NORGES BANK

Reports from the Central Bank of Norway No 4/2006

Inflation Report

with monetary policy assessments

3

06

November

Norges Bank's *Inflation Report* with monetary policy assessments

Norges Bank's *Inflation Report* is published three times a year, in March, June and November. The *Report* presents an assessment of the monetary policy outlook. The report contains projections for developments in the Norwegian economy, boxes in which particular themes are dealt with more fully, and a summary of Norges Bank's regional network reports.

At its meetings on 17 October and 1 November, Norges Bank's Executive Board discussed the main content of the *Inflation Report* and endorsed the analyses and projections for future interest rate developments in the *Report*. At its meeting on 1 November, the Executive Board approved a monetary policy strategy based on these discussions for the period to the next *Inflation Report*, which will be published on 15 March 2007. The strategy is presented in Section 1. In the period to the next *Inflation Report*, the Executive Board will hold monetary policy meetings on 13 December, 24 January and 15 March.

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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Inflation Report 3/2006
with monetary policy assessments

Boxes

The Inflation Report is based on information in the period to 26 October 2006
The monetary policy strategy in Section 1 was approved by the Executive Board on 1 November 2006

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% 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 relevant horizon will depend on disturbances to which the economy is exposed and how they will affect the path for inflation and the real economy in the period ahead.

The decision-making process

The main features of the analysis in the *Inflation Report* are presented to the Executive Board for discussion at a meeting about two weeks before the *Report* is published. On the basis of the analysis and discussion, the Executive Board assesses the consequences for future interest rate developments and adopts a monetary policy strategy for the period to the next *Inflation Report*. The strategy is presented in Section 1 of the *Inflation Report*.

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 and the monetary policy strategy presented 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.

Communication of the interest-rate decision

The monetary policy decision is announced at 2pm on the day of the meeting, and the Bank holds a press conference at 2:45 pm on the same day. The press release provides an account of the main features of economic developments that have been of importance for the interest rate decision 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 Section 75c of the Constitution, which stipulates that the Storting shall supervise Norway's monetary system, and in Section 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.

Editorial

Changing trajectories

The different phases of the current cyclical upturn have spanned longer periods than we had expected. As a result of strong growth in productivity and a temporary fall in sickness absence, private and public enterprises were able to increase production without increasing the number employed for a longer period. It was only towards the end of last year that employment began to rise markedly, and this year growth in employment has been substantial. Moreover, it took time for various measures of unemployment to show a clear decline. Since spring 2006, unemployment has shown an appreciable fall.

Even after several years of robust growth in the domestic and global economy, underlying inflation remains low. Increased imports from low-cost countries have resulted in a decline in prices for imported goods. A strong krone has contributed to the fall in import prices measured in terms of NOK. Intensified labour market competition, particularly owing to labour inflows from new EU member states, has most likely contributed to a moderate rise in labour costs. In addition, the possibility for enterprises to relocate production abroad may have had a dampening impact on wage growth.

In relation to capacity utilisation and labour market tightness, inflation is very low. It is likely that this will not continue. Many enterprises in our regional network report that labour shortages are a considerable constraint on production. The position of employees is strengthening and, after a period, it is also likely that employers will be willing to bid up wages to attract labour. In the next round, enterprises will have to pass on higher costs to prices. The krone exchange rate fluctuates from month to month, but depreciated somewhat this autumn from strong levels last summer. Against the background of high growth in demand and a tighter labour market, there are prospects for higher consumer price inflation ahead.

Interest rates have also been low for an unusually long period as a result of very moderate inflation. On balance, developments since the previous *Inflation Report* suggest that it will now be appropriate to raise the interest rate gradually towards a more normal level at a somewhat faster pace than envisaged earlier, although it is unlikely that rates will be raised at every monetary policy meeting. Nevertheless, if developments ahead are broadly in line with projections, it will most likely be noted when we later look back that the interest rate has been raised in small, not too frequent steps during this cyclical upturn.

1 November 2006
Jarle Bergo

1 Monetary policy assessments and strategy

The economic situation

Underlying inflation is low. Consumer price inflation adjusted for tax changes and excluding energy products (CPI-ATE) has edged down since summer (see Chart 1.1). Other indicators of underlying inflation are higher (see Chart 1.2). Both prices for domestically produced goods and services and prices for imported consumer goods have risen less than expected (see Chart 1.3). The rise in overall consumer prices (CPI) has held up, however, and is now around the inflation target. An unexpected strong rise in energy prices has pushed up CPI inflation.

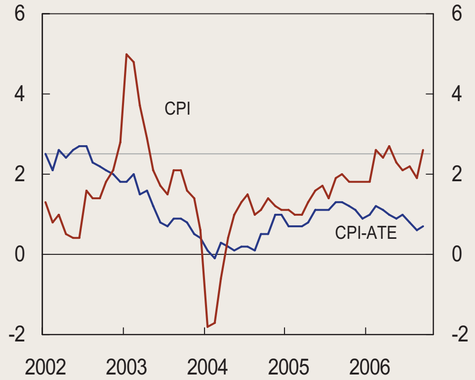
Over the past year, underlying inflation by different measures has largely been stable, but considerably lower than the inflation target of 2.5%. It is our assessment that underlying inflation is now in the interval ¾ - 1½%.

There is little spare capacity in the Norwegian economy. Growth is strong in most industries, and profitability in the business sector is solid. At the same time, the krone exchange rate has depreciated from strong values. Capacity utilisation in the economy is rising. Demand in the household, enterprise and public sectors is growing. Employment is rapidly rising, and unemployment is now in line with the unemployment level during the previous boom at the end of the 1990s. The upturn in the Norwegian economy is stronger than we previously anticipated.

The low rate of underlying inflation is not a result of weak growth in the economy, but rather a reflection of favourable developments on the production side. Strong competition and high productivity growth, combined with fairly low wage growth, have contributed to keeping down the rise in prices for domestic goods and services. Inflation variability has been lower than observed in the 1980s and the beginning of the 1990s (see Chart 1.4). Inward labour migration may have induced participants in local and centralised wage negotiations to place greater emphasis on the already very high level of wages in Norway compared with our trading partners. At the same time, foreign labour inflows have reduced bottlenecks in some industries and increased the growth capacity of the Norwegian economy. In addition, the possibility for many enterprises to relocate production or establish new enterprises abroad has probably contributed to restraining wage growth.

Monetary policy is oriented towards bringing inflation towards target and anchoring inflation expectations close to 2.5%. Since summer 2005, Norges Bank has gradually

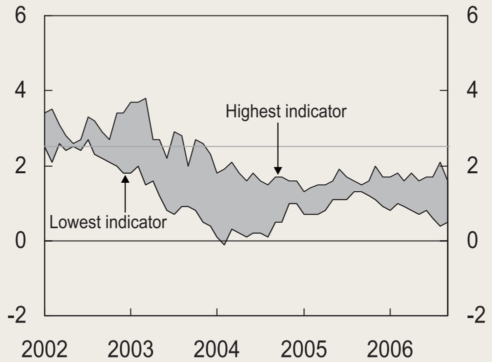
Chart 1.1 CPI and CPI-ATE[1]. 12-month change. Per cent. Jan 02 – Sep 06



[1] CPI-ATE: CPI adjusted for tax changes and excluding energy products. A further adjustment is made for the estimated effect of reduced maximum day-care rates from January 2006.

Sources: Statistics Norway and Norges Bank

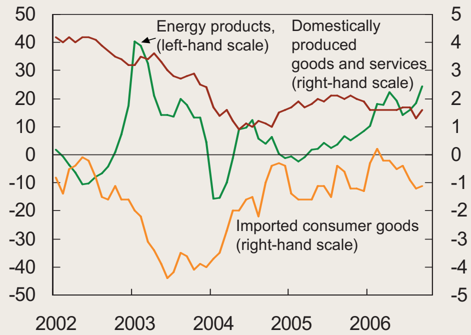
Chart 1.2 Interval of uncertainty for underlying inflation. Highest and lowest indicator[1]. 12-month change. Per cent. Jan 02 – Sep 06



[1] Highest and lowest indicator of CPI-ATE, weighted median and trimmed mean. See separate box on recent price developments.

Sources: Statistics Norway and Norges Bank

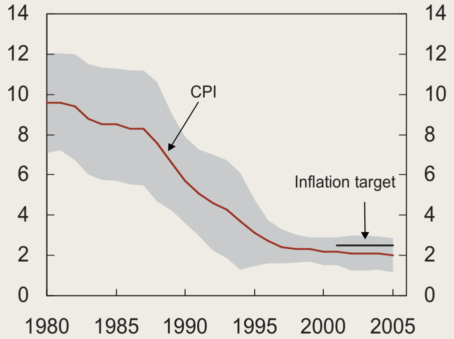
Chart 1.3 Consumer prices. Prices for energy products and the CPI-ATE[1] by supplier sector[2]. 12-month change. Per cent. Jan 02 – Sep 06



[1] Adjusted for tax changes and excluding energy products. A further adjustment is made for the estimated effect of reduced maximum day-care rates from January 2006.
[2] Norges Bank's estimates.

Sources: Statistics Norway and Norges Bank

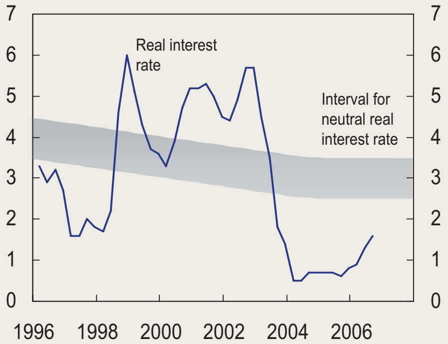
Chart 1.4 CPI. Moving 10-year average[1)] and variation[2)]. Per cent. Annual figures. 1980 – 2005[3)]



[1)] The moving average is calculated 7 years back and 2 years ahead.
[2)] The band around the CPI is the variation in the average period, measured by +/- one standard deviation.
[3)] Projections for 2006 –2007 in this Report form the basis for this estimate.

Sources: Statistics Norway and Norges Bank

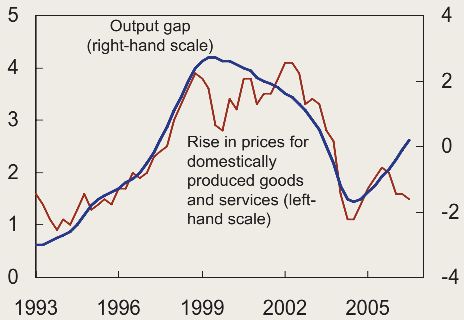
Chart 1.5 3-month real interest rate[1)] and the neutral real interest rate in Norway. Per cent. Quarterly figures. 96 Q1 – 06 Q3



[1)] 3-month money market rate deflated by the 12-quarter moving average (centred) of inflation measured by the CPI. Projections for the CPI from this Report form the basis for this estimate.

Source: Norges Bank

Chart 1.6 Rise in prices for domestically produced goods and services in the CPI-ATE[1)] and output gap level (lagged by 4 quarters). 93 Q1 – 06 Q3



[1)] Adjusted for the estimated effect of reduced maximum day-care rates from January 2006.

Sources: Statistics Norway and Norges Bank

raised its policy rate. Real interest rates are nevertheless lower than what we consider to be a neutral interest rate (see Chart 1.5).[1]

Inflation has also been low among our trading partners. High and rising energy prices exerted upward pressure on CPI inflation up to autumn. Reduced uncertainty as to oil and gas supply and high oil stock levels have pushed down oil prices in recent months, although they are still high. The fall in oil prices may push down CPI inflation in the period ahead. Excluding energy prices, inflation is moderate in most countries, with the important exception of the US.

The world economy is experiencing its strongest continuous upturn since the early 1970s. Economic growth is higher than trend in Sweden, Denmark, the UK and the euro area, where short-term interest rates are expected to rise. Developments in China and India are buoyant. At the same time, growth in the US is now tending downwards. Developments in the US housing market indicate that growth in household demand is slackening. Weaker growth prospects in the US have contributed to the fall in long-term interest rates in many countries, and in the US and Canada short-term interest rates are now also expected to move down in the course of next year.

Baseline scenario

After expanding at a strong pace over several years, the US economy is now showing signs of a slowdown. This may have ripple effects in other countries. It still seems that growth in the world economy will be sustained. The weight of China, India and other Asian economies in the world economy is rising. In the euro area, and to some extent in Japan, the upturn has broadened, and dependence on the US economy has been reduced somewhat.

Compared with the upturns in the Norwegian economy in the mid-1980s and the latter half of the 1990s, the current cyclical upswing has a somewhat different profile. An important difference seems to be that the various phases of the expansion have been longer during this upturn. Inflation is still low more than three years after the recovery started (see Chart 1.6).

It has taken longer than normal for employment to rebound. A marked fall in sickness absence in 2004 increased labour availability for the private and public sectors without an increase in the number employed. It was only towards the

[1] Estimations may indicate on an uncertain basis that the neutral real interest rate for Norway is now in the lower end of the range 2½-3½%.

end of 2005 that employment picked up, and this year the number employed has risen sharply. Sickness absence has now increased again, and in the past year unemployment has rapidly declined (see Chart 1.7).

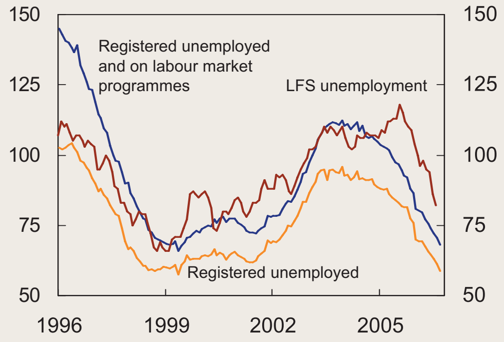
Wage growth has advanced from moderate levels over the past year, but is still lower than during the previous expansion. However, there are now signs that wage growth may accelerate at a faster pace. Many industries report labour shortages. Against this background, there is reason to assume that cost inflation will pick up in the period ahead.

Continued moderate growth in labour costs this year, strong competition in product markets, high productivity growth and an increase in the share of imports from low-cost countries will probably contribute to keeping consumer price inflation at a low level in the period to the end of the year and into next year. At the same time, several factors point to higher inflation ahead.

Mainland GDP growth in Norway will probably be higher than trend growth again in 2007. Capacity utilisation will continue to rise and the labour market will become tighter. Labour shortages are expected to translate into higher wage growth in the coming years, and the projections for wage growth have been revised upwards since the June *Report.* Low prices for imported consumer goods will probably continue to restrain inflation, while certain domestic conditions may gradually have the opposite effect. Productivity growth and corporate profitability have been very high in recent years. Normally, productivity growth picks up early in a cyclical upswing and then slows after a period. In conjunction with higher wage growth, somewhat lower productivity growth may thus lead to an increase in costs among enterprises in the period ahead. How rapidly higher costs will feed through to prices will depend on the market situation and competition in the different markets.

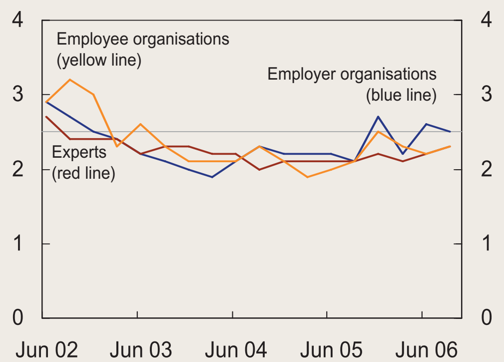
The sustained rise in oil prices points to continued buoyancy in petroleum investment. A substantial increase in the value of the government's foreign investments will lead to a considerable increase in disposable funds under the fiscal rule in the years ahead. The projections are based on the assumption that fiscal policy will provide some stimulus to aggregate demand and production in 2008 and 2009. At the same time, labour force participation has reached a high level. Labour shortages and capacity constraints will gradually impose limits on further growth in production. High capacity utilisation, rising wage growth and somewhat slower productivity growth are expected to lead to higher inflation, particularly from the second half of 2007 and into 2008. Compared with the previous *Inflation Report*, inflation is now expected to increase at a somewhat later point in time.

Chart 1.7 Unemployed. LFS unemployment, registered unemployed and persons on ordinary labour market programmes. In thousands. Seasonally adjusted. Monthly figures. Jan 96 – Sep 06



Sources: Statistics Norway and Norwegian Labour and Welfare Organisation (NAV)

Chart 1.8 Expected consumer price inflation 2 years ahead. Employer/employee organisations and experts[1]. Per cent. Quarterly figures. 02 Q2 – 06 Q3



1) Employees in financial industry, macroanalysts and academics.

Source: TNS Gallup

Monetary policy since the previous *Inflation Report*

Norges Bank's projections for economic developments in *Inflation Report* 2/06, which was presented on 29 June 2006, implied a sight deposit rate in the interval 2¾ - 3¾% in the period to 1 November. The monetary policy strategy was conditional on economic developments being broadly in line with the projections. The Executive Board's assessment was that the interest rate should gradually - in small, not too frequent steps - be brought back towards a more normal level. It was assumed that this interest rate path would provide a reasonable balance between the objective of bringing inflation up towards the target and the objective of stabilising developments in output and employment.

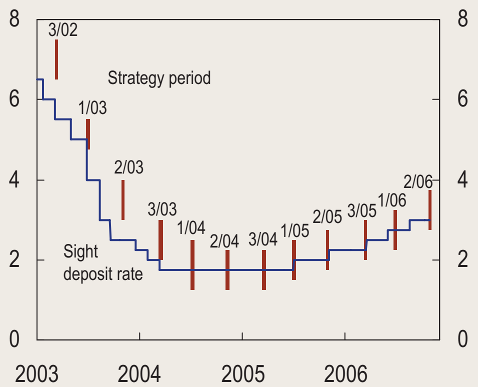
The previous *Inflation Report* indicated that continued pronounced shifts in the import pattern, a strong krone exchange rate and strong domestic competition might result in lower-than-expected inflation. The *Report* also pointed out that a long period of low real interest rates might result in more rapid output and employment growth and higher-than-projected price and cost inflation.

The interest rate was left unchanged at the monetary policy meeting on 29 June after the interest rate was raised in May. The Executive Board pointed out that the slow rise in prices for domestically produced goods and services might be a sign of solid productivity growth and intensified competition. At the same time, economic growth was strong and capacity utilisation was higher than previously expected. There were prospects that inflation would pick up, but this could take time. It was pointed out that economic policy must increasingly reflect capacity constraints in the domestic economy. In the first six months of 2006, the policy rate was increased in two increments of 0.25 percentage point. The Executive Board's assessment was that the interest rate would rise further at about the same pace.

At the monetary policy meeting on 16 August, the Executive Board pointed out that capacity constraints and a shortage of skilled labour posed a mounting challenge to a number of industries. Corporate earnings were very high. Household and corporate borrowing remained high and property prices had risen markedly. These factors pointed to a higher interest rate. At the same time, underlying consumer price inflation remained low. Clothing and footwear prices had fallen to a surprising extent in July. The krone exchange rate had depreciated somewhat but was still fairly strong. On balance, the Executive Board was of the view that there were not sufficient grounds for changing the outlook for inflation and output or the risk assessment. The strategy published in *Inflation Report* 2/06, coupled with new information to mid-August, implied that the interest rate should be increased at that meeting. The sight deposit rate was raised by 0.25 percentage point to 3%.

The policy rate was left unchanged at the monetary policy meeting on 27 September. New information that emerged in the period to this monetary policy meeting provided mixed signals. The Executive Board pointed out that there was little spare capacity in the Norwegian economy. A steadily rising share of enterprises lacked the capacity to accommodate increased demand, largely because of labour shortages. The labour market had become considerably tighter and there were several signs that wage growth was picking up. Developments in aggregate demand, output and employment suggested a higher interest rate. At the same time, the rise in consumer prices had slowed, and the rise in prices excluding energy products was unexpectedly low. This suggested a continued low interest rate. The strategy published in the *Inflation Report*, coupled with new information, indicated that the interest rate should be left unchanged. The Executive Board's assessment was that high capacity utilisation and growth were likely to result in a gradual pick-up in inflation and that the interest rate would therefore be set so that monetary policy would gradually become less expansionary.

Chart 1 Interval for the sight deposit rate at the end of each strategy period and actual developments. Daily figures. Per cent. 1 Jan 03 – 26 Oct 06



Source: Norges Bank

Monetary policy cannot fine-tune developments in the economy, but must prevent the largest effects when the economy is exposed to disturbances. In some situations, it may be appropriate to guard against particularly adverse developments.

The policy rate was reduced to a very low level in 2003 and 2004 primarily with a view to preventing inflation expectations from becoming entrenched well below target. In spite of a longer period of low inflation, inflation expectations are close to the inflation target (see Chart 1.8). According to TNS Gallup's expectations survey, a growing share of enterprises expects purchase prices to rise. At the same time, the contact enterprises in Norges Bank's regional network expect retail prices to increase in the period ahead. On balance, the likelihood that low inflation will be followed by deflation now appears to be small. Nevertheless, it is appropriate to guard against the risk of a slower rate of inflation when inflation is already at a low level.

Capacity utilisation is rising at a faster pace than expected. We have previously seen that cost inflation can accelerate quickly in a tight labour market. It may then be necessary to increase interest rates substantially in order to stabilise inflation. Such a development would be particularly unfavourable in a situation with high household debt. With a high debt burden, an interest rate increase would result in a considerable fall in disposable income. The risk of a pronounced downturn in the economy as a result of a high level of capacity utilisation and rising price and cost inflation seems to have increased somewhat. In order to guard against such a development, a pre-emptive increase in interest rates would be appropriate.

Monetary policy affects the economy with a lag and primarily influences inflation one to three years ahead. Against the background of high growth in output and employment, rising wage growth and a weaker krone, there are prospects of higher consumer price inflation ahead. On balance, developments since the previous *Report* suggest that it would be appropriate to raise the policy rate gradually towards a more normal level at a somewhat faster pace than envisaged earlier, although it is unlikely that rates will be raised at every monetary policy meeting (see Charts 1.9 and 1.10). Based on our current assessment, the interest rate will thus continue to be raised in small, not too frequent steps if economic developments are broadly in line with projections.

A gradual normalisation of the interest rate level will contribute to curbing growth in the Norwegian economy. Growth in household demand will be restrained by somewhat weaker growth in real disposable income. Investment growth in the mainland economy is expected to ease. Weaker growth in the world economy, in conjunction with

Criteria for an appropriate future interest rate path

The following criteria may be useful in assessing whether a future interest rate path appears reasonable compared with the monetary policy objective.

1. If monetary policy is to anchor inflation expectations around the target, the interest rate must be set so that inflation moves towards the target. Inflation should be stabilised near the target within a reasonable time horizon, normally 1-3 years. For the same reason, inflation should also be moving towards the target well before the end of the three-year period.

2. Assuming that inflation expectations are anchored around the target, the inflation gap and the output gap should be in reasonable proportion to each other until they close.[1] The inflation gap and the output gap should normally not be positive or negative at the same time further ahead.

3. Interest rate developments, particularly in the next few months, should result in acceptable developments in inflation and output also under alternative, albeit not unrealistic assumptions concerning the economic situation and the functioning of the economy.

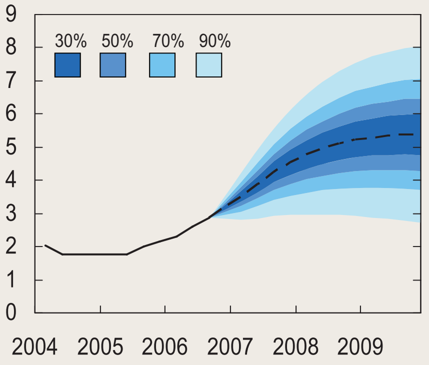
4. The interest rate should normally be changed gradually so that we can assess the effects of interest rate changes and other new information about economic developments.

5. Interest rate setting must also be assessed in the light of developments in property prices and credit. Wide fluctuations in these variables may in turn constitute a source of instability in demand and output in the somewhat longer run.

6. It may also be useful to cross-check by assessing interest rate setting in the light of some simple monetary policy rules. If the interest rate deviates systematically and substantially from simple rules, it should be possible to explain the reasons for this.

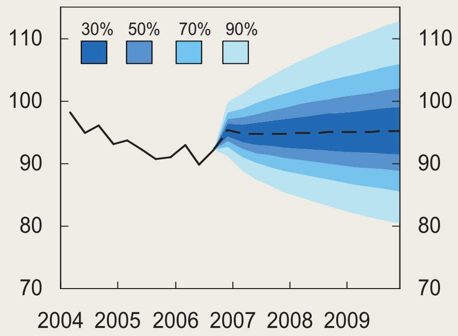
[1] The inflation gap is the difference between actual inflation and the inflation target of 2.5%. The output gap measures the percentage difference between actual and projected potential mainland GDP.

Chart 1.9a The sight deposit rate in the baseline scenario with fan chart. Per cent. Quarterly figures. 04 Q1 - 09 Q4



Source: Norges Bank

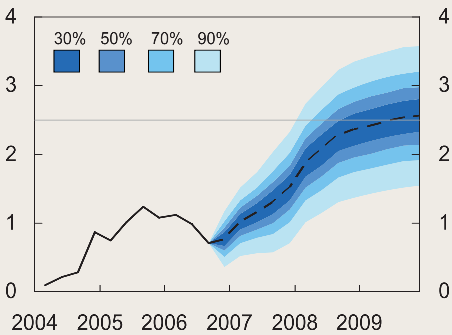
Chart 1.9b Import-weighted exchange rate (I-44)[1] in the baseline scenario with fan chart. Quarterly figures. 04 Q1 – 09 Q4



[1] A rising curve denotes a weaker krone exchange rate. It is assumed that strengthening by a certain percentage is just as likely as weakening by the same percentage.

