0	5,2	5,9
	Nov	3,3	7,0	10,8	-0,4	4,5	5,4
	Dec	1,9	6,9	10,9	-1,5	4,1	5,1
2004	Jan	1,3	6,9	10,8	-1,5	3,9	4,7
	Feb	2,0	7,1	10,8	-0,7	3,9	5,0
	Mar	3,7	7,1	11,1	-1,1	3,9	5,1
	Apr	4,6	7,2	11,4	-1,1	3,9	5,2
	May	4,6	7,1	11,5	-1,5	3,9	5,1
	Jun	5,6	7,6	11,8	-0,5		
	Jul	4,8	7,7	11,6	0,6		
	Aug	3,9	7,7	11,5	0,8		
Level last month. In billions of NOK		899	1947	1183	611	2356	2142

The credit indicator (C2), credit to households and total credit to the non-financial private sector and municipalities, mainland Norway (C3). 12-month change. Per cent. Monthly figures. Jan 97 - Aug 04



Source: Norges Bank

Annex III

Detailed projections and assessments

Table 7 GDP growth in other countries

Percentage change from previous year

	US	Japan	Germany	France	UK	Sweden	Trading-partners ¹⁾	Euro area ²⁾
1995	2,5	1,9	1,7	1,8	2,8	4,1	2,9	2,3
1996	3,7	3,5	0,8	1,0	2,8	1,3	2,3	1,4
1997	4,5	1,8	1,4	1,9	3,3	2,4	3,1	2,3
1998	4,2	-1,2	2,0	3,6	3,1	3,6	2,8	2,9
1999	4,4	0,2	2,0	3,2	2,9	4,6	3,5	2,8
2000	3,7	2,8	2,9	3,8	3,9	4,3	4,0	3,5
2001	0,8	0,4	0,8	2,1	2,3	0,9	1,4	1,6
2002	1,9	-0,3	0,1	1,2	1,8	2,1	1,5	0,6
2003	3,0	2,5	-0,1	0,5	2,2	1,6	1,4	0,5
Projections								
2004	4¼	4¼	1½	2½	3¼	3¼	2¾	2
2005	3	2	1¾	2¼	2½	2¾	2½	2
2006	3	1¾	2	2½	2½	2¼	2½	2¼
2007	3	1½	2	2½	2½	2¼	2½	2½

1) Export weights, Norway's 24 most important trading partners

2) Weights from Eurostat

Sources: OECD, EU Commission and Norges Bank

Table 8 Consumer prices in other countries

Percentage change from previous year

	US	Japan	Germany ¹⁾	France ¹⁾	UK ¹⁾	Sweden	Trading-partners ²⁾	Euro area ¹⁾
1995	2,8	-0,1	1,7	1,8	2,7	2,5	2,3	2,9
1996	2,9	0,1	1,2	2,1	2,5	0,5	1,8	2,4
1997	2,3	1,7	1,5	1,3	1,8	0,7	1,6	1,7
1998	1,5	0,7	0,6	0,7	1,6	0,3	1,1	1,2
1999	2,2	-0,3	0,6	0,6	1,3	0,5	1,3	1,2
2000	3,4	-0,7	1,4	1,8	0,8	0,9	2,0	2,1
2001	2,8	-0,6	1,9	1,8	1,2	2,4	2,4	2,4
2002	1,6	-0,9	1,3	1,9	1,3	2,2	1,9	2,3
2003	2,3	-0,3	1,0	2,2	1,4	1,9	1,8	2,1
Projections								
2004	2¾	-¼	2	2¼	1¼	¾	1½	2
2005	2¼	0	1½	1¾	1¾	1½	1¾	1¾
2006	2½	¼	1½	1¾	2	2	1¾	1¾
2007	2½	½	1¾	1¾	2	2	2	2

1) HICP, Harmonized Indices of Consumer Prices

2) Import weights, Norway's 23 most important trading partners

3) HICP. Eurostat weights (each country's share of total euro area consumption)

Source: OECD, EU Commission and Norges Bank

The fiscal rule and Norges Bank's assumptions

The fiscal rule

The fiscal rule, which was introduced in spring 2001 (Report to the Storting No. 29 (2000-2001)), implies that the structural, non-oil budget deficit shall be equivalent over time to the expected real return on the Government Petroleum Fund. The expected real return on the Petroleum Fund is estimated at 4%.

