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.	Category not applicable
..	Data not available
...	Data not yet available
-	Nil
0	Less than half the final
0.0	digit shown

Imbalances and paradoxes

In recent *Inflation Reports* I have expressed growing concern over a number of aspects of the Norwegian economy. In my opinion, the current situation is of even greater concern.

On the surface, this concern may seem overstated. Price inflation appears to remain steady at about 2-2½% and is projected to be lower this year than assumed in the March *Inflation Report*. We have just come through a wage settlement where the social partners have once again confirmed their support for the wage moderation approach, although a real wage growth of close to 1½% and pension reforms may prove to be more costly than they are worth in the longer term.

However, under the surface, the imbalances in the economy are becoming increasingly evident. We are in the process of exhausting the idle capacity available at the onset of the current cyclical upturn in an environment of sustained demand growth. The imbalances are reflected in a number of indicators:

– Employment growth is continuing at a brisk pace, unemployment is falling and there are signs of a growing shortage of resources - including a shortage of skilled labour - in large parts of the business sector and the public sector.
– The growth in the credit supply and M1 is rising. Growth in both this monetary aggregate and in the supply of credit is now higher than nominal GDP growth, which will lead to mounting inflationary pressures in the economy if this continues.
– In the report *Financial Sector Trends* included in this issue of the Economic Bulletin, it is pointed out that a higher share of bank credit is being chanelled to less secure loans than earlier and banks are becoming increasingly dependent on short-term foreign financing.
– The potential fall in asset prices is rising. House prices have risen markedly and household financial saving was negative in the last two quarters of 1996. Moreover, housing starts are growing sharply. Share prices have reached an historical peak.
– The estimates in the June *Inflation Report* indicate that growth in the economy will continue to outpace the underlying growth in capacity by a substantial margin, and that the slack in the labour market will continue to decline.

How this picture can be consistent with continued moderate price and wage inflation may seem paradoxical.

The main explanation may be that price inflation in Norway is partly being kept at bay by the subdued level of international inflation. As the Norwegian economy is relatively open, international inflation always has a pronounced impact on Norwegian price trends. Foreign competition in many sectors also makes Norwegian producers cautious about raising prices.The estimates in the *Inflation Report* also imply a continuation of this situation next year.

However, past experience indicates that the Norwegian economy will eventually meet constraints which engender an acceleration in price and wage inflation unless the pressures in the economy are alleviated. This may in turn necessitate a new round of tightening measures in order to restore stability in the economy and confidence in our ability to keep inflation under control.

It is difficult to determine the timing of such developments, and they may be triggered by unanticipated shocks in the economy. It is also uncertain when an increasingly tight labour market will have an impact and the extent to which wage and price formation in an international environment of low inflation perhaps functions differently than in the past. The uncertainty goes both ways. We may once again have underestimated the pressures in the economy or demand growth. In our *approach* to the uncertainty we are facing, there are solid grounds for underlining the risk of growing imbalances and rising price inflation.

In order to reduce the risk of an unsustainable rise in prices, growth in total demand must be brought down. There are currently few, if any, elements in the economy which are actually contributing to curbing demand growth. Monetary policy is geared towards preventing a strengthening of the krone exchange rate. There seems to be little left of the fiscal tightening which was originally proposed last autumn. Again it may seem fairly paradoxical that the greater the need is for conducting a tight economic policy, the less scope there is for implementing this policy.

Kjell Storvik

Norges Bank's inflation report

Pursuant to the Norges Bank Act, the central bank has an advisory function in the area of monetary, credit and foreign exchange policy. In its executive capacity, Norges Bank shall ensure the stability of the krone's value measured against European currencies. Sustained low price and wage inflation in line with or lower than that of trading partners is a necessary condition for a stable krone exchange rate.

The *Inflation Report* provides a survey of price trends and factors that influence price and wage inflation. It contains a broad review of the situation in the Norwegian economy and provides Norges Bank's professional evaluation of the outlook for prices for the next 12-18 months. In the leader above, the Governor provides a summary of Norges Bank's assessment of the situation.

The cut-off date for the *Inflation Report* was 13 June 1997

1 INFLATION OUTLOOK

Economic growth in Norway has continued at a brisk pace into 1997. The projections in this report indicate that the high level of economic activity will continue this year and next, accompanied by a marked decline in unemployment.

Price inflation is projected at 2½% in 1997 and 2% in 1998. The decline in price inflation between 1997 and 1998 primarily reflects lower electricity prices. Excluding changes in indirect taxes and electricity prices, underlying inflation is estimated at about 2% in 1997 and 2¼% in 1998.

The inflation projections in this report represent Norges Bank's professional evaluation of the outlook for prices. It is our assessment that the most likely scenario is continued moderate price inflation over the next 18 months. The risk of a substantially higher-than-expected increase in price and wage inflation is, however, considered to be greater than the reverse.

1.1 The economic news

Economic growth in 1996 was stronger than expected. Growth in public consumption, traditional merchandise exports and imports, and mainland GDP has been revised upwards by a substantial margin. Growth has continued into 1997, with a sharp rise in employment and a pronounced decline in unemployment.

In the March *Inflation Report* it was pointed out that growth in the Norwegian economy had gathered momentum in 1996, with activity in the economy projected to remain high in the period ahead. Quarterly national accounts for the first quarter may indicate a slightly slower growth rate in demand and output. Although several demand components fell, total domestic demand rose by a seasonally adjusted 1% from the fourth quarter of 1996 to the first quarter of this year, primarily reflecting higher petroleum investment. Mainland GDP fell by a seasonally adjusted 0.5% between the fourth and the first quarter. However, the figures must be interpreted with caution, as Easter came in the first quarter of this year whereas it was in the second quarter in 1996. In addition, it was leap year in 1996. These conditions were not fully adjusted for when making seasonal adjustments.

Other short-term indicators underline continued high economic activity:

– The brisk growth in employment observed last year continued in the first quarter of this year. Adjusting for

Easter, employment rose by 67 000, or 3.1%, compared with the first quarter of last year. According to Statistics Norway's Labour Force Survey (LFS), unemployment declined by 0.9 percentage point in the same period. Unemployment now appears to be falling at a slightly faster pace than in previous years, which may indicate that the growth in the labour force is slowing and enterprises are thereby employing previously unemployed persons in new positions to a greater extent. A rising number of enterprises report a shortage of labour.

– Asset prices are still moving on an upward trend. House prices rose by $6\frac{1}{2}$% in the first quarter compared with the previous quarter, and were 14% higher than one year earlier. Following a weaker period at the end of March and the beginning of April, the all-share index of the Oslo Stock Exchange continued to advance and is about 6% higher than the level prevailing in March and around 40% higher than one year ago.

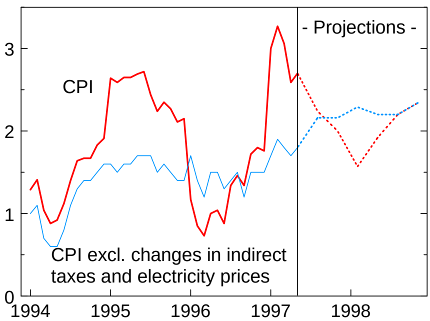
The year-on-year rise in consumer prices peaked in February at 3.3%, and has since declined to 2.6% in April, followed by a slight rise to 2.7% in May. The fall has been greater than projected in the March *Inflation Report*, primarily reflecting a greater-than-expected fall in electricity prices charged to households.

The wage settlement for this year points to lower wage growth than in 1996. Based on information from the centrally negotiated wage settlements, it would appear that the annual growth in wages may be about 4%.

The exchange rate situation has changed since the March *Inflation Report*. The krone was strong in the first few months of this year, but on 13 June the krone exchange rate was about $4\frac{1}{2}$% weaker against the ECU than the rate prevailing in mid-March. The krone exchange rate was at its strongest at the beginning of February, but in the first half of June had returned to approximately the level obtaining in October 1996.

In the Revised National Budget (RNB) for 1997 the underlying real growth in central government budget spending is estimated at $1\frac{3}{4}$%, ie $\frac{1}{4}$% higher than the estimate in the Final Budget Bill. Measured by the change in the non-oil, cyclically-adjusted budget surplus net of interest payments, the budget programme for 1997 as presented in the RNB entails a tightening of domestic demand equivalent to $\frac{1}{2}$% of mainland GDP, whereas the estimate in the Final Budget Bill was 1%. The more expansionary budget is partly related to the outcome of the final deliberations on the budget in December and partly to the lower-than-estimated expenditure level for 1996. There are no proposals in the Revised National Budget to further tighten the budget.

