# Norwegian economy

### Developments so far this year

Preliminary figures from the quarterly national accounts show that the pick-up in activity in the mainland economy during the last few quarters continued in the second quarter of 2000. On the demand side, investment, household demand and traditional merchandise exports expanded, while general government consumption appears to have exhibited a sluggish trend. Developments so far this year underpin the impression that the pause in growth in the second half of 1998 and first half of 1999 was transitory.

Employment also appears to have edged up from the relatively stable level through 1999. With virtually parallel growth in the labour force, unemployment is now at approximately the same level as in the first half of 1999. As a result of a pronounced rise in energy prices and fairly steep increases in import prices, consumer prices have so far this year risen at a faster pace than in 1999. Measured by the harmonized index of consumer prices, inflation is now one percentage point higher in Norway than in the EU, and hence

**Macroeconomic indicators. 1998-2000**
Growth from previous period unless otherwise noted. Per cent

| | | | Seasonally adjusted | | | |
|---|---|---|---|---|---|---|
| | 1998 | 1999 | 99.3 | 99.4 | 00.1 | 00.2 |
| **Demand and output** | | | | | | |
| Consumption in households and non-profit organizations | 3.3 | 2.4 | 1.1 | 0.4 | 1.2 | 0.5 |
| General government consumption | 3.8 | 2.7 | 2.3 | -1.6 | 1.3 | -1.1 |
| Gross fixed investment | 5.8 | -5.6 | 16.0 | -13.3 | 2.8 | -0.2 |
| Mainland Norway | 1.6 | -2.1 | 5.4 | -0.4 | 2.0 | 0.2 |
| Petroleum activities[1] | 20.4 | -12.6 | 8.9 | -34.7 | -5.8 | 9.6 |
| Final domestic demand from Mainland Norway[2] | 3.1 | 1.6 | 2.2 | -0.2 | 1.4 | 0.0 |
| Exports | 0.3 | 1.7 | 1.0 | 3.3 | -2.3 | -0.8 |
| Crude oil and natural gas | -3.6 | -0.1 | -0.4 | 6.6 | 0.6 | -4.3 |
| Traditional goods | 3.3 | 2.6 | 2.2 | 3.9 | -1.9 | 2.6 |
| Imports | 9.3 | -3.1 | 4.4 | -2.4 | -1.0 | 3.5 |
| Traditional goods | 8.6 | -2.0 | 1.5 | 3.9 | -2.1 | 6.7 |
| Gross domestic product | 2.0 | 0.9 | 2.0 | 0.5 | 1.1 | -0.2 |
| Mainland Norway | 3.3 | 0.8 | 1.4 | 0.2 | 0.7 | 0.9 |
| **Labour market[3]** | | | | | | |
| Man-hours worked | 2.3 | 0.3 | -0.1 | -0.1 | 0.6 | 1.1 |
| Employed persons | 2.4 | 0.7 | -0.4 | 0.6 | 0.1 | 0.6 |
| Labour force | 1.4 | 0.8 | -0.2 | 1.0 | 0.2 | 0.1 |
| Unemployment rate, level[4] | 3.2 | 3.2 | 3.3 | 3.6 | 3.7 | 3.2 |
| **Prices** | | | | | | |
| Consumer price index[5] | 2.3 | 2.3 | 2.0 | 2.7 | 2.9 | 2.9 |
| Export prices, traditional goods | 1.2 | 0.1 | 2.3 | 2.6 | 3.8 | 4.4 |
| Import prices, traditional goods | 1.6 | -2.3 | -1.8 | 1.5 | 4.0 | -0.9 |
| **Balance of payment** | | | | | | |
| Current balance, bill. NOK | -14.3 | 46.9 | 14.3 | 27.2 | 41.1 | 37.9 |
| **Memorandum items** (Unadjusted, level) | | | | | | |
| Money market rate (3 month NIBOR) | 5.7 | 6.4 | 6.0 | 6.0 | 5.8 | 6.4 |
| Average borrowing rate[6] | 7.4 | 8.4 | 8.0 | 7.7 | 7.6 | 7.7 |
| Crude oil price NOK[7] | 96.3 | 141.2 | 162.9 | 191.4 | 221.3 | 236.0 |
| Importweighted krone exchange rate, 44 countries, 1997=100 | 102.2 | 101.0 | 100.6 | 101.0 | 101.9 | 104.9 |
| NOK per ECU/euro | 8.46 | 8.31 | 8.22 | 8.19 | 8.11 | 8.20 |

1 Figures for petroleum activities now cover the sectors oil and gas extraction proper, transport via pipelines and service activities incidental to oil and gas extraction.
2 Consumption in households and non-profit organizations + general government consumption + gross fixed capital formation in Mainland Norway.
3. Figures for 1998 and 1999 are from the national accounts. The quarterly figures are from Statistics Norway's Labour force survey (LFS), since the new quarterly national accounts series for employment are too short for seasonal adjustment.
4 According to Statistics Norway's labour force survey (LFS).
5 Percentage change from same period previous year.
6 Households' borrowing rate in private financial institutions.
7 Average spot price, Brent Blend.
Sources: Statistics Norway and Norges Bank.

noticeably higher than the level aimed at by the European Central Bank.

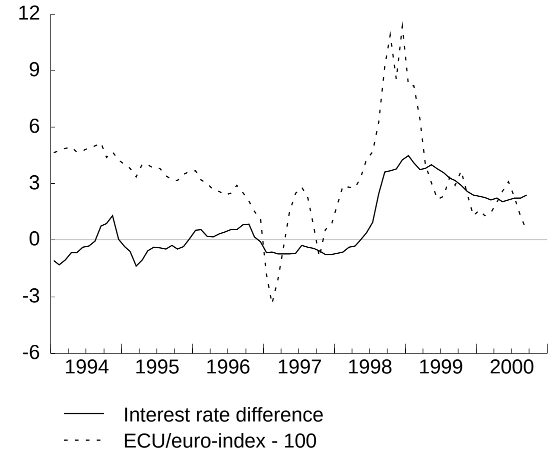
Based on the view that high price and cost inflation over a longer period may result in a weak and unstable currency, Norges Bank has increased its key rates for banks by 1 1/4 percentage points over the last six months. Money market rates have increased correspondingly, and financial institutions' lending and deposit rates are moving up. Compared with the level in 1999, the Norwegian krone has appreciated against the euro, but depreciated against an import-weighted basket of our trading partners' currencies. Over the past year changes in the exchange rate have generated an inflationary impetus via import prices that has not been entirely exhausted. Measured in USD, the crude oil price has so far this year been a good 50 per cent higher than last year, and more than double the level in 1998. Along with an historically very strong dollar, this has contributed to a current account surplus of NOK 79 billion in the first half of 2000, more than NOK 30 billion higher than the result for 1999 as a whole.

As a result of Norges Bank's decision to raise interest rates in three steps so far this year, half of the decline in interest rates recorded in 1999 has been reversed. Money market rates have moved up at about the same pace as the key rates, and are now 1 1/4 percentage points higher than at the beginning of the year. Forward rates are slightly higher than rates on spot contracts, which is consistent with Norges Bank's statement that the next change in interest rates is more likely to be an increase than a reduction.