Source: Norges Bank

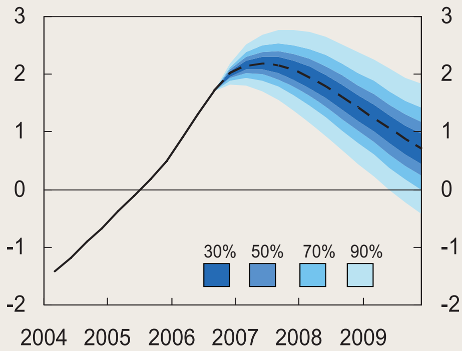
Chart 1.9c Projected CPI-ATE in the baseline scenario[1] with fan chart. 4-quarter change. Per cent. 04 Q1 – 09 Q4



[1] CPI-ATE: CPI adjusted for tax changes and excluding energy products. A further adjustment is made for the estimated effect of reduced maximum day-care rates from January 2006. Other measures of underlying inflation are shown in Chart 3.10.

Sources: Statistics Norway and Norges Bank

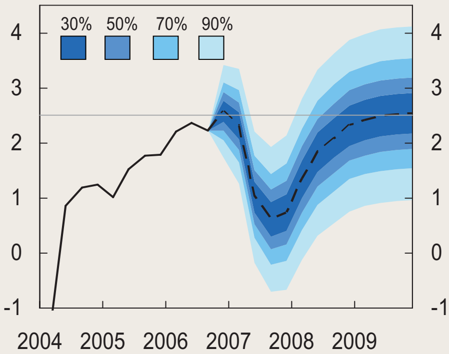
Chart 1.9d Estimated output gap in the baseline scenario with fan chart[1]. Per cent. Quarterly figures. 04 Q1 – 09 Q4



[1] Uncertainty concerning the current situation is not taken into account in the calculation (see separate box p. 48).

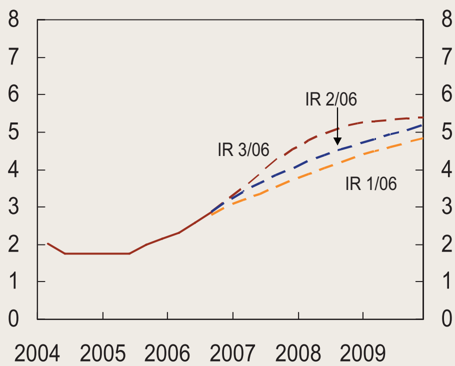
Source: Norges Bank

Chart 1.9e Projected CPI in the baseline scenario with fan chart. 4-quarter change. Per cent. 04 Q1 – 09 Q4



Sources: Statistics Norway and Norges Bank

Chart 1.10 The sight deposit rate in the baseline scenario in IR 1/06, IR 2/06 and IR 3/06. Per cent. Quarterly figures. 04 Q1 – 09 Q4



Source: Norges Bank

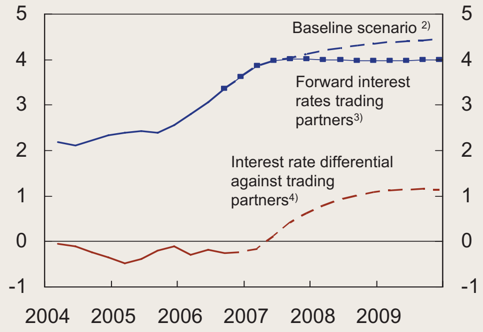
higher wage growth in Norway, may also contribute to slower growth in mainland exports. All in all, mainland GDP is projected to grow slightly below trend in 2008 and 2009, with a gradual decline in capacity utilisation.

Movements in the exchange rate are difficult to predict. The krone exchange rate is now weaker than assumed in the previous *Report*. Neither the appreciation last spring nor the depreciation in autumn appears to be directly related to interest rate differentials between Norway and its trading partners. The movements in the exchange rate partly reflect changes in the outlook for oil prices and changing themes in foreign exchange markets. Robust global economic growth and favourable prospects have contributed to a gradual tightening of monetary policy among our trading partners over the past year. In the US and Canada, there are expectations of interest rate cuts, but further interest rate increases in the period to next summer are expected for a number of our trading partners. Such a development may dampen the effect of further interest rate increases in Norway on the krone exchange rate. Norges Bank has applied the assumption that money market rates among our trading partners will gradually rise to a normal level of around 4½% over the next few years (see Chart 1.11). As in previous *Inflation Reports*, the projections are based on the assumption that external and domestic interest rates will rise to a somewhat higher level in the longer term than implied by forward interest rates. The krone exchange rate is assumed to appreciate somewhat from its October level, but to remain at a weaker level than assumed in the previous *Report*.

Charts 1.9a-e show Norges Bank's projected path for the Norwegian economy with a forecast for the interest rate. A further description of the assumptions and projections are provided in Sections 2 and 3. The output gap is now estimated to reach 2¼% in 2007 and to drift lower thereafter. The output gap estimate has been revised up by ¾ percentage point in 2007 since the previous *Report*. The CPI-ATE, adjusted for changes in day-care rates, is projected to rise from the current level of 0.7% to about 2% in the course of the first half of 2008. High electricity prices may contribute to keeping CPI inflation above 2% in the period to next summer, before lower energy prices are expected to contribute to a marked fall in CPI inflation. There are prospects that inflation will be close to the target of 2.5% three years ahead.

The sharp rise in house prices may contribute to sustaining household debt accumulation at a high level in the next few years. Moreover, competition in the banking industry for market shares seems to be influencing credit growth. House price inflation and growth in credit to households

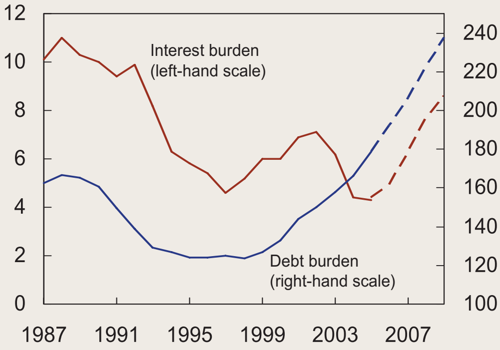
Chart 1.11 Interest rate forecasts for trading partners and interest rate differential. Money market rates[1]. Quarterly figures. 04 Q1 – 09 Q4



[1] The money market rate is approximately 0.2 percentage point higher than the sight deposit rate.
[2] As in previous reports, the forward rate is adjusted somewhat in the longer term.
[3] Weighted average of trading partners' forward rates at 26 Oct.
[4] Interest rate differential in the baseline scenario from 06 Q4 (broken line).

Source: Norges Bank

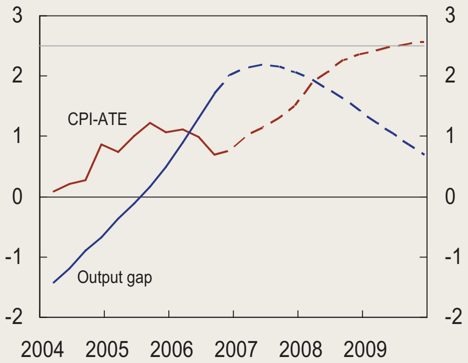
Chart 1.12 Projections of household interest burden[1] and debt burden[2]. Per cent. Annual figures. 1987 – 2009



1) Interest expenses after tax as a percentage of disposable income less estimated reinvested dividends, less return on insurance claims and plus interest expenses.
2) Loan debt as a percentage of disposable income less estimated reinvested dividends, less return on insurance claims.

Sources: Statistics Norway and Norges Bank

Chart 1.13 Projected CPI-ATE[1] and output gap in the baseline scenario. Quarterly figures. Per cent. 04 Q1 – 09 Q4



1) CPI-ATE: CPI adjusted for tax changes and excluding energy products. A further adjustment is made for the estimated effect of reduced maximum day-care rates from January 2006.

Sources: Statistics Norway and Norges Bank

seem to be somewhat higher than projected in the previous *Report*. As a result of low interest rates, the interest burden is now low, but will increase gradually as the interest rate approaches a more normal level (see Chart 1.12). The level of both short-term and long-term interest rates tends to influence household behaviour. An increase in short-term interest rates might have a smaller effect on house prices and credit growth if long-term interest rates remain at a low level. Increased competition has also reduced banks' interest margins. As a result, the interest rate increases over the past year have not fully fed through to interest rates charged on loans to households and enterprises. Interest margins may be reduced further in the years ahead.

The developments in inflation and capacity utilisation in Chart 1.13 provide a balance between the various objectives of monetary policy. The interest rate is sufficiently low for allowing inflation to pick up and approach the target of 2.5%, while the increase in the interest rate will gradually contribute to reducing capacity utilisation.

Uncertainty surrounding the projections

The projections for inflation, output, the interest rate and other variables are based on an assessment of the current situation in the Norwegian economy and our perception of the functioning of the economy. The uncertainty surrounding the projections for the interest rate, the krone exchange rate, inflation and the output gap is illustrated in the fan charts (see Charts 1.9a-e).[2] The wider the fan charts are, the more uncertain the projections. The width of the fan charts is based on historical disturbances.[3] The uncertainty surrounding the interest rate reflects the fact that monetary policy reacts to disturbances to other variables. This increases the uncertainty surrounding future interest rates, but also contributes to reducing the uncertainty surrounding the other variables.

Over several years, interest rates in Norway have been considerably lower than what we consider to be a neutral level. In the baseline scenario the interest rate is gradually raised to a more normal level. The interest rate path may differ from that now envisaged if economic prospects change or if interest rate changes have a different impact on output, employment and prices than assumed. The effects are particularly uncertain in the prevailing situation where the interest rate has been substantially lower than normal for a long period.

2 There is also uncertainty attached to the current situation (see box on p. 48 and *Inflation Report* 3/05).
3 A further discussion of the fan charts is presented in Bergo, J. (2006): "Projections, uncertainty and the choice of interest rate assumptions in monetary policy", Economic Bulletin 1/2006 p. 16, Norges Bank.

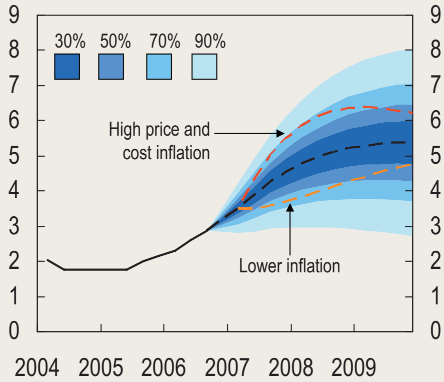
Charts 1.14a-c show an analysis based on alternative paths for the economy. Interest rate setting must be assessed in the light of the reasons for, and the expected duration of the disturbances that cause an unexpected path. The later monetary policy reacts to such disturbances, the wider the fluctuations in output and inflation will be. On the other hand, it may be difficult to distinguish between transitory effects on statistics and more long-lasting disturbances. It may therefore take time before interest rate setting can be based on economic developments that differ from the projected path.

It may be that inflation will again be surprisingly low, even though economic growth is strong. Shifts in import patterns may be more pronounced than assumed, and it may take longer for the rise in prices for imported consumer goods to pick up. Strong domestic competition or unexpected high productivity growth may curb the rise in prices for domestically produced goods and services. A downturn in the world economy or an appreciation of the krone exchange rate might also exert downward pressure on inflation. Charts 1.14a-c illustrate a path where inflation is about ¾ percentage point lower than in the baseline scenario.[4] In such a situation, with a risk of inflation expectations falling well below the inflation target, monetary policy must give weight to sustaining inflation expectations. In isolation, this implies an interest rate path that is lower than the central projection (see Chart 1.14a). Lower interest rates will gradually push up the output gap to a level that is higher than in the baseline scenario (see Chart 1.14c). Inflation gradually picks up, but is lower than in the baseline scenario over the next three years (see Chart 1.14b).

On the other hand, inflation might also be higher than projected, for example if the krone weakens further or if we underestimate the effect of low real interest rates. We have assumed that inward labour migration has resulted in a more flexible labour market and an easing of wage pressures. Unemployment has declined to a low level, however, and it is expected to fall further. Labour shortages are on the rise. In previous cyclical upturns, such a development has often led to a marked change in the rate of increase in wages and prices. It may be that we have underestimated pressures in the economy and that we might face a situation with rapidly rising price and cost inflation, as illustrated in Charts 1.14a-c.[5] This means that pressures in the economy

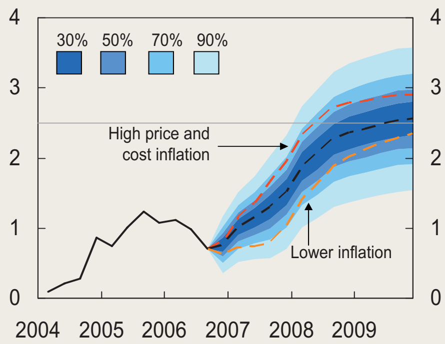
[4] Several factors that may contribute to low inflation will also have an impact on the real economy. As a technical assumption, the projections for the real economy are held constant. It is also assumed that we apply the interest rate in the baseline scenario the first months and do not react to disturbances until spring 2007. Other market participants, households and enterprises are also uncertain whether the economy will follow a different path before that time. The background for the delayed reaction is that it may take time to realise that the economy is moving on a different path.
[5] This alternative is also based on the assumption that it takes time to reveal the causes and to adjust monetary policy.

Chart 1.14a Sight deposit rate in the baseline scenario and in the alternatives with lower inflation and with high price and cost inflation. Per cent. Quarterly figures. 04 Q1 – 09 Q4



Source: Norges Bank

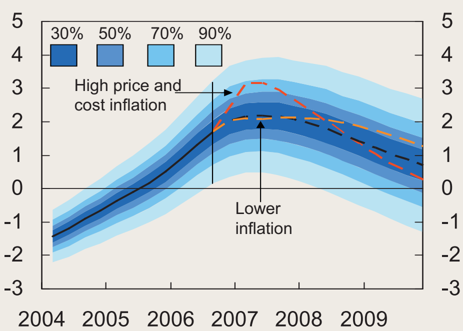
Chart 1.14b Projected CPI-ATE[1)] in the baseline scenario and in the alternatives with lower inflation and with high price and cost inflation. 4-quarter change. Per cent. 04 Q1 – 09 Q4



[1)] CPI-ATE: CPI adjusted for tax changes and excluding energy products. A further adjustment is made for the estimated effect of reduced maximum day-care rates from January 2006.

Sources: Statistics Norway and Norges Bank

Chart 1.14c Estimated output gap in the baseline scenario[1)] and in the alternatives with lower inflation and with high price and cost inflation. Per cent. Quarterly figures. 04 Q1 – 09 Q4



[1)] Uncertainty concerning the current situation is taken into account in the fan chart (see separate box p. 48).

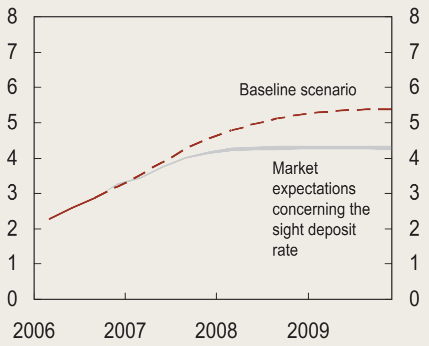
Source: Norges Bank

turn out to be stronger than projected and that inflation rises at a faster pace than expected.[6] Such a development would warrant a faster increase in interest rates than in the baseline scenario in order to prevent the persistence of the high level of capacity utilisation and inflation from overshooting the target after a period. The higher interest rate path contributes to moderating growth in the economy, and capacity utilisation declines faster than in the baseline scenario after a period (see Charts 1.14a and 1.14c). Inflation is somewhat higher than in the baseline scenario (see Chart 1.14b).

Cross-checks

Market expectations, as reflected in forward rates, provide a cross-check of the Bank's interest rate forecast. Long-term forward rates in Norway have fallen by ¼ percentage point since the June *Inflation Report*. This probably reflects expectations of slower growth in the US and continued strong demand for US government bonds from central banks in Asia among others. Short-term interest rate expectations are approximately unchanged since end-June and now suggest a gradual rise in the policy rate to 4¼% in 2008 (see Chart 1.15). The interest rate forecast in this *Report* is broadly in line with short-term interest rate expectations in the market up to summer 2007. Thereafter, Norges Bank's interest rate forecast is somewhat higher than market interest rate expectations. Market participants may have a different perception of the interest rate path necessary to stabilise inflation at target and to achieve stable developments in output and employment. The difference between the baseline scenario and market interest rate expectations is larger than in the previous *Report*. This is partly because the central interest rate projection is now somewhat higher and partly because long-term forward rates have declined since end-June.

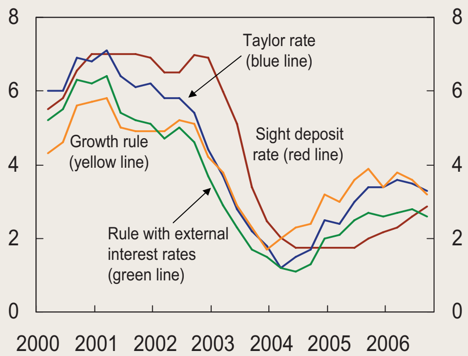
Chart 1.15 Sight deposit rate in the baseline scenario and market expectations regarding the sight deposit rate[1)]. Per cent. Quarterly figures. 06 Q1 – 09 Q4



[1)] Derived from estimated forward rates. A credit risk premium and a technical difference of 0.20 percentage point were deducted in calculating the sight deposit rate. The grey shaded interval shows the highest and lowest interest rates in the market's sight deposit rate path in the period 13 – 26 October 2006.

Source: Norges Bank

Chart 1.16 Sight deposit rate, Taylor rate, growth rule and rule with external interest rates.[1)] Per cent. Quarterly figures. 00 Q1 – 06 Q3



[1)] The CPI-ATE adjusted for the estimated effect of reduced maximum day-care rates has been used as a measure of inflation. Other measures of underlying inflation that have been higher than the CPI-ATE would have resulted in a higher interest rate path.

Source: Norges Bank

Simple monetary policy rules have prescribed higher interest rates than our policy rate for a longer period, but are now closer to the sight deposit rate (see Chart 1.16). The Taylor rule[7] applies the output gap and inflation. The growth rule[8] instead applies observed GDP growth and inflation. Simple monetary policy rules do not take account of the economic

[6] The output gap is assumed to rise by 1 percentage point in relation to the baseline scenario and inflation by ¾ percentage point.

[7] The Taylor rule: Interest rate = Inflation target + equilibrium real interest rate +1.5 (inflation – inflation target) + 0.5 output gap. See Taylor J.B. (1993): "Discretion versus policy rules in practice", Carnegie-Rochester Conference Series on Public Policy 39, pp. 195-214.

[8] Growth rule: Interest rate = Inflation target + equilibrium real interest rate +1.5 (inflation – inflation target) + 0.5 growth gap. Athanasios Orphanides proposes to replace the output gap with the difference between actual growth and trend growth in the economy (growth gap). One reason for this is that the Taylor rule is sensitive to errors in the measurement of the output gap. See Orphanides A. (2003): "The quest for prosperity without inflation", Journal of Monetary Economics, vol. 50, no. 3, pp. 633-663.

outlook but focus solely on the economic situation today. Because inflation has receded to a low level, the rules imply lower interest rates now than in the previous *Report* despite higher capacity utilisation in the Norwegian economy. In the calculations, we use the CPI-ATE adjusted for reduced maximum day-care rates. It is our assessment that underlying inflation is somewhat higher than measured by this indicator. Simple interest rate rules would then imply a higher interest rate than shown in the chart.

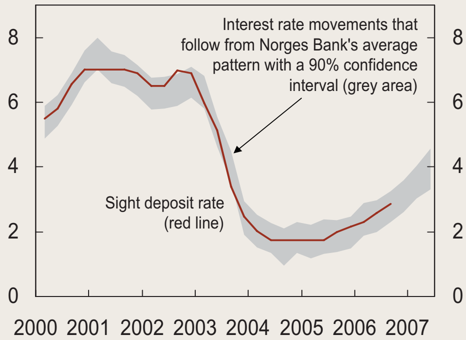
The rules have some limitations as a reference for a small, open economy. They do not take into account that any changes in the interest rate that would be consistent with the rules may result in changes in the exchange rate, thereby influencing the inflation outlook. In principle, the rule involving external interest rates is better suited for a small, open economy.[9] This rule implies a somewhat lower interest rate than the other rules because external interest rates are low.

Norges Bank has also estimated a simple reaction function on the basis of the Bank's previous interest rate setting (see box in *Inflation Report* 3/04). A rule based on this reaction function suggests some degree of tightening up to summer 2007 (see Chart 1.17). It is primarily as a result of high GDP growth and prospects for higher inflation that this interest rate rule implies higher interest rates ahead.

Mainland nominal GDP growth can serve as a cross-check that is less reliant on methodology than simple interest rate rules. Nominal GDP growth takes account of both growth in production volume and the overall rise in prices for all types of goods and services produced in the mainland economy. This eliminates the uncertainty inherent in breaking down GDP into a price component and a volume component. Over time, nominal GDP will grow in pace with the sum of the rise in prices and growth in production capacity in the economy. Experience shows that production capacity increases by about 2-3% annually over time. With an inflation target of 2.5%, this implies that nominal GDP can grow by about 4.5-5.5% annually over time. If nominal GDP growth is higher than that, it may be an indication that monetary policy should be tightened. Conversely, nominal GDP growth of less than 4.5-5.5% may be an indication that monetary policy should be more expansionary. Nominal GDP growth is now higher than the level assumed to be consistent with the inflation target over time (see Chart 1.18). One of the reasons behind the high rate of growth in nominal GDP is that the rise in prices included in GDP – the GDP deflator – has been higher than underlying consumer price inflation in recent years. This is

[9] The external real interest rate rule: Interest rate = inflation target + equilibrium real interest rate + 1.5 (inflation – inflation target) + 0.5 output gap + 1.0 (real interest rate among Norway's trading partners – real interest rate in Norway).

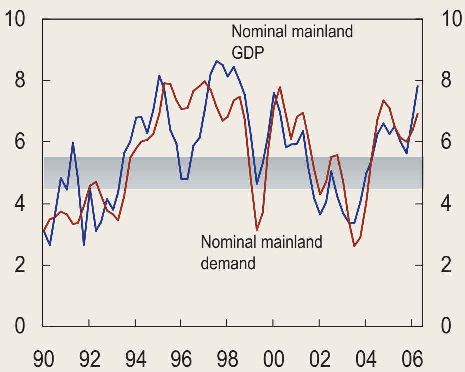
Chart 1.17 Sight deposit rate and interest rate movements that follow from Norges Bank's average pattern for the setting of interest rates[1)]. Per cent. Quarterly figures. 00 Q1 – 07 Q2



[1)] The interest rate movements are explained by developments in inflation, mainland GDP growth, wage growth and 3-month interest rates among trading partners. See *Inflation Report* 3/04 for further discussion.

Source: Norges Bank

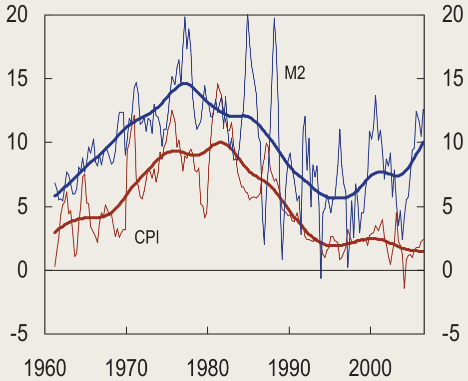
Chart 1.18 Nominal mainland GDP and overall mainland demand.[1)] 4-quarter growth. Per cent. 90 Q1 – 06 Q2



[1)] Adjusted for seasonal variations and irregular components.

Sources: Statistics Norway and Norges Bank

Chart 1.19 Consumer prices (CPI) and money supply (M2). Calculated trend rise[1]. 4-quarter rise. Per cent. 61 Q1 – 06 Q2



[1] Trend calculated using HP filter.

Sources: Statistics Norway and Norges Bank

partly due to the sharp rise in prices for some other goods and services, particularly export prices. This change in relative prices reflects an improvement in Norway's terms of trade, which does not necessarily have implications for interest rate setting. Nominal growth in aggregate domestic demand is somewhat lower, but is also higher than the normal level of 4.5-5.5%.

Historically, there has been a relationship between inflation and money growth (M2). Trend money growth can serve as a rough cross-check of inflation projections generated by other models. In recent years, consumer price inflation has tended downwards, while money growth has moved on an upward trend (see Chart 1.19). Higher money growth must be seen in the light of strong growth in the Norwegian economy in an environment of low interest rates and high credit growth. The difference between trend money growth and the trend rise in prices has widened, but the conclusions to be drawn from this are not obvious. It may be that the low level of inflation in recent years will gradually translate into slower money growth. On the other hand, the high rate of money growth may indicate that inflation will gradually rise. It is likely that the widening divergence between growth in the GDP deflator and consumer price inflation, as described above, is also reflected in the relationship between money and consumer prices. We see that M2 growth more closely follows mainland nominal GDP growth.

Conclusions – monetary policy strategy

The Executive Board's assessment is:

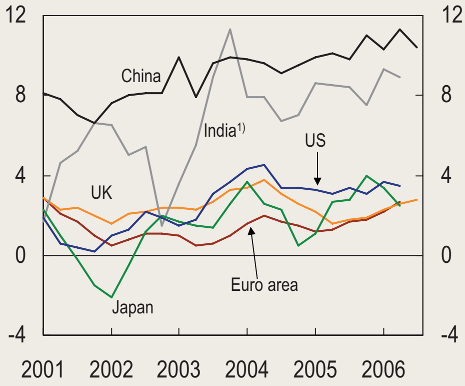
- Underlying inflation has been lower than projected in recent months. Nevertheless, several factors point to higher inflation ahead. Capacity utilisation is high and there is little spare capacity in the Norwegian economy. Employment is rapidly rising and unemployment has exhibited a marked decline. There are signs of higher wage growth and expectations of rising inflation. At the same time, the krone exchange rate has depreciated from strong values.