Chart 1.1 *CPI, total and excluding indirect taxes and electricity prices. Historical figures and projections. 12-month rise in per cent*



Source: Statistics Norway and Norges Bank

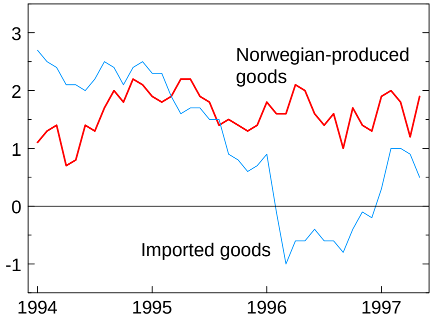
Table 1.1 *Consumer prices. Norges Bank's projections. Percentage change from previous year. Consensus forecast in brackets*[1)]

	1997		1998	
USA	2.9	(2.8)	3	(3.1)
Japan	$1\frac{1}{4}$	(1.3)	1	(0.9)
Germany	$1\frac{1}{2}$	(1.6)	$1\frac{1}{2}$	(2.0)
UK	$2\frac{1}{2}$	(2.7)	3	(3.1)
Sweden	1	(0.8)	2	(2.0)
Finland	1	(1.3)	$1\frac{1}{2}$	(2.1)
Denmark	2	(2.4)	$2\frac{1}{2}$	(2.7)
Norway's trading partners	$1\frac{3}{4}$	(2.0)	2	(2.3)
EU-12-countries[2)]	2	(2.2)	2	(2.3)

1) The average projection for consumer price inflation from various private institutions at May 1997.
2) ECU index weights.

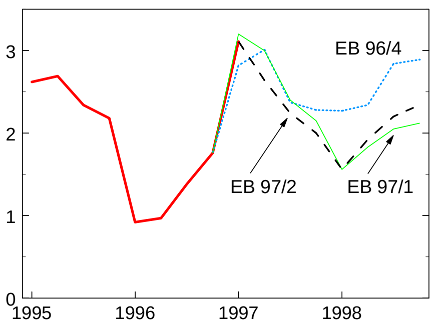
Source: Norges Bank and Consensus Forecasts

Chart 1.2 *Consumer prices excl. indirect taxes and electricity prices. 12-month rise in per cent*



Source: Statistics Norway and Norges Bank

Chart 1.3 *Current and earlier projections for consumer price inflation. 12-month rise in per cent*



Source: Statistics Norway and Norges Bank

1.2 Norges Bank's inflation projections

Price and wage inflation is continuing on a moderate trend in Norway, in spite of four years of strong economic growth. There are a number of factors behind this trend: Sluggish growth in continental Europe in recent years has contributed to restraining the rise in prices for imported goods, see Chart 1.2. Norwegian-produced goods have shown a higher price rise than imported goods over the last two years, and the rise in prices in Norway may be slightly higher than among trading partners in the period ahead. Moreover, continued moderate growth in labour costs in conjunction with sharp competition in distributive trades also has a dampening effect on consumer price inflation.

Prices for imported goods will continue to restrain the general rise in consumer prices in the period ahead. Norwegian-produced goods and services are primarily influenced by the growth in labour costs. The moderate growth in hourly wages over recent years is primarily due to high unemployment combined with the wage moderation approach, but is also ascribable to the pension reforms allowing early retirement. The pension reforms will increase enterprises' and public sector costs in the years ahead, which may explain why nominal wage growth has not risen to a higher level. Over time a steadily tighter labour market is expected to translate into higher overall wage growth than previously. If, in addition, the rise in costs internationally is higher than expected, the rise in consumer prices in Norway may gradually show a substantial increase. For the time being, however, there are no signs of accelerating price inflation.

The projections in the March *Inflation Report* pointed to a consumer price inflation of more than 3% at the beginning of 1997 followed by a decline to about 2% towards the end of the year and in 1998. The rise in prices through the year was primarily influenced by changes in indirect taxes, higher electricity prices in the last part of 1996 and expectations of lower electricity prices later in 1997. Norges Bank projected that the rise in prices, excluding indirect taxes and electricity prices, would edge up through this year and in 1998.

Electricity prices have fallen by a greater margin and more quickly than assumed in the March *Inflation Report*, which is reflected in a slightly lower rise in prices than previously assumed. This is the main reason that the price inflation projection for this year has been lowered to 2 1/2%. For 1998 the rise in prices is projected at 2%, unchanged on the previous report.

The estimates for underlying inflation, see box, remain essentially unchanged on the March *Inflation Report*. Excluding indirect taxes and electricity prices, price inflation is projected at around 2% this year and 2 1/4% in 1998. Wage growth for this year and next has been adjusted

UNDERLYING INFLATION

An important objective of Norges Bank's *Inflation Report* is to analyse the actual price pressures in the economy and to elucidate the price factors which may fuel inflation. Norges Bank does not seek to measure the rise or decline in individual prices. Inflation exists when the general price level in the economy shows a sustained rise. In Norway inflation has traditionally been measured by the rise in the CPI. However, the CPI can be influenced by random or transitory shocks, which do not have a lasting effect on price inflation. A change in the VAT rate, higher excise duties or sharp price changes for electricity are examples of this. The concept of underlying inflation was therefore introduced in order to distinguish between sharp relative price changes and one-off price effects which only have a temporary influence on price inflation on the one hand, and the trend rise in all prices on the other.

Indicators for underlying inflation are primarily estimated in countries where monetary policy is operated using an inflation target. Irrespective of the monetary policy target chosen, price trends must be analysed. If the rise in prices measured by the CPI is higher than projected, it is useful to have an indicator that reveals whether this is due to random and temporary forces or the result of stronger pressures in the economy.

The difference between the rise in prices measured by the CPI and underlying inflation is illustrated by a highly simplified and stylised example. Chart 1 shows a hypothetical path for the price *level* measured by the CPI over a 16-quarter period. Assume that a shock occurs in the fifth quarter. Such a shock may be due, for instance, to a jump in oil prices, an increase in excise duties or an increase in VAT. This leads in our example to a rise of 3 per cent in the price level measured by the CPI, cf the bold line. We assume that the effect on the CPI is immediate, and exclude any possible second-round effects of the shock. After the fifth quarter we assume that the price level moves upwards on a weak positive trend as it did before the shock. The thin line shows the movement in the CPI if such a shock had not occurred.

As a result of the price shock in the fifth quarter, the twelve-month rise measured by the CPI jumps from 2 to 5 per cent, cf bold line in Chart 2. In the ninth quarter the rise in prices falls to 2 per cent, however. The price shock has therefore only had a temporary effect on the rise in the CPI. Consequently, there is no need to change the orientation of economic policy with a view to curbing price inflation as this will occur on its own.

In estimating an indicator of underlying inflation, one seeks to eliminate price shocks of the type mentioned above, cf the thin line in Chart 2. By estimating an indictor of underlying inflation one can "see through" the temporary rise in price inflation measured by the CPI, and thereby obtain a clearer picture of actual inflation in the economy.

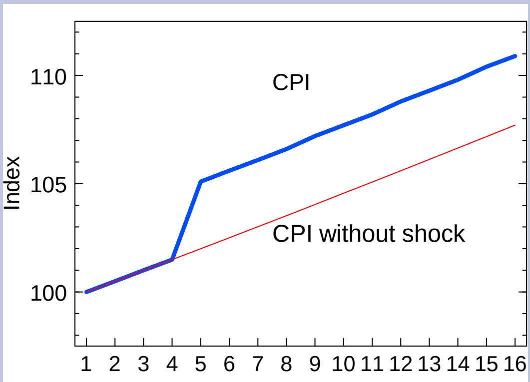
A price shock of the type used in this example may, however, lead to rising inflation in the somewhat longer term as a result of a rise in other prices (and wages). This may be due to the fact that those setting prices and wages are inclined to assume that a relative price change will translate into a broader rise in prices, or that they want compensation for a change in the price level. For instance, in the event of an increase in VAT, some groups of employees will probably demand and obtain wage compensation for an increased cost of living. These wage increases may translate, in full or in part, into higher product prices. Similar effects may occur as a result of other types of price shocks and via channels other than wages. If the scope of the effect is substantial, a price shock may result in higher inflation. An indicator of underlying inflation shall ideally not capture the first-round effect of shocks, but shall reflect the effects of second and subsequent rounds.

Bråten and Olsen (1997) have examined various methods for estimating such an indicator of underlying inflation, based on the most commonly used international methods. They find it difficult to recommend one indicator over another as it is problematic to define clear and objective criteria that such an indicator should fulfill. The report does not provide a key as to how the indicator of underlying inflation should be estimated. Norges Bank's *Inflation Report* presents an indictor of underlying inflation, excluding indirect taxes and electricity prices, see Chart 1.1. A rise in consumer prices due to higher indirect taxes is not an indication of pressure tendencies in the economy. Moreover, the recent wide fluctuations in electricity prices reflect weather conditions which are unrelated to economic fundamentals. Although this indicator is only one of several possible indicators, it provides a more accurate picture of the actual inflation trends in the Norwegian economy than the unadjusted consumer price index.