Yields on Norwegian government bonds with a residual maturity of 3-5 years have risen by between 1/2 and 1 percentage point this year, slightly more than yields on corresponding German bonds. Banks' deposit and lending rates have also edged up this year, and stood at 4.6 and 7.8 per cent respectively at the end of the second quarter. Developments in market rates so far this year point to a further rise in financial institutions' interest rates in the second half of 2000.

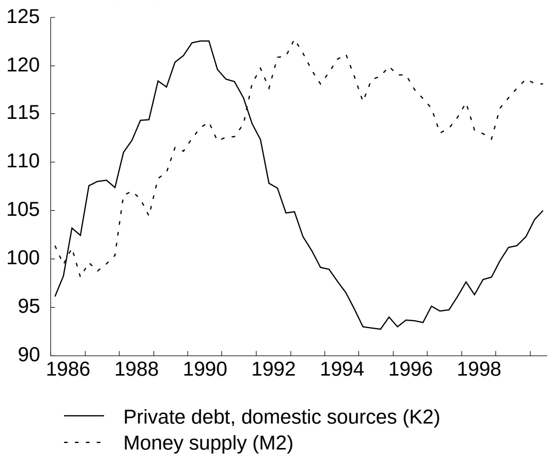
So far this year, the euro exchange rate has fluctuated around NOK 8.15, and measured against the euro the krone has been about 2 per cent stronger than in 1999. Measured by the import-weighted krone exchange rate, the krone depreciated by a good 3.0 per cent from the beginning of the year to end-August, and with an unchanged exchange rate the remainder of the year, the krone will have depreciated by 2.7 per cent on an annual basis. The Swedish krona, pound sterling and particularly the US dollar have appreciated against the euro the past year, providing much of the explanation for movements in the import-weighted krone exchange rate.

**Interest rate difference and exchange rate against ECU/euro**
1994 - 2000



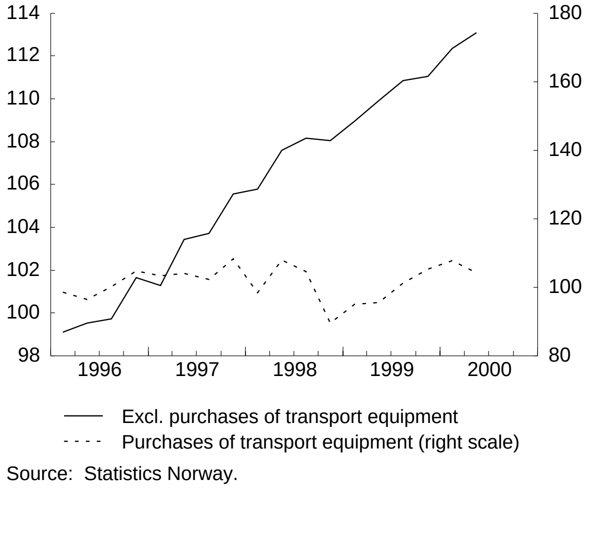

Source: Norges Bank.

**Money supply and private debt. 1986-2000**
Per cent of mainland GDP
Seasonally adjusted. Index 1986=100



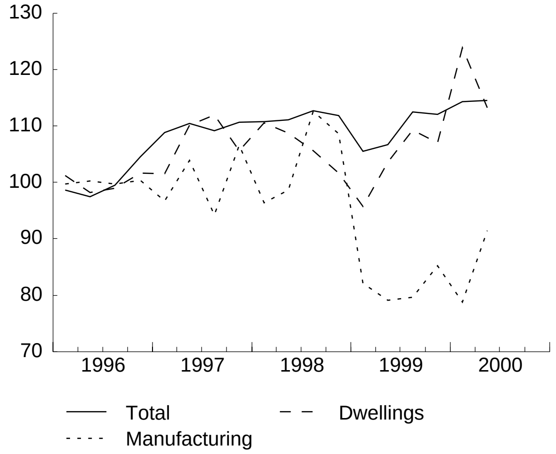

Sources: Statistics Norway and Norges Bank.

**Consumption in households. 1996 - 2000**
Seasonally adjusted volume indices, 1996=100



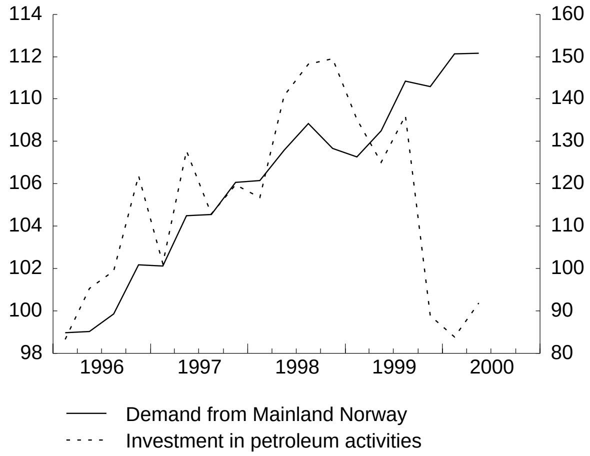

Source: Statistics Norway.

**Gross fixed capital formation, Mainland Norway. 1996 - 2000**
Seasonally adjusted volume indices, 1996=100



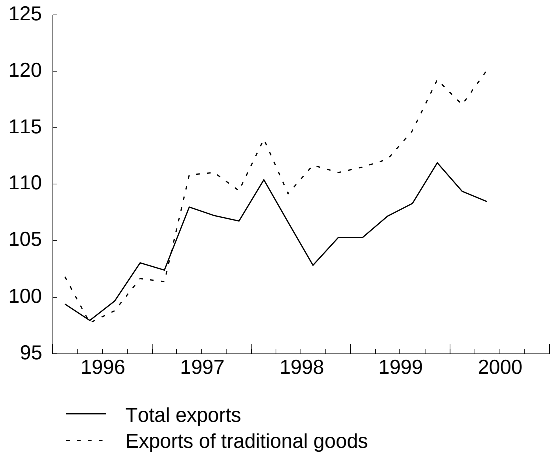

Source: Statistics Norway.

**Demand from Mainland Norway and investment in petroleum activities. 1996 - 2000**
Seasonally adjusted volume indices, 1996=100




Source: Statistics Norway.

**Exports. 1996 - 2000**
Seasonally adjusted volume indices, 1996=100




Source: Statistics Norway.

Following a sharp slowdown in the second half of 1998, growth in household consumption has again picked up. Measured at an annual rate, growth in consumption in the last six quarters has only been about one percentage point lower than during the period of expansion in 1993-1998. As in the previous seven years, it appears that consumption is expanding at about the same rate as income. Households' gross debt is now rising at a considerably faster pace than income, although net lending seems to remain relatively high. Preliminary figures indicate that household spending on goods increased at a slower pace than spending on services in the second quarter of 2000. Developments in new car registrations in the period to end-August this year and in the retail sales index up to end-July point to a fairly sluggish trend in household spending on goods in the third quarter.

Demand for housing appears to have increased further in the second quarter. Prices for existing owner-occupied dwellings rose substantially on the previous quarter to a level that was 16 per cent above the average for last year. After exhibiting sluggish trends through 1998, it now appears that housing investment may be increasing again, and in the first half of this year this investment was nearly 14 per cent higher than the average for last year. Preliminary and highly uncertain figures show, however, a decline from the first to second quarter. If investment should nevertheless stabilize at a noticeably higher level than that recorded during previous years, stronger growth in the supply of new dwellings may gradually contribute to curbing the rise in prices for existing dwellings. In isolation, higher interest rates will have the same effect.