- The interest rate path presented in this *Report* will provide a reasonable balance between the objective of bringing up inflation towards target and the objective of stabilising developments in output and employment, conditional on the information currently available to Norges Bank.

- Monetary policy influences the economy with a lag. Over several years, interest rates have been considerably lower than what we consider to be a neutral level. The interest rate may gradually be raised to a more normal level at a somewhat faster pace than envisaged earlier, although it is unlikely that rates will be raised at every monetary policy meeting. Based on our current assessment, the interest rate will thus continue to be raised in small, not too frequent steps if economic developments are broadly in line with projections.

- The sight deposit rate should be in the interval 3¼ - 4¼% in the period to the publication of the next *Inflation Report* on 15 March 2007, conditional on economic developments that are broadly in line with projections. New information may reveal aspects of economic developments that indicate that the Norwegian economy is moving on a different path than projected. On the one hand, major shifts in trade patterns, strong competition, weaker global growth or a stronger krone exchange rate may result in low inflation. On the other hand, low real interest rates or a further depreciation of the krone may lead to a higher-than-projected rise in output and inflation.

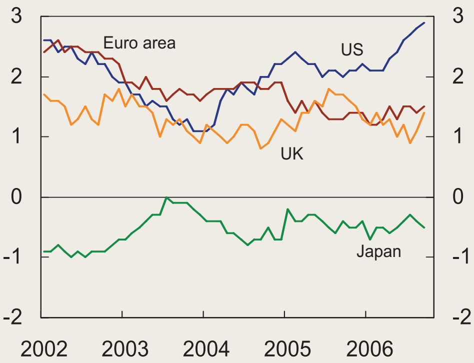
Chart 2.1 GDP. 4-quarter growth. Per cent. 01 Q1 – 06 Q3



[1)] Measured by factor price.

Source: Reuters and EcoWin

Chart 2.2 Core inflation[1)]. 12-month change. Per cent. Jan 02 – Sep 06



[1)] US and Japan: CPI excl. food and energy. Euro area and UK: CPI excl. energy, food, alcohol and tobacco.

Sources: Reuters EcoWin and Norges Bank

Table 2.1 Projections for GDP growth in other countries. Change from previous year. Per cent

	2006	2007	2008	2009
US	3¼	2	2½	2¾
Japan	2½	2	1½	1¼
Germany	2¼	1½	1½	2
France	2¼	2	2	2
UK	2½	2½	2¼	2¼
Sweden	4¼	3	2¼	2
China	10½	9	8½	8
Trading partners[1)]	3¼	2½	2¼	2¼
Euro area[2)]	2½	2	2	2

[1)] Export weights.
[2)] Weights from Eurostat.

Sources: Eurostat and Norges Bank

Economic developments

Growth is still solid, but uncertainty surrounding developments in the US

Activity in the world economy remains solid (see Chart 2.1). Growth from 2004 to 2006 is the strongest recorded since the early 1970s. High and rising energy prices have contributed to pushing up inflation among our trading partners. However, energy prices have so far only to a limited extent been passed on to other prices so that core inflation still is moderate and stable in most countries (see Chart 2.2). The fall in oil prices through autumn may curb inflation in the period ahead. Developments in growth and prices in recent years reflect ongoing globalisation, which is having a growing impact on service, goods and labour markets.

After expanding at a strong pace over several years, the US economy is now showing signs of a slowdown. This may have ripple effects in other countries. It still seems that growth in the world economy will hold up. In the euro area, and to some extent in Japan, the upturn has broadened. In China and India growth is strong. These developments will contribute to a more balanced profile. Overall, we are expecting a moderate slowdown in global growth. In 2006, growth among our trading partners appears on the whole to be somewhat stronger than assumed in *Inflation Report* 2/06. However, the growth outlook for the US in 2007 appears to be weaker than previously projected. This is also expected to contribute to lower growth among other trading partners (see Table 2.1). On the whole, growth is projected to moderate to slightly below trend and growth projections for 2008 and 2009 have been revised downwards slightly since the previous *Inflation Report*. It is assumed that global inflation will remain moderate through the projection period. Oil prices have fallen through autumn, but remain at a high level. Prices for other commodities that are important for the Norwegian economy have remained high.

Growth prospects

After several years of low interest rates, monetary policy has been gradually tightened in recent years. Forward rates indicate that trading partners' policy rates will increase until summer 2007 and will thereafter remain relatively stable up to end-2009.

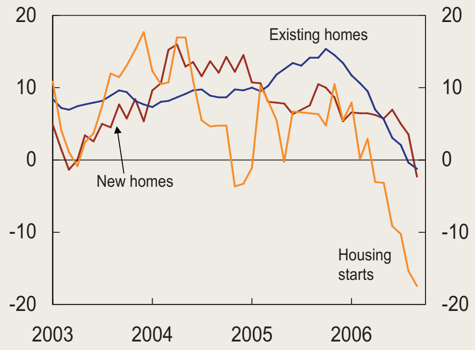
The slowdown in growth in the US is primarily reflected in the housing market. The turnover time has risen markedly and prices and housing starts have fallen (see Chart 2.3.).

Historically, developments in the housing market have been closely related to the general pace of economic growth. Weaker developments in the housing market are expected to influence growth through a number of channels. Lower house sales will curb housing investment, which accounts for a good 5% of GDP. Residential construction has been important for employment in recent years. However, the decline in the housing market is likely to be partly offset by increased corporate investment and higher employment in the enterprise sector, supported by solid profitability (see Chart 2.4). Equity prices have also risen markedly. Reduced energy prices will contribute to increasing household real disposable income. Overall, this will contribute to a moderate slowdown in consumption and growth in the economy. There is now some pressure on resources, but over the next few years growth is expected to be weaker than potential growth. There will probably be spare capacity in the US economy as early as next year.

The euro area is experiencing the strongest upturn since 2000. Export growth has been the most important driving force, but private sector investment and gradually private consumption have also contributed. Solid corporate profitability and low interest rates are expected to boost investment ahead. Most business confidence indicators are at a high level, although a slight decline has been observed recently (see Chart 2.5). Growth in private consumption is also projected to pick up. Employment has increased and unemployment has fallen to the lowest levels recorded since 2001 (see Chart 2.6). Growth in household disposable income has nevertheless remained low partly as a result of low wage growth and increasing use of part-time employment. Relatively strong GDP growth has contributed to an improvement in government finances in several countries. Fiscal policy in 2006 is expected to be virtually neutral. Some structural changes and tightening have been announced for 2007, primarily in Germany and Italy. Growth is expected to be clearly above trend this year. Next year, however, slower growth in exports to the US, a less expansionary monetary policy and fiscal retrenchment are likely to curb growth.

Capacity utilisation is still high in the UK. Growth in industrial production has remained buoyant, while there have been signs of somewhat weaker growth in retail trade in recent months. House prices are still on the rise, while turnover in the housing market has flattened out. Industrial and household confidence indicators point to somewhat weaker developments ahead. Unemployment has risen from a low level, as a result of both an increase in the labour supply and somewhat weaker employment growth. Growth is expected to slow next year, partly reflecting

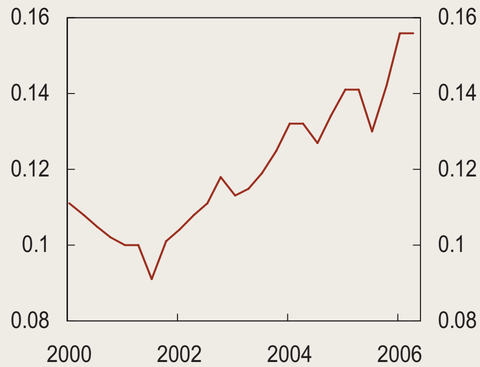
Chart 2.3 House prices[1)] and housing starts[2)] in the US. Seasonally adjusted. 12-month change. Per cent. Jan 03 – Sep 06



1) Median price for dwellings.
2) 3-quarter moving average.

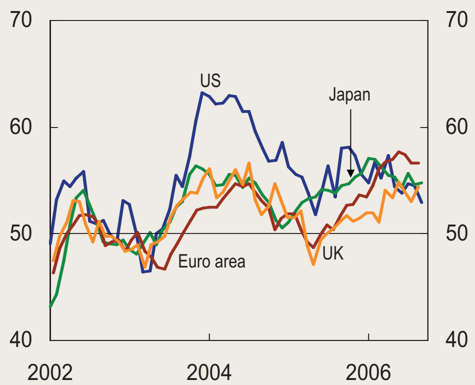
Sources: Reuters, EcoWin and Norges Bank

Chart 2.4 Profit as a share of gross product in the US business sector. Quarterly figures. 00 Q1 – 06 Q2



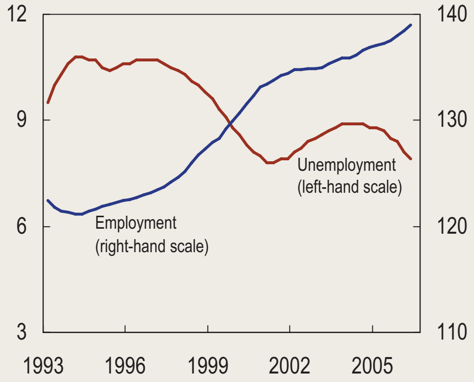
Source: Reuters EcoWin

Chart 2.5 Confidence indicators for manufacturing. Seasonally adjusted diffusion indices. Monthly figures. Jan 02 – Sep 06



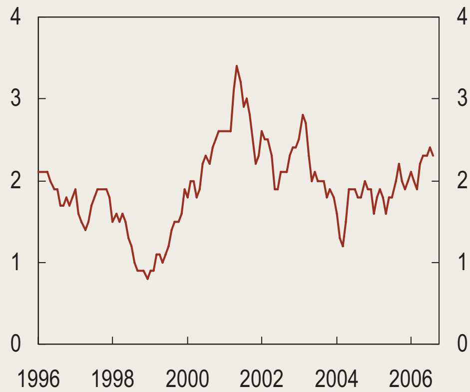
Source: Reuters EcoWin

Chart 2.6 Unemployment rate as a percentage of the labour force and employment in millions in the euro area. Quarterly figures. 93 Q1 – 06 Q2



Source: Reuters EcoWin

Chart 2.7 Consumer prices. 25 trading partners. Seasonally adjusted. 12-month change. Per cent. Jan 96 – Aug 06



Sources: Reuters EcoWin and Norges Bank

weak growth in household real disposable income and lower growth in exports.

In Sweden, economic growth has been high so far this year. Capital goods account for a large share of the country's exports, and higher growth among trading partners have had a positive impact. Since autumn 2005, labour market conditions have improved, even though unemployment is still higher than in 2002. In spite of monetary policy tightening, interest rates are still low. This will, together with a moderately expansionary fiscal policy, contribute to continued solid growth this year. Next year, slower global growth is expected to bring growth down towards trend.

In Japan, the recovery has continued and the economy is moving away from deflation. The zero rate policy of recent years was therefore discontinued in July. The corporate debt burden has fallen markedly. At the same time, corporate profitability is solid and is supporting investment and investment plans. In several regions, house prices have started to rise again, following a ten-year period of falling prices. The labour market has improved and consumption has edged up. However, low wage growth is resulting in low growth in household disposable income. Some confidence indicators and new industrial orders point to more moderate developments ahead. A slowdown is expected next year as a result of lower growth in the US, but growth is still projected to remain above trend.

Solid growth in emerging economies

China is still expanding at a brisk pace. Continued strong growth in investment and a marked increase in net exports have made the main contribution. The Chinese authorities have implemented a number of measures to prevent the economy from overheating. Higher interest rates and a tightening of reserve requirements are intended to curb investment growth. Available information for the third quarter indicates that the measures have had some impact. Moreover, the slowdown in the US is expected to curb exports over the next year. However, the expansion in China is expected to continue at a high pace, with high growth in private investment and consumption.

Growth is vigorous in India, primarily reflecting favourable developments in the service sector, which accounts for more than 50% of production. Developments in the agricultural sector, which employs more than half the labour force, have been more moderate. There are signs of a tighter labour market for qualified labour in services production, which may curb growth in the short term. However, growth is still expected to remain robust as a result of a continued rise in service exports, stronger growth in industrial production and somewhat higher public sector investment.

Inflation outlook

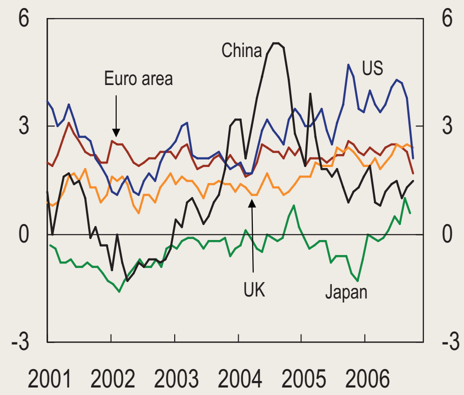
So far this year, inflation has picked up as a result of high prices for oil and other commodities along with the sharp rise in electricity prices in many countries (see Chart 2.7). In the very recent past, however, inflation has slowed as a result of the fall in energy prices through autumn (see Chart 2.8). Inflation excluding energy prices has generally been moderate and stable. After peaking at the beginning of August, oil prices have fallen by about 25%. Prices for metals and industrial commodities declined slightly from mid-July to September, but have edged up again over the past month. Levels are still higher than at the time of the previous *Inflation Report* (see Chart 2.9). Futures prices for oil and metals indicate a continued high price level ahead. Next year, inflation among our trading partners is expected to increase somewhat and then ease towards 2% at the end of the projection period (see Table 2.2).

Low underlying inflation among our trading partners can partly be attributed to intensified competition in many goods and service markets. The share of imports from low-cost countries has risen and the range of imported goods and services has increased. While corporate profitability is high and capital returns are solid, the wage share is declining in several of the largest economies. Wage growth is moderate (see Chart 2.10). To a large extent, this appears to be a consequence of the marked rise in the labour supply owing to globalisation. This has come both directly through increased migration and relocation of jobs, as well as indirectly through higher trade. In some countries, especially within the euro area, there is still spare capacity. In the euro area, wage growth is expected to edge higher as a result of the recent fall in unemployment (see Chart 2.11). New remuneration systems may have been a factor behind slower growth in hourly wages because employees are increasingly being offered bonuses, company shares, options and the like.

The US experienced a sharp rise in unit labour costs in the second quarter of 2006. This appears to reflect strong growth in bonus payments, while at the same time productivity growth has slowed. Wage growth is expected to moderate again as pressures in the economy decrease.

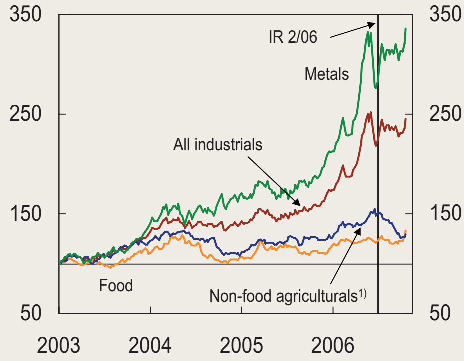
Inflation in the euro area has been approximately 2.5% over the past year, partly as a result of a sharp rise in prices for housing expenses, transport and food. In September, inflation moved down to 1.7%. The inflation rate still varies considerably across countries. In September, the year-on-year rise was lowest in Finland at 0.8% and highest in Spain at 3.1%. In the UK, inflation has risen from March, owing to a higher rise in prices for most goods and services, with the exception of clothing and footwear, telecom

Chart 2.8 Consumer prices. 12-month change. Per cent. Jan 01 – Sep 06



Source: Reuters EcoWin

Chart 2.9 The Economist's commodity price indices. 3 Jan 03 = 100. Weekly figures. Week 1 2003 – Week 42 2006



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

Sources: Reuters EcoWin and Norges Bank

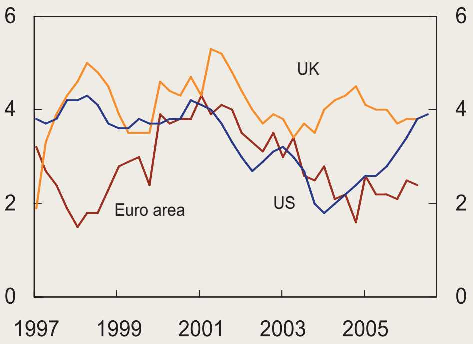
Table 2.2 Projections for consumer prices in other countries. Change from previous year. Per cent

	2006	2007	2008	2009
US	3½	2½	2	2½
Japan	½	1	1¼	1¼
Germany	2	2½	1½	1½
France	2	2	1¾	1¾
UK	2¼	2	2	2
Sweden	1½	2	2	2
China	1¾	2¼	3¼	3
Trading partners[1]	2¼	2½	2¼	2
Euro area[2]	2¼	2½	2	2

1) Import weights, Norway`s 25 most important trading partners.
2) HICP. Weights from Eurostat (each country`s share of total euro area consumption).

Sources: Eurostat and Norges Bank

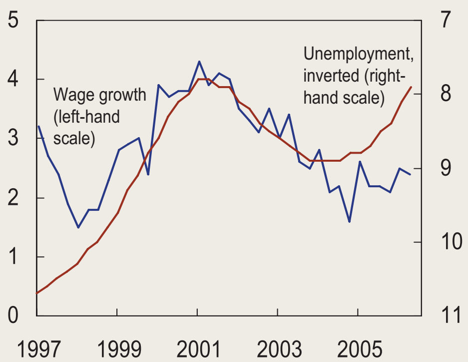
Chart 2.10 Wage growth.[1] 4-quarter growth. Per cent. 97 Q1 – 06 Q3



[1] Euro area: Hourly labour costs, UK: Average income excl. bonsues, US: Average hourly income excl. Bonuses.

Source: Reuters EcoWin

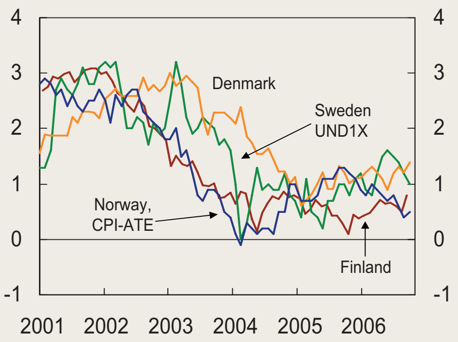
Chart 2.11 Wage growth[1] and unemployment in the euro area. Per cent. Quarterly figures. 97 Q1 – 06 Q2



[1] Hourly labour costs. 4-quarter rise.

Source: Reuters EcoWin

Chart 2.12 Core inflation in the Nordic countries[1]. 12-month change. Per cent. Jan 01 – Sep 06



[1] Denmark and Finland: CPI excl. energy, food, alcohol and tobacco products. Sweden: Excluding interest expenses and Tax changes. Norway: CPI adjusted for tax changes and excluding energy products.

Source: Reuters and EcoWin

services and leisure. In Sweden inflation remains low. Measured by UND1X, which excludes interest expenses and tax changes, inflation is now approximately 1% (see Chart 2.12).

Uncertainty surrounding the projections

Growth in the global economy is stronger than projected in *Inflation Report* 2/06. There are still considerable global imbalances, primarily linked to the US current account. This reflects low saving in both the household and public sector. The possibility of substantial corrections to these imbalances is an important source of uncertainty. Developments in the US housing market constitute a distinct risk. A marked fall in house prices may trigger a stronger increase in saving and thereby lead to a more pronounced fall in consumption than we have assumed.

At the same time, there are considerable uncertainties associated with the effects of a possible sharp economic slowdown in the US on the global economy. An important question is whether the world economy is more robust than earlier, as well as to what extent growth in the euro area, Japan and China will be influenced by a downturn in the US. Net exports to the US do not fully reflect the significance of US demand for global trade because it also fuels exports between other countries. As a result of increased competition and a higher degree of specialisation, the input factors and components of a product are more often manufactured in different countries before the finished product is exported. Lower demand from the US might therefore affect a number of exporting countries. The propensity to import is relatively high in the US compared with for instance the euro area. Lower growth may therefore result in a sharper fall in imports than a comparable slowdown in the euro area. In addition, developments in the US affect the wider world economy through their impact on international financial markets, which will be of particular importance in the event of abrupt changes.

It is also uncertain to what extent growth in the Chinese economy is sustainable. In spite of the tightening measures that have been introduced, there is still a risk of overheating as a result of strong investment growth. After a sharp rise in prices over a longer period, there is some measure of risk associated with the housing markets in several countries, including in Europe. Lack of progress in the work on a new global trade agreement also constitutes a significant risk to global economic developments in the slightly longer term. The risk of increased protectionism or more bilateral trade agreements is increasing. Even though oil prices have fallen markedly, there is still uncertainty surrounding developments ahead, as well as possible second-round effects on inflation.

However, a number of factors point to a more robust global economy. Both in the euro area and Japan, structural changes appear to have improved the growth potential in the economy somewhat. Particularly in the euro area, there are some signs of greater flexibility, for example in labour markets. Developments in trade patterns also indicate somewhat reduced dependency on the US. For example, Asia and the eastern European countries have become more important trading partners for the euro area in recent years (see Chart 2.13). Rising private consumption in Europe and several Asian and eastern European countries is also reducing the vulnerability of the global economy to lower consumer demand in the US.

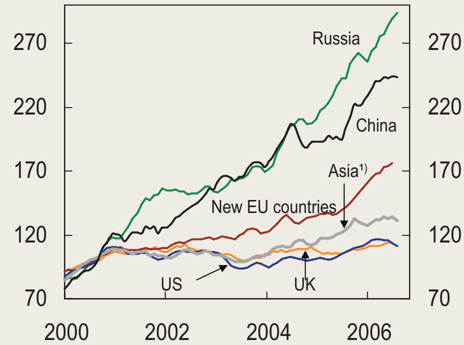
At the same time, a slowdown in the US may also contribute to curbing pressures on energy and other commodity prices. Lower energy and commodity prices might, in isolation, result in lower interest rates than otherwise and make a more direct contribution to growth in total demand in many countries (see Chart 2.14). This may dampen the effects of a downturn in the US on the global economy.

Global growth may also be markedly stronger than assumed. Solid profitability in industrial countries may result in higher business investment than expected. In several countries, both in Europe and Asia, there is a potential for higher consumption growth, if growth in household disposable income is stronger than assumed.

The oil market

During the summer, oil prices rose to new record high levels. At the beginning of August, North Sea oil (Brent Blend) prices were more than USD 78 per barrel. The high prices were primarily a result of fears of a possible decline in production. A halt in oil exports from Iran as a result of the conflicts surrounding the country's nuclear programme would have considerable consequences. Iran is one of the world's leading oil exporters, and there is not enough idle production capacity elsewhere to compensate for a possible shortfall. The war in Lebanon also increased the tension in the Middle East, and pushed up prices. In the US, there were fears that hurricanes again might have severe consequences for crude oil production and refining. In addition, the transition to more environment-friendly fuel products created some uncertainty in connection with production and distribution of petrol during a period when demand is seasonally high. In addition to the increased risk of production disruptions, actual production was somewhat reduced as a result of unrest in Nigeria and difficulties with a large field in Alaska.

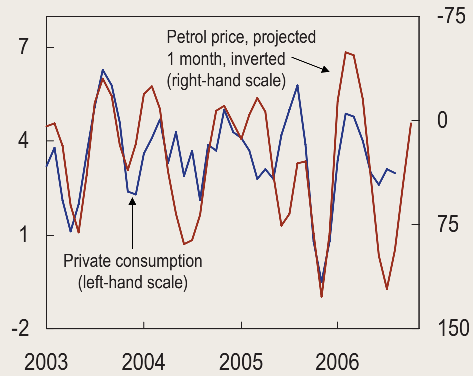
Chart 2.13 Exports from the euro area. Index. 2000 = 100. 3-month moving average. Jan 00 – Jul 06



1) Asia excl. Japan and China.

Sources: Reuters EcoWin and Norges Bank

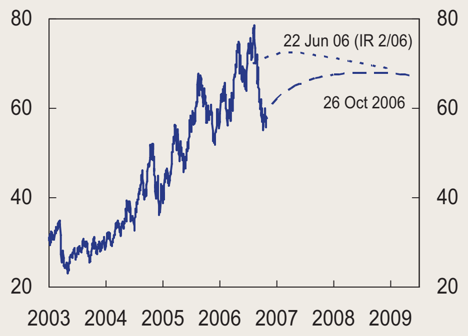
Chart 2.14 Private consumption[1] and petrol price in the US. 3-month rise. Annual rate. Per cent. Jan 03 – Sep 06



1) Seasonally adjusted.

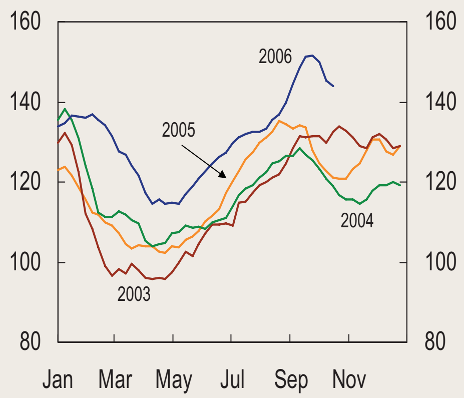
Sources: Reuters EcoWin and Norges Bank

Chart 2.15 Oil price (Brent Blend) in USD per barrel. Daily figures. 2 Jan 03 – 26 Oct 06. Futures prices from 22 Jun and 26 Oct 06. Monthly figures. Aug 06 – Jun 09



Sources: Reuters EcoWin, Reuters and Norges Bank

Chart 2.16 US stocks of distillates. In million barrels. Weekly figures. Week 1 2003 – Week 42 2006



Source: Energy Information Administration (EIA)

Oil prices have fallen markedly in recent months (see Chart 2.15), primarily because some of the risk factors that pushed up oil prices this summer have been reduced or no longer apply. Petrol prices have fallen more than the reduction in oil prices would imply in isolation, partly due to very high US stocks. Stocks of distillates are also high in the US, and are likely to be sufficient even for a cold winter (see Chart 2.16). Oil inventories in the other OECD countries are also relatively high.