The guidelines for the use of the expected real return on the Petroleum Fund's capital are based on a normal cyclical situation. The guidelines state that in a situation with high activity in the economy, the fiscal stance should be tightened accordingly, while a downturn may necessitate an increase in the use of petroleum revenues. It is also emphasised that in the event of particularly substantial changes in the Fund's capital or in factors that affect the structural, non-oil deficit from one year to the next, any change in the phasing-in of petroleum revenues must be distributed over several years based on an estimate of the size of the real return on the Fund a few years ahead.

The Government's budget proposal for 2005 implies a structural, non-oil budget deficit of NOK 66.4bn in 2005. This is a good NOK 24bn higher than the expected real return on the capital in the Petroleum Fund at the beginning of 2004. The use of petroleum revenues in 2004 was higher than assumed in the National Budget for 2004. The estimate for the structural, non-oil budget deficit has been increased by NOK 7.5bn in relation to the National Budget for 2004, and by NOK 3bn in relation to the Revised National Budget.

The assumptions in the Inflation Report

Norges Bank's projections are based on the estimates in the National Budget for 2005. According to the National Budget for 2005, fiscal policy will generate less impetus to the Norwegian economy next year compared with the previous three years. For 2004 and 2005, underlying, nominal spending growth over the central government budget is estimated to increase by almost 11%, while nominal revenue growth for the local government sector is estimated to rise by a little more than 11%. This is higher than mainland GDP growth, in value terms, in the same period. We apply the technical assumption that annual real growth in public spending on goods and services will be 2% in 2004, 1¾ % in 2005, and 1½% in 2006 and 2007.

Table: Changes in the structural, non-oil deficit and in the Government Petroleum Fund in the medium term. In billions of NOK (unless otherwise stated). Constant 2005-prices.

	Government Petroleum Fund, at the beginning of the year ¹⁾	Expected return, 4 per cent rule	Structural, non-oil deficit	Structural, non-oil deficit, percentage of trend GDP for mainland Norway
2001	386,6	-	30,5	2,4
2002	619,3	27,3	38,5	3,0
2003	604,6	25,7	50,1	3,8
2004	847,1	35,0	60,1	4,5
2005	1053,1	42,1	66,4	4,9
2006	1244,1	48,1	66,4	4,8
2007	1456,4	54,6	66,4	4,7
2008	1668,9	60,5	66,4	4,7
2009	1881,8	66,0	66,4	4,6
2010	2102,9	71,4	71,4	4,9

¹⁾ Current prices.

Source: National Budget 2005

Table 9 Interest rate and exchange rate

Historical developments		I-44 ¹⁾	Sight deposit rate
1997		99,2	3,4
1998		101,7	5,5
1999		100,4	6,3
2000		103,3	6,2
2001		100,2	7,0
2002		91,6	6,7
2003	Q1	88,7	6,0
	Q2	91,9	5,1
	Q3	95,7	3,4
	Q4	94,7	2,5
2004	Q1	98,1	2,0
	Q2	94,9	1,8
	Q3	96,1	1,8
Forward exchange rate			
Based on forward interest rates ²⁾			
2004	Q4	93,6	1,7
2005	Q1	93,5	1,8
	Q2	93,4	1,9
	Q3	93,2	2,1
	Q4	93,1	2,3
2006	Q1	93,0	2,6
	Q2	93,0	2,8
	Q3	92,9	3,1
	Q4	92,9	3,3
2007	Q1	93,0	3,5
	Q2	93,0	3,7
	Q3	93,1	3,9
	Q4	93,1	4,0

- 1) Import-weighted exchange rate, 44 countries. Weights are calculated on the basis of imports from 44 countries which cover 97% of of total imports. Current weights based on annual import shares.
- 2) Three-month forward rates are estimated on the basis of interest rates in the money market and interest rate swap markets observed on 28 October. We have deducted 0.25 percentage points from the forward interest rates to provide an expression of the expected sight deposit rate. In addition the interest rate scenario has been adjusted for the fact that credit risk increases with the period to maturity.