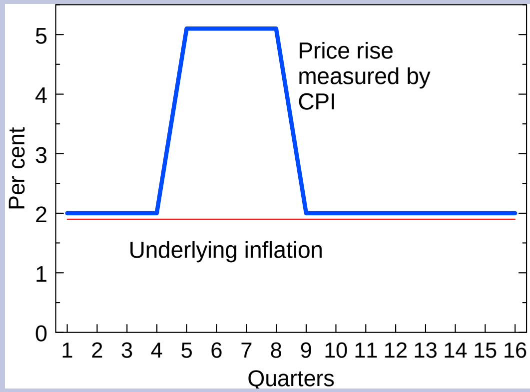
Reference

Bråten, Arne and Kjetil Olsen, (1997), Various methods for estimating an indicator of underlying inflation, Reports 97/9, Statistics Norway

CPI with 3% price-level shock



Annual price rise with 3% price-level shock

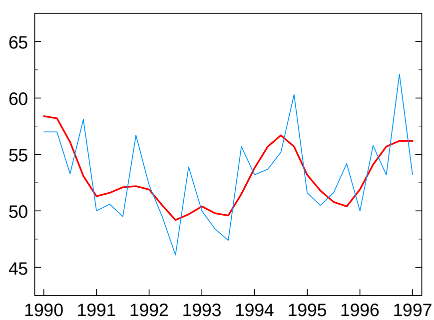


downwards. On the other hand, the exchange rate is now weaker than assumed in March so that the rise in import prices both this year and next is projected to be slightly higher than assumed earlier. The sustained robust growth in demand is still expected to result in higher margins.

In the March *Inflation Report* the main scenario entailed a rise in wage growth from 4 1/4% in 1996 to 4 1/2% in 1997 and 5% in 1998. The centralised wage settlements both in the private and public sector in 1997 point to a slightly lower wage growth this year, however, than assumed in the March report. Based on information from the settlements for groups covered by the main employer and employee organisations, combined with estimates for wage drift, annual wage growth in manufacturing may reach about 4%. Annual growth in the private and public services sector is also expected to be in this area. Combined, annual wage growth is projected at around 4% this year, ie half a percentage point lower than our projection in the March report.

The estimate for 1998 is based on historical experience regarding wage formation as embodied in our macoeconomic model RIMINI. However, an underlying assumption is

Chart 1.4 *Manufacturing enterprises' expectations concerning price trends in the domestic market. Diffusion index[1]. Unadjusted and smoothed*



Source: Statistics Norway

[1] A diffusion index is calculated using the following formula: (Percentage share that expect higher prices) +0.5 x (Percentage that expect unchanged prices). The diffusion index has a turning point value of 50. A common interpretation of the diffusion index is, for example, that if the value is more than 50, and rising, this indicates higher growth.

that wage growth will not be influenced by a catch-up effect following previous moderate wage settlements even though activity growth remains high and the labour market is considerably tighter. The wage carry-over into 1998 will also be reduced. On the other hand, corporate profitability is expected to improve as a result of higher export prices. The combined effect is a downward adjustment of the estimate for wage growth in 1998 to about 4 1/4%, ie around 3/4 percentage point below the estimate in the March report.

The exchange rate has depreciated since the March report and in the first half of June was close to the level prevailing in 1996. The projections are based on the technical assumption that the average exchange rate from the previous month will apply for the remainder of the projection period.

Prices for traditional merchandise imports have remained virtually unchanged in the 1990s. Price inflation among trading partners is expected to continue at a moderate pace also in coming years, contributing to a continued low rise in import prices. The rise in import prices is also influenced by cost trends, demand and competition conditions in Norway. In isolation, continued strong demand growth will push up import prices in the period ahead by providing operators with more scope to increase profit margins.

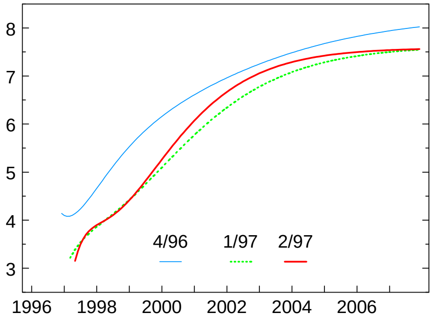
The estimate for import prices has been adjusted upwards in relation to the main scenario in the March report, primarily reflecting the depreciation of the krone exchange rate since March. However, prices for traditional merchandise imports are still expected to decline by 1/4% in 1997 compared with 1996. Import prices are expected to rise by 1 1/4% in 1998.

Changes in indirect taxes have had a pronounced impact on consumer prices in recent years. The assumptions underlying the projections in the March report remain unchanged, with increases in indirect taxes pushing up the average rise in prices by 0.3-0.4 percentage point between 1996 and 1997. For 1998, it is assumed that indirect taxes will be adjusted in pace with the expected rise in prices.

Electricity prices surged during the autumn of 1996 and in January 1997. In the period between January and May prices dropped by almost 10%, but are still 8% higher than one year earlier. Electricity prices are projected to fall further in coming months, reaching the price level prevailing before electricity prices started to rise in 1996.

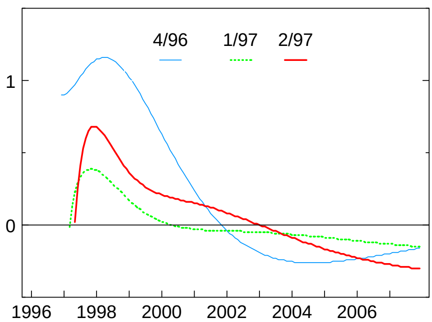
Electricity prices will thereby push down consumer price inflation by about 1/4 percentage point both in 1997 and 1998 compared with the estimates in the March report. The increase in the electricity production tax from July this year will reduce profits in the power supply sector. However, it is assumed that electricity prices charged to households will not be influenced to any considerable extent by this increase, partly because the Storting (Norwegian parliament) has decided to abolish the production tax with effect from 1 January 1998.

Chart 1.5 *Forward rates in Norway. Expected short-term rates in per cent*



Source: Norges Bank

Chart 1.6 *Differential between expected short-term rates in Norway and Germany in percentage points*



Source: Norges Bank

Table 1.2 *Various institutions' projections for consumer price inflation in Norway in 1997 and 1998[1]. Percentage change from previous year*

	1997	1998
Ministry of Finance	2½	-
Statistics Norway	2,4	1,8
OECD[2]	2,6	2,5
Norges Bank	2½	2
Private institutions[3]		
highest estimate	2,9	3,7
average	2,6	2,5
lowest estimate	2,2	1,8

[1] Latest official projections from the respective institutions.
[2] Consumption deflator.
[3] Based on projections from 14 private institutions.

1.3 Inflation expectations

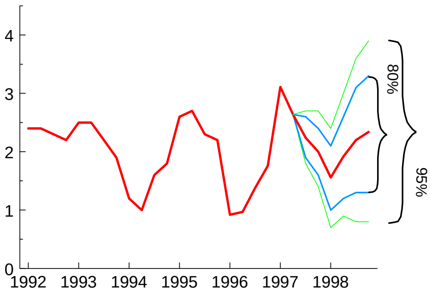
Statistics Norway's general business tendency survey for the first quarter shows that 12% of manufacturing enterprises expect higher prices in the second quarter of this year for products sold on the domestic market, whereas 6% expect a decline in prices. As many as 76% thus expected unchanged prices. In the fourth quarter of 1996, 48% expected unchanged prices, whereas 35% expected higher prices and 12% expected lower prices. The diffusion index shown in Chart 1.4 is constructed on the basis of these figures and has indicated a faster rise in prices since the end of 1995. The decline from the previous quarter in the number of enterprises which expected prices to rise may be related to the strong krone exchange rate in the first quarter.

The forward rate curve can provide information about inflation expectations in money and foreign exchange markets. This curve is calculated on the basis of effective yields on capital instruments in Norway with various maturities, including government bonds. Forward rates may - under certain conditions - be viewed as the sum of the expected real rate of interest and expected future inflation. If the real rate of interest is constant, changes in forward rates may be interpreted as changes in inflation expectations. Chart 1.5 shows changes in forward rates over the last six months. Since the last *Inflation Report*, forward rates have risen at the medium to long end, which partly reflects the rise in long interest rates internationally as well as the depreciation of the Norwegian krone between March and June.

If forward rate differentials between countries reflect inflation differentials, the differential between Norwegian and foreign forward rates may provide an indication of changes in inflation expectations vis-à-vis other countries. However, there is substantial uncertainty attached to the interpretation of these calculations. Chart 1.6 shows that the differential against Germany is positive in coming years and that it has widened since the March report. However, the differential has not changed to any substantial extent for the years after 2000. Higher inflation expectations in Norway than in Germany in coming years may be partly ascribable to the fact that Norway and Germany are at different stages of the business cycle. Germany is in a cyclical slump, whereas Norway is experiencing a cyclical boom.

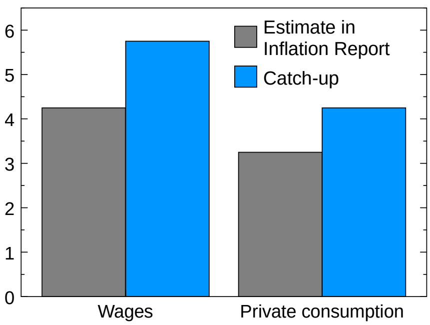
Norges Bank collects price inflation projections from 14 private institutions for this year and next year. For 1997, the institutions expect prices to rise by 2.6% on average. The price estimates range between 2.2 and 2.9%. Eight institutions have also provided estimates for 1998. These institutions expect on average a price inflation rate of 2.5% in 1998, with the lowest rate at 1.8% and the highest estimate at 3.7%.