The fall in prices can partly be accounted for by downward revisions in demand growth, primarily as a result of prospects for slightly lower activity growth in the US. The growth outlook in other parts of the world is still auspicious and will contribute to sustaining the high level of overall demand. This year, the oil supply from non-OPEC countries has been lower-than-expected compared with earlier IEA forecasts. The start-up of new fields has been postponed at a number of sites, while production at older fields has fallen somewhat faster than expected. For next year, early forecasts indicate that growth in production may be nearly twice as high as this year. If this is the case, this may exert pressure on OPEC countries, which are then likely to lose market shares again. In recent years, however, early projections have been too optimistic. Unforeseen events have repeatedly contributed to a lower rise in the oil supply than initially assumed.

Futures prices for oil have not fallen as much as spot prices. Should a situation arise with renewed unrest in important oil-producing countries, prices for oil may rise rapidly again. The situation in Iran is still tense and constitutes perhaps the largest risk for further prices increases. On the other hand, lower growth in the world economy may result in a reduction in demand for oil and contribute to a further fall in prices. However, OPEC countries have indicated clearly that they will attempt to keep oil prices at a high level. At the end of October, the organisation decided to reduce production by 1.2m barrels per day from November. This is the first production cut since 2003, and it exceeded market participants' expectations.

In recent years, global excess production capacity has declined to a very low level and the vulnerability to production disturbances has increased. Previously, there was a clear relationship between oil prices and oil stock levels, but this relationship has been less evident in recent years. Market participants have sought to increase stocks at a given oil price, in order to compensate for part of the increased uncertainty associated with limited idle production capacity. If OPEC reduces production as announced, excess production capacity will increase correspondingly.

Natural gas prices were relatively low towards the end of summer, in both the UK and US. Demand has been low in the US, while at the same time the reduced risk of destructive hurricanes has pushed down prices in this market as well. Moreover, stocks are relatively high. The opening of the southern part of the Langeled pipeline to the UK, in addition to a new pipeline from the Netherlands, will reduce the possibility of another winter of gas shortages. However, gas prices have recently shown a seasonal rise in both the US and UK. Over time, prices for exports of Norwegian natural gas generally follow oil prices (see Chart 2.17).

Developments in financial markets

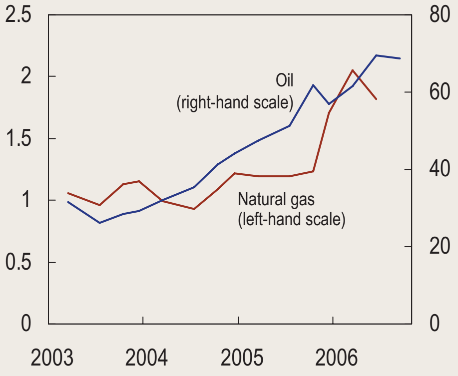
Developments in fixed income markets

Strong global growth is a primary factor behind the rise in interest rates over the past year. Several countries have gradually increased their interest rates. Since *Inflation Report* 2/06, policy rates have been raised by 0.25 percentage point in the US, UK, Japan, Australia and Switzerland and by 0.5 percentage point in Sweden and the euro area. Several countries are expected to raise their interest rates further (see Chart 2.18).

As a result of the slowdown in the US, market participants now expect that interest rates in the US will be reduced in the course of 2007. In the euro area, Sweden and the UK, interest rate expectations have edged up somewhat in the very short term. For the euro area and Sweden they have dropped in the slightly longer term. The fall in long term interest rate expectations may reflect concerns that lower economic growth in the US, will also affect growth in these countries ahead. Interest rates in the euro area are expected to rise by 0.5 percentage point and between 0.75 and 1.0 percentage point in Sweden over the next six months. Forward rates indicate that trading partners' policy rates will increase up to autumn 2007 and will thereafter remain stable to end-2009.

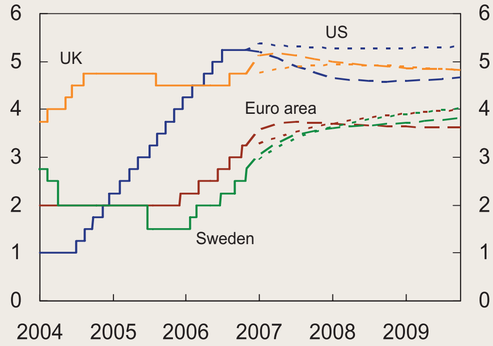
In Norway, the policy rate was increased by 0.25 percentage point on 16 August to 3.0%. Interest rate expectations, especially for somewhat longer maturities, have also fallen in Norway (see Chart 2.19). This may reflect reduced interest rate expectations internationally. However, the prospect of continued solid growth in Norway has limited the fall in Norwegian interest rates. Market participants expect the policy rate to increase by a little less than 1.25 percentage points in Norway in the course of the coming year, with a further small increase in the period to summer 2008. At end-2009, the key rate is expected to be lower in Norway

Chart 2.17 Prices for crude oil (Brent Blend) in USD per barrel and exported natural gas in NOK per Sm^3. Quarterly figures. 03 Q1 – 06 Q3



Sources: Reuters EcoWin, Statistics Norway and Norges Bank

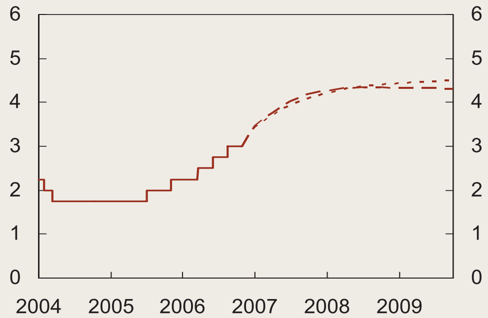
Chart 2.18 Interest rate expectations. Actual developments and expected key rates at 22 June and 26 October 06[1)]. Per cent. Daily and quarterly figures. Jan 04 – 31 December 09



[1)] Broken lines show expectations on 26 October 2006. Dotted lines show expectations at 22 June 2006. Expectations are based on interest rates in the money market and interest rate swaps.

Sources: Reuters and Norges Bank

Chart 2.19 Interest rate expectations in Norway. Actual developments and expected key rates at 22 June and 26 October 06[1)]. Per cent. Daily and quarterly figures. Jan 04 – 31 December 09



[1)] Broken line shows expectations on 26 October 2006. Dotted line shows expectations at 22 June 2006. Expectations are based on interest rates in the money market and interest rate swaps.

Sources: Reuters and Norges Bank

than in the US and the UK, but higher than in the euro area and Sweden.

A number of factors may have contributed to the very low international long-term interest rates observed in recent years (see Chart 2.20). Low underlying inflation and low inflation expectations, high demand for long-term papers and high saving in several countries are probably among the factors that have contributed to low long-term interest rates. In the US, ten-year government bond yields have been lower than three-month money market rates since end-June.

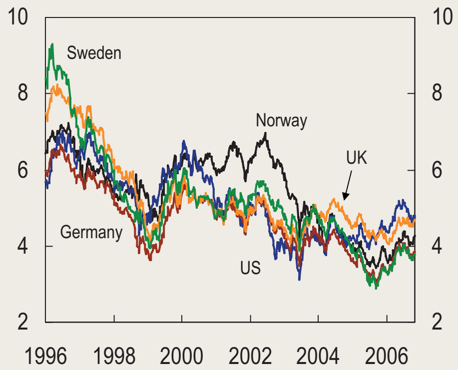
Developments in the krone exchange rate

Since *Inflation Report* 2/06, the krone has depreciated by 4.3% measured by the import-weighted krone exchange rate index I-44 (see Chart 2.21). The real exchange rate has also depreciated, but measured by relative labour costs and by relative consumer prices in a common currency, it is estimated to be about 6.5% stronger this year than the average for 1970-2005 (see Chart 2.22). These estimates are based on exchange rate developments so far this year and the estimates for the exchange rate and price and wage inflation in this *Report*.

Neither the appreciation of the krone last spring, nor the depreciation this autumn can be explained to any appreciable extent by changes in interest rate expectations. Various indices measuring the risk willingness among market participants have risen since summer. Risk-willingness is very high. Exchange rates in countries with high interest rates and with expectations of further interest rate increases have appreciated at the expense of low interest rate currencies. The low interest rate level in Norway has made it less attractive to buy NOK. The krone has depreciated substantially in pace with foreign exchange market participants' reduction of their NOK holdings.

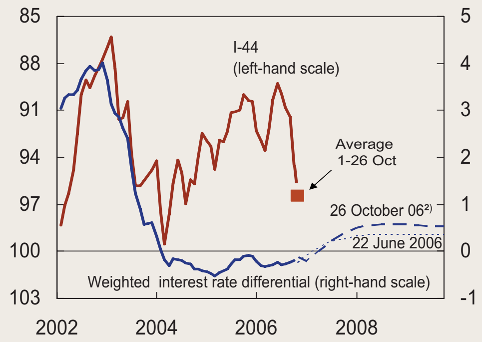
The relationship between oil prices and the krone exchange rate has historically been unstable. In some periods, oil prices have been important for developments in the krone exchange rate, while in other periods there has been no clear relationship. The fall in oil prices from record high levels in the first half of August has occurred in tandem with the depreciation of the krone. Recently, the krone exchange rate has fluctuated widely. In October, short-term volatility of the Norwegian krone against the euro was at the highest level in more than two years.

Chart 2.20 10-year government bond yield in various countries. Per cent. Weekly figures. Week 1 1996 – Week 43 2006



Source: Bloomberg

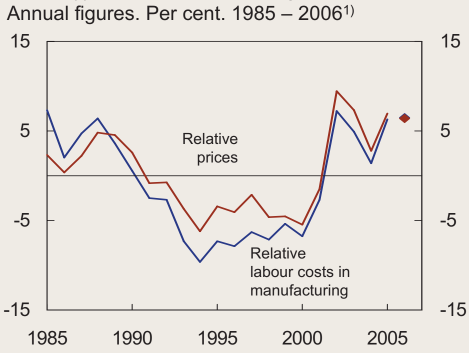
Chart 2.21 3-month interest rate differential against trading partners and import-weighted exchange rate (I-44) [1]. Monthly figures. Jan 02 – Dec 09



[1] A rising curve denotes a stronger krone exchange rate.
[2] Expectations are based on interest rates in the money market and interest rate swaps.

Sources: Reuters and Norges Bank

Chart 2.22 Real exchange rates (relative consumer prices and labour costs in common currency). Deviation from average 1970-2005. Annual figures. Per cent. 1985 – 2006[1]



[1] Average nominal exchange rate (TWI), consumer price inflation and wage growth for 2006 are based on projections in the baseline scenario in IR 3/06.

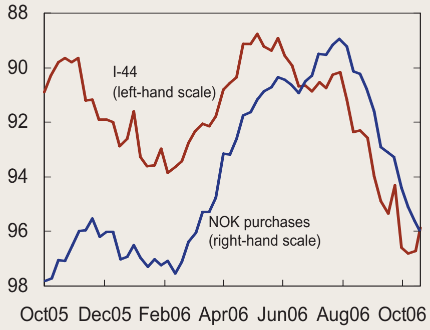
Sources: Statistics Norway, Tech. Reporting Committee on Income Settlements, Ministry of Finance and Norges Bank

According to statistics on foreign exchange transactions, foreign operators still dominate the krone market. Chart 2.23 shows that foreign operators' net purchases of NOK move closely in line with developments in the krone exchange rate. Petroleum tax payments involve substantial purchases of NOK by oil companies. These purchases are largely offset by Norges Bank's foreign exchange purchases on behalf of the Government Pension Fund – Global.

Developments in equity markets

Equity prices in Norway and internationally have generally risen since 2003. Following a sharp fall towards the end of the first half of 2006, international equity prices have advanced considerably in recent months (see Chart 2.24). Lower interest rate expectations, the fall in oil prices and positive corporate results internationally have contributed to the rise in equity prices. Corporate results in Norway have also been solid. Since the June *Report*, the Oslo Stock Exchange benchmark index has advanced by approximately 13% (see Chart 2.25). In Europe and the US, equity prices have increased by 13.5 and 11.5%, respectively.

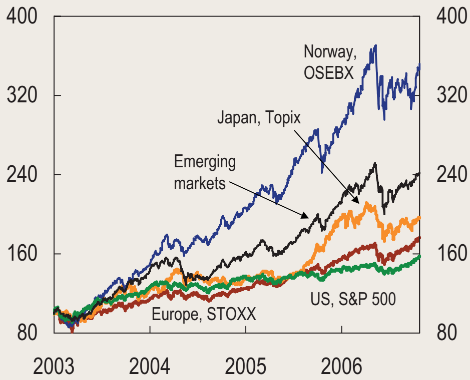
Chart 2.23 Foreign banks' net accumulated NOK purchases (in billions of NOK) and import-weighted exchange rate (I-44)[1]. Weekly figures. Week 40 2005 – Week 43 2006[2]



[1] A rising curve denotes a stronger krone exchange rate.
[2] The figure for Week 43 is the average up to 25 October.

Source: Norges Bank

Chart 2.24 Developments on international stock exchanges. 1 Jan 03 = 100. Daily figures. 2 Jan 03 – 26 Oct 06



Sources: Reuters EcoWin and Norges Bank

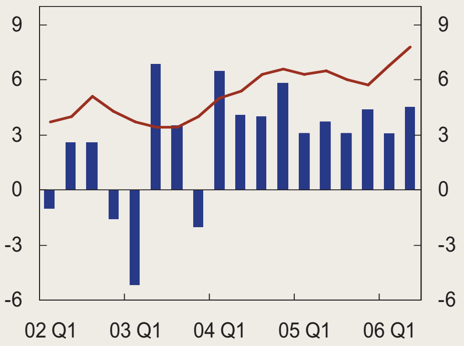
Chart 2.25 Developments in some sub-indices on the Oslo Stock Exchange. 1 Jan 03 = 100. Daily figures. 2 Jan 03 – 26 Oct 06

[1] Average of IT and telecommunications indices.
[2] Average of industrials and materials indices.

Sources: Bloomberg and Norges Bank

3 | Developments in the Norwegian economy

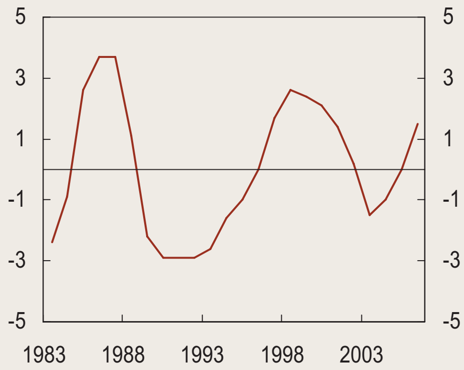
Chart 3.1 Mainland GDP. Seasonally adjusted annualised quarterly growth at constant prices (columns) and 4-quarter growth at current prices[1)] (line). Per cent. 02 Q1 – 06 Q2



[1)] The current price series is smoothed.

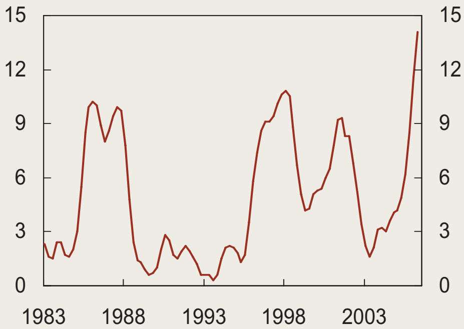
Sources: Statistics Norway and Norges Bank

Chart 3.2 Estimate of the output gap. Per cent. Annual figures. 1983 – 2006



Source: Norges Bank

Chart 3.3 Business tendency survey. Labour shortages in manufacturing.[1)] Smoothed. Per cent. Quarterly figures. 83 Q1 – 06 Q2



[1)] Share of companies reporting that labour shortages are a production constraint.

Source: Statistics Norway

The economic situation

Demand, output and capacity utilisation

The Norwegian economy is currently booming. Norway's terms of trade have improved by nearly 30% since 2000, and activity in the export industry is very high. Globalisation has resulted in a low rise in prices for imported consumer goods at the same time as strong growth in demand for commodities and semi-finished goods has led to high prices for many Norwegian export goods. Investment in the petroleum sector has risen sharply, leading to higher demand for goods and services supplied by mainland enterprises. Low interest rates and high real income growth have contributed to strong growth in household demand and a sharp rise in house prices. Fixed investment has also picked up in the wider business sector.

The output gap reflects our assessment of overall capacity utilisation in the economy in relation to a normal level.[1] Since summer 2003, average four quarter growth in mainland GDP has been just over 6%. At constant prices, growth has been about 4% annualised (see Chart 3.1). Since summer 2003, output in the mainland economy has increased more rapidly than potential output. After several years of strong growth, there is currently little spare capacity in the economy. The output gap for 2006 is now estimated to be clearly positive (see Chart 3.2). [2]

Technical calculations of the output gap based on developments in mainland GDP are assessed together with other information about capacity utilisation in the economy. Statistics Norway's business tendency survey shows that an increasing number of industrial leaders are reporting a shortage of qualified labour (see Chart 3.3). Company contacts in our regional network confirm that capacity utilisation is higher than normal. In the August round of interviews, 59% of the companies reported capacity problems. The share has increased since the previous round. Difficulties in accommodating an increase in demand are most pronounced in building and construction and among suppliers to the petroleum industry. An increasing number of contacts report labour shortages, particularly a shortage of engineers, project managers, transport workers and qualified labour within corporate services. In some regions, labour shortages are also beginning to emerge in retail trade and household services.

[1] See box on "Norges Bank's estimate of the output gap" in *Inflation Report* 2/04 for a more detailed account of methods for estimating the output gap.

[2] There is considerable uncertainty surrounding real-time output gap estimates. See box on page 48.

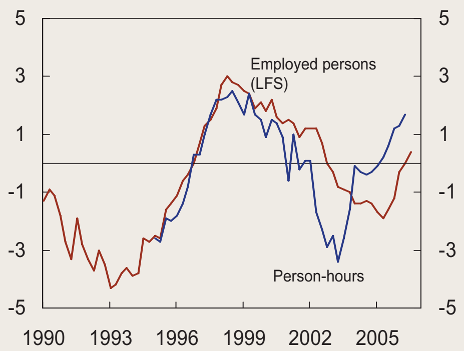
The demand for labour is high. Employment growth is particularly strong in commercial services, building and construction and the health care sector. Manufacturing employment has also edged up recently.

The number of person-hours worked has increased markedly the past three years. Both person-hours and the number of persons employed are higher than estimated trend levels (see Chart 3.4). In the first phase of the upturn, employment measured by the number employed increased less than person-hours, partly reflecting lower sickness absence. The number of persons employed, as measured by Statistics Norway's Labour Force Survey (LFS), has exhibited a marked increase since end-2005 and is estimated to increase by 2¾% this year. In recent years, increased use of foreign labour has probably curbed employment growth in the LFS. Persons on short-term labour contracts who are not registered as resident in Norway are not included in the LFS. There are probably about 20 000 persons from other Nordic countries who have performed short-term assignments in Norway this year. The number has been relatively stable in recent years (see Chart 3.5). Since EU enlargement in 2004, however, the number of workers from new EU member states has increased markedly. In 2006, the number of persons employed from new EU members who are not resident in Norway is estimated at close to 30 000, i.e. an increase of 12 000 since 2005.[3]

Growth in the labour force picked up in autumn 2005, and the labour force is estimated to expand by 1½% in 2006, i.e. more than growth in the working age population (16-74) would suggest. This is in line with earlier experience, which indicates that the labour supply increases somewhat more than population growth in the age group 16-74 when growth in activity is high. Labour force participation rate is projected to increase by ½ percentage point from 2005 to 2006. The increase in the number of disability pensioners has curbed growth in the labour force for a long period. In the first half of 2006, the increase in the number of disability pensioners corresponds to about a third of the growth in the working age population (16-74). If we take account of higher disability propensities and that older workers, who have a low labour force participation rate, account for a larger share of the labour force, the labour force participation rate seems to be at approximately the same level now as at the peak of the previous expansion. Therefore, labour resources outside the labour force are probably limited. However, many employees work part-time. According to the LFS, the number of persons working part-time has been increasing for a number of years. A fairly large proportion of these employees would like to increase their working hours. In the first half of 2006, the supply of labour in the

[3] See box "Foreign labour in Norway" in *Inflation Report* 2/06 for a further discussion of the scale of foreign labour in Norway.

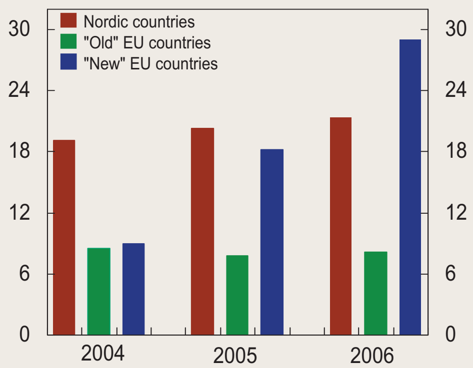
Chart 3.4 Employment and person-hours. Percentage deviation from trend[1)]. Quarterly figures. 90 Q1 – 06 Q3



[1)] Trend calculated using HP filter. See Staff Memo 2005/2 (www.norges-bank.no) for further information.

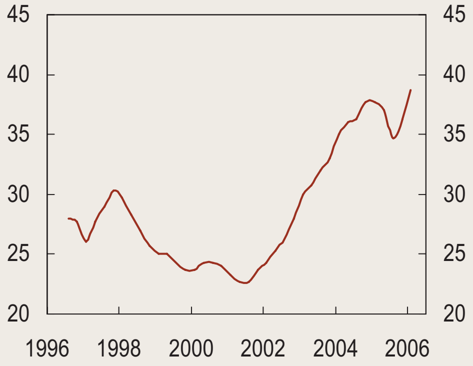
Sources: Statistics Norway and Norges Bank

Chart 3.5 Estimated number of employed persons not resident in Norway. In thousands. Annual figures



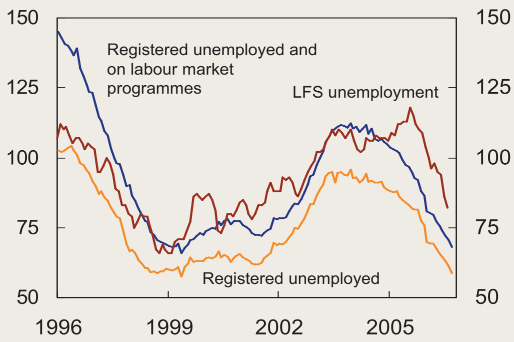
Source: Norges Bank

Chart 3.6 Potential supply of person-years from underemployed. In thousands. 3-quarter centred moving average. 96 Q2 – 06 Q1



Sources: Statistics Norway and Norges Bank

Chart 3.7 Unemployed. LFS unemployment, registered unemployed and persons on ordinary labour market programmes. In thousands. Seasonally adjusted. Monthly figures. Jan 96 – Sep 06



Sources: Statistics Norway and Norwegian Labour and Welfare Organisation (NAV)

form of underemployed persons was equivalent to just over 40 000 person-years (see Chart 3.6). This is 15 000 more person-years than the average for the period 1998-1999.

High demand for labour has resulted in a marked decline in unemployment so far this year. Unemployment is now in line with the unemployment level during the previous expansion at the end of the 1990s (see Chart 3.7). Registered unemployment was 2.4% of the labour force in September, and according to the LFS, seasonally adjusted unemployment was 3.4% in the three-month period from June to August. This is 0.5 percentage point lower than the previous three-month period.

Real wage growth may be an indicator of labour market tightness. Stable real wage growth, in line with productivity growth, is a sign of a balanced labour market. In spite of solid corporate profitability and an unemployment level that has earlier triggered markedly higher wage growth, real wage growth from 2005 to 2006 will probably be moderate. However, unemployment fell rapidly through summer. The main agreements in the centralised wage settlements had then been concluded. The social partners may therefore have assumed that the labour market would be less tight than currently implied by employment and unemployment figures. For large employee groups, the centralised wage settlements also establish the framework for the local negotiations through autumn, which means that annual wage growth is largely determined relatively early in the year. Some groups negotiate wages locally in the autumn. Wage growth may be higher than average for these groups. Systematic information about these negotiations is limited, however, before the first months of 2007. In the last rounds of interviews with our regional network, an increasing number of companies reported that wage growth in 2006 will be higher than budgeted early this year.

The level of unemployment that is consistent with stable real wage growth is uncertain and probably varies over time. We have assumed that increased economic integration across countries, both in the form of an increase in inward labour migration and intensified competition in product markets, may have a dampening effect on wage demands for a given level of unemployment. The improvement in the terms of trade and higher productivity growth may have the opposite effect. The upward pressure on price and wage inflation given the level of current resource utilisation, as reflected in the output gap, is estimated to be lower than in the previous expansion even though the unemployment rate is at approximately the same low level.

The growth rate in the mainland economy is now higher than previously projected and the labour market has tightened somewhat more rapidly than expected. The pressure on economic resources may be slightly higher than estimated in the previous *Inflation Report*, and the estimate of the output gap at the end of 2006 has been adjusted upwards by ½ percentage point (see Chart 3.8).