Mainland investment showed little change between the first and second quarter of 2000. Even though manufacturing investment rose sharply, housing investment showed, as noted, a decline. This was also the case for investment in goods-producing industries, excluding manufacturing, and investment in private service industries, excluding dwellings. All in all, mainland investment is now back to the level of 1997-1998, which was the highest one recorded during the cyclical upturn in the 1990s. Petroleum investment has generally contracted the last two years, and is now about 35 per cent below the level in 1998. It appears, however, that petroleum investment rose marginally from the first to second quarter of this year. The estimates in Statistics Norway's investment statistics for the third quarter indicate that petroleum investment will show little change through the remainder of this year, while manufacturing investment may edge down.

Preliminary QNA figures indicate, on an uncertain basis, no change in general government demand from the second half of 1999 to the first half of 2000. The figures show a decline in general government consumption from the first to second quarter of 2000, while general government investment boosts the figure. All in all, mainland demand was broadly unchanged from the first to second quarter of this year after rising appreciably in the previous quarter.

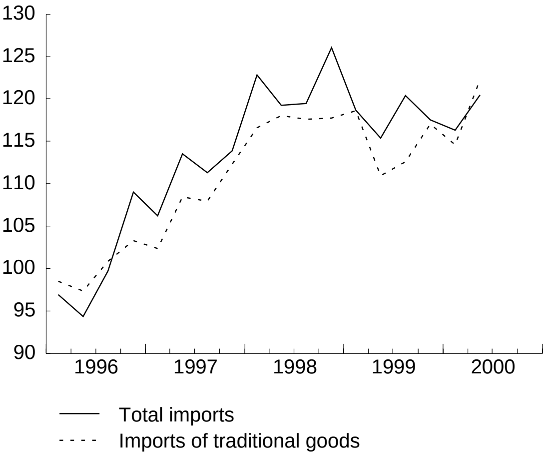
On a seasonally adjusted basis, the volume of traditional merchandise exports rose in the second quarter after declining in the previous quarter. The figures were boosted by exports of engineering products, fish and fish products and electricity, while exports of industrial raw materials fell slightly. Measured at an annual rate, traditional merchandise exports have risen by a good 6 per cent per quarter over the last six quarters after remaining virtually stagnant through the previous one and a half years. Traditional merchandise exports are therefore likely to generate somewhat stronger growth impulses this year than in 1999 and 1998. Crude oil and natural gas exports edged down in the second quarter of 2000, measured at constant prices, to a level only slightly higher than the average for last year. This means that growth in petroleum exports must be very buoyant the rest of the year if our earlier projections concerning developments on an annual basis are to be realized.

Export prices in krone terms continued to rise in the second quarter. On a seasonally adjusted basis, the export price of crude oil and natural gas rose by 6 per cent on the previous quarter, to a level nearly 60 per cent above the average for 1999. Prices for refined petroleum products are also about 60 per cent higher than the average for last year. The sharp rise in prices for metals and other industrial raw materials as well as fish and fish products has also contributed to a substantial increase in the value of Norwegian exports. This may partly be ascribed to the increase in a number of commodity prices measured in dollar terms and partly to the considerable appreciation of the dollar against the krone (and most other currencies) during the past year.

Growth in mainland activity through the second half of last year continued in the first two quarters of 2000. Developments in both private service industries and goods-producing industries, excluding manufacturing, contributed to pushing up the average. The level of activity in the general government sector is estimated to have increased at about the same pace as through the previous two years, while value added in manufacturing fell further in the second quarter, to a level that was about 7 per cent below the peak recorded in the second quarter of 1998. Both the production index for July and developments in new orders and order backlogs point to less sluggish trends for manufacturing in the third quarter.

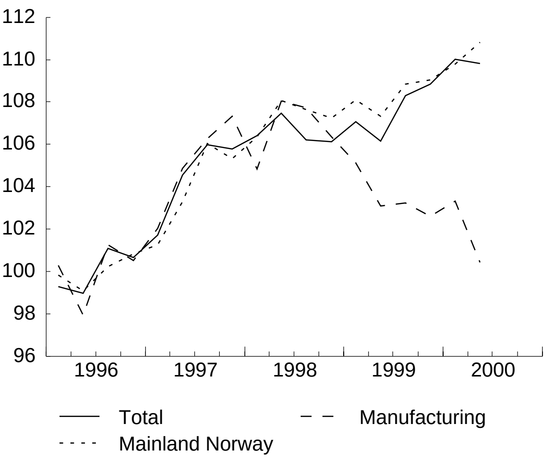
Imports also expanded in the second quarter after declining through the previous two quarters. The figure was boosted by traditional merchandise imports,

**Imports. 1996 - 2000**
Seasonally adjusted volume indices, 1996=100



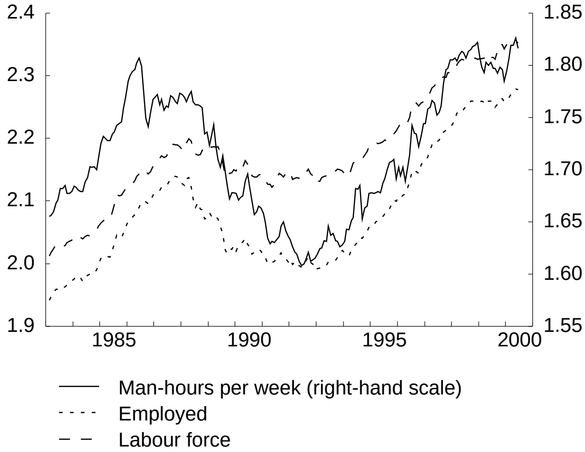

Source: Statistics Norway.

**Gross domestic product. 1996 - 2000**
Seasonally adjusted volume indices, 1996=100



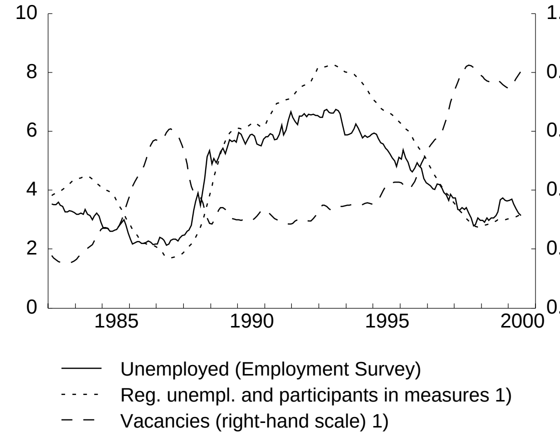

Source: Statistics Norway.

**Labour force, employment and number of man-hours worked per week. 1983-2000**
Millions. Seasonally adjusted and smoothed indices.



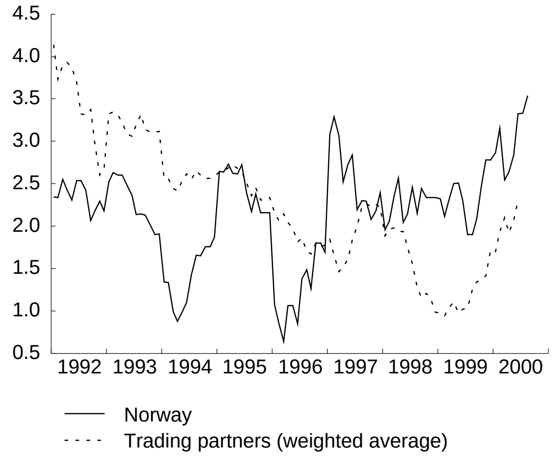

Source: Statistics Norway.