Chart 1.7 *Uncertainty in the inflation projections. 12-month rise in per cent*



Source: Statistics Norway and Norges Bank

Chart 1.8 *Effects of catch-up in wages and consumption. Growth from 1997 to 1998 compared with reference path*



Source: Norges Bank

1.4 The risks to the inflation outlook

Norges Bank's inflation forecast is based on assumptions concerning a number of variables that are not determined in our macroeconomic model RIMINI. Our inflation reports are based on technical assumptions about interest and exchange rate movements.

Other types of risks to the inflation outlook also reflect the uncertainty associated with historical relationships incorporated in the model, see Chart 1.7. There is an 80% probability that the innermost interval will reflect the actual inflation rates and a 95% probability that inflation rates will be in the outermost interval. The estimates entail a 50 to 80% probability that price inflation in Norway will be higher than among trading partners at the end of 1998, based on the price inflation projection for trading partners.

The model's economic relationships are primarily applied as they stand, but a number of additional assumptions are made based on information which is not embodied in the model. The two most critical additional assumptions concern wage formation and household saving behaviour.

The assumption underlying the projections for the past two years concerning continued moderation in income settlements and the attendant sustained effect on wage growth in the future still applies. The relationships in the model entail that low wage growth in one year will be compensated for over the next two to three years, taking account of the conditions in the labour market and business profitability. The assumption that wage moderation will have a sustained effect on the level of wage growth entails that this catch-up effect does not take place. The estimate for wage growth in 1998 is therefore lower than indicated by the model. If the catch-up effect takes place in the course of two years, wage growth in 1998 may reach 5 3/4%, compared with our estimate of 4 1/4%, see Chart 1.8.

As previously, we also assume that households and banks will exhibit more caution than past experience would indicate. As a result, growth in private consumption has been revised downwards by a small margin. The growth in consumption in our estimate for 1998 is therefore lower than the model would indicate. In the absence of restrained behaviour, consumption growth in 1998 may reach 4 1/4%, whereas our estimate is 3 1/4%, see Chart 1.8. If historical experience of these two relationships is reflected in developments in 1998, the growth rates in both nominal and real terms may be substantially higher than assumed in our projections.

There are also other forces which may result in higher price inflation than estimated:

- Public expenditure may rise at a faster pace than assumed.
- The contribution from indirect tax increases to price in-

flation in 1998 may be more substantial than assumed. In the period 1994 to 1996 indirect taxes contributed about $^{1}/_{4}$ percentage point every year, whereas our assumptions imply an inflation adjustment of indirect taxes in 1998.
– If metal prices continue to rise, profitability in export companies will be higher than assumed. Improved profitability in the export sector has traditionally led to higher wage growth in the economy as a whole. Higher commodity prices may also translate into a higher rise in import prices.

Forces that may lead to a lower rise in prices than projected are:

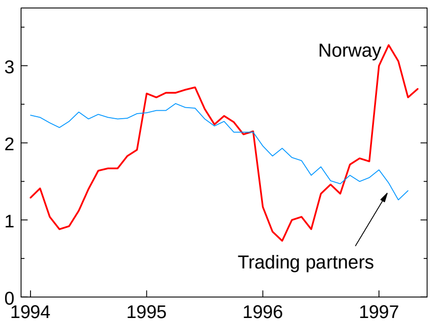
– Wage drift may be lower than assumed this year and the policy of wage moderation may have a greater impact on this year's wage negotiations than assumed.
– Continued sluggish growth in continental Europe may curb export and investment growth, resulting in an even lower rise in import prices than assumed.

As mentioned, the inflation projections in this report represent Norges Bank's professional assessment of the outlook, and the most likely scenario is that price inflation in Norway will remain moderate over the next 18 months. It is our assessment that the risk of a markedly higher rise in prices and wages is greater than the reverse. This assessment is partly based on the high level of capacity utilisation in the economy in conjunction with continued strong growth in employment and demand.

2 RECENT PRICE DEVELOPMENTS

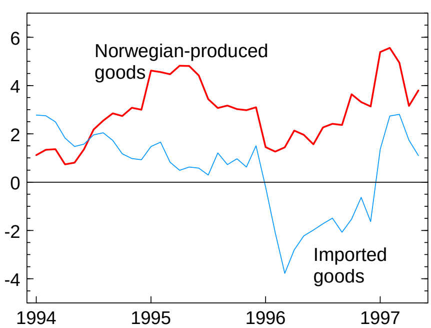
2.1 Consumer prices

Chart 2.1 *Consumer prices in Norway and abroad. 12-month rise in per cent*



Source: Statistics Norway and OECD

Chart 2.2 *Consumer prices in Norway. Imported goods and Norwegian-produced goods. 12-month rise in per cent*



Source: Statistics Norway and Norges Bank

The 12-month rise in consumer prices increased towards the end of 1996 and at the beginning of 1997. Since February, when the year-on-year rise was 3.3%, the rates have fallen to 2.6% in April, edging up to 2.7% in May. The decline in the year-on-year rate reflected indirect tax changes and changes in electricity prices. Higher petrol prices as a result of the end of the petrol price war in the eastern part of Norway contributed to higher inflation last month.

Excluding indirect tax changes and electricity prices, underlying inflation was 1.5% in 1996. In annual terms, underlying inflation has averaged 1.8% so far this year.

The subdued rise in prices must be seen in the light of the low rise in prices for imported goods. Chart 2.2 shows the year-on-year rise in the sub-indices for imported goods and Norwegian-produced goods (excluding agricultural and fish products) and the rise in the total CPI. The rise in import prices fell sharply as from January 1996, primarily reflecting the reduction in car taxes in January. The effect of this was eliminated in the figures as from January of this year. The twelve-month rise in imported goods has moved upwards to just above 1%. The rise in prices for imported goods is still lower than the rise in the total CPI and has a dampening impact on price inflation in Norway. The rise in prices for Norwegian-produced goods picked up last year, peaking at 5.6% in February of this year. The pick-up is primarily ascribable to the sharp rise in electricity prices of over 20% from the summer of 1996 to January of this year. Electricity prices charged to households have been reduced over the last three months, and the rise in prices for Norwegian-produced goods has also declined, but was still as high as 3.8 % in May.

The rise in consumer prices is slightly higher in Norway than among our trading partners where price inflation has hovered just below 1.5% since the beginning of the year. In addition to national CPIs, EEA countries have been publishing harmonised CPIs since January of this year. These indices are adjusted for conditions specific to the various countries and provide a better basis of comparison for international price trends, see box. According to the harmonised CPI, the rise in prices in the EU was 1.5% in April of this year and 2.7% in Norway.

2.2 Commodity prices and import prices

The Economist's all-items index, excluding oil, (measured in SDRs) has advanced by close to 17% between the fourth

HARMONISED CONSUMER PRICE INDEX

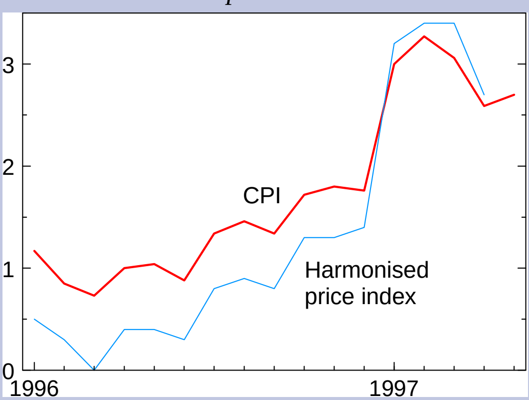
In addition to national CPIs, EEA countries have published harmonised price indices since January of this year. The harmonised price indices are the outcome of an international programme which started in 1993, in which Norway has participated. This work must be seen against the background of fairly wide variations in the construction of national CPIs, making it difficult to compare the price trends directly. The work was also undertaken due to the need for comparable price measurements in connection with the EU convergence criterion on maximum price inflation as set out in the Treaty on European Union.

The harmonised index essentially covers the same areas as the Norwegian CPI, but a share of consumption - 14% - is temporarily excluded. This is primarily because it has still not been agreed internationally how some services in the index are to be treated. For example, health and education services affected by public transfers, owner-occupied housing costs and some insurance services are still not included in the harmonised index, whereas they are incorporated in the Norwegian CPI. These items are to be incorporated in the harmonised index by January 1999.

The harmonised index for Norway dates back to the beginning of 1995, and twelve-month rises are therefore available as from 1996. As illustrated in the chart, the rise in the harmonised index was about 0.5 percentage point lower than the rise in the CPI in 1996, primarily because the harmonised index has a higher share of goods than the CPI, and the rise in prices for goods was consistently lower than the rise in prices for services. However, this changed when electricity prices jumped up last year (electricity is defined as a good in the price indices). Since January of this year the harmonised price index has risen at a faster pace than the CPI.