Source: Norges Bank

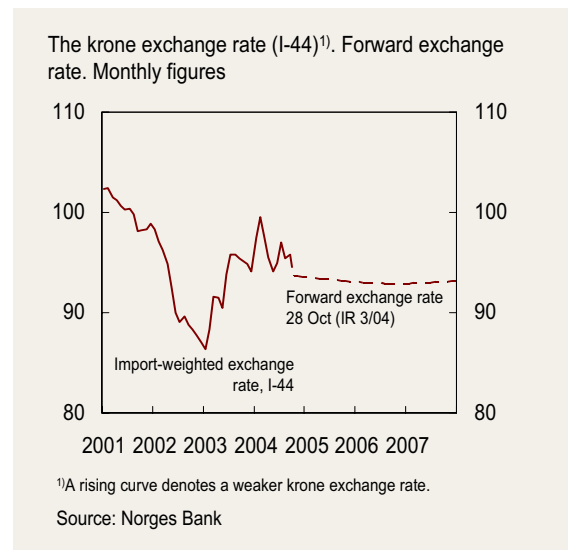
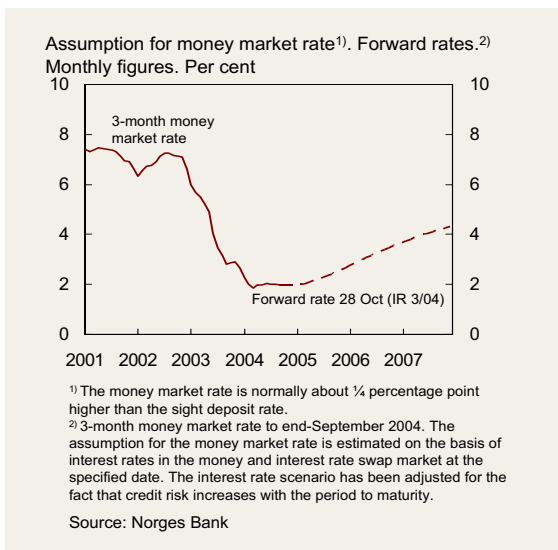


Table 10 Main macroeconomic aggregates with forward interest rate and forward krone exchange rate

	In billions of NOK		Percentage change (unless otherwise stated)			
	2003	2003	Projections			
			2004	2005	2006	2007
Real economy						
Mainland demand ¹⁾	1270	1,7	4¼	4	3½	2¼
- Private consumption	722	3,8	5	4½	3¾	2½
- Public consumption	353	1,4	2	1¾	1½	1½
- Fixed investments	195	-4,7	5¾	5	5	2¾
Petroleum investment ²⁾	63	15,8	12½	15	5	-7½
Traditional exports	189	2,6	4	4½	3	3
Imports	433	2,2	8½	6	4	1¾
GDP	1564	0,4	2¾	3¼	2¾	2
Mainland GDP	1246	0,6	3¾	3½	2¾	2
Potential mainland GDP	1258	2½	3	2½	2½	2½
Output gap Mainland	-12	-1	-¼	¾	1	½
Labour market						
Employment		-0,6	¼	1¼	1¼	½
Labour force, LFS		-0,1	¼	1	1	½
Registered unemployment (rate)		3,9	4	3½	3¼	3¼
LFS-unemployment (rate)		4,5	4½	4	3¾	3¾
Prices and wages						
CPI ³⁾		2,5	½	2¼	1¾	2¼
CPI-ATE ⁴⁾		1,1	¼	1½	1¾	2¼
Annual wages ⁵⁾		4,5	3¾	4½	4¾	4¾

1) Private and public consumption and mainland gross fixed investment.

2) Extraction and pipeline transport.

3) Not adjusted for the introduction of maximum prices for day-care places.

4) CPI-ATE: CPI adjusted for tax changes and excluding energy products. Not adjusted for the introduction of maximum prices for day-care places.

5) Annual wage growth is based on the Technical Reporting Committee on Income Settlements' definitions and calculations.

Sources: Statistics Norway, the Technical Reporting Committee on Income Settlements, Aetat Arbeidsdirektoratet and Norges Bank