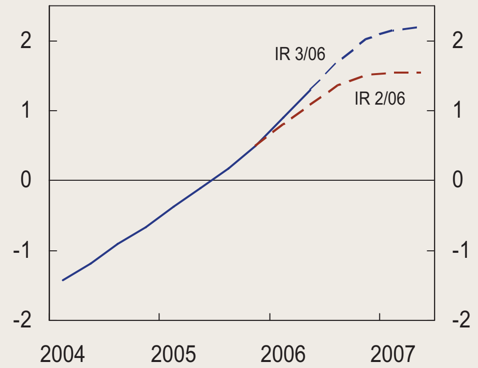
Continued strong growth in the Norwegian economy is in prospect in the near term, and GDP growth is expected to be somewhat higher at the beginning of 2007 than assumed in the previous *Report*. Statistical models for GDP growth, which are based on current economic indicators, support this. High growth in household demand will continue to fuel activity. Both Statistics Norway's business tendency survey and a high level of new orders and order reserves point to a further pick-up in manufacturing investment. According to information from our regional network and private job placement services, many companies are planning to increase employment over the next few quarters. The number of person-hours worked may grow at a more moderate pace than the number of persons employed as a result of higher sickness absence. Growth in employment is expected to remain solid, even though the growth rate will probably edge down. There are prospects that capacity utilisation in the economy will increase further in the period to summer. The output gap next year is estimated at 2¼%, i.e. ¾ percentage point higher than in the previous *Inflation Report*.

Inflation

After three years of high growth in the economy, underlying inflation remains low and has not picked up substantially. The rise in prices for both imported and domestically produced goods and services has been restrained by structural changes in the Norwegian and international economy (see Chart 3.9). Increased trade with China and other emerging economies have contributed to falling import prices. This has led to high real wage growth even with low nominal pay increases. The high level of inward labour migration in recent years has probably curbed wage growth in sectors where activity is high, e.g. in the construction industry. The opportunities generated by a more global labour market may also have contributed to restraining wage growth in other sectors. Competition has increased in many product markets. In recent years, new operators have entered markets that were previously fairly sheltered from competition. Examples include the grocery trade, building materials, telecommunications and banking and insurance.

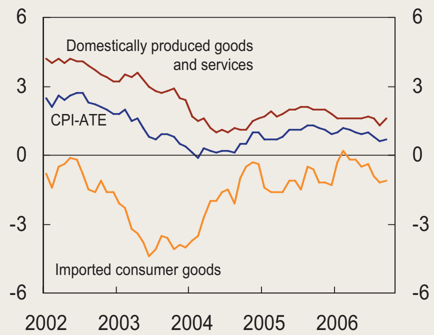
In addition, in some sectors that manufacture and sell goods and services to households, productivity growth has been higher than in other sectors of the economy. Productivity growth has been particularly high in retail trade. In the past five years, productivity growth in retail trade has been 0.5 percentage point higher on average than in the mainland

Chart 3.8 Output gap estimates in the baseline scenario in IR 2/06 and IR 3/06. Per cent. Quarterly figures. 04 Q1 – 07 Q2



Source: Norges Bank

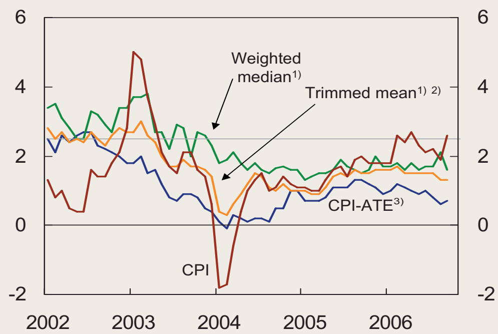
Chart 3.9 CPI-ATE[1]. Total and by supplier sector[2]. 12-month change. Per cent. Jan 02 – Sep 06



[1] CPI-ATE: CPI adjusted for tax changes and excluding energy products. A further adjustment is made for the estimated effect of reduced maximum day-care rates from January 2006.
[2] Norges Bank's calculations.

Sources: Statistics Norway and Norges Bank

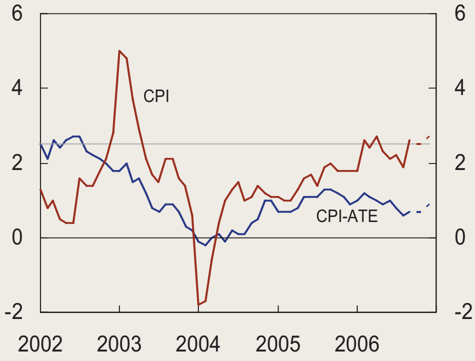
Chart 3.10 CPI and indicators of underlying inflation. 12-month change. Per cent. Jan 02 – Sep 06



[1] Estimated on the basis of 146 sub-groups of the CPI-AT.
[2] Price changes accounting for 20 per cent of the weighting base are eliminated.
[3] CPI-ATE: CPI adjusted for tax changes and excluding energy products. A further adjustment is made for the estimated effect of reduced maximum day-care rates from January 2006.

Sources: Statistics Norway and Norges Bank

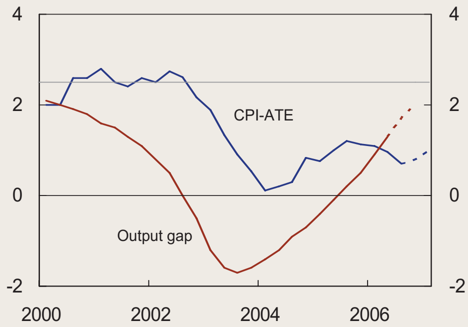
Chart 3.11 CPI and CPI-ATE[1]. 12-month change. Per cent. Jan 02 - Dec 06[2]



[1] CPI-ATE: CPI adjusted for tax changes and excluding energy products. A further adjustment is made for the estimated effect of reduced maximum day-care rates from January 2006.
[2] Projections for Oct 06 – Dec 06.

Sources: Statistics Norway and Norges Bank

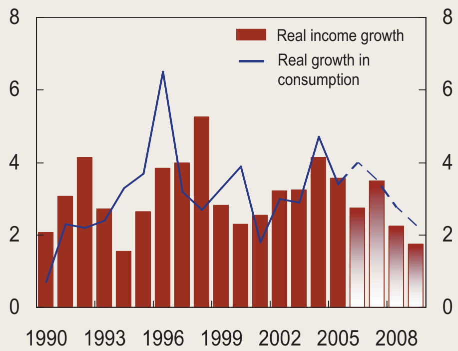
Chart 3.12 CPI-ATE[1] and estimates of the output gap[2]. Per cent. Quarterly figures. 00 Q1 – 06 Q4[3]



[1] CPI-ATE: CPI adjusted for tax changes and excluding energy products. A further adjustment is made for the estimated effect of reduced maximum day-care rates from January 2006.
[2] Quarterly figures for the output gap have been derived from the annual figures.
[3] Projections for the period 06 Q3 – 06 Q4.

Sources: Statistics Norway and Norges Bank

Chart 3.13 Real growth in household disposable income[1] and consumption. Per cent. Annual figures. 1990 – 2009[2]



[1] Excluding share dividends.
[2] Projections for 2006 – 2009.

Sources: Statistics Norway and Norges Bank

economy as a whole. New methods for measuring price developments, i.e. for food and housing services, may also have influenced the figures for consumer price inflation.

Through 2006, the year-on-year rise in consumer prices adjusted for tax changes and excluding energy products (CPI-ATE) exhibited a gentle downward trend. The year-on-year rise in prices was 0.5% in September, which was somewhat lower than projected in the previous *Report*. Adjusted for the reduction of maximum day-care rates as from January 2006, prices rose by 0.7%. In the past year, underlying inflation by different measures has generally been stable but considerably lower than the target of 2.5%. In September, the weighted median showed a year-on-year rise of 1.6%, while the corresponding figure for a trimmed mean was 1.3% (see Chart 3.10). According to our assessment, underlying inflation is currently in the interval ¾%-1 ½%.

High growth in the global economy has also resulted in a sharp increase in prices for oil and other commodities. Partly owing to rising petrol prices, the rise in the CPI has been higher than the rise in the CPI-ATE in the past two to three years (see Chart 3.11). The year-on-year rise in energy prices in the CPI has been somewhat less than 20% on average in 2006. In 2006, the substantial difference between the CPI and the CPI-ATE primarily reflects the rise in electricity prices. On the Nordic energy exchange Nordpool, both spot and forwards electricity prices increased sharply in the summer months. Over the past month, prices have fallen somewhat again. Forward prices indicate continued high electricity prices through winter, which may then contribute to high overall consumer price inflation until next spring. Underlying inflation measured by the CPI-ATE is not expected to rise substantially in the coming months (see Chart 3.12). Inflation is likely to be somewhat higher at the beginning of 2007. However, the rise in the CPI-ATE is expected to be somewhat lower next year than projected in the previous *Inflation Report*. For more information about recent price developments, see box on page 42.

Outlook for the years ahead

Households

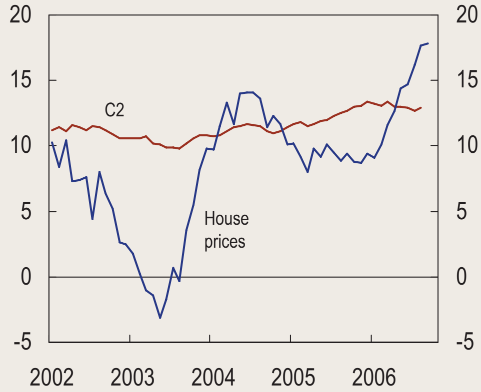
Growth in household demand has been one of the most important driving forces behind the upturn in the Norwegian economy over the past few years. Low interest rates, rising asset prices and high growth in household real income have contributed to growth in consumption. High demand for labour may have increased household wage expectations and reduced uncertainty. Consumption growth is expected to remain high to the end of this year and into 2007 (see Chart 3.13).

Household debt growth has been high in recent years (see Chart 3.14). With a gradual increase in Norges Bank's policy rate, household interest expenses will rise substantially in the course of the projection period. Higher taxes will also curb growth in household purchasing power in 2007. At the same time, growth in wage income will push up purchasing power. On balance, household real disposable income excluding dividend income is expected to grow at a somewhat slower pace through the projection period than in recent years. Higher interest rates and slower growth in household purchasing power are projected to result in a gradual easing of consumption growth in the course of the projection period and a slight fall in the saving ratio (see Chart 3.15).

Solid income growth and confidence in the future, coupled with low short- and long-term interest rates, have contributed to a high level of activity in the housing market. Over the past two years, housing investment has risen by an annual average of 13%. It appears that growth will be high again this year, but somewhat lower than in 2004 and 2005. A number of contacts in Norges Bank's regional network report high demand for new dwellings, and order reserves for homes are still exhibiting solid growth. Pent-up demand following a period of relatively limited residential construction in the 1990s, increased labour inflows, migration to urban areas and high resale home prices may be some of the factors behind the high level of housing investment. These factors may also sustain demand for new homes in the period ahead. Changes in the age composition of the population may have the opposite effect. As a result of a low level of cohorts in the latter half of the 1970s and first half of the 1980s, the number of persons in the start-up phase is now falling (see Chart 3.16). On balance, housing investment is expected to level off through the projection period.

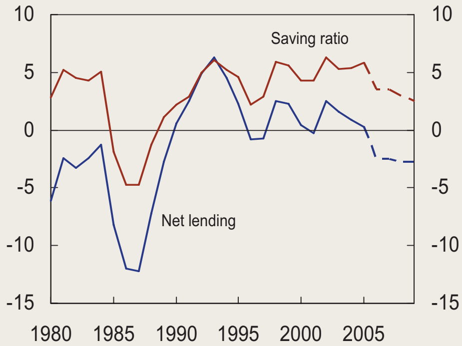
House prices have risen sharply this year (see Chart 3.14). After a rise in house prices of 9% from 2004 to 2005, prices have risen by an average of 14% in the first 9 months of 2006 compared with the same period one year earlier. Falling unemployment and solid growth in household disposable income have probably contributed to the upswing. Intensified competition and adaptation to new capital adequacy rules in the financial sector have squeezed banks' lending margins. This may have curbed the impact of higher policy rates on house price inflation. With a continued tight labour market and accelerating wage growth, house price inflation is expected to remain high in the short term. After a period, increased supply of new dwellings, slower growth in household disposable income and higher interest rates might curb the rise in house prices. Both short- and long-term interest rates influence developments in house prices. Although long-term rates are primarily influenced by expectations concerning the level of future interest rates

Chart 3.14 House prices and credit to households (C2). 12-month change. Per cent. Jan 02 – Sep 06



Sources: Norwegian Association of Real Estate Agents, Association of Real Estate Agency Firms, FINN.no, ECON and Norges Bank

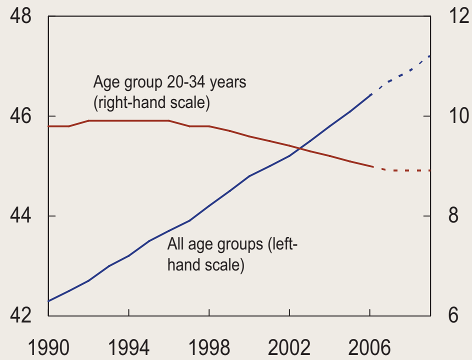
Chart 3.15 Household saving ratio and net lending as a share of disposable income.[1)] Annual figures. 1980 – 2009[2)]



1) Adjusted for estimated reinvested share dividends for 2000 – 2005.
2) Projections for 2006 – 2009.

Sources: Statistics Norway and Norges Bank

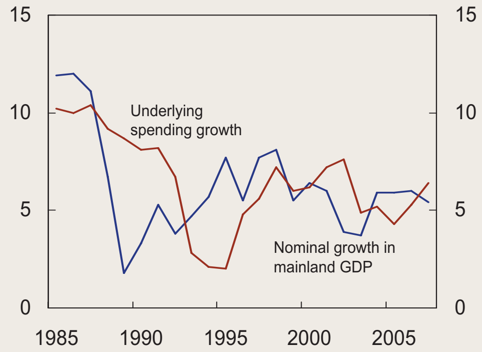
Chart 3.16 Population. In 100 000s. At 1 January. 1990 – 2009[1)]



1) Statistics Norway's projections for 2007 – 2009. Alternative median growth (MMMM).

Sources: Statistics Norway and Norges Bank

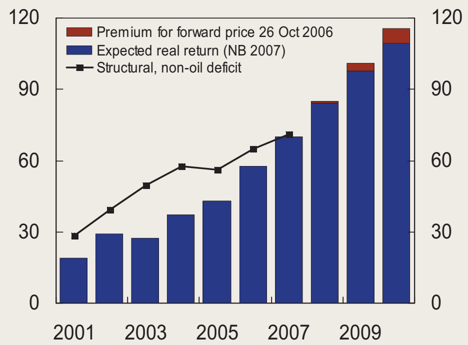
Chart 3.17 Underlying spending growth in the government budget and nominal growth in mainland GDP. Per cent. Annual figures. 1985 – 2007[1)]



1) Projections for 2006 and 2007 from the Ministry of Finance.

Sources: Ministry of Finance (National Budget 2007) and Statistics Norway

Chart 3.18 Expected real return on the Government Pension Fund - Global. In billions of 2007-NOK. Annual figures. 2001 – 2010



Sources: Ministry of Finance (National Budget 2007) and Norges Bank

Table 3.1 Projections for main macroeconomic aggregates. Change from previous year in per cent unless otherwise stated

	2006	2007	2008	2009
Mainland demand	4¼	3¾	2½	2
Private consumption	4	3½	2¾	2¼
Public consumption	2¾	2¾	3	3¼
Mainland fixed investment	7¾	5¼	1	-¾
Petroleum investment	5	0	-5	0
Traditional exports	6½	4½	2¾	2¾
Imports	6¼	4¼	2¼	2¼
GDP, mainland Norway	4	3¼	2	1¾
Output gap[1)], M-Norway	1½	2¼	1¾	1
Employment	2¾	1½	¼	0
LFS unemplyment[2)]	3½	3	3¼	3¾
CPI-ATE[3)]	1	1¼	2¼	2½
Annual wage growth[4)]	4¼	5	5¼	4¾

1) Percentage deviation between actual and projected potential GDP.
2) Percent of labour force.
3) CPI-ATE: CPI adjusted for tax changes and excluding energy products. A further adjustment is made for the estimated effect of reduced maximum day-care rates from January 2006.
4) Based on TRCIS definitions and calculations. Includes costs related to the introducion of mandatory occupational pensions.
Source: Norges Bank

in Norway, they will also be influenced by the level of long-term interest rates among Norway's trading partners and regulations relating to financial institutions' investments. If long-term rates remain at a low level, this might reduce the impact of a rise in short-term interest rates on house prices.

Public sector

In the Government's budget proposal for 2007, the structural non-oil budget deficit, measured as a percentage of trend mainland GDP, is estimated to increase from 4.3% in 2006 to 4.6% in 2007. Measured by this indicator, the budget for 2007 will have an expansionary effect on the economy, and to a somewhat further extent than assumed in the previous *Inflation Report*. However, the impulses to the economy may be somewhat weaker than this year. Strong growth in the Norwegian economy is boosting tax revenues and reducing spending on unemployment benefits. As a result, the general government budget deficit excluding transfers from the Government Pension Fund – Global will be reduced from 2006 to 2007. These automatic stabilisers are also dampening cyclical fluctuations.

The budget proposal for 2007 implies that underlying nominal growth in general government budget spending will increase by 6.4%. Spending growth is higher than the Government's estimate of nominal growth in mainland GDP of 5.4% (see Chart 3.17).

The fiscal rule entails a gradual phasing-in of petroleum revenues into the economy, approximately in pace with the expected real return, estimated at 4%, on the Government Pension Fund - Global. The guidelines for petroleum revenue spending clearly state that spending should be adapted to the economic situation.

As a result of relatively high oil prices, there are prospects that the capital in the Government Pension Fund – Global will increase markedly in the years ahead. We assume that oil prices will move in line with futures price. Petroleum revenue spending in line with the expected real return on the Fund implies that the structural, non-oil deficit may increase by about NOK 15bn at 2007 prices in both 2008 and 2009 (see Chart 3.18). In the light of the strong expansion in the Norwegian economy, a less pronounced increase in petroleum revenue spending will be in line with the fiscal rule. Our projections are based on the assumption that fiscal policy will generate some stimulus to overall demand and output in 2008 and 2009, but somewhat less than the rise in the expected return on the Fund, given oil futures prices (see Table 3.1).

Tax revenues so far this year have been appreciably higher than assumed in *Inflation Report* 2/06, and local government revenues are rising at a fast pace. In the National Budget for 2007, real local government revenue growth for the year is projected at 4%, equivalent to NOK 9.1bn. Local government activity is not expected to increase to the same extent, thereby improving net operating results. Revenue growth for 2007 will be lower again, at about 1 per cent.

Oil and gas activity

The level of activity on the Norwegian continental shelf is high, and the investment volume for the oil and gas industry appears to be somewhat higher this year than last year. Owing to large projects like Ormen Lange, Snøhvit and Statfjord late phase development, total investment may come to around NOK 100bn in 2006. This is reflected in the high level of activity among suppliers to the petroleum industry. The substantial investment in on-shore installations in recent years has generated strong impulses to the mainland economy. According to Statoil, 60% of the value of contracts associated with the development of the LNG plant outside Hammerfest has been awarded to Norwegian companies. This is appreciably higher than Statoil assumed when the project was initiated. The overall effect on the domestic business sector will depend on the extent to which Norwegian companies use foreign subcontractors.

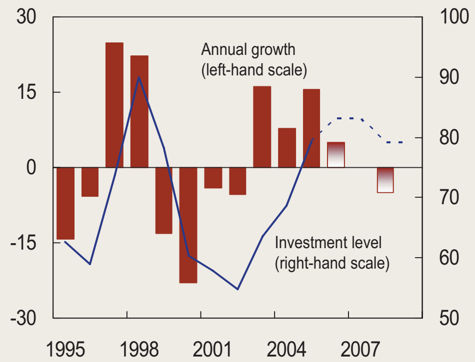
Statistics Norway's investment intentions survey indicates that exploration investment may increase markedly both this year and in 2007, following some years of subdued exploration activity. This reflects expectations of continued high oil prices, promising exploration results and new fields under exploration. However, high demand for rigs has pushed up costs, which may have a dampening impact on exploration activity.

The level of investment in 2007 is assumed to be approximately the same as this year, before falling to a somewhat lower level thereafter (see Chart 3.19). Increased efforts to extend production at older fields may contribute to sustaining investment activity later in the period. The recent fall in oil prices will probably have little effect on investment plans. The price estimates underlying companies' investment decisions remain low compared with both spot and futures prices for oil.

Mainland business fixed investment

Since 2003, business fixed investment has made an increasing contribution to growth in the Norwegian economy. The investment level as a share of mainland GDP is approaching the peak recorded in the previous expansion. Low interest rates and the global expansion have contributed to high

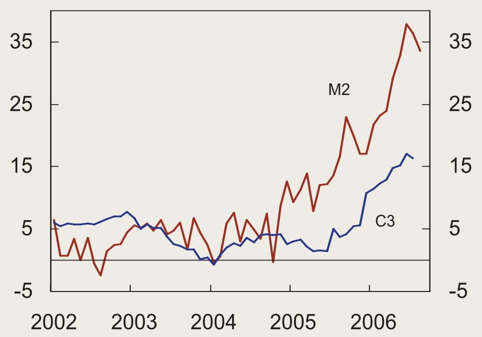
Chart 3.19 Investment in oil and gas recovery incl. pipeline transport. Investment level in billions of NOK (constant 2003-prices) and annual growth in per cent. 1995 – 2009[1]



[1] Projections for 2006 – 2009.

Sources: Statistics Norway and Norges Bank

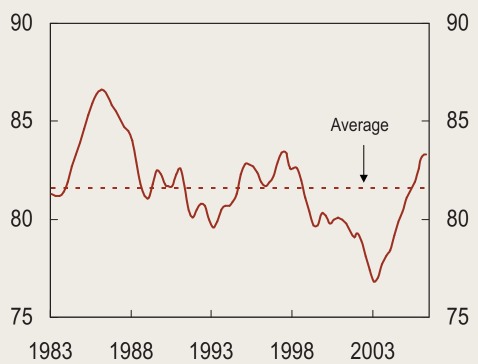
Chart 3.20 Credit to enterprises[1] and enterprises' liquid assets[2]. 12-month change. Per cent. Jan 02 – Aug 06



[1] Total debt non-financial enterprises mainland Norway (C3).
[2] Non-financial enterprises' liquid assets (M2).

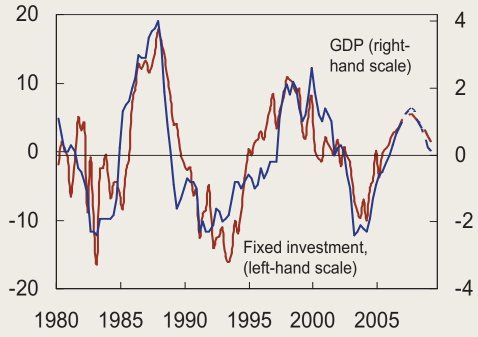
Source: Norges Bank

Chart 3.21 Capacity utilisation in manufacturing. Trend. Per cent. Quarterly figures. 83 Q1 – 06 Q2



Sources: Statistics Norway and Norges Bank

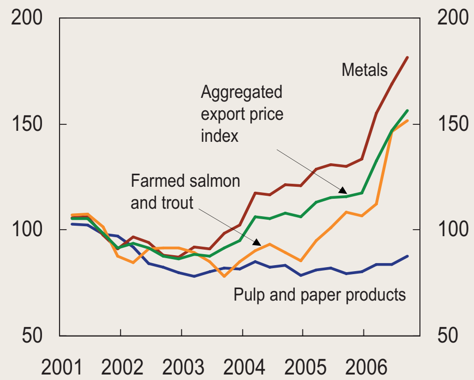
Chart 3.22 GDP and fixed investment. Mainland Norway. Percentage deviation from trend.[1)] Quarterly figures. 80 Q1 – 09 Q2[2)]



1) Trend calculated using HP filter. See Staff Memo 2005/2 (www.norges-bank.no) for further details.
2) Based on annual projections for 2006 – 2009.

Sources: Statistics Norway and Norges Bank

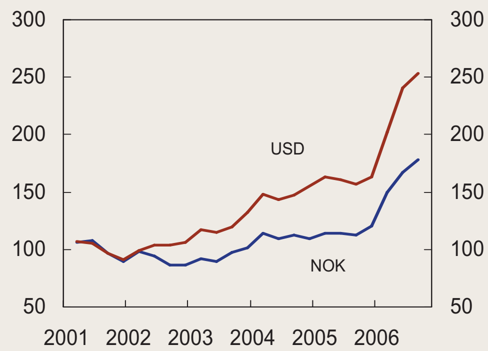
Chart 3.23 Price indices[1)] for exports from Norway in NOK. 2001 = 100. Quarterly figures. 01 Q1 – 06 Q3



1) Norges Bank's estimates based on world market prices.

Sources: Reuters EcoWin, Statistics Norway and Norges Bank

Chart 3.24 Price index[1)] for export of non-ferrous metals[2)] from Norway in USD and NOK. 2001 = 100. Quarterly figures. 01 Q1 – 06 Q3



1) Norges Bank's estimates based on world market prices.
2) Aluminium, nickel, copper and zinc.

Sources: Reuters EcoWin, Statistics Norway and Norges Bank

profitability in most industries. The return on real capital still appears to be high. According to TNS Gallup's third-quarter business sentiment survey, corporate profitability is expected to remain solid next year. Growth in enterprises' liquid funds (M2) has advanced markedly over the past year (see Chart 3.20). At the same time, higher growth in credit to the enterprise sector indicates that enterprises are now debt-financing an increasing share of their investment.