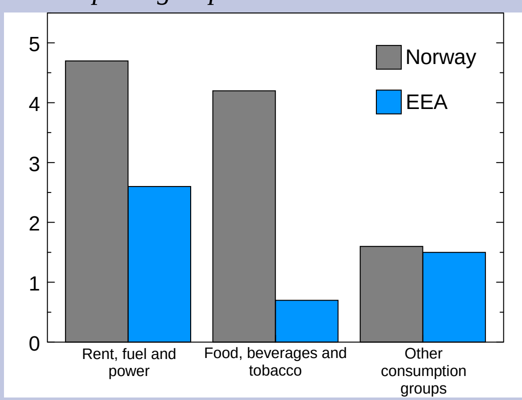
According to the harmonised index, price inflation in Norway is currently higher than any other EEA country, with the exception of Greece. A disaggregation of various goods and services into groups shows that in April the rise in prices for food, beverages and tobacco, and the group "rent, fuel and power" was markedly higher in Norway. The higher rise in prices for alcoholic beverages and tobacco must be seen in connection with the increase in indirect taxes, while the increase in electricity prices over the last year explains the sharp rise in prices for "rent, fuel and power".

Chart 1 *Consumer prices.*



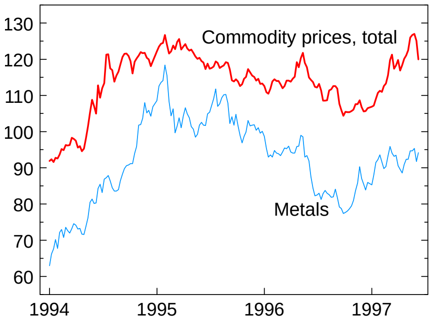
Source: Statistics Norway and Norges Bank

Chart 2 *Harmonised price index. Rise by consumption group*



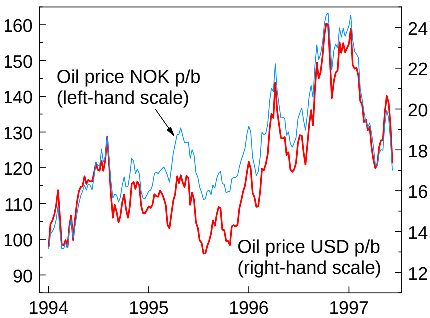
Source: Statistics Norway and Norges Bank

Chart 2.3 *Commodity prices measured in SDRs, total and metals. 1990=100*



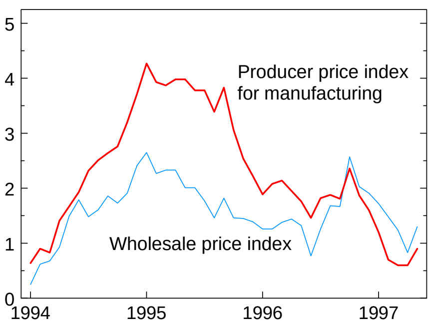
Source: The Economist

Chart 2.4 *Oil prices in NOK and USD*



Source: The Economist

Chart 2.5 *Wholesale and producer price indices. 12-month rise in per cent*



Source: Statistics Norway

quarter of last year and mid-June. Commodity prices are now higher than in 1994. The sharp rise primarily reflects a rise of 25% in food prices and 18% in metal prices. Measured in NOK, aluminium prices have risen by 23% from the fourth quarter, after falling by 15% between 1995 and 1996.

Oil prices have dropped from about USD 24 p/b since the beginning of the year to a good USD 17 p/b in April. The fall in oil prices partly reflects the increase in the supply of oil after Iraq was allowed to export to the world market as from December of last year, in addition to relatively large oil stocks and seasonal conditions. Oil prices rose again to the end of May, followed by a decline to around USD 17 p/b in mid-June. Measured in NOK, oil prices have fallen from around NOK 160 p/b at the beginning of the year to a little more than NOK 120 p/b in mid-June.

Price inflation remains subdued among trading partner countries, with the year-on-year rise at 1.4% in April. Price inflation is expected to edge up through the year, but is projected to be 1¾% in 1997. The rise in commodity prices so far this year is not expected to generate any noticeable price impulses. In those countries where economic growth has been strongest in recent years, particularly in the US and the UK, the rise in prices is being restrained by a strong exchange rate. In countries whose currency has depreciated, higher external price impulses will in isolation contribute to higher consumer price inflation. However, in the latter countries there is considerable idle capacity so that price inflation is expected to be very moderate for 1997 as a whole. Price inflation is projected to rise to about 2% among trading partners in 1998.

According to the quarterly national accounts, prices for traditional merchandise imports declined by a seasonally adjusted 2.4% between the fourth quarter of 1996 and the first quarter of 1997. The temporary appreciation of the Norwegian krone exchange rate at the beginning of 1997 was probably the main reason behind the decline. The fall in import prices has not translated into a corresponding decline in consumer prices. This may be related to the fact that a large proportion of imported gods are not finished consumer goods, and higher profits margins at the import and retail stage have probably also played a role.

The depreciation of the exchange rate since the first quarter of this year, in conjunction with higher commodity prices and a slight increase in consumer price inflation among trading partners, may contribute to an upward movement in import prices in the period ahead.

2.3 Wholesale and producer prices

Producer and wholesale prices can provide an indication of future consumer price movements. The year-on-year rise in producer prices in manufacturing has edged down in the six months to April, when it stood at 0.6%. In May the rise was 0.9%, primarily reflecting higher producer prices for metals. The price trend for goods produced for the domestic market has been stable over recent months, with twelve-month rates at around 2%.

In recent months the rise in wholesale prices for consumer goods has been subdued, with the year-on-year rise down from 1.6% in April to 1.4% in May.

Table 2.1 *National accounts price deflators. Percentage rise from same period previous year*

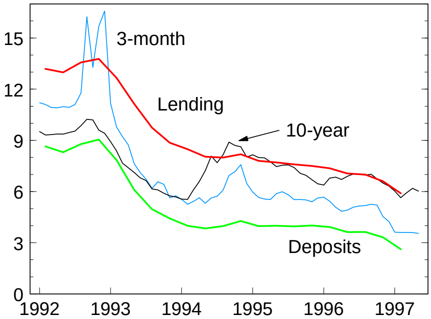
	1996			1997
	Q2	Q3	Q4	Q1
Domestic demand	2.4	2.2	2.5	2.3
Private consumption	1.6	1.6	1.5	4.5
Public consumption	3.8	2.8	3.4	2.3
Mainland gross fixed investment	3.1	2.9	3.8	-0.3
Exports, traditional goods	-0.9	-2.5	0.5	-0.6
Imports, traditional goods	0.3	0.1	0.5	-4.1
GDP	3.2	4.6	6.5	5.4
Mainland GDP	2.1	1.1	2.0	3.4

Source: Statistics Norway

2.4 National accounts deflators

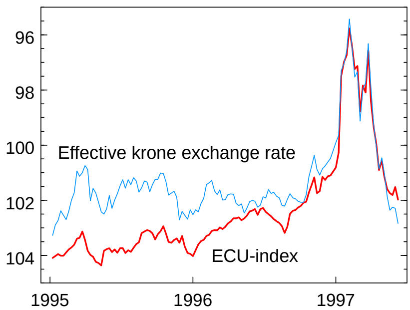
The price deflator for private consumption increased by 4.5% in the first quarter compared with the same quarter of last year, which primarily reflects the sharp price rise for bank and insurance services. According to the national accounts, the rise in prices in this sector has varied widely over the last year. The price deflator for gross fixed investment in the mainland economy edged down in the twelve months to the first quarter of this year, partly reflecting a good 4% fall in the price deflator for traditional merchandise imports in the same period. The drop in import prices must be seen in connection with the appreciation of the exchange rate in the first months of the year. The price deflator for mainland GDP rose by 3.4% in the first quarter after rising by an average of 1.5% in 1996. Whereas the deflator for gross output in the manufacturing sector fell from the first quarter of 1996, the deflator for gross output in the services sector showed an increase, in particular in the power supply sector.

Chart 3.1 *Interest rate movements in Norway. Banks' average deposit and lending rates, 3-month Euro-rate and 10-year government bond yield*



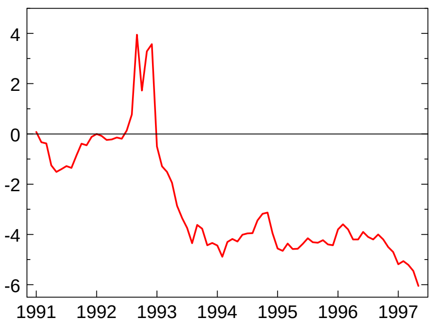
Source: Norges Bank

Chart 3.2 *ECU index and manufacturing industry's effective krone exchange rate. Rising curve denotes appreciation*



Source: Norges Bank

Chart 3.3 *Norges Bank's Monetary Conditions Index (MCI). January 1992=0.*



When aggregating, the real interest rate is given a weight of 3/4 and the real effective exchange rate a weight of 1/4

Source: Norges Bank

3 Interest rates, exchange rates and monetary variables

3.1 Interest and exchange rates

Effective 3-month rates in Norway have generally hovered around 3.5% since the March report, ie 1.5 percentage points below the average for 1996. The projections are based on the technical assumption that the previous month's interest rate level will apply for the remainder of the projection period.