**Unemployed and number of vacancies, monthly figures. 1983-2000**
Per cent of labour force. Seas. adj. and smoothed



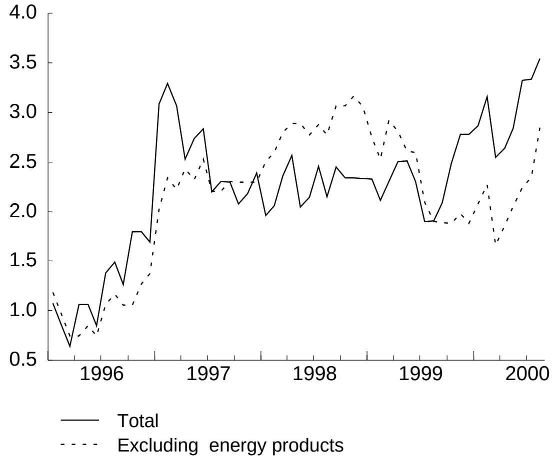

1) Backwards adjusted for breaks in the series from january 1999.
Sources: The Directorate of Labour and Statistics Norway.

**Consumer price indices. 1992-2000**
Pct. change from the same month the previous year



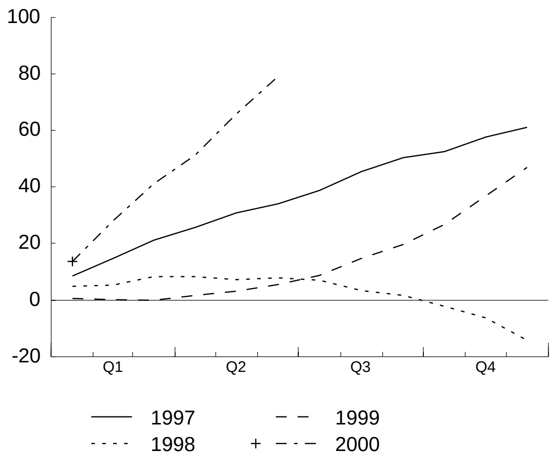

Source: Statistics Norway.

**The consumer price index**
Percentage change from the same month the previous year




Source: Statistics Norway .

**Current external balance 1997-2000**
Cumulative figures in NOK billions month by month




Source: Statistics Norway.

which on a seasonally adjusted basis rose by nearly 7 per cent on the previous quarter. Imports of metals (particularly aluminium) showed an abnormally strong growth. However, imports of other industrial raw materials, engineering products and transport equipment with no corresponding Norwegian production also rose markedly.

A comparison of the figures on changes in inventories and statistical deviations in the second quarter of 2000 and the second quarter of 1999 indicates that the supply of goods and services rose at a slightly faster pace than demand. Statistics Norway's inventory statistics for manufacturing show, however, a general decline in inventories through the period. This difference may be related to the changes in the inventory item for metals in the QNA, which increased about as much as imports in the period. This corresponds to more than half of the total rise in inventories from the second quarter of 1999 to the second quarter of 2000.

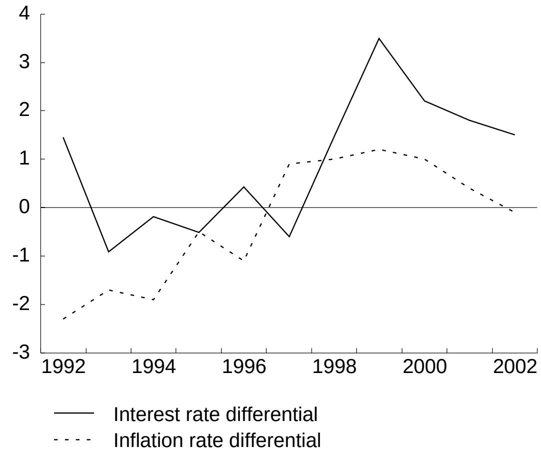
After showing marginal changes through the second half of 1998 and most of 1999, employment has moved on an upward trend since the end of last year. Seasonally adjusted figures from Statistics Norway's Labour Force Survey (LFS) indicate that employment in the second quarter was nearly 1 per cent higher than the average for 1999. For the period as a whole, the labour force has increased at about the same rate as employment, and unemployment is only slightly higher than the trough recorded at the beginning of 1999. LFS unemployment has thus fallen from the level seen at the beginning of 2000. The sum of registered unemployed at employment offices and persons participating in ordinary labour market programmes has also increased over the past year, but developments through the period have been more even than for LFS unemployment. For the period as a whole, however, the figures from the Directorate of Labour and LFS show approximately the same picture for developments in unemployment. The number of people laid off (entirely and in part) is now back to the level recorded in 1994-1996 after declining through 1997 and 1998. The number of vacancies at employment offices has edged up again this year after exhibiting a slightly falling trend from the summer of 1998. Viewed in relation to developments in unemployment, this may be an indication of a growing mismatch between the composition on the supply and demand side in the labour market.

As an average for the first seven months of the year, the consumer price index was 3.0 per cent higher than in the same period one year earlier. The year-on-year rise in prices was as much as 3.3 per cent in both June and July. So far this year, movements in prices for petrol, electricity, beverages and tobacco as well as a number of services have contributed to pushing up price inflation, whereas changes in telecommunication rates and prices for food, clothing and footwear have had the opposite effect. Prices for goods and services, excluding energy goods, were 2.1 per cent higher in the first seven months of the year than in the same period last year. This is the same as the rise in prices for these groups of goods and services from 1998 to 1999, and 0.2 percentage point lower than the average for the last three years. On a 12-month basis, the rate of price increase for these groups was down to 1.7 per cent in March, but has since increased, reaching 2.3 per cent in July. The harmonized index of consumer prices also rose by 3 per cent from the period January-July 1999 to the same period this year. This is 1.1 percentage point higher than price inflation in the EU in the same period and 1 percentage point more than in the same period last year.

According to preliminary national accounts figures, wages per normal man-year rose by 5.2 per cent last year. The Technical Reporting Committee on Income Settlements has estimated that the average wage carry-over into 2000 was 1.3 per cent, against 3.1 per cent the previous year. Even though pay increases were higher, and in some cases considerably higher in 2000 than last year, the low carry-over will contribute to wage growth per normal year that is still nearly one percentage point lower than in 1999. This year, however, there are two fewer working days than in 1999. For salaried employees, this means that wage growth will be 0.9 percentage point higher measured per man-hour than when measured per normal man-year. An increase in sickness absence points in the same direction. Employers will also incur additional costs this year in connection with the two extra vacation days in 2001.

The current account of the balance of payments showed a surplus of NOK 79 billion in the first half of 2000, against NOK 47 billion for 1999 as a whole. Compared with the first half of 1999, the surplus rose by nearly NOK 74 billion. The higher value of oil and natural gas exports accounted for most of this increase. Almost the entire increase of NOK 67 billion in the value of this export component can be ascribed to the sharp rise in prices. Despite a considerable increase in Norway's net foreign assets over the past year, the deficit on the interest and transfers balance rose moderately in the period.