The order situation for manufacturing is highly favourable, and a number of industries have record-high order reserves. According to surveys, industrial leaders are optimistic about the market outlook. Capacity utilisation in manufacturing has continued to grow (see Chart 3.21). Industrial leaders are signaling that production capacity will be expanded by increasing both investment and recruitment.

According to Norges Bank's regional network, the market outlook for service industries remains favourable, and there are reports of plans to increase investment, particularly in business premises.

Fixed investment in mainland Norway normally fluctuates more than mainland GDP (see Chart 3.22). With prospects for continued high capacity utilisation and demand in the Norwegian economy, and solid profitability, investment growth is expected to remain high in 2006. As the policy rate is brought up to a more normal level and growth in the economy moderates, investment growth will slow. If long-term interest rates remain at a low level, this may reduce the impact of higher policy rates to some extent.

Foreign trade

The Norwegian export industry has benefited extensively from the dismantling of trade barriers and increased global integration. Growth in international trade is higher than for many years. In particular, China and other low-cost countries have experienced a sharp rise in exports. Demand for intermediate and capital goods from emerging economies has increased in pace with production. Robust growth in maritime transport has led to increased demand in favour of Norwegian shipyards. Prices for many Norwegian export goods have risen (see Chart 3.23). Changes in the exchange rate have resulted in a slower rise in prices for Norwegian exporters (see Chart 3.24). Whereas export prices for non-ferrous metals have risen by almost 140% since 2001. Measured in USD, the rise is about half the level measured in NOK. High prices have nonetheless contributed to an improvement in Norway's terms of trade in recent years, also for goods excluding oil and gas.

Activity in the Norwegian export industry is high, and order reserves imply continued buoyant demand for Norwegian export goods. Lower global growth and capacity constraints in a number of industries will probably curb export growth as early as next year.

High demand in the economy, coupled with increased import shares, have contributed to strong growth in imports in recent years. In the period ahead, lower production growth in relatively import-dependent sectors, such as suppliers to the petroleum industry, and in the export industry will probably reduce growth in import shares. As demand growth gradually slackens, import growth may be somewhat weaker.

Output

As a result of continued low interest rates and high activity in the global economy, output will increase at a faster pace than potential output again next year. The economy may face growing capacity constraints, which may limit further output growth. Looking further ahead, higher interest rates, lower global growth and somewhat lower petroleum investment will gradually lead to slower demand growth. Higher wage growth in the Norwegian export sector than among trading partners may also result in somewhat weaker export growth. Increased general government demand will contribute to underpinning demand. Capacity utilisation is expected hover above a normal level throughout the projection period, but the divergence will gradually diminish.

Labour market

The working age population is assumed to increase by almost 1% annually up to 2009, while an increase in the number of disability pensioners and changes in the age composition of the population will curb growth in the labour supply (see Table 3.2). The youngest and oldest age groups will account for a growing share of the population in the years ahead. As a result of solid growth in demand for labour, labour force participation rates will edge up again in 2007, but labour resources outside the labour force are now probably limited. The labour force is expected to increase moderately in the years ahead.

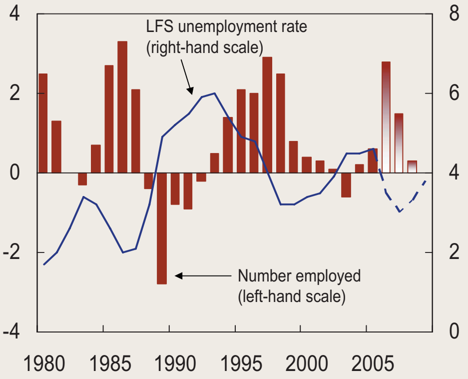
Considerble labour inflows from the new EU member states have led to a considerable increase in the supply of labour in recent years. The future magnitude of these inflows is uncertain. Inward labour migration to Norway has taken place in a period with high unemployment in large parts of Europe. We have assumed that slower growth in the Norwegian economy and increased demand for labour in

Table 3.2 Growth in population and labour force

	2006	2007	2008	2009
Growth in population aged 16-74	0.9	1.0	1.0	1.0
Contribution from demographic change in labour force	-0.2	-0.2	-0.3	-0.3
Contribution from increase in number of disability pensioners	-0.2	-0.2	-0.2	-0.2
Contribution from cyclical conditions	1	½	0	0
Growth in labour force	1½	¾	½	½

Sources: Statistics Norway and Norges Bank

Chart 3.25 Change in employment on previous year. Per cent. Unemployment (LFS) as a percentage of the labour force. Annual figures. 1980 – 2009[1)]



[1)] Projections for 2006 – 2009.

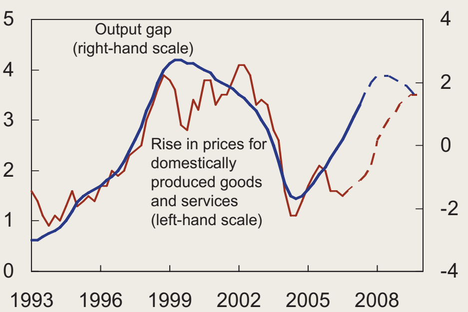
Sources: Statistics Norway and Norges Bank

Chart 3.26 Annual wage growth[1)] and LFS unemployment. Per cent. Annual figures. 1993 – 2009[2)]

[1)] Average for all groups. Including estimated costs of increase in number of vacation days and introduction of mandatory occupational pension.
[2)] Projections for 2006 – 2009.

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

Chart 3.27 Rise in prices for domestically produced goods and services in the CPI-ATE[1)] (4-quarter rise) and output gap level (lagged by 4 quarters). 93 Q1 – 09 Q4[2)]



[1)] Adjusted for the estimated effect of reduced maximum day-care prices from January 2006.
[2)] Estimate for period 06 Q3 – 09 Q4.

Sources: Statistics Norway and Norges Bank

other parts of the Nordic region and in the new EU member states will gradually stabilise the number of foreign workers on short-term assignments in Norway.

As growth in the Norwegian economy moderates, employment is expected to growth at a somewhat slower rate (see Chart 3.25). Unemployment is expected to fall somewhat further from the current low level, and the labour market will be very tight in the coming year. If the supply of foreign labour increases at the same pace next year, unemployment will probably fall somewhat less than we have assumed. As growth in activity in the Norwegian economy abates, it is estimated that employment will grow at a somewhat slower rate than the labour force, resulting in a moderate increase in unemployment (see Chart 3.25).

Wage growth

Wage growth has edged up since 2005, but there are some signs that wage drift this year may be somewhat higher than expected earlier. However, wage drift is still projected to be lower than the average for the years 1997 - 2002. Annual wage growth, including the costs associtaed with mandatory occupational pensions, is estimated at 4¼% in 2006 (see Chart 3.26).

In the period ahead, a tight labour market is expected to result in higher real wage growth. However, it is assumed that labour inflows will have a dampening impact on wage demands, so that real wage growth will be a little lower in the next few years than in previous periods of equally low unemployment. If the competitive edge of foreign enterprises weakenes through a wider application of collective wage agreements or other measures, or if the supply of foreign labour is lower than assumed, wage growth might be higher than projected. On the other hand, it is possible that inward labour migration will continue on a similar scale in the years ahead, in which case wage growth might be more subdued.

The central government budget for 2007 proposes changes in the sick pay regulations that may push up growth in labour costs by ¼ percentage point. If the changes are implemented, growth in labour costs will be an estimated 5¼% in 2007.

Prices

Continued strong competition, both foreign and domestic, and high productivity growth in recent years will probably contribute to continued low domestic inflation in 2007. Higher wage growth in the next few years will gradually translate into a higher rise in prices for goods and services produced in Norway. In addition, increased demand provides scope for higher mark-ups in some product markets, while the prospect of somewhat lower growth in retail trade productivity may gradually push up the rise in prices for consumer goods. Inflation will probably pick up somewhat later than the historical relationship between inflation and capacity utilisation would suggest (see Chart 3.27). Overall, the rise in prices for domestically produced goods and services is projected to pick up gradually and exceed 3% towards the end of 2008 (see Chart 3.28).

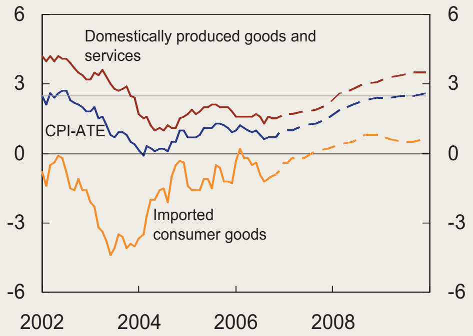
Trade liberalisation and a shift in imports towards low-cost countries have for a long period resulted in negative price impulses from imported consumer goods, measured in foreign currency (see Chart 3.29). The shift in imports has been somewhat less pronounced in 2006 than in previous years. The projections are based on a continued shift in trade, but to a lesser extent than earlier. The rise in prices for oil and other commodities in recent years has resulted in a sharp rise in producer and export prices among Norway's traditional trading partners this year. It is assumed that this will result in higher inflation in the short run. On balance, it is assumed that price impulses from imported consumer goods, measured in foreign currency, will be close to zero in the years ahead.

The krone depreciation since summer will contribute to a higher rise in prices for imported consumer goods ahead. Selling prices for imported consumer goods are also influenced by developments in distribution and sales costs in Norway. As domestic inflation picks up, this is also expected to push up prices for imported goods. Our overall assessment is that selling prices for imported consumer goods will be approximately unchanged next year. In 2008 and 2009, selling prices will rise by around ½% annually.

Oil futures prices do not suggest pronounced changes in prices for petroleum products charged to consumers through the projection period. Electricity forward prices indicate that electricity prices will remain at their current high levels until spring 2007, and thereafter fall substantially. The year-on-year rise in the CPI may decelerate to less than 1% in autumn 2007. Further ahead, prices for energy products are expected to move in line with the general rise in prices.

Overall, inflation measured by the CPI-ATE is projected to pick up gradually to 2½% over the next three years (see Chart 3.30). As the policy rate gradually reaches a more normal level, demand and employment growth will abate, and wage growth will moderate. This will curb the rise in inflation further ahead and stabilise inflation close to target.

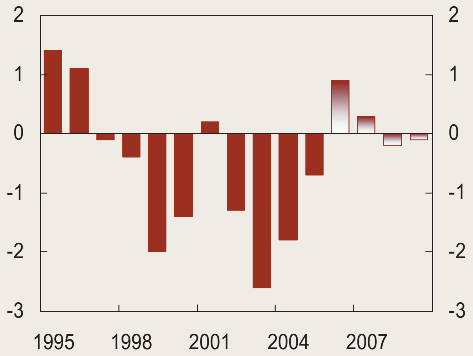
Chart 3.28 CPI-ATE.[1] Total and by supplier sector[2]. 12-month change. Per cent. Jan 02 – Dec 09[3]



[1] CPI-ATE: CPI adjusted for tax changes and excluding energy products. A further adjustment is made for the estimated effect of reduced maximum day-care rates from January 2006.
[2] Norges Bank's estimates.
[3] Projections for Oct 06 – Dec 09.

Sources: Statistics Norway and Norges Bank

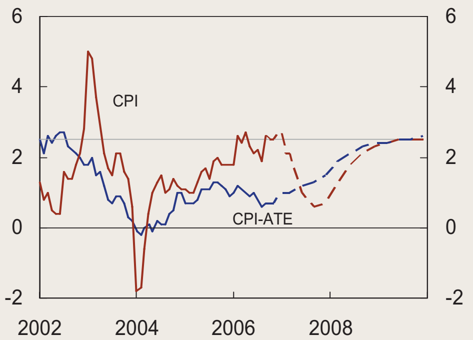
Chart 3.29 Indicator of external price impulses to imported consumer goods measured in foreign currency. Per cent. Annual figures. 1995 – 2009[1]



[1] Projections for 2006 – 2009.

Source: Norges Bank

Chart 3.30 CPI and CPI-ATE[1]. 12-month change. Per cent. Jan 02 – Dec 09[2]



[1] CPI-ATE: CPI adjusted for tax changes and excluding energy products. A further adjustment is made for the estimated effect of reduced maximum day-care rates from January 2006.
[2] Projections for Oct 06 – Dec 09.

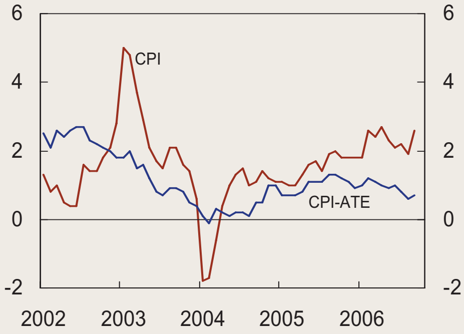
Sources: Statistics Norway and Norges Bank

Boxes

Recent price developments
Projections in *Inflation Report* 2/06 and 3/06
Output gap uncertainty

Recent price developments

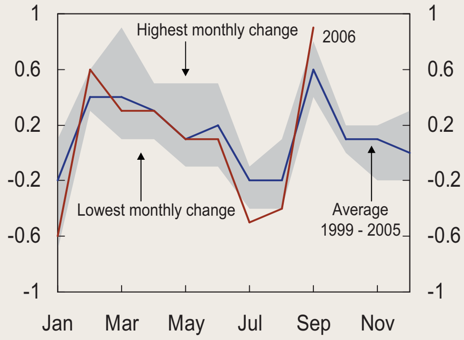
Chart 1 CPI and CPI-ATE[1)]. 12-month change. Per cent. Jan 02 – Sep 06



[1)] CPI-ATE: CPI adjusted for tax changes and excluding energy products. A further adjustment is made for the estimated effect of reduced maximum day-care rates from January 2006.

Sources: Statistics Norway and Norges Bank

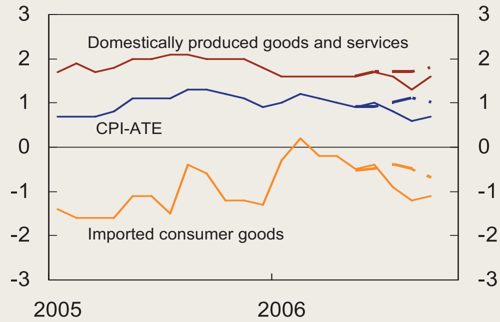
Chart 2 CPI-ATE[1)]. Highest and lowest monthly change in the period 1999 – 2005, average monthly change in same period and monthly change in 2006. Per cent



[1)] CPI-ATE: CPI adjusted for tax changes and excluding energy products in January 2006.

Sources: Statistics Norway and Norges Bank

Chart 3 CPI-ATE[1)]. Total and by supplier sector[2)]. Historical inflation and projections in IR 2/06 (broken line). 12-month change. Per cent. Jan 05 – Sep 06



[1)] CPI-ATE: CPI adjusted for tax changes and excluding energy products. A further adjustment is made for the estimated effect of reduced maximum day-care prices from January 2006.
[2)] Norges Bank's calculations.

Sources: Statistics Norway and Norges Bank

The year-on-year rise in the consumer price index (CPI) was 2.6% in September this year (see Chart 1). CPI inflation has been higher than projected in the June *Inflation Report,* reflecting a higher-than-expected rise in electricity prices.

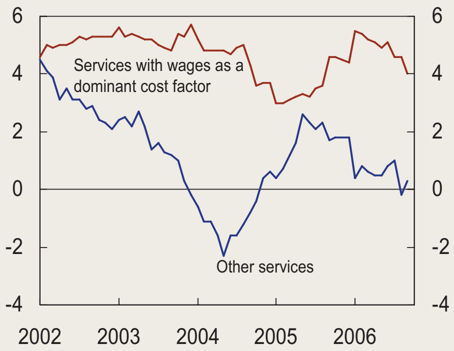
Inflation measured by the CPI adjusted for tax changes and excluding energy products (CPI-ATE) has been somewhat lower than projected. This is partly because domestic inflation did not pick up as expected and partly because prices for imported consumer goods have fallen more than projected. The rise in prices was surprisingly low in July and August in particular. For example, prices for clothing and footwear showed an unexpected sharp decline. Prices for furniture and telecom services also fell markedly in July and August. Extraordinary summer sales probably account for some of the decline in these months. While the fall in prices through June and July was somewhat greater than earlier this year, the price increase from August to September was higher (see Chart 2). The year-on-year rise in the CPI-ATE moved up from 0.4% in August to 0.5% in September. Adjusted for the reduction in day-care rates in January this year and the interest rate effect on house rents, the rise in prices was 0.8% in September.

Low and stable domestic inflation

The year-on-year rise in prices for domestically produced goods and services was 1.3% in September (see Chart 3). Domestic inflation has remained relatively flat around this level so far this year, with the exception of August when the 12-month rate of increase was 1.0%. Adjusted for the reduction in day-care rates in January this year, domestic inflation in September can be estimated at 1.6%. This is about 0.2 percentage point lower than projected in the June *Report*. In particular, the rise in prices for house rents and other services has been lower than expected.

The rise in prices for domestically produced consumer goods has been somewhat higher than assumed, partly as a result of a pick-up in the 12-month rise in prices for non-tradable consumer goods from 0.8% in May to 1.7% in September. Statistics Norway revised the method for measuring the rise in food prices in August last year. Since the revision, the 12-month rate of increase for this group of goods

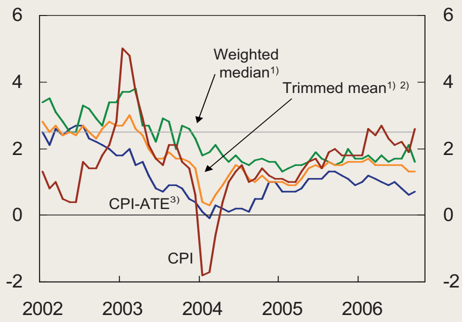
Chart 4 Service groups in the CPI-ATE[1]). 12-month change. Per cent. Jan 02 – Sep 06



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

Source: Statistics Norway

Chart 5 CPI and indicators of underlying inflation. 12-month change. Per cent. Jan 02 – Sep 06



1) Estimated on the basis of 146 sub-groups of the CPI-AT
2) Price changes accounting for 20 per cent of the weighting base are eliminated.
3) CPI-ATE: CPI adjusted for tax changes and excluding energy products. A further adjustment is made for the estimated effect of reduced maximum day-care rates from January 2006.

Sources: Statistics Norway and Norges Bank

may have been influenced by the changes to the measurement method.

Whereas the rise in house rents was projected to edge up, the 12-month rise moved down from 2.2% in May to 2.0% in September. The rise in prices for services other than house rents has also been edging down so far this year. The 12-month rise in prices for services with wages as the dominant cost factor has decelerated from 4.9% in May to 4.0% in September (see Chart 4). The 12-month rise in prices for services with dominant cost factors other than wages was also lower in September than in May. The reduction in maximum day-care rates has pushed down the rise in prices for this group in 2006. In addition, a marked fall in prices for telecom services is behind the low rise in services prices in recent months.

Prices for imported consumer goods fall at a faster pace

Prices for imported consumer goods have fallen markedly over several years (see Chart 3). The fall in prices slowed in the first six months this year. Since the latest *Inflation Report* the fall in prices has accelerated, and is now about the same as in 2005. In the twelve months to September, prices declined by 1.1%. A considerable decline in prices for clothing and footwear contributed to pushing down the rise in prices for imported consumer goods. While prices for clothing and footwear fell by 1.4% in the twelve months to May this year, the twelve-month rate of decline was 5.9% in September.

Higher electricity prices

Prices for energy products have increased at a faster rate than expected in the June *Report*. The rate of increase in electricity prices has been high throughout 2006, and accelerated further this autumn. Electricity prices in the CPI increased by 20.9% from August to September, and electricity prices were 48.1% higher in September than one year earlier, partly reflecting low reservoir levels and technical problems at Swedish nuclear power plants. Since then, an increase in water reservoir levels and higher production capacity in Sweden have resulted in somewhat lower market prices for electricity on the Nordpool exchange compared with the peak levels recorded earlier this autumn.

The recent fall in oil prices has led to lower petrol prices than assumed in the previous *Report*. In September, prices for petrol were 1.0% higher than in the same month one year earlier.

Other indicators of inflation

Inflation measured by a weighted median increased from a year-on-year rate of 1.6% in May to 2.1% in August. In September, however, the increase in this indicator fell back to 1.6% (see Chart 5). Inflation measured by a trimmed mean has declined from 1.5% in May to 1.3% in September. In September, a considerable number of services prices were removed from the trimmed mean. For example, the rate of increase in prices for certain services in the culture, sports and leisure industries was high.

Projections in Inflation Report 2/06 and 3/06

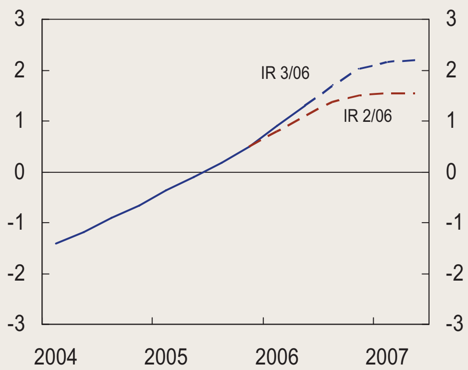
This box presents an analysis of the changes made to the projections in the previous *Inflation Report*. The changes have been made partly because developments since June have differed somewhat from our projections. New information has also emerged concerning conditions that will have an impact on the economy in the period ahead. Moreover, we compare Norges Bank's projections for 2007 with projections from other institutions.

New information since the previous Inflation Report

The following points summarise developments in the economy since the previous *Inflation Report* that have influenced our forecasts for the current year and the period ahead.

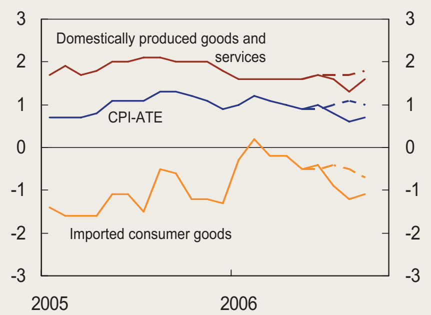
- Our estimate of the output gap now and in the immediate future has been revised upwards (see Chart 1). Employment has increased more rapidly than expected, and unemployment has now fallen to a low level. Various surveys indicate that production in a growing number of enterprises is approaching capacity limits, and that there is a shortage of labour. The rate of growth in the mainland economy is now somewhat higher than projected earlier.
- Inflation measured by the CPI-ATE has been somewhat lower than projected. Prices for both domestically produced goods and services and imported consumer goods have shown weaker-than-expected price developments (see Chart 2).
- The krone exchange rate has depreciated from strong values and is now weaker than assumed when *Inflation Report* 2/06 was published.
- The growth outlook for the US in 2007 appears to be weaker than previously projected. This is also expected to contribute to lower growth among other trading partners
- In the National Budget for 2007 it is assumed that growth in general government consumption will be somewhat stronger than in the previous *Inflation Report.*

Chart 1 Output gap estimates in the baseline scenario in IR 2/06 and IR 3/06. Per cent. Quarterly figures. 04 Q1 – 07 Q2



Source: Norges Bank

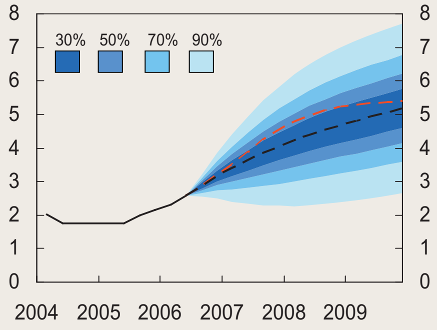
Chart 2 CPI-ATE.[1)] Total and by supplier sector[2)]. Projections from IR 2/06 (broken line) and actual developments. 12-month change. Per cent. Jan 05 – Sep 06



1) CPI-ATE: CPI adjusted for tax changes and excluding energy products. A further adjustment is made for the estimated effect of reduced maximum day-care rates from January 2006.
2) Norges Bank's estimates.

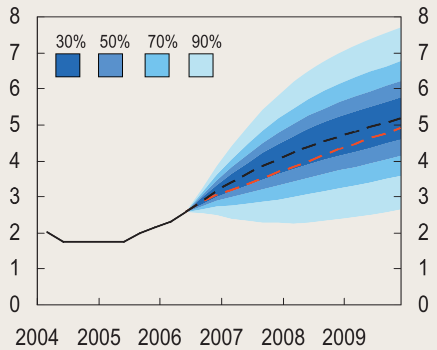
Sources: Statistics Norway and Norges Bank

Chart 3 Sight deposit rate in the baseline scenario in IR 2/06 with fan chart and sight deposit rate in the baseline scenario in IR 3/06 (red line). Per cent. Quarterly figures. 04 Q1 – 09 Q4



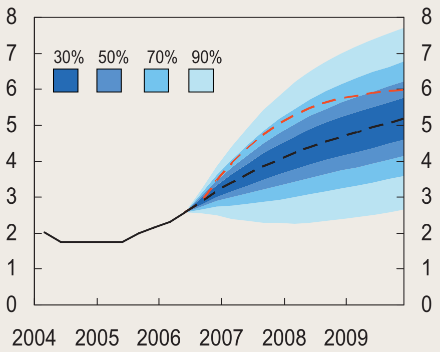
Source: Norges Bank

Chart 4 Sight deposit rate in the baseline scenario from IR 2/06 with fan chart and the isolated effect of lower inflation (red line). Per cent. Quarterly figures. 04 Q1 – 09 Q4



Source: Norges Bank

Chart 5 Sight deposit rate in the baseline scenario from IR 2/06 with fan chart and the isolated effect of a higher output gap and a weaker krone exchange rate (red line). Per cent. Quarterly figures. 04 Q1 – 09 Q4



Source: Norges Bank

Effects on the interest rate path

The interest rate forecast in this *Report* is somewhat higher than that presented in the previous *Report*, i.e. about ½ percentage point on average for 2007 and 2008 (see Chart 3).