The differential against German 3-month rates has been stable since the March report, and was 0.3 percentage point in mid-June. Norwegian 3-month rates have been 0.6-0.9 percentage point lower than corresponding ECU rates in the same period.

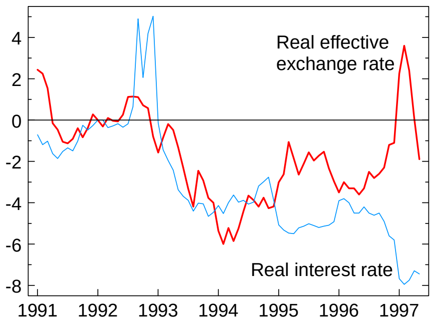
Norges Bank's interest rate statistics show that the fall in money market rates in January translated into lower lending and deposit rates. Commercial and savings banks' average lending rate fell by 0.7 percentage point to 6.0% between the fourth quarter of 1996 and first quarter of 1997. Some financial institutions have lowered interest rates further in the subsequent period. In many financial institutions the lowest lending rate is now at around 4 1/2%. The State Housing Bank's lending rate will be reduced by 1 percentage point to 3.8% on 1 September.

Changes in long-term rates provide an indication as to expectations concerning short-term rates. Fixed investment may also be linked to long rates although loans with a long fixed-interest period are of limited scope in Norway. The yield on 10-year government bonds has moved up 0.2 percentage point since the March report, to 5.9%. The yield peaked in April at 6.3%.

The krone exchange rate has depreciated by 5.2% measured against manufacturing industry's effective krone exchange rate and by 4.6% against the theoretical ECU since the March report. The krone weakened from its strongest level on 6 February by 6 1/2% against the ECU index to 102.5 on 13 June. The krone exchange rate was in the first half of June at about the same level as in October 1996. The projections are based on the technical assumption that the average exchange rate prevailing in the previous month will apply throughout the projection period. This implies an average appreciation of 2.2% against the ECU index between 1996 and 1997 and an approximately unchanged level between 1997 and 1998.

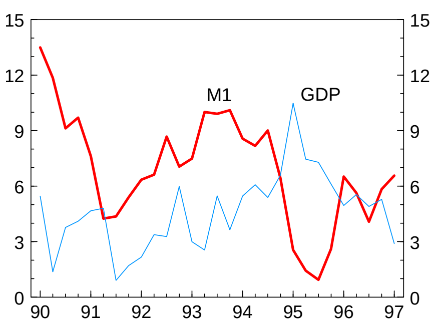
Norges Bank's Monetary Conditions Index was constructed to summarise the effects of changes in the real exchange rate and the real interest rate on domestic demand, see Chart 3.3. A fall in the index indicates that interest and ex-

Chart 3.4 *Components of the MCI. January 1992=0*



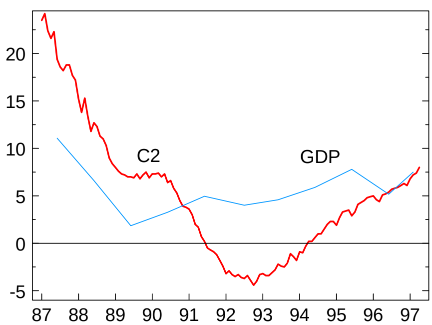
Source: Norges Bank

Chart 3.5 *Money supply (M1) and nominal mainland GDP. Growth from same period previous year*



Source: Statistics Norway and Norges Bank

Chart 3.6 *Total domestic credit (C2) and nominal mainland GDP[1]. Growth from same period previous year*



[1] The growth in 1997 is the estimate for the entire year.

Source: Statistics Norway and Norges Bank

change rate movements are having a more expansionary effect on the real economy. The index has only shown minor variations in the three years to the autumn of last year, but since then a lower real interest rate has contributed to a more expansionary monetary policy.

Interest and exchange rate developments are discussed in greater detail in a separate survey in this issue of *Economic Bulletin: Financial market developments and Norges Bank's operations.*

3.2 Monetary growth

Changes in the money supply are used in many countries as an indicator of future inflation. Econometric studies of Norwegian data indicate that historically there has not been a close correlation between monetary growth and inflation in Norway. However, a fairly stable relationship between changes in monetary growth and growth in nominal mainland GDP has been observed. In the current situation it is difficult to interpret changes in aggregated monetary variables. This is partly due to the fact that when deposit rates fall by a substantial margin, savings are channelled from bank deposits, which are included in the money supply, to other investment alternatives which are not included in the money supply.

In 1996, the 12-month growth in the registered money supply (M2), which includes notes and coin, sight deposits, unutilised overdraft facilities and time deposits, varied between 2.5 and 8.9%, and stood at 6.0% at end-1996. In the first four months of 1997 year-on-year growth in M2 declined from 3.9% in January to 0.7% in March, rising to 2.6% in April. Time deposits (primarily deposits on special terms) have been reduced by 8.6% over the last 12 months, which indicates that the private sector may have found saving alternatives providing a higher return than bank deposits. The sharp advance in prices for shares and houses may have contributed to this reallocation of savings. Excluding time deposits, the narrow monetary aggregate (M1) showed solid growth in 1997, expanding by an average of 7.1% year-on-year to the end of April, which is slightly higher than demand and output growth.

3.3 Credit growth

The credit indicator C2, which comprises private and municipal gross domestic debt, rose by 0.8% in the 12 months to end-April, compared with 7.4% in the year to March. Credit growth has moved on a steadily rising trend since October 1992.

The faster pace of credit growth reflects the fall in interest rates over recent years and the favourable cyclical trends in the Norwegian economy. Chart 3.6 shows the changes in annual growth rates for C2 and mainland GDP at current prices from 1983 to date. The chart shows that the growth in domestic credit so far in the 1990s has generally been lower than the growth in value added in the mainland economy. This contrasts with credit growth in the 1980s, which was substantially higher than economic growth over a longer period. The credit growth observed so far during this cyclical upturn seems to be more consistent with economic fundamentals than during the previous cyclical expansion. Private and municipal debt in relation to value added in the economy is considerably lower at present than during the end of the 1980s and early in the 1990s.

Non-financial enterprises account for the highest growth in credit, with the 12-month growth in NOK-denominated loans at a good 11% at the end of the first quarter of 1997, according to preliminary estimates. The corresponding figure for households was about 6 1/2%.

According to Norges Bank's database FINDATR, household net lending was negative in both the third and fourth quarter of 1996. Net lending declined from NOK 19bn in 1995 to NOK 11bn in 1996. The increase in borrowing accounted for virtually the entire decline. A substantial increase in housing investment is expected in 1997 and 1998, which means that the household financial saving ratio is set to fall to a lower level and be negative this year and next. Chart 3.6 also shows that credit growth is currently in line with growth in value added.

4 Cyclical developments

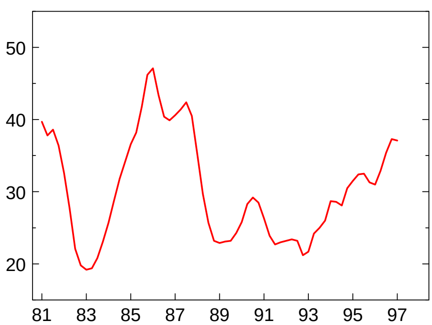
4.1 Main features

Table 4.1 *Supply and use of goods and services. Percentage growth from previous year*

	1996	1997	1998
Mainland demand	4.7	4	3 1/4
Private consumption	4.7	3 1/2	3 1/4
Public consumption	3.3	2 3/4	1 3/4
Mainland fixed investment	6.6	7 1/2	4 3/4
Accrued petroleum investment	-4.4	20	4
Exports	10.0	5	6 1/2
Of which:			
Oil, gas and pipeline transport	16.0	7	10 3/4
Traditional goods	10.3	4	5
Imports	6.5	7	4 3/4
Traditional goods	9.3	6	4
GDP	5.3	3 3/4	4
Mainland GDP	3.7	3 1/4	3

Source: Statistics Norway and Norges Bank

Chart 4.1 *Indicator of resource shortages in manufacturing industry according to the general business tendency survey. Per cent of enterprises experiencing production constraints*



Source: Statistics Norway

The Norwegian economy passed a new cyclical peak in 1996 after expanding for four consecutive years. Preliminary national accounts figures show that mainland GDP grew by 3.7% between 1995 and 1996. Mainland demand increased by 4.7% and traditional merchandise exports were more than 10% higher than in 1995. Employment continued to rise sharply, and wage growth in real terms was the highest for ten years.

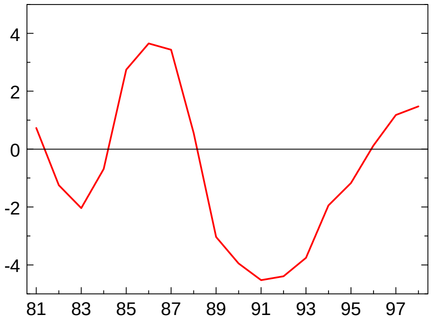
With hindsight, it is clear that Norges Bank's projections for economic developments in the period 1994 to 1996 underestimated the strong growth, see box.