**Interest rate and inflation differential between NOK, and the ECU/euro. 1992-2002**
Projections for 2000-2002




Sources: Norges Bank and Statistics Norway.

## Outlook for the next few years

### Cyclical upturn abroad

As noted above, Norway's trading partners are likely to record higher growth in output and demand in 2000 than last year. Market growth for traditional Norwegian export goods is thus projected at about 7 per cent. The growth projections for 2001 are also high even though lower growth is expected in the US. Our projections for market growth abroad are therefore in line with our assumptions in the June report. In 2002, we project slightly slower growth among trading partners. This, combined with relatively stable inflation, means that interest rates are not expected to show any substantial increase.

International commodity prices have risen considerably since bottoming out in connection with the Asian crisis a year and a half ago. Prices for a number of important Norwegian export goods (in addition to the oil price) have risen substantially. To some extent this is a cyclical catch-up following the low prices recorded in 1998.

### Monetary policy and estimates for exchange rates

The import-weighted krone exchange rate depreciated considerably in the first half of 2000 but has shown little change in recent months. The changes are primarily due to movements in the krone exchange rate against the US dollar, as the krone exchange rate against the euro has been more stable. In line with earlier assumptions concerning exchange rate movements, we assume that the dollar and pound sterling

**Main economic indicators 1999-2001. Accounts and forecasts**
Percentage change from previous year unless otherwise noted

| | | Forecasts | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Accounts | 2000 | | | 2001 | | | 2002 | |
| | 1999 | SSB | FIN | NB | SSB | FIN | NB | SSB | NB |
| **Demand and output** | | | | | | | | | |
| Consumption in households and non-profit organizations | 2.4 | 3.0 | 2.9 | 3 | 1.7 | 3.0 | 2 | 1.6 | 2 1/2 |
| General government consumption | 2.7 | 2.0 | 1.9 | 2 1/4 | 1.8 | 1.7 | 2 | 1.9 | 2 |
| Gross fixed investment | -5.6 | -2.3 | -6.3 | -4 1/2 | -2.2 | -2.5 | -2 1/2 | 2.7 | 1 |
| Petroleum activities | -12.6 | -23.9 | -23.5 | -23 | -10.8 | -17.6 | -15 | 8.3 | -3 |
| Mainland Norway | -2.1 | 4.0 | 1.5 | 2 | 1.3 | 1.3 | 1 | 1.6 | 2 |
| Firms | -3.3 | 2.5 | 0.3 | 1/4 | 0.4 | 1.1 | -3/4 | 1.3 | 1 1/4 |
| Housing | -2.2 | 12.8 | 5.4 | 9 | 10.6 | 8.9 | 5 | 3.5 | 4 1/2 |
| General government | 1.3 | 1.7 | 1.8 | 1 3/4 | -3.9 | -3.9 | 2 | 0.5 | 1 3/4 |
| Demand from Mainland Norway[1] | 1.6 | 3.0 | .. | 2 1/2 | 1.7 | .. | 1 3/4 | 1.6 | 2 1/4 |
| Stockbuilding[2] | -1.3 | 0.2 | 0.0 | .. | 0.0 | -0.1 | .. | 0.0 | .. |
| Exports | 1.7 | 3.6 | 7.2 | 5 1/2 | 4.8 | 6.1 | 5 | 3.0 | 3 1/4 |
| Crude oil and natural gas | -0.1 | 6.7 | 13.1 | 9 1/2 | 4.1 | 7.5 | 7 | 2.0 | 2 3/4 |
| Traditional goods | 2.6 | 4.9 | 5.4 | 4 | 5.5 | 4.8 | 4 1/4 | 4.2 | 3 3/4 |
| Imports | -3.1 | 1.0 | 0.7 | 1/2 | 3.4 | 2.9 | 1 1/4 | 4.2 | 3 3/4 |
| Traditional goods | -2.0 | 4.0 | 2.6 | 1 1/2 | 5.9 | 3.8 | 1 1/4 | 4.6 | 3 3/4 |
| Gross domestic product | 0.9 | 2.7 | 3.1 | 3 | 1.5 | 2.8 | 2 1/2 | 1.5 | 1 3/4 |
| Mainland Norway | 0.8 | 2.0 | 1.8 | 1 3/4 | 1.2 | 1.9 | 1 1/2 | 1.6 | 1 1/2 |
| **Labour market** | | | | | | | | | |
| Employed persons | 0.7 | 0.7 | 0.3 | 1/4 | 0.7 | 0.6 | 1/2 | 0.8 | 1/2 |
| Unemployment rate (level) | 3.2 | 3.3 | 3.6 | 3 1/2 | 3.3 | 3.6 | 3 1/2 | 3.2 | 3 1/2 |
| **Prices and wages** | | | | | | | | | |
| Wages per standard man-year | 5.2 | 4.5 | 3 3/4 | 4 1/4 | 4.0 | .. | 3 3/4 | 3.5 | 4 1/4 |
| Consumer price index | 2.3 | 3.0 | 2.6 | 3 | 2.2 | 2.3[3] | 2 1/2 | 1.8 | 2 1/2 |
| Export prices, traditional goods | 0.1 | 11.3 | 4.1 | 6 | -1.2 | 1.8 | 2 | -1.2 | 1 1/2 |
| Import prices, traditional goods | -2.3 | 4.8 | 1.8 | 3 | 0.1 | 1.0 | 1 3/4 | -1.2 | 1 1/2 |
| Real prices, dwellings | 7.5 | 13.5 | .. | 6 3/4 | 4.9 | .. | 1 1/2 | 2.7 | 3 1/2 |
| **Balance of payment** | | | | | | | | | |
| Current balance (bill. NOK) | 46.9 | 168.8 | 152.7 | 170 | 164.8 | 119.5 | 170 | 151.4 | 140 |
| Current balance (per cent of GDP) | 3.9 | 12.3 | 11.4 | 13 | 11.8 | 8.9 | 12 | 10.6 | 10 |
| **Memorandum items:** | | | | | | | | | |
| Household saving ratio (level) | 6.8 | 6.3 | 6.9 | 6 | 6.7 | 6.3 | 5 3/4 | 7.9 | 6 1/4 |
| Money market rate (level) | 6.4 | 6.6 | 6.4 | 6.6 | 7.1 | 6.2 | 6.8 | 6.8 | 6.3 |
| Average borrowing rate (level)[4] | 8.4 | 8.1 | .. | .. | 9.1 | .. | .. | 8.7 | .. |
| Crude oil price NOK (level)[5] | 141 | 231 | 190 | 220 | 193 | 145 | 190 | 168 | 160 |
| International market growth | 5.4 | 7 | .. | .. | 6.5 | .. | .. | 6.0 | .. |
| Importweighted krone exchange rate (44 countries)[6] | -1.2 | 2.5 | .. | 1.7 | -0.8 | .. | -0.3 | -1.2 | 0.0 |

1 Consumption in households and non-prifit organizations + general government consumption + gorss fixed capital foramtion in Mainland Norway.
2 Change in stockbuilding. Per cent of GDP.
3 The consumption deflator.
4 Households' borrowing rate in private financial institutions.
5 Average spot price Brent Blend.
6 Increasing index implies despreciation.
Sources: Statistics Norway (SN), Ministry of Finance, Revidert nasjonalbudsjett 2000 (MoF), Norges Bank, Penger og kreditt 2000/2 (NB).

will depreciate against the euro in the period ahead. However, we now estimate that this will take a longer time than was assumed earlier. We now expect a relatively steady depreciation of the dollar from its current level to about 1.10 against the euro eight quarters ahead. The value of the Norwegian krone against the euro is expected to remain at about NOK 8.25 starting next year. On the basis of these assumptions, the import-weighted krone exchange rate will depreciate by 2.5 per cent from 1999 to 2000 on an annual basis and then appreciate by about one per cent in both 2001 and 2002.