The underlying rise in prices has been lower than expected. In isolation, this points to a lower interest rate path (see technical illustration in Chart 4). The relatively moderate rise in labour costs in 2006, strong competition in product markets, high productivity growth and an increase in the share of imports from low-cost countries will probably contribute to keeping inflation low through the remainder of 2006 and into 2007.

On the other hand, the upturn in the Norwegian economy is stronger than previously envisaged. Capacity utilisation in the economy is increasing. Demand from households, enterprises and the public sector is growing. Employment is increasing rapidly, and unemployment is now in line with the level during the previous boom at the end of the 1990s. These developments suggest that cost inflation will accelerate in the period ahead. At the same time, the krone has depreciated. These factors point to a higher interest rate path (see technical illustration in Chart 5).

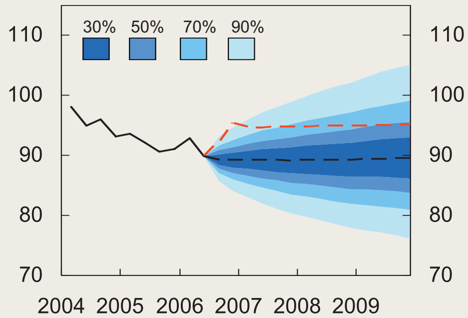
Changes in the projections

The projections in this *Report* are based on the assumption that the interest rate will follow a path which, in the Executive Board's view, will provide a reasonable balance between the objectives of monetary policy. Section 1 provides a more detailed account of assessments and interest rate developments ahead.

Through summer and autumn, unemployment has fallen more rapidly than assumed in *Inflation Report* 2/06, and the output gap in 2006 is now estimated to be higher than assumed in the June *Report*. Projected mainland GDP growth in 2006 has been revised upwards by ¼ percentage point. Mainland GDP in 2007 is now projected at 3¼ per cent, ½ percentage point higher than projected in the previous *Report*. As a result of higher wage and employment growth, growth in household real disposable income will be higher than projected in the previous *Report*, despite a somewhat faster rise in interest rates. This contributes to raising the projection for private consumption, while at the same time increased leeway under the fiscal rule contributes to higher growth in public demand than previously assumed.

Over the past few months, inflation measured by the CPI-ATE has been somewhat lower than projected in the previous *Report*. The low level of inflation is expected to persist into 2007. Higher wage growth, mounting pressures on economic resources and gradually slower productivity growth are likely to contribute to a rise in inflation, particularly from the second half of 2007 and into 2008 (see Table 1). At the same time, the krone is weaker than assumed in the previous *Report* (see Chart 6). Projected inflation measured by the CPI-ATE is ¼ percentage point lower in 2007 and ¼ percentage point higher in 2008 in this *Report* than the projection in *Inflation Report* 2/06, while the projections for 2009 are unchanged (see Chart 7).

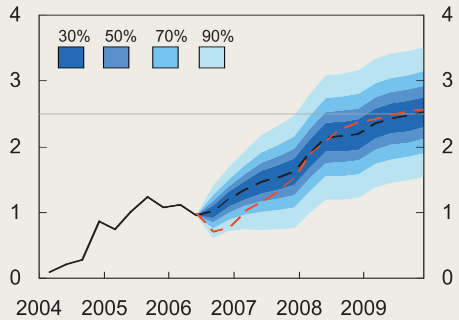
Chart 6 Import-weighted exchange rate (I-44)[1] in the baseline scenario in IR 2/06 with fan chart and I-44 in the baseline scenario in IR 3/06 (red line). Quarterly figures. 04 Q1 – 09 Q4



[1] A rising curve denotes a weaker krone exchange rate. It is assumed that strengthening by a certain percentage is just as likely as weakening by the same percentage.

Source: Norges Bank

Chart 7 Projected CPI-ATE[1] in the baseline scenario in IR 2/06 with fan chart and CPI-ATE in the baseline scenario in IR 3/06 (red line). 4-quarter rise. Per cent. 04 Q1 – 09 Q4



[1] CPI-ATE: CPI adjusted for tax changes and excluding energy products. A further adjustment is made for the estimated effect of reduced maximum day-care rates from January 2006. Other measures of underlying inflation are shown in Chart 3.10.

Sources: Statistics Norway and Norges Bank

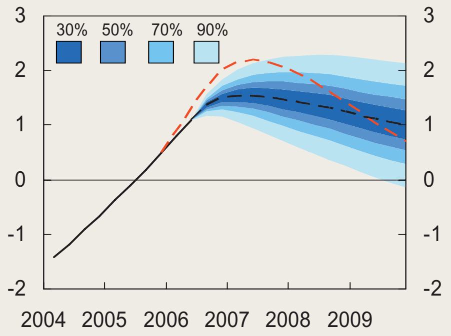
Table 1 Projections for main macroeconomic aggregates in *Inflation Report* 3/06. Change from projections in *Inflation Report* 2/06 in brackets.

	2006		2007		2008		2009	
Mainland demand	4¼	(0)	3¾	(¾)	2½	(0)	2	(-½)
GDP, mainland Norway	4	(¼)	3¼	(½)	2	(-¼)	1¾	(-½)
Employment	2¾	(½)	1½	(½)	¼	(-¼)	0	(-¼)
LFS unemployment (per cent of labour force)	3½	(-¼)	3	(-½)	3¼	(-¼)	3¾	(0)
CPI-ATE[1]	1	(0)	1¼	(-¼)	2¼	(¼)	2½	(0)
CPI	2¼	(0)	1¼	(-½)	2	(0)	2½	(0)
Annual wage growth	4¼	(¼)	5	(¼)	5¼	(½)	4¾	(0)

[1] Adjusted to take into account that the reduction in maximum day-care rates pushes down the rise in the CPI-ATE by an estimated 0.2 percentage point in 2006.

Source: Norges Bank

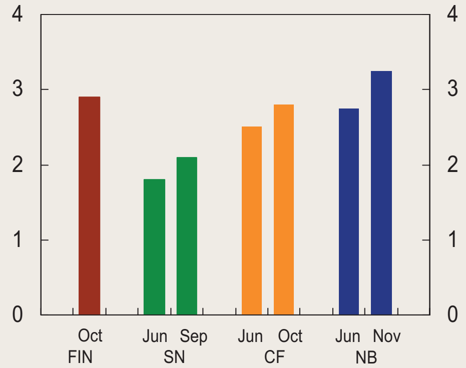
Chart 8 Estimated output gap in the baseline scenario in IR 2/06 with fan chart[1)] and output gap in the baseline scenario in IR 3/06 (red line). Per cent. Quarterly figures. 04 Q1 – 09 Q4



1) Uncertainty concerning the current situation is not taken into account in the calculation (see separate box).

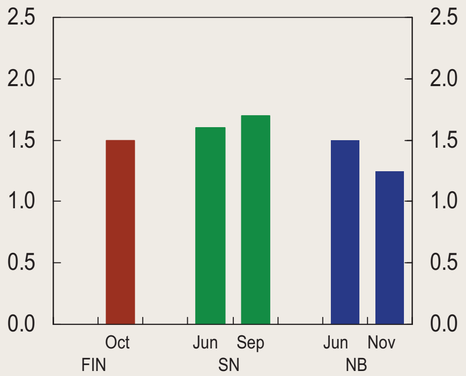
Source: Norges Bank

Chart 9 Mainland GDP. The last two projections published for 2007. Percentage rise



Sources: National Budget 2007, *Economic Survey* 3/2006 and 4/2006, *Inflation Report* 2/06 and 3/06, *Concensus Forecasts* June 2006 and October 2006

Chart 10 CPI-ATE.[1)] The last two projections published for 2007. Percentage rise



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

Sources: National Budget 2007, *Economic Survey* 2/2006 and 3/2006, *Inflation Report* 2/06 and 3/06

A higher interest rate and slower growth among our trading partners will lead to slower activity growth ahead. Growth in mainland GDP will probably slacken at a somewhat faster pace than projected in the previous *Report*. At the end of the period, the output gap will therefore be slightly below 1 per cent, somewhat lower than the estimates in *Inflation Report* 2/06 (see Chart 8).

Forecasts from other institutions

Norges Bank's projections for economic growth in 2007 are somewhat higher than those of the Ministry of Finance and Statistics Norway and the average forecast from Consensus Forecasts (see Chart 9). Norges Bank projects mainland GDP growth at 3¼% next year. When Statistics Norway published its forecasts in mid-September, mainland GDP growth in 2007 was projected at 2.1%, which is higher than the June projection of 1.8%. Statistics Norway's forecasts are based on the assumption of a more pronounced global slowdown than expected by Norges Bank. In the National Budget for 2007, the Ministry of Finance puts GDP growth at 2.9% in 2007. The average forecast from Consensus Forecasts has been revised upwards since *Inflation Report* 2/06. In June, the average forecast for growth in mainland Norway was 2.5%, while in October it was 2.8%.

In this *Inflation Report*, Norges Bank projects CPI-ATE inflation at 1¼% in 2007 (see Chart 10), while the Ministry of Finance's projection is 1½%. Since June, Statistics Norway has raised its projection for CPI-ATE inflation in 2007 by 0.1 percentage point to 1.7%. Consensus Forecasts does not compile forecasts for the CPI-ATE.

The Ministry of Finance's forecasts were published on 6 October 2006. These are their first projections for 2007. Statistics Norway published its projections on 15 June and 14 September this year, while Consensus Forecasts collected its forecasts on 12 June and 9 October. As the institutions publish projections at different times, the information on which the projections are based will differ.

Output gap uncertainty

The output gap represents a summary and quantification of resource shortages in the economy. A positive output gap is normally referred to as a boom, while a negative output gap indicates that there is spare capacity in the economy. In a more technical sense, the output gap can be described as the percentage deviation of actual output in the economy from potential output. Potential output is usually defined as the level of output that is consistent with stable inflation over time.

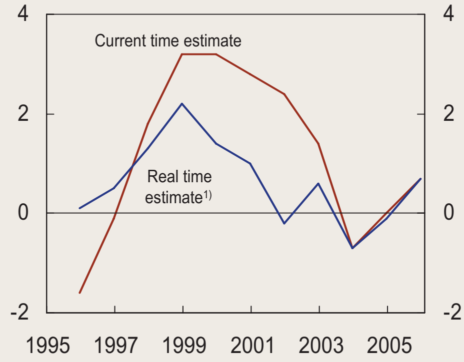
The output gap is not observable and must be estimated. There is considerable uncertainty surrounding the estimates, not only the estimates of the future output gap but also today's output gap.

Different calculation methods produce different estimates of the output gap (see e.g. Bjørnland et al. (2004)).[1] Each method has its strengths and shortcomings and it is not obvious which method provides the best indication of resource shortages.[2]

In addition to methodology uncertainty, estimates of the output gap are uncertain due to data uncertainty. National accounts figures are revised, often considerably and at times after several years. Normally, the figures are first published with a lag of two to three months. Uncertainty may be reduced by taking account of developments in alternative data and indicators that are highly correlated with cyclical developments and which are not revised extensively at a later time.[3] Examples of such information are Norges Bank's regional network, Statistics Norway's business tendency survey, labour market statistics and information concerning price and wage developments.

Chart 1 illustrates the uncertainty surrounding the current situation based on the OECD's current estimates of historical output gaps in Norway and real-time estimates. We see considerable, persistent differences in the estimates, indicating that errors with regard to the degree of pressures in the economy may persist over a relatively long period. Such persistent over- and underestimation of pressures are in line with findings for the US, see Orphanides (2003). [4]

Chart 1 Estimate of the output gap. Per cent. Annual figures. 1995 – 2005



1) Estimates published at different times.

Source: OECD Economic Outlook

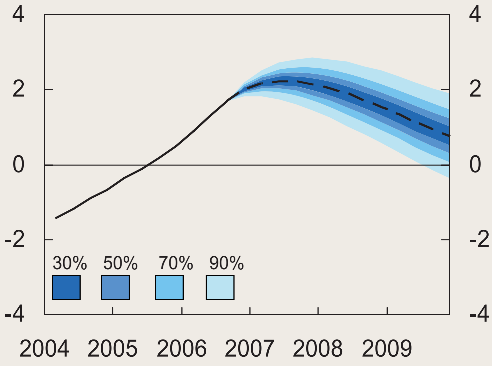
Norges Bank's estimate of the output gap is based on an evaluation of the driving forces in the economy, different calculation methods and information from alternative indicators. The overall assessment is based on professional judgement. Norges Bank's output gap estimates are therefore based on the use of several methods and a broad range of information. This reduces the uncertainty of the estimates. Table 1 shows how Norges Bank's estimates of the output gap have changed over time. The estimates for 2002-2005 have changed somewhat over time, but the estimates tend to stabilise. The updated estimates for these years have not reversed the output gap's sign in a given year.

Table 1 Estimates of the output gap at different times

	2002	2003	2004	2005
IR 3/03	1½	-¼		
IR 3/04	1	-1	-¼	
IR 3/05	½	-1¼	-¾	¼
IR 3/06	¼	-1½	-1	0

Source: Norges Bank

Chart 2a Estimate of the output gap in the baseline scenario with fan chart. Excluding uncertainty regarding current situation. Per cent. Quarterly figures. 04 Q1 – 09 Q4



Source: Norges Bank

Chart 2b Estimated output gap in the baseline scenario with fan chart. Including uncertainty regarding current situation. Per cent. Quarterly figures. 04 Q1 – 09 Q4

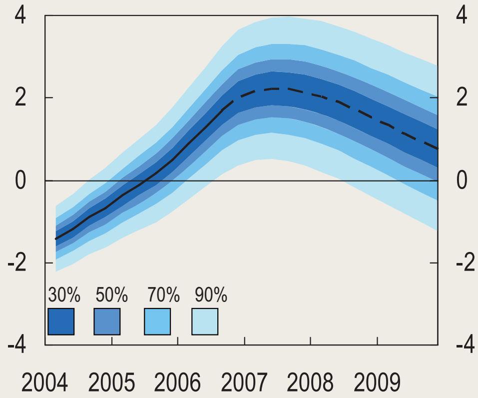


Chart 2a illustrates the uncertainty surrounding the estimates of the output gap in the period ahead, in the same way as we have so far presented the uncertainty surrounding the projections. The fan chart illustrates normal uncertainty about the future based on recent years' experience and is calculated within the framework of a small macroeconomic model (see box in *Inflation Report* 3/05). These calculations do not take into account the uncertainty surrounding the current output gap. Chart 2b shows the uncertainty surrounding the output gap when we also take into account the uncertainty surrounding the current situation and the historic output gap. Based on changes in Norges Bank's own estimates, among other things, we have on a discretionary basis assumed that the uncertainty surrounding the output gap today has a standard deviation of around 1 percentage point. Historical output gaps may have a somewhat lower standard deviation because over time it is easier to distinguish between changes in potential output and temporary disturbances to output. Therefore, uncertainty declines when moving backwards in time. The uncertainty surrounding future output gaps is greater due to the uncertainty about future economic developments.

[1] See Bjørnland, Brubakk og Jore (2004). "The output gap in Norway – a comparison of different methods", *Economic Bulletin* 2/05, Norges Bank.

[2] One drawback of many of the methods normally used to estimate the output gap is that the methods do not distinguish between different kinds of disturbances. While many methods assume that potential output is a trend of actual output, recent literature on monetary policy often refers to a more theoretical measure of potential output, i.e. the level of output when all prices and wages are completely flexible. Estimating the output gap on the basis of this interpretation is demanding and requires a capacity to identify the different disturbances that have influenced the economy and estimate how these shocks would have affected a hypothetical economy without wage and price rigidities. The theoretical interpretation of the output gap shows that certain types of disturbances that lead to increased output, such as a sustained improvement in productivity, should feed through fully to the economy's potential output. This will not affect the output gap. Norges Bank is working on developing a model with flexible prices and wages in order to estimate the output gap on the basis of this theoretical interpretation.

[3] See Olsen, Qvigstad and Røisland, "Monetary Policy in Real Time: The role of simple rules", BIS Papers No. 19/2003.

[4] Orphanides, A (2003): "The Quest for Prosperity without Inflation", *Journal of Monetary Economics*, 50(3), April 2003, pp 633-663.

Earlier boxes 2002-2006

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Output gap uncertainty

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Why have clothing prices fallen?
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How does the krone exchange rate influnce the CPI?

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Evaluation of Norges Bank's projections for 2000
Wage growth
Have Norges Bank's interest rate decisions been expected?

Annex I
Regional Network

Norges Bank's regional network

Norges Bank's regional network was established in autumn 2002 and consists of enterprises, local authorities and regional health enterprises throughout Norway. Five times a year, we interview business and community leaders concerning developments in their enterprises and industries. Each round of talks comprises about 290 visits. The contacts reflect the production side of the economy, both in terms of industry sector and geographic area. The network comprises approximately 1500 individuals who are contacted about once a year.

The primary purpose of the regional network is to obtain up-to-date 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 official 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 main 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 provide 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 for six regions we have engaged regional research institutions 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, Finnmark)	Kunnskapsparken Bodø
Region Central Norway (Nord-og Sør-Trøndelag)	Centre for Economic Research at the Norwegian University of Science and Technology
Region North-West (Møre og Romsdal, Sogn and Fjordane)	Møreforsking in Molde
Region South-West (Rogaland og Hordaland)	International Research Institute of Stavanger
Region South (Aust- og Vest-Agder, Telemark, Vestfold)	Agderforskning
Region Inland (Hedmark og Oppland)	Østlandsforskning
Region East (Buskerud, Akershus, Oslo, Østfold)	Covered by Norges Bank

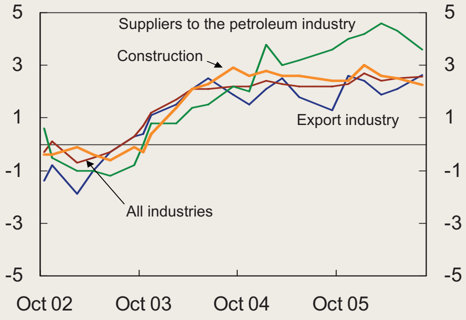
Summary of the contact rounds since the previous *Inflation Report*

In the contact round since the previous *Inflation Report*, which was conducted in August, we interviewed nearly 280 contacts in the regional network. A national summary and summaries from each region are available on Norges Bank's website. The summary below is based on regional reports from the institutes responsible for the various regions and does not necessarily represent Norges Bank's view of economic developments.

Demand, output and the market outlook

Companies in the regional network report that growth in demand and output remains solid (see Chart 1). The activity level and growth are high in many industries, particularly for petroleum-related enterprises. This is generating solid growth in all of Norway's coastal regions, especially in the North-West and South-West where these industries are concentrated. In the eastern regions, high activity in the corporate services sector is the primary growth factor.

Chart 1 Norges Bank's regional network. Growth in demand and production. Index[1]. Oct 02 – Aug 06



[1] The scale runs from -5 to +5, where -5 indicates a large fall and +5 indicates strong growth. See article "Norges Bank's regional network" in *Economic Bulletin 3/05* for further information.

Source: Norges Bank

Domestically oriented manufacturing reports solid growth in all regions and across industries. Suppliers to the building and construction industry continue to benefit from the high activity level in the building industry and report solid to strong growth. Developments are also particularly solid in the mechanical industry and the engineering industry, including manufacturers of vessels and equipment for the fish farming industry as well as companies supplying equipment to shipyards.

On the whole, the *export industry* reports solid growth. Companies supplying equipment and technology to shipping companies and the petroleum industry report strong demand. Growth is also solid in the metal products industry, in spite of intense competition from companies in eastern Europe and China. As in the previous round, the fish farming industry reports solid growth. Demand growth is highest in the EU. Exports of fresh fish to Russia are being limited by restrictions. Our contacts in the furniture industry also report solid demand in the US, Japanese and European markets.

Suppliers to the petroleum industry report continued high activity and strong growth in all areas. A considerable portion of oil service companies' activity is related to large projects such as Ormen Lange and Snøhvit. There is also growth in exploration and field development on the Norwegian continental shelf and globally. Shipping companies with offshore vessels report strong growth both at home and abroad, and a very large number of new vessels are on order, resulting in strong demand for shipyards and equipment suppliers.

Building and construction report a very high activity level and solid growth. Residential construction continues to increase in all regions. There is also solid growth in construction of private and public commercial buildings. In the construction sector, there is still considerable activity related to petroleum sector development. All companies report varying degrees of capacity problems. Many companies have large order reserves that will generate buoyant activity through 2007. It is primarily capacity that will place constrains on growth ahead.

In *retail trade*, overall growth has been solid, but there are to some extent wide differences across industries. Growth has been moderate through the summer for groceries, clothing and leisure products. Growth has been stronger for more expensive goods such as flat screen TVs, watches and jewellery. The car industry reports close to zero growth although sales of more expensive cars are improving steadily. This is also the case for leisure boats where sales of larger, more expensive boats are showing the highest increase. Growth has been solid to strong for building materials, and sales to tradesmen have increased more than sales to private individuals.

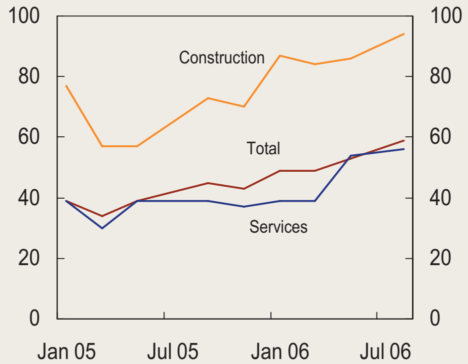
Growth in *corporate services* is very solid. High activity in manufacturing and the business sector in general is resulting in high demand for staffing services, auditing, management consulting, legal services, transport and accommodation. Many companies are also investing in new, upgraded IT systems, resulting in solid growth in the IT sector.

Household services report somewhat lower growth than corporate services. In line with a vigorous housing market, banks report continued solid growth in lending to households. Growth is also very strong for telecom and broadband services. Hotels and restaurants report moderate to solid growth in the household market.

Capacity utilisation and investment

Capacity utilisation is rising among the contacts in the regional network. 59% of companies report that they would have some or considerable difficulties accommodating an increase in demand (see Chart 2). This share has increased from 53% in June and 43% one year ago. Building and construction and suppliers to the petroleum industry have the least spare capacity. Companies in North-Western and South-Western Norway in particular will have difficulties accommodating an increase in demand. Capacity utilisation is also increasing in service industries and retail trade compared with earlier interview rounds.

Chart 2 Capacity utilisation. Regional network. Share reporting some or considerable difficulty in accommodating an increase in demand. Per cent. Jan 05 – Aug 06



Source: Norges Bank

Investment is increasing in all industries. 42% of the contacts are planning to increase investment in the period ahead. Manufacturing, corporate services and the local government and hospital sectors are expecting the strongest investment growth in the next 6-12 months. Increasingly, the main purpose of the investments is to boost capacity.

Employment and the labour market

Employment growth in this round is the strongest registered so far in the regional network. Building and construction and service industries report the strongest growth in employment. The increase is more moderate in the local government and hospital sectors. A large portion of growth, particularly in Southern and North-Western Norway, must be attributed to the high activity level in and relating to petroleum activities. In the period ahead, employment is expected to rise in all industries, including the local government and hospital sectors. Employment growth will continue to be strongest in building and construction and service industries. A number of companies are uncertain, however, as to whether they will be able to increase employment as much as planned because labour availability is seen as limited.

Labour market conditions are becoming tighter. 47% of the companies report that the supply of labour will be a constraint if demand increases. The share was 40% in the previous round and 24% one year ago. Building and construction and petroleum-related industry in particular report shortages of skilled labour, but the labour supply is also increasingly a constraint in service industries. However, there are wide geographical variations. As in the previous round, labour shortages are most pronounced in South-Western and North-Western Norway.

Costs, prices and profitability

Expected annual wage growth has increased throughout the year. Companies are now expecting annual wage growth of about 4½% on average in 2006. At the beginning of the year, companies expected wage growth of 3¾%. Annual wage growth is expected to be in the interval 4% to 5¼%. Building and construction and service industries are expecting the highest wage growth, while retail trade and the local government and hospital sectors are expecting the lowest wage growth.

Selling prices have increased in all industries during the past 12 months. The rise in prices is strongest in corporate services and building and construction. In retail trade and household services, the price rise is moderate. In the period ahead, the share of companies expecting prices to rise at a faster pace is somewhat larger than the share expecting prices to rise at a slower pace. The share of companies expecting a more rapid price rise is highest in corporate services and the export industry. In building and construction, a larger share of companies expects prices to rise at a slower pace, probably because prices in the industry have already risen considerably.

Profitability continues to improve in the entire private sector. This reflects increased activity, higher selling prices and enhanced efficiency. Suppliers to the petroleum industry again report the most substantial profitability improvements.