Although fixed investment has also increased, with production capacity at a higher level now than at the beginning of the upturn, the scope for further output growth is becoming increasingly limited. Statistics Norway's indicator of resource shortages shows a steady rise since the beginning of 1993, see Chart 4.1 This indicator summarises the percentage of enterprises reporting that they are facing constraints either because of full capacity utilisation, a shortage of labour or input shortages. Chart 4.2 shows the output gap, ie the percentage difference between trend and actual GDP. A positive output gap indicates that production capacity is utilised to a greater extent than trend GDP would indicate. The calculations of trend GDP are uncertain, but both indicators in Chart 4.1 and 4.2 illustrate that the economy is approaching full capacity utilisation. When the economy is operating at near full capacity, a further rise in total demand can be covered only to a limited extent by higher production. If the rise in demand cannot be covered by an increase in imports, the rise in demand may instead translate into higher costs and prices.

In the first quarter of this year it seems that growth in both demand and production has slackened compared with the robust growth in 1996. Seasonally adjusted quarterly national accounts figures show that mainland demand fell by 0.4% on the previous quarter. Sharp growth in gross investment in oil extraction and pipeline transport still contributed to a good 1% rise in domestic demand, whereas traditional merchandise exports fell by 2.4%. The weak growth in demand is reflected in a 0.5% decline in mainland GDP.

According to Statistics Norway, the weak trend in the first quarter may be related to Easter coming in the first quarter, which makes it difficult to make seasonal adjustments. Available short-term data for April seem to underline a stronger trend in the second quarter. New orders for the first quarter of 1997 also point to stronger growth in the second quar-

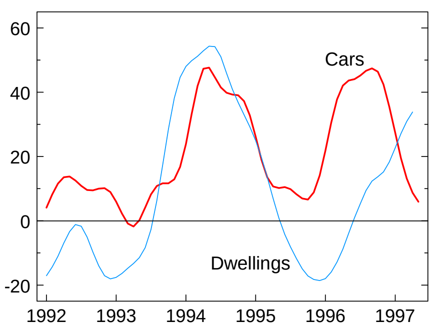
Chart 4.2 *Output gap. Difference between actual and trend GDP in mainland Norway[1]. Percentage points*



[1] Estimate for 1997 and 1998

Source: Statistics Norway and Norges Bank

Chart 4.3 New car registrations and housing starts. 12-month growth in smoothed series



Source: Statistics Norway

ter. The expected value of new orders in the domestic market rose markedly on the previous quarter, and a slight rise in the value of new orders from export markets is also envisaged.

Demand growth is projected to slow somewhat in 1997 and 1998 although growth is still expected to be buoyant. The low level of money market rates, which as a technical assumption is held constant at the previous month's rate during the remainder of the projection period, is one of the main driving forces behind domestic demand. Continued solid growth in public demand and a sharp rise in petroleum investment will also make a contribution. Mainland demand is projected to rise by 4% this year and 3 1/4% in 1998. Mainland GDP is projected to expand by 3 1/4% this year and by 3% in 1998. These estimates imply that average annual GDP growth will hover around 3 1/2% in the period 1994-1998.

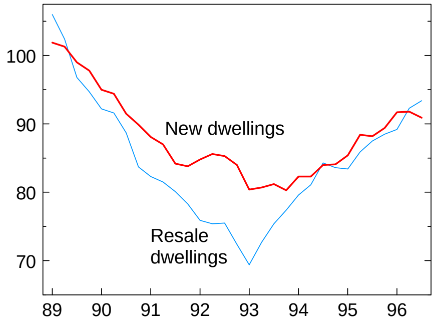
Employment and unemployment trends reflect the sharp growth in production. Employment is projected to rise by a further 2 1/4% this year and 1 1/2% next year, ie an upward revision of a quarter percentage point for each year. LFS figures indicate a reduction in unemployment from 4.9% in 1996 to 4% in 1997 and 3 3/4% in 1998, which means that unemployment will fall to 3 1/2% by the end of 1998. Based on earlier LFS definitions, this corresponds to an unemployment rate of 3%, which is close to the average unemployment level in the 1980s.

The shortage indicators in Chart 4.1 and 4.2 illustrate that the Norwegian economy has reached a stage of the business cycle with growing shortages of various inputs. Both indicators underline that the Norwegian economy is now in approximately the same situation as in the summer of 1985. However, there is still some way to go before we see the emergence of the capacity constraints which affected the economy in 1986 and 1987.

4.2 Households

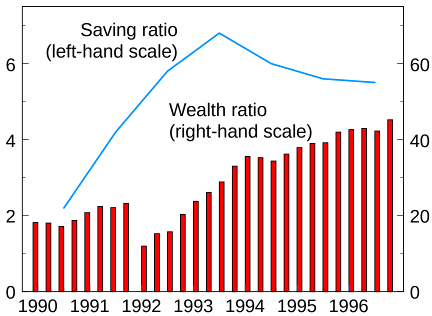
Household consumption expanded by almost 12% in volume terms between 1993 and 1996. In spite of the sharp growth in consumption, household wealth had improved substantially at the beginning of 1997 compared with the situation three years ago, reflecting the persistently strong growth in real income over recent years. In addition, advances in share prices and higher house prices have made a contribution during this period. A considerable share of growth in consumption refers to purchases of consumer durables - cars, furniture and white goods - which can be looked upon as investment and not pure consumption as defined in the statistics. The rise in car purchases came to about 2 percentage points of the total growth in consumption of 4.7% in 1996.

Chart 4.4 Real house prices. Index 1989=100



Source: Statistics Norway and ECON

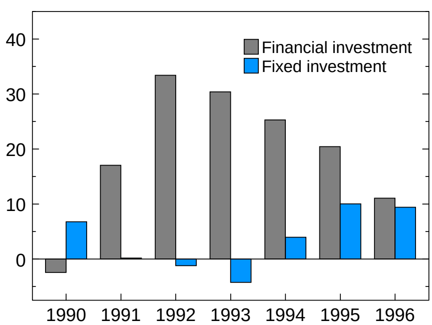
Chart 4.5 *Household saving ratio and wealth/disposable income ratio*[1]



[1] Break in the series for the wealth/disposable income ratio in 1992.

Source: Statistics Norway and Norges Bank

Chart 4.6 *Household investment in fixed and financial assets. In billions of NOK*



Source: Statistics Norway and Norges Bank

QNA figures show a seasonally adjusted 0.9% fall in private consumption between the fourth quarter of last year and first quarter of this year. Consumption of goods fell by 2%, whereas services fell by 0.5%. The volume of retail sales in the first four months of 1997 indicates that the weak trend may be related to the occurrence of Easter in the first quarter. Although the number of shopping days was considerably higher in the first four months of last year, retail sales in the same period of this year were 2% higher than in 1996.

In the March *Inflation Report* consumption growth was put at 4% in 1997 and 3 1/4% in 1998. The retails sales index indicates slightly lower consumption growth so far this year than assumed earlier.

On the other hand, the fall in money market rates in November and January triggered a surge in activity in the housing market and has contributed to a sharp rise in house prices. Resale home prices are now projected to show a nominal increase of 13% this year and 7% in 1998. Against the background of the growth in housing starts so far this year, our projection for the rise in housing investment has been revised upwards to 12% for 1997 and 15% for 1998.

The financial position of households and the rise in house prices point to continued strong growth in private consumption in coming years. Consumption growth is expected to pick up later in 1997, reaching 3 1/2% for 1997 as a whole. The projection of 3 1/4% for 1998 in the March report remains unchanged. Our projections imply a fall in the household saving ratio from 5.5% in 1996 to 4 1/2% in 1997 and 4 1/4% in 1998.

Household financial saving peaked in 1992 at NOK 33bn (8% of disposable income). Since then financial saving has declined and was NOK 11bn in 1996 (2% of disposable income). According to Norges Bank's statistics for household financial accounts, financial saving was negative in the last two quarters of 1996. Our estimates for household income, consumption and housing investment indicate that household financial saving may be negative in 1997 and 1998. The decline in financial saving partly reflects the rise in housing investment.

4.3 Fixed investment

Four consecutive years of expansion have been accompanied by firm growth in mainland business fixed investment. The investment rate, ie investment as a share of gross output, has risen sharply in recent years, see Chart 4.7. Developments towards the end of 1996 and so far this year indicate a slightly slower pace of investment growth compared with the past three-four years, which must be seen in the light of the current high level of investment. According to QNA figures, mainland business fixed investment fell by about 3% between the fourth quarter of last year and first

Evaluation of Norges Bank's economic projections for the years 1994 to 1996

Since 1993 Norges Bank's forecasts have been based on historical experience embodied in the RIMINI model. There are several reasons why the outturn differs from projections of economic developments: Assumptions that are exogenously determined may not materialise, structural changes may have occurred which entail that one or more of the model's relationships no longer provide an adequate description of the economy, and more discretionary evaluations may prove to be incorrect. Finally, random effects and unexpected events of a more temporary nature have an influence on developments.