The depreciation of the import-weighted krone exchange rate has contributed to a pronounced rise in import prices so far this year. We now assume that prices for traditional imported goods will increase at an annual rate of nearly 5 per cent. Such a high rise in import prices has not been seen since the 1980s. This rise in prices, however, is not only due to the depreciation of the import-weighted krone exchange rate, but also to noticeably higher prices on the world market following a period of very low prices in 1998 and the beginning of 1999. The sharp increase in the price of crude oil has almost no direct impact on the price index for traditional imported goods. However, higher oil prices influence production costs for foreign producers and thus contribute to boosting prices for Norwegian imported goods measured in a foreign currency. In line with the OECD's latest forecast, we project that in the period ahead the rise in prices abroad will stabilize at a slightly lower level than in recent months and that the rise in prices for manufactured goods abroad will be about 1 per cent annually. If our assumptions concerning exchange rate movements hold true, the rise in prices for traditional imported goods, measured in krone terms, will thus come to a halt very soon and import prices may fall slightly in 2001 and 2002.

The Norwegian money market rate has risen substantially through this year and now stands at more than 7 per cent. This is nearly 2 1/2 percentage points above the corresponding rate in the euro area, while the inflation differential is about one percentage point. We assume that the interest rate in the euro area will increase to a little more than 5 per cent from the beginning of 2001 and then remain at this level. Moreover, we assume that the Norwegian money market rate will remain at around 7 1/4 per cent through most of next year and then gradually decline by half a percentage point. This implies that households' borrowing rate in financial institutions at the beginning of 2001 will approach the level recorded at the beginning of 1999.

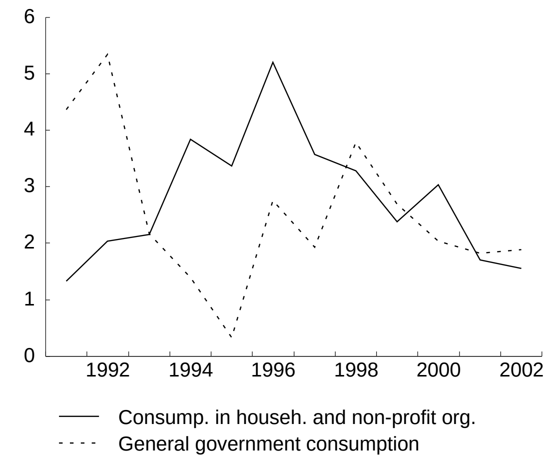
The money market rates used as a basis for our calculations, along with estimates for inflation differentials between Norway and the euro area and exchange rate estimates as described above, are not entirely compatible with the relationships embodied in the KVARTS model. A mechanical use of the model would, for example, imply that the Norwegian money market rate would have been nearly one percentage point lower than we have assumed for 2001. Thus, there is a risk that the krone might remain fairly strong against the euro and perhaps appreciate further in the period ahead in contrast to the assumptions on which our projections are based.

An indicator of the tightness of the current monetary policy is the average real interest rate after tax for household loans in private financial institutions. If current inflation is used as an indicator of expected inflation, this real interest rate was a good 2.5 per cent in the first half of 2000. Given the interest rate increases we have observed so far in the third quarter and that are expected in the fourth quarter, the real interest rate after tax will be about 3 per cent in the second half of the year, rising to nearly 4.5 per cent, according to our estimates, in the first half of 2001. Since our estimates show a gradual decline in inflation through next year, we have assumed that the money market rate will also decline in nominal terms so that the real interest rate remains approximately constant

**Exports**
Percentage growth

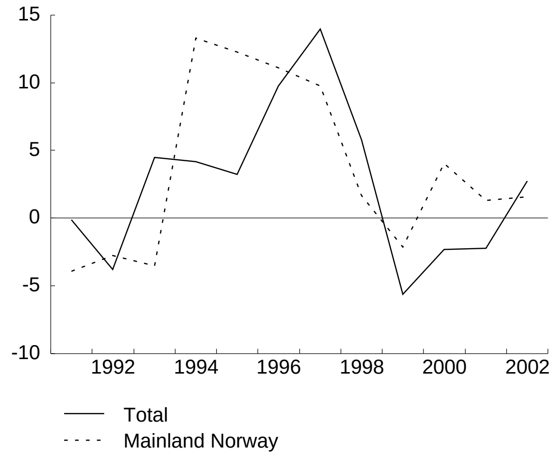

Source: Statistics Norway

**Consumption**
Percentage growth



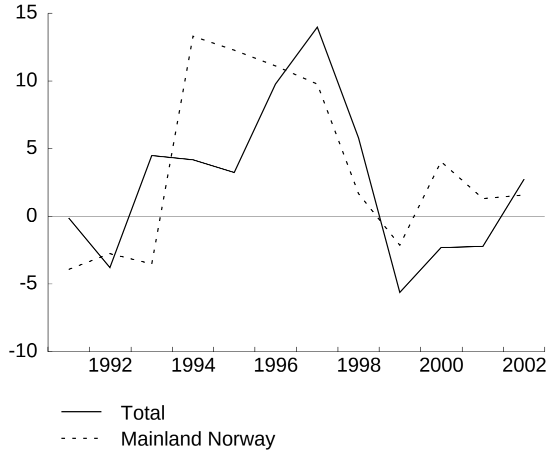

Source: Statistics Norway

**Gross fixed capital formation**
Percentage growth




Source: Statistics Norway

**Gross fixed capital formation**
Percentage growth

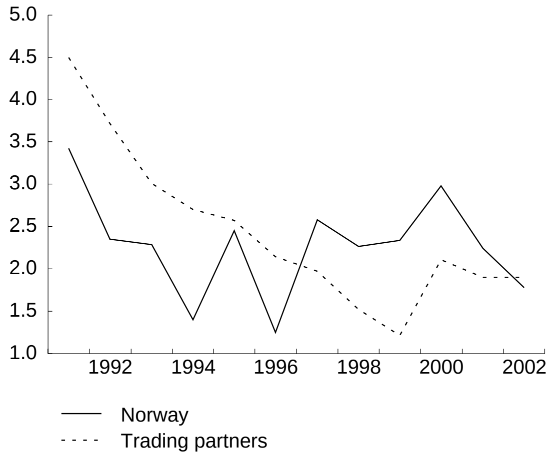



Source: Statistics Norway

**Labour market**
Percentage change


1) Adj. for stat. rev. from 1996.
Source: Statistics Norway

**Consumer price indices**
Percentage growth




Source: Statistics Norway

at 4.5 per cent in 2001 and 2002. Given the way our model describes the functioning of the Norwegian economy, this will contribute to a substantial increase in the household saving ratio in the period ahead and consequently lower growth in household demand than the level implied by income growth.