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

A.B. Jürgensen
ADCom Data
Adecco Norge AS
Adresseavisen ASA
AF Gruppen ASA
Ahead Frisør
Aker Kværner Stord
Aker Kværner MH AS
Aker Seafoods Melbu AS
Aker Yards Florø AS
Aksel L. Hansson
Alsvåg Plater AS
Amfi Drift AS
Applica AS
Apropos Internett AS
APS Norway (Flowtite Norway AS)
Arbor-Hattfjelldal AS
Arkitektfirma Brandsberg-Dahl
ASKO Agder AS
Aukra Midsund Offshore AS
Autokarosseri
Avinor AS Værnes
B&T Låsservice AS
Bademiljø AS
Bakke El-Installasjon AS
Becotek
Bergan Fritid
Bergene Holm AS
Big Horn Steak House Norge AS
Bilia AS
BioMar AS
Bjølseth Caravan AS
BN Entreprenør AS
Bodø kommune
Borregaard
Brødrene Harsjøen AS
Brødrene Pedersen AS
Brødrene Røsand AS
Bunnpris
Buskerud Sentralsykehus
Bygg og Maskin AS
Byggkjøp Farsund Bygg
Byggmaker Norgros
Capgemini Norge AS
Chiron AS
Choice Hotels Scandinavia ASA
Coop Nord BA
Coop Sogn og Fjordane BA
Den Norske Bank ASA, Tønsberg
Diplom-Is AS
Dnb NOR Eiendom
Domaas og Jensen AS
Drytech AS
E. A. Smith AS
EDB Gruppen Norge AS
Eidesvik Offshore ASA
Elektro Hvitevarer AS
Elsafe International AS
Eltel Networks AS
Elvenes Transport & Maskin AS
ErgoGroup AS
Ernst & Young
Eurospar Sogndal
Expert ASA
Farveringen AS
Fatland AS
FAV Gruppen
Figgjo AS
Firda Avishuset
Fjeldseth AS
Flora kommune
Fløibanen
Fokus Bank Bedriftsmarked
Forestia AS
Fundator AS
Furnes Hamjern Holding AS
Gausdal kommune
Gausdal Landhandleri AS
Gjensidige Forsikring
Gjesdal kommune
Glava AS
Godstrafikk og Bilspedisjon AS
Gresvig ASA
Grimstad kommune
Halliburton
Handelsbanken Trondheim
Handelshuset Martinsen
Hansa Borg Bryggerier ASA
Havkrefter AS
Hedalm Anebyhus AS
Hedmark fylkeskommune
Helgeland Plast AS
Helgeland Sparebank
Helkama Grepa AS
Helse Bergen HF
Helse Nord RHF
Hemnes kommune
Hemnes Mek. Verksted AS
Herøy kommune
Holberg Forvaltning
Holm Grafisk AS
Hunderfossen Familiepark AS
Hunton Fiber AS
Hurtigruten Group ASA
Hydro Aluminium Structures Raufoss AS
Hydro Olje og Energi
Høie AS
Høllalaks AS
Hå kommune
I. P. Huse AS
IBM Norge
IKM gruppen
Imaas Bil
Industriverktøy AS
Innoventi Reklamebyrå AS
Innvik Sellgren Industrier AS
Invenia Innovation AS
ISS Facility Services AS
ISS Norge AS
Itab Industrier AS
J.M. Hansen AS
Jacobsen og Reiten Arkitektkontor AS
JC Decaux Norge AS
Julius Jakhelln AS
Jærentreprenør
Jørstad AS
Kongsberg Gruppen AS
KPMG
Kraft Foods
Kragerø kommune
Kremmertorget kjøpesenter
Kristiansand kommune
Krogsveen Hamar AS
Krogsveen Raknes AS
Leksvik kommune
Lerøy Midnor AS
Lerøy Seafoods
Lindex AS
Litra AS
Loreal Norge AS
LPO arkitektur & design AS
Lycro AS
Lyng Elektronikk AS
Lyse Energi AS
Løvenskiold-Fossum
Løvold Bodø AS
Madshus AS
Maihaugen
Malvik kommune
Mandal Industrier AS
Mandal kommune
Manpower AS
Maritech AS
Mascot Electronics AS
Mesta AS
Mester Grønn AS
Mezina AS
Midt-Norge Regnskap AS
Miljøbygg AS
Moelven Nordia
Molab AS
Moss kommune
MTU Telecom AS
N.W. Damm & Søn AS
Narvik Sparebank
NAV Arbeid Vest-Agder
NCC Construction (NCC Norge)
Nerland Granitindustri AS
Net Transe Services AS
Nettbuss Sør AS
Norcem AS
Nordea Bank Norge ASA
Norgesgruppen ASA
Norplasta AS
Norsvin
Nortrans Touring AS
Notar Eiendom Nordland AS
Notodden Mur- og Entreprenørforretning AS
Nova-Group
Nycomed Pharma AS
Nysted AS
Obos
Olav Thon Eiendomsselskap ASA
Olympic Shipping AS
Oracle Norge AS
Oras armatur AS
Orkidéekspressen AS
Os Husdyrmerkefabrikk AS
Otteren Gullsmed
P4 Radio Hele Norge ASA
Pallin AS
Petter Gagama AS
PipeLife Norge AS
Plantasjen Norge AS
Prior Norge BA Kjøttdivisjonen
Prognosesenteret AS
Protan
Protech AS
Quality Hafjell Hotell AS
Rambøl Unico AS
Rapp Bomek AS
Rauma kommune
REC ScanCell AS
Revisorgruppen Vestfold AS
Revisorkonsult AS
Rica Ishavshotel Tromsø
Riibe Mynthandel
Ringerike kommune
Ringnes AS
Risa AS
Ruukki Norge AS
Ruukki Profiler AS
Rørlegger D. Åsheim AS
Rørteknikk og bademiljø AS
S.A.T.S. Norge
Saint Gobain Ceramic Materials AS
Savalen Drift AS
ScanRope AS
Seafarm Invest AS
Securitas AS
Servi Cylinderservice AS
Sig.Halvorsen AS
Sisoflor AS
Skagen Brygge Hotell
Skanem Moss AS
Skanska Norge AS
Skedsmo kommune
Skeie AS
Skipsplast AS
Slatlem & Co AS
Snillfjord kommune
Solstad Offshore
Sparebank 1 Moss
Sparebank 1 Oslo AS
Sparebanken Hedmark
Sparebanken Sogn og Fjordane
Stansefabrikken Lillesand AS
Stillasservice AS
Stokke Gruppen AS
Stord kommune
Stor-Elvdal kommune
Storvik AS
Strand kommune
Strand Sea Service AS
Strax Trondheim AS
Studentsamskipnaden i Agder
Sult AS
Swix Sport AS
Sykehuset Innlandet HF
Søral
Sørlandet sykehus HF
T. Johansen Drift AS
Tannum Møbler
Telenor Mobile AS
Thommessen Krefting Greve Lund AS
Ticket.No
Timpex AS
Tine BA
Tine Meierier Sør
Torgkvartalet kjøpesenter
Trehuseksperten AS
Triplex AS
Tyrholm & Farstad AS
Ullevål universitetssykehus
Umoe Mandal AS
Union Hotel
Veidekke Entreprenør AS Indre Østland
Vestlandshus
Veøy AS
Våler kommune
Wartsila Norway
Westco Renovasjon
Wist Last og Buss
Xsport AS
Øksnes kommune

Annex II
Statistics, charts and detailed projections

Monetary policy meetings in Norges Bank
with changes in sight deposit rate

Date	Sight deposit rate[1)]	Change
Future meetings		
25 April 2007		
15 March 2007		
24 January 2007		
13 December 2006		
Previous monetary policy meetings		
1 November 2006	3.25	+0.25
27 September 2006	3	0
16 August 2006	3	+0.25
29 June 2006	2.75	0
31 May 2006	2.75	+0.25
26 April 2006	2.5	0
16 March 2006	2.5	+0.25
25 January 2006	2.25	0
14 December 2005	2.25	0
2 November 2005	2.25	+0.25
21 September 2005	2	0
11 August 2005	2	0
30 June 2005	2	+0.25
25 May 2005	1.75	0
20 April 2005	1.75	0
16 March 2005	1.75	0
2 February 2005	1.75	0
15 December 2004	1.75	0
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
21 April 2004	1.75	0
11 March 2004	1.75	-0.25
28 January 2004	2	-0.25
17 December 2003	2.25	-0.25
29 October 2003	2.5	0
17 September 2003	2.5	-0.5
13 August 2003	3	-1

[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 slightly higher than the sight deposit rate.
.

Table 1 Main macroeconomic aggregates

Percentage change from previous year/ quarter		GDP	Mainland GDP	Private con-sump-tion	Public spending on goods and servi-ces	Mainland fixed inv.	Petroleum inv.[1]	Exports trad. goods	Imports
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		1.1	1.4	3.0	3.7	2.5	-5.3	0.4	0.7
2003		1.1	1.4	2.9	1.3	-3.7	16.1	4.4	1.1
2004		3.1	3.8	4.7	2.2	7.8	7.8	3.4	8.9
2005		2.3	3.7	3.4	1.5	8.8	15.6	5.8	7.4
2005[2]	Q1	0.3	0.8	0.3	-0.1	-4.9	-1.4	-0.2	-2.3
	Q2	1.1	0.9	1.8	0.3	5.0	8.4	-1.6	4.1
	Q3	0.9	0.8	0.6	0.0	1.1	-4.5	5.0	3.6
	Q4	0.1	1.1	0.0	0.7	7.6	14.7	2.0	1.5
2006[2]	Q1	0.6	0.8	2.0	0.3	-5.8	-15.7	-0.9	0.4
	Q2	0.5	1.1	0.6	0.7	6.7	5.9	2.5	3.4
Level 2005, in billions of NOK		1904	1410	796	388	252	88	230	534

1) Extraction and pipeline transport.
2) Seasonaly adjusted quarterly figures.

Source: Statistics Norway

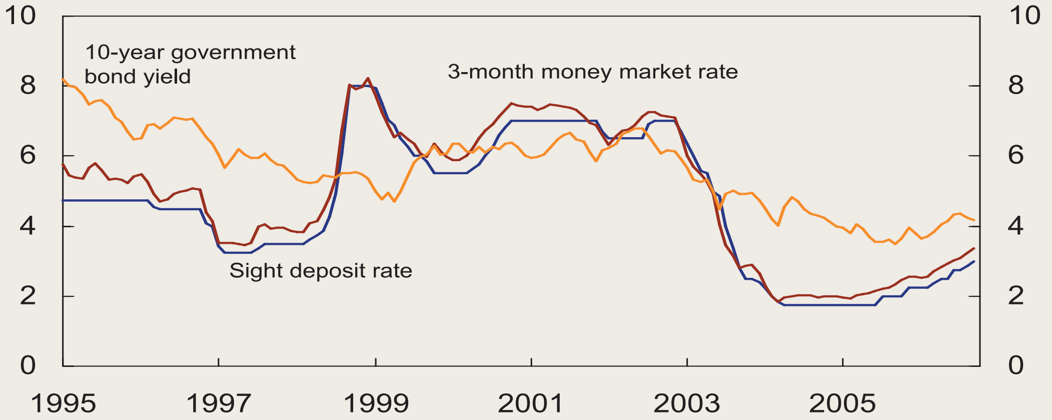
Table 2 Consumer prices

Twelve-month rise. Per cent		**CPI**	**CPI-ATE[1]**	**CPI-AT[2]**	**CPI-AE[3]**	**HICP[4]**
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	1.9
2004		0.4	0.3	0.0	0.8	0.6
2005		1.6	1.0	1.2	1.4	1.5
2005	Jul	1.4	1.1	1.1	1.4	1.3
	Aug	1.9	1.3	1.5	1.6	1.8
	Sep	2.0	1.3	1.7	1.6	2.1
	Oct	1.8	1.2	1.5	1.4	1.8
	Nov	1.8	1.1	1.5	1.4	1.8
	Dec	1.8	0.9	1.5	1.3	2.0
2006	Jan	1.8	0.8	1.5	1.1	1.8
	Feb	2.6	1.0	2.3	1.2	2.7
	Mar	2.4	0.9	2.2	1.1	2.4
	Apr	2.7	0.8	2.6	1.1	2.8
	May	2.3	0.7	2.1	1.0	2.5
	Jun	2.1	0.8	1.9	1.1	2.1
	Jul	2.2	0.6	1.9	1.0	2.3
	Aug	1.9	0.4	1.6	0.5	2.1
	Sep	2.6	0.5	2.4	0.8	3.0

Source: Statistics Norway

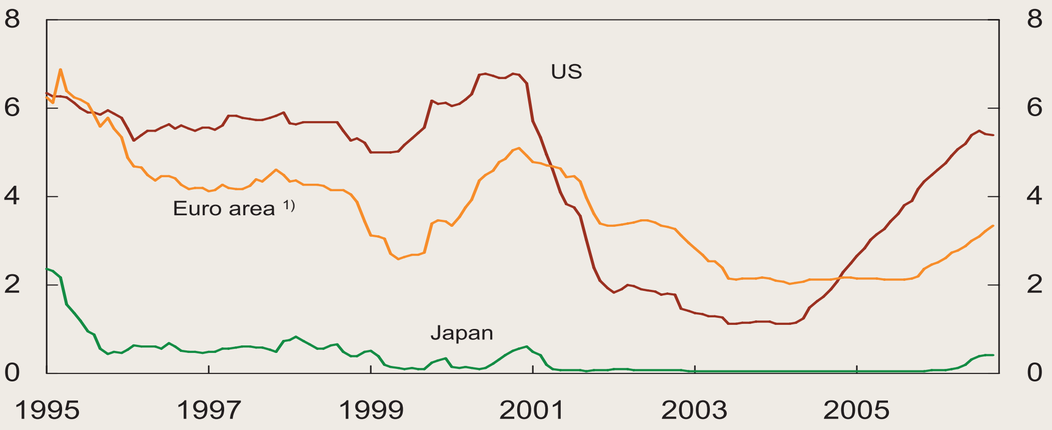
1) CPI-ATE: CPI adjusted for tax changes and excluding energy products.
2) CPI-AT: CPI adjusted for tax changes.
3) CPI-AE: CPI excluding energy products.
4) HICP: The Harmonised Index of Consumer Prices. The index is based on international criteria drawn up by Eurostat.

Chart 1 Norwegian interest rates. 3-month money market rate, sight deposit rate and 10-year government bond yield. Monthly figures. Jan 95 – Sep 06



Source: Norges Bank

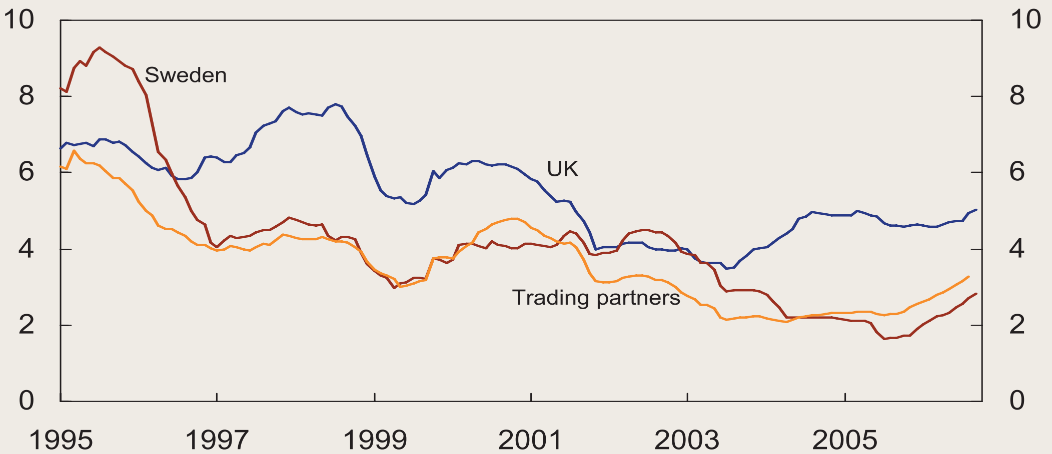
Chart 2 3-month interest rates in the US, the euro area and Japan. Monthly figures. Jan 95 – Sep 06



1) Theoretical ECU rate up to and including December 1998.

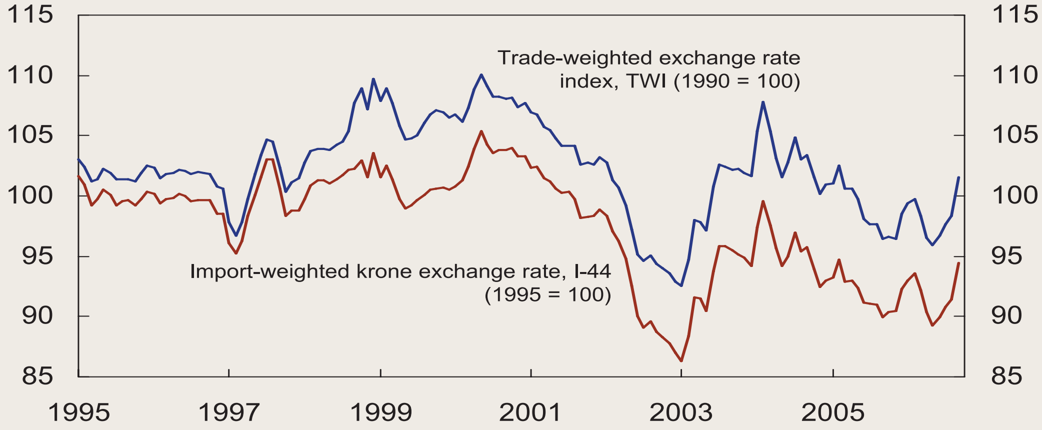
Source: Reuters EcoWin

Chart 3 3-month interest rates in the UK, Sweden and among trading partners. Monthly figures. Jan 95 – Sep 06



Sources: Reuters EcoWin and Norges Bank

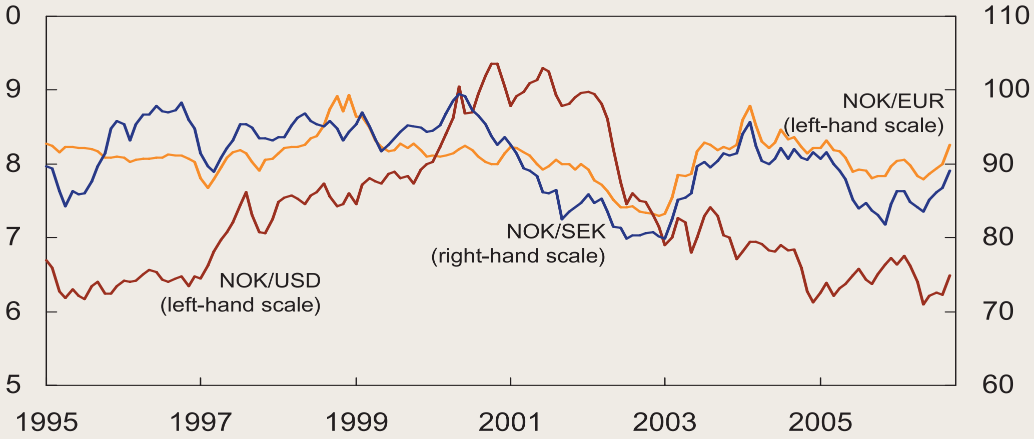
Chart 4 Trade-weighted exchange rate index (TWI) and import-weighted krone exchange rate (I-44).[1] Monthly figures. Jan 95 – Sep 06



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

Source: Norges Bank

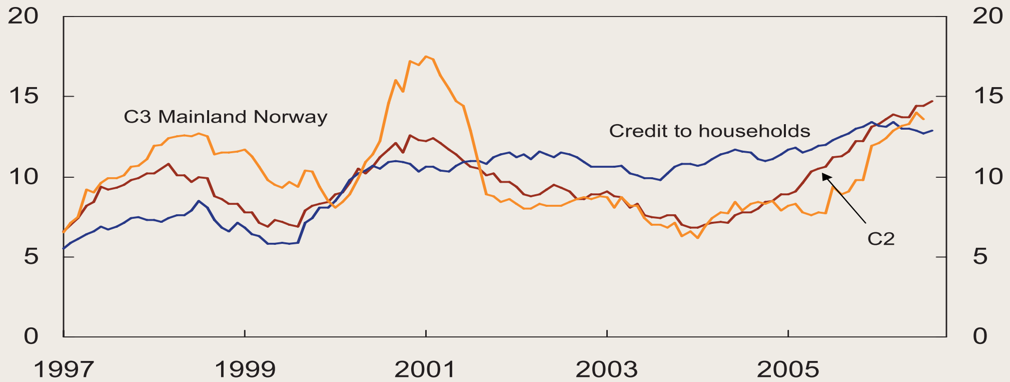
Chart 5 Bilateral exchange rates[1]. Monthly figures. Jan 95 – Sep 06



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

Source: Norges Bank

Chart 6 The credit indicator (C2), credit to households and total credit to the non-financial private sector and municipalities, mainland Norway (C3)[1]. 12-month change. Per cent. Jan 97 – Aug 06



1) As a result of a change in the foreign component in C3, the figures presented here have been considerably revised compared with earlier versions, see http://www.norges-bank.no/front/statistikk/en/k3/meta_e.htm for further information.

Source: Norges Bank

Table 3 GDP growth in other countries

Percentage change from previous year
Projections for 2006 – 2009

	US	Japan	Germany	France	UK	Sweden	Trading partners[1]	Euro area[2]
2005	3.2	2.6	0.9	1.2	1.9	2.7	2.5	1.4
Projections								
2006	3¼	2½	2¼	2¼	2½	4¼	3¼	2½
2007	2	2	1½	2	2½	3	2½	2
2008	2½	1½	1½	2	2¼	2¼	2¼	2
2009	2¾	1¼	2	2	2¼	2	2¼	2

1) Export weights, Norway's 25 main trading partners.
2) Weights from Eurostat.

Sources: IMF, OECD, Eurostat, national sources and Norges Bank

Table 4 Consumer prices in other countries

Percentage change from previous year
Projections for 2006 – 2009

	US	Japan	Germany	France	UK	Sweden	Trading partners[1]	Euro area[2]
2005	3.4	-0.3	1.9	1.9	2.1	0.5	2.0	2.2
Projections								
2006	3½	½	2	2	2¼	1½	2¼	2¼
2007	2½	1	2½	2	2	2	2½	2½
2008	2	1¼	1½	1¾	2	2	2¼	2
2009	2½	1¼	1½	1¾	2	2	2	2

1) Import weights, Norway's 25 main trading partners.
2) HICP. Eurostat weights (each country's share of total euro-area consumption).

Sources: IMF, OECD, Eurostat, national sources and Norges Bank

Table 5 Main macroeconomic aggregates

	In billions of NOK	Percentage change (unless otherwise stated)				
			Projections			
	2005	2005	2006	2007	2008	2009
Real economy						
Mainland demand[1)]	1435	3.8	4¼	3¾	2½	2
- Private consumption	796	3.4	4	3½	2¾	2¼
- Public consumption	388	1.5	2¾	2¾	3	3¼
- Fixed investment[2)]	252	8.8	7¾	5½	1	-¾
Petroleum investment[3)]	88	15.6	5	0	-5	0
Traditional exports	230	5.8	6½	4½	2¾	2¾
Imports[2)]	534	7.4	6¼	4¼	2¼	2¼
GDP[4)]	1904	2.3	2¾	3¾	3	1
Mainland GDP[4)]	1410	3.7	4	3¼	2	1¾
Potential mainland GDP		2½	2½	2½	2½	2½
Output gap, mainland Norway[5)]		0	1½	2¼	1¾	1
Labour market						
Employment		0.7	2¾	1½	¼	0
Labour force, LFS		0.8	1½	1	½	½
Registered unemployment (rate)		3.5	2½	2	2¼	2¾
LFS unemployment (rate)		4.6	3½	3	3¼	3¾
Prices and wages						
CPI		1.6	2¼	1¼	2	2½
CPI-ATE[6)]		1.0	1	1¼	2¼	2½
Annual wage growth[7)]		3.3	4¼	5	5¼	4¾
Interest rate and exchange rate						
Sight deposit rate (level)		1.9	2¾	4	5	5¼
Import-weighted exchange rate (I-44)[8)]		91.9	92½	94¾	95	95

1) Private and public consumption and mainland gross fixed investment.
2) The projections do not include the import of two frigates in 2006, and the import of one frigate in each year in the period 2007-2009. Each frigate is estimated to cost NOK 3.5 billion.
3) Extraction and pipeline transport.
4) Fluctuations in the production of electricity are excluded from the GDP estimates.
5) The output gap measures the percentage deviation between mainland GDP and projected potential GDP.
6) CPI-ATE: CPI adjusted for tax changes and excluding energy products. In addition, it is adjusted to take into account that the reduction in maximum day-care rates pushes down the rise in the CPI-ATE by an estimated 0.2 percentage point in 2006.
7) Annual wage growth is based on the Technical Reporting Committee on Income Settlements' definitions and calculations. The projections include estimated costs related to the introduction of mandatory occupational pensions.
8) Level. The weights are estimated on the basis of imports from 44 countries, which comprises 97% of total imports.

Sources: Statistics Norway, the Technical Reporting Committee on Income Settlements, the Norwegian Labour and Welfare Organisation and Norges Bank

B-blad/Economique

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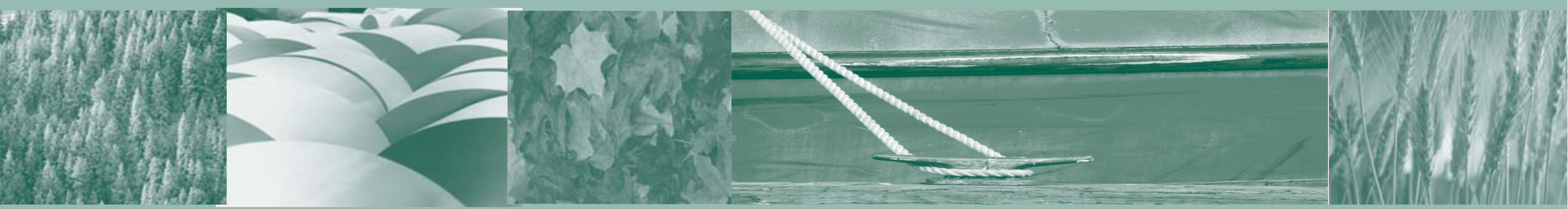

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