Charts 1-5 show Norges Bank's projections at various point of time along with actual developments. The projections are from June and December for the previous and current year, respectively.

The main features are:

- Growth in mainland demand was generally underestimated, particularly in 1994 and 1996 (Chart 1). The brisk growth in mainland GDP was underestimated in 1994 and 1996, whereas the projection of slower growth in 1995 proved to be more accurate (Chart 2). Employment growth was underestimated by a substantial margin in all three years, particularly for 1996 (Chart 3).
- The projection errors for both wages and prices were marginal. The projections for wage growth were close to the outturn in all three years (Chart 4), whereas the rise in consumer prices was somewhat overestimated in 1994 and 1996 and slightly underestimated in 1995 (Chart 5).

The following factors help to explain why mainland GDP growth was underestimated in 1994 and 1996:

- We have generally underestimated the long-term effects of the fall in interest rates in the first half of 1993. This resulted in a sharp upward revision of the projection for house prices and private consumption in both 1994 and 1996. The vigorous growth in consumption in 1996 must also be viewed in conjunction with the reduction in car taxes, which contributed to a surge in car purchases.
- The projections for growth in public consumption in 1996 were underestimated in the budget documents used as a basis for Norges Bank's projections.
- Export projections also had to be revised upwards in 1994 and 1996, reflecting higher market shares and higher-than-expected exports to new markets.
- Petroleum investment in 1996 was underestimated the first few times the projections were published.

In 1995, the unexpected strong growth in manufacturing investment offset the lower-than-expected growth in traditional merchandise exports. The downward revision of export growth partly reflected the weaker-than-expected growth internationally as well as interruptions in production at the Mongstad refinery. Combined with moderate growth in public consumption, this entailed that the slowdown in GDP growth was approximately as projected.

Employment growth was underestimated because the growth in private and public consumption was underestimated. The growth in service industries, which account for the highest share of employment, was thus higher than assumed. Moreover, the level of part-time employment has increased by a greater margin than assumed.

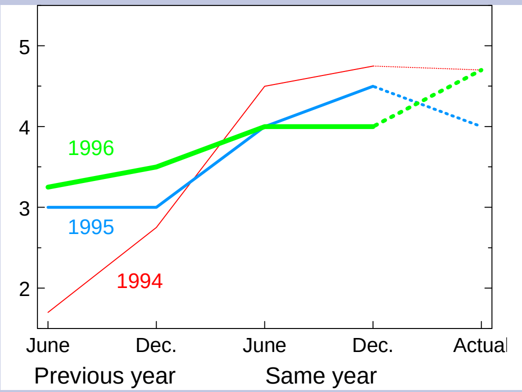
The projection for consumer price inflation was overestimated in 1994 as a result of higher-than-projected wage growth, the dampening effect on prices due to strong competition in the retail trade sector and the lower-than-expected rise in import prices. The projection for 1996 was overestimated primarily as a result of the reduction in car taxes from January 1996. The change in the estimate for 1995 reflected the increase in VAT from January 1995.

In general only minor adjustments to the model's relationships have been made, particularly with regard to the projections one year ahead. One exception was the forecast for 1994, published in 1993, where an upward adjustment was made instead of reducing the projections for demand and output growth.

The main reason we underestimated the cyclical upturn was that growth in 1993 was lower than could be expected in connection with the steep fall in interest rates. This was interpreted to mean that as a result of the sharp growth in the mid-1980s and the subsequent recession, households would be extremely cautious about increasing consumption and enterprises would exercise restraint with regard to investments and the hiring of new employees. Later it became clear that the upturn was merely delayed and came into full evidence in 1994.

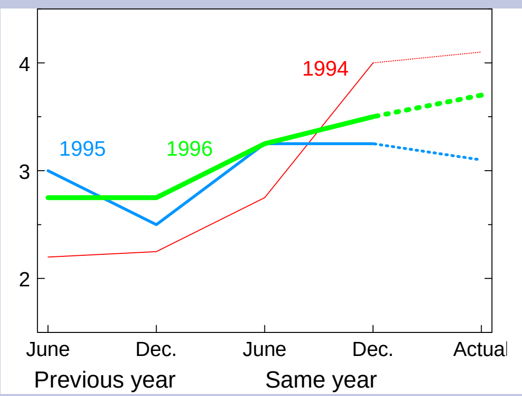
Since the autumn of 1995 the projections for wage growth for the following year have been based on the assumption that wage growth would be consistent with previous experience. However, we have decided to assume that to the extent the policy of wage moderation has resulted in a lower wage level than the model's relationships indicate, there will be no catch-up effect the following year. This has provided better estimates than if we had assumed a full catch-up of wage levels.

Chart 1 *Mainland demand. Annual growth in per cent*



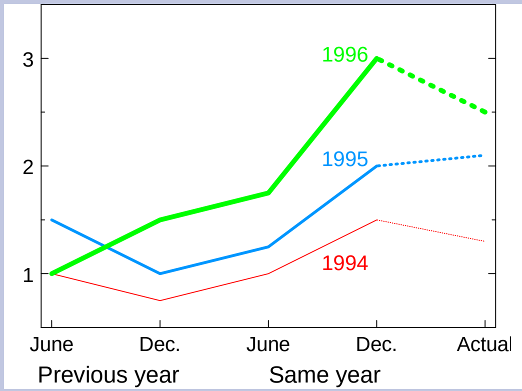
Source: Statistics Norway and Norges Bank

Chart 2 *Mainland GDP. Annual growth in per cent*



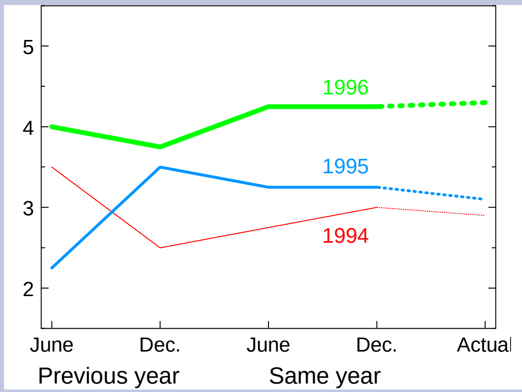
Source: Statistics Norway and Norges Bank

Chart 3 *Employment. Annual growth in per cent*



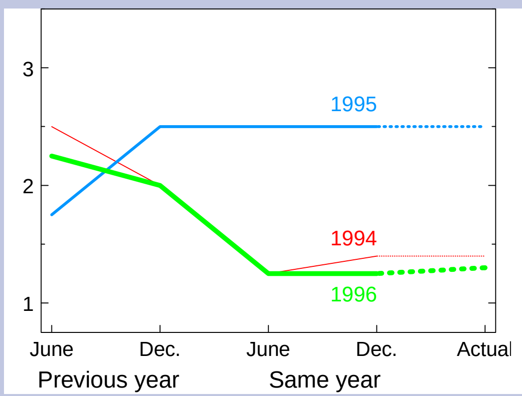
Source: Statistics Norway and Norges Bank

Chart 4 *Annual wage growth in per cent*



Source: Statistics Norway and Norges Bank

Chart 5 *CPI. Annual rise in per cent*

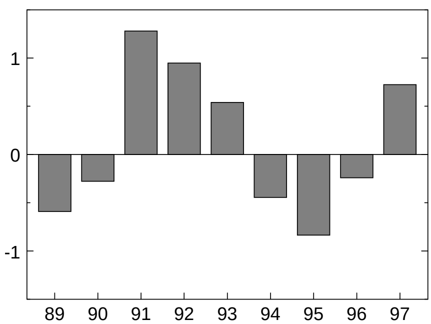


Source: Statistics Norway and Norges Bank

Chart 4.7 *Investment rate for mainland enterprises. Per cent*

Source: Statistics Norway

Chart 4.8 *Demand impetus from petroleum investment. Contribution to mainland GDP growth in percentage points*



Source: Ministry of Finance and Norges Bank

quarter of this year, adjusted for normal seasonal variations. Statistics Norway's investment intentions survey indicates a slight increase in manufacturing investment this year. Several other indicators underline a continued high level of investment: Although performance among Norwegian enterprises was slightly poorer in 1996 than in 1995, earnings remain solid. The drop in interest rates last year and so far this year has reduced the required rate of return on capital. Interest rates are expected to remain low in an environment of rising capacity utilisation. According to Statistics Norway's general business tendency survey, a rising number of manufacturing enterprises report that plant and machinery capacity is limiting or will limit production.

Mainland business fixed investment is projected to expand by about 7 1/2% this year and 2% in 1998, primarily fuelled by growth in services and distributive trades. Investment in manufacturing and the construction sector is estimated to grow by 5% this year and remain approximately unchanged in 1998.

Statistics Norway's investment intentions survey for the second quarter of this year is in line with previous surveys, underlining a sharp upswing in petroleum investment this year compared with the previous two-three years. Petroleum investment declined in the period 1994-1996 with an attendant dampening