## Cyclically neutral fiscal policy

The assumptions concerning growth in general government spending on goods and services are in line with the estimates in the Revised National Budget for 2000 and have not been changed to any notable extent compared with our previous report. General government consumption is projected to expand by about 2 per cent a year in both 2000 and 2001. Investment will increase marginally this year and then decline by about 4 per cent next year. The estimates for 2002 are based on a continuation of consumption growth in 2001, while the level of investment remains unchanged.

We have only assumed a general inflation adjustment of direct and indirect tax rates in 2001 and 2002 even though it now appears that VAT on some services will be introduced and the rates for a number of excise duties will be reduced. It is assumed that the framework for this will be a generally balanced budget change. The expected changes in indirect taxes are so extensive that we do not deem it appropriate to guess what the policy will be. However, the changes may have a considerable influence on the rise in prices and particularly relative prices in 2001. It is unlikely, however, that inflation will be particularly affected on a more sustained basis by the changes in indirect taxes. As a result of our assumption concerning an inflation adjustment of excise duties and subsidies next year, in keeping with our normal practice, our calculations may provide a poor forecast for inflation in 2001. On the other hand, our forecast still provides an indication of underlying growth and inflationary impulses. We will incorporate the changes in indirect taxes in our December report when these have been approved by the Storting.

## New impetus from petroleum activities in the period ahead?

In line with earlier projections, we assume that petroleum investment will show a considerable decline from 1999 to 2000. On an annual basis, the contraction is estimated at 24 per cent, which is largely in line with the companies' own estimates. In 2001, we expect a continued fall in investment, albeit not on the same scale as in 2000. Petroleum investment is now projected to drop by 11 per cent next year, while in 2002 it is estimated that investment will be back to the level in 2000. As a result of the sharp rise in oil prices, it is quite conceivable that investment will show a smaller decline than we now assume. Since the mid-1980s, we have on several occasions observed a time lag between oil prices and petroleum investment of 2-3 years. At the beginning of next year, two years will have passed since the oil price bottomed out.

Our estimates for growth in oil and gas production have been revised downwards compared with earlier. The reduction is greatest for oil production. In 2000, we expect both oil and gas production to increase in volume by about 6 per cent. Gas production is expected to increase considerably more in 2001, while oil production will then rise at a noticeably slower pace than in 2000.

In periods, oil prices have been higher than USD 30 per barrel this year, but are expected to fall gradually to USD 24 on average next year and USD 22 per barrel in 2002. Combined with the assumption of a weaker dollar, this means that the oil price in krone terms will fall to about NOK 170 per barrel in 2001 from the current level of about NOK 300.

**Household income and demand**

Growth in household real disposable income may be a good 3 per cent in 2000. Growth in consumption is estimated to be about the same, and the household saving ratio will thus remain stable and at a relatively high level. So far in 2000, housing investment has increased considerably compared with one year earlier even though preliminary and uncertain estimates for the second quarter of 2000 indicate a seasonally adjusted decline from the first quarter. The sharp rise in prices for existing dwellings has made it more favourable to build new dwellings. Combined with high growth in household income and low unemployment, this means that households will probably increase their demand for new dwellings despite higher borrowing rates and a rising real interest rate after tax. We therefore assume that growth in housing investment will continue in the period ahead even if interest rates in Norway increase further. Growth is not expected to level off until later in 2002.

On the other hand, growth in household consumption is assumed to be more moderate the next few years than the level expected in 2000. The main reason for this is higher real interest rates and lower growth in household wealth, primarily as a result of a slower rise in house prices. Growth in household real disposable income is expected to be around 2-2.5 per cent the next two years, with the saving ratio edging up in the period ahead, particularly in 2002. Income developments reflect relatively stable growth in households' employment income, projected lower growth in transfers to households compared with the sharp rise in 2000 as well as higher interest expenditure due to higher interest rates. As a result of a more moderate rise in house prices in the period ahead and the assumption of unchanged real equity prices, household wealth (revalued) will expand at a slightly slower pace ahead even if financial saving remains high. This, combined with a higher real interest rate after tax, will push down consumption growth in relation to income growth.

**Stable mainland investment**

Preliminary and uncertain estimates for the second quarter of 2000 show that mainland investment has picked up from the low level recorded in the first half of 1999. However, this is not expected to continue and we assume that mainland investment will remain fairly stable the next few years. Housing investment will contribute to growth in mainland investment, but general government investment is expected to decline in the period ahead from an historically high level. There are no signs indicating a resumption of growth in manufacturing investment as a whole even though solid profitability in the processing industry may contribute to a rise in their capital construction ahead. Investment is increasing in some service industries, but moderate growth in the mainland economy in the period ahead implies that we will not see a new upswing of significance. Higher interest rates in Norway are not expected to have any significant influence on corporate investment.

**Moderate growth in the mainland economy**

It now appears that mainland GDP growth will be about 2 per cent from 1999 to 2000. Manufacturing production is edging down, while production in service industries and the electricity sector is rising. The sharp growth in electricity production due to considerable precipitation may alone contribute 0.3 percentage point to overall growth this year. With normal precipitation levels, electricity production will edge down next year. Adjusted for these factors, growth in the mainland economy is estimated to be a quarter per cent lower in 2001 than in 2000. Value added in manufacturing has fallen from a peak two years ago and is expected to decline somewhat more through 2000 and into next year. As a result of the projected rise in petroleum investment and growth in exports, the fall in manufacturing production may come to a halt next year, but no sharp growth is expected thereafter.

So far this year, production in service industries has shown a noticeable increase. With moderate consumption and investment growth in the period ahead, however, growth in these industries is not expected to be strong next year. A tight labour market combined with additional vacation days will limit growth in man-hours worked next year. This will particularly influence the growth potential of labour-intensive enterprises that are fairly typical in many service industries. The rise in residential construction will contribute to renewed growth in the building sector in the period ahead following a decline in the building and construction sector since 1998.

Production in the general government sector largely shadows changes in man-hours. The average growth in man-hours is assumed to be 1.5 per cent annually in the period ahead. Combined with projected productivity gains of half a per cent, value added in the general government sector is thus estimated to expand by about 2 per cent annually the next two years.

**Continued tight labour market**
According to LFS figures, unemployment rose at the beginning of the year but has since declined again. Underlying developments the last few years are now more on a par with the figures for the number of registered unemployed (including labour market programmes). The latter figures show a weak upward trend. New notifications of vacancies are still considerable and the total number of vacancies remains at a high level. Employment is expected to grow by 0.7 per cent this year, while the number of man-hours worked is not expected to show any growth. Next year, man-hours worked are expected to edge down, while the number employed will rise. Two additional vacation days both next year and in 2002 imply that employment will expand at approximately the same pace as the labour force despite a slight fall in man-hours worked. Compared with the current level, unemployment is therefore not expected to show any pronounced change the next two years. This means that the level of unemployment will remain approximately unchanged from 1998 to 2002. In this situation, the Norwegian economy is vulnerable to positive demand impulses that further boost the demand for labour in relation to developments described here. Similarly, new reforms that contribute to reducing the supply of labour will amplify pressures in the labour market.
Stronger krone results in lower price inflation
It now appears that consumer price inflation will be about 3 per cent this year, the highest level since 1991. Along with domestic cost impulses, higher oil prices and a weaker krone exchange rate against the currencies of countries we import from are important factors behind these developments. As noted earlier, the oil price in dollar terms is assumed to fall considerably the next two years (to USD 22 per barrel in 2002) and the import-weighted krone exchange rate is expected to appreciate by about one per cent each year in the period ahead, to a level that approximately corresponds to the level in 1999. Combined with moderate commodity price increases and continued low inflation internationally, this will contribute to a gradual fall in import prices for traditional goods after rising by almost 5 per cent in 2000. These assumptions are part of the background for our projection that consumer price inflation will decline to a little less than 2 per cent over the next two years, or a good one percentage point lower than inflation this year. If the import-weighted krone exchange rate does not appreciate as we have assumed, consumer price inflation will be about 2.5 per cent the next two years. If oil prices also fail to decline, the estimate for price inflation will increase another few tenths each year.

Lower growth in unit labour costs comes in addition to the effects of a lower rise in import prices. Growth in hourly earnings is not likely to show any pronounced change from 1999 to 2001, but wage growth per normal man-year will edge down. The difference in developments between these two variables is related to the increase in vacation days. Furthermore, we assume that productivity gains will increase in the period ahead. This will help to restrain price inflation. As noted above, we have not incorporated changes in indirect taxes and subsidies in excess of the normal inflation adjustment of excise duty rates.

In connection with the wage settlement in 2000, contractual pay increases for spring 2001 were also agreed so that there will be no centralized negotiations next year. For a number of sectors where wage drift is traditionally limited, for example in the public sector, it is therefore possible at this early stage to have a sound opinion about wage growth next year. In manufacturing, where the importance of local pay increases is considerable and in some cases dominates entirely for broad groups of employees, it is conceivable that higher profitability due to high product prices will result in higher wage drift than the level assumed in connection with the spring wage settlement. The tight labour market also points to high wage drift in some industries. With lower price inflation in the period ahead, however, real wage growth will remain high, and a projected appreciation of the krone may limit enterprises' willingness to provide sizeable local pay increases in 2001.

**Enormous current account surpluses**
The current account surplus may reach NOK 170 billion this year, or a good 12 per cent of nominal GDP. If oil prices remain at the current level of more than USD 30 per barrel the rest of the year, the surplus may be about NOK 200 billion. In 2001, the assumption of lower oil prices contributes to reducing the surplus somewhat even if this is partly offset by higher production. The assumption of a strengthening of the import-weighted krone exchange rate contributes to restraining growth in the value of imports and to some extent the value of exports as well. A decline in the deficit on the interest and transfers balance will contribute to increasing the current account surplus. With a projected weaker dollar, valuation changes in financial assets will contribute to a faster rise in net foreign assets in 2001 than this year despite a lower current account surplus.

## Effects of higher growth in the public sector's use of resources, a partial analysis

Our forecasts are largely dependent on the assumptions concerning economic policy. We have assumed a cyclically neutral fiscal policy. On the basis of the prospect of a continued tight labour market, higher demand compared with the level assumed will to a greater extent than otherwise have an impact on wage and price developments. In the calculations presented here we look at the consequences of higher growth in the public sector's use of resources equivalent to NOK 5 billion (2001 prices) each year. In the first calculation we allow the entire increase in demand to take the form of higher local government employment, while in the second we increase local government investment in machinery and equipment.

In practice, this isolated increase in either employment or investment cannot be implemented. Higher employment will have to be accompanied by higher investment, and higher investment will require an increase in manpower to make use of it.

In order to arrive at the more long-term consequences of this policy shift, we have decided to make calculations over a five-year period. In the calculations, there is no direct feedback to the economy through changes in productivity, reduced sickness absence or the number of social security recipients from the increase in the public sector's use of resources. It is also assumed that the transfer of labour between industries does not encounter absolute limits in the supply of labour.

Qualitatively the measures are very similar. Higher public sector use of resources contributes to increased activity levels as a whole, greater pressures in the labour market, higher wage and price inflation and a less favourable external account. Reduced cost competitiveness contributes to lower activity in internationally exposed sectors. Quantitatively, however, there are considerable differences. By increasing investment, a large part of the higher demand is channelled directly abroad so that pressures in the Norwegian economy are considerably less. According to the calculations, wages after five years will be 16.7 per cent higher when employment is increased and 2.0 per cent higher when investment is increased.

These effects are very sensitive to the level of unemployment in the baseline scenario, which here is about 3.2 per cent in the entire period. If unemployment is slightly lower, the wage effects may be substantially greater. It must also be emphasized that the calculations have been made on the assumption that confidence in the Norwegian krone does not change and that Norges Bank does not attempt to counter the expansionary effects through a more contractionary monetary policy. Nominal Norwegian interest rates and exchange rates are therefore assumed to remain unchanged in relation to the baseline scenario. However, it is conceivable that the effects from money and foreign exchange markets may be quite considerable, although these problems are not discussed here.

**Effects of an annual increase in the volume of general government consumption (local government employment) equivalent to NOK 5 bn (2001 prices)**
As a percentage of the level in the baseline scenario unless otherwise noted

| | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|
| General government consumption | 1.8 | 3.5 | 5.2 | 6.9 | 8.5 |
| Consumption in households and NPISHs | 0.5 | 1.8 | 3.8 | 6.2 | 9.6 |
| Private mainland investment | 0.5 | 2.8 | 6.9 | 11.6 | 18.0 |
| Traditional merchandise exports | 0.0 | -0.3 | -0.8 | -1.8 | -3.2 |
| Imports | 0.3 | 1.4 | 3.2 | 5.4 | 8.4 |
| Mainland GDP | 0.7 | 1.7 | 3.1 | 4.6 | 6.3 |
| Unemployment rate, level in per cent | -0.6 | -0.9 | -1.3 | -1.4 | -1.7 |
| Labour force | 0.4 | 1.2 | 2.1 | 3.2 | 4.1 |
| Wages | 0.8 | 2.7 | 5.0 | 10.2 | 16.7 |
| Consumer price index | 0.1 | 0.3 | 0.7 | 1.5 | 2.8 |
| Current account balance, level in NOK bn. | -1.6 | -6.7 | -16.1 | -27.9 | -45.4 |

**Effects of an annual increase in the volume of general government investment (local government investement in machinery and equipment) equivalent to NOK 5 bn (2001 prices)**
As a percentage of the level in the baseline scenario unless otherwise noted

| | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|
| General government consumption | 0.1 | 0.3 | 0.7 | 1.1 | 1.7 |
| Consumption in households and NPISHs | 0.1 | 0.3 | 0.7 | 1.1 | 1.7 |
| Private mainland investment | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| Traditional merchandise exports | 0.0 | -0.1 | -0.2 | -0.4 | -0.6 |
| Imports | 0.8 | 1.7 | 2.8 | 3.9 | 4.9 |
| Mainland GDP | 0.3 | 0.7 | 1.1 | 1.7 | 2.2 |
| Unemployment rate, level in per cent | -0.1 | -0.2 | -0.2 | -0.3 | -0.4 |
| Labour force | 0.0 | 0.1 | 0.3 | 0.5 | 0.6 |
| Wages | 0.1 | 0.3 | 0.7 | 1.3 | 2.0 |
| Consumer price index | 0.0 | 0.0 | 0.1 | 0.2 | 0.3 |
| Current account balance, level in NOK bn. | -3.6 | -8.0 | -13.8 | -21.2 | -27.1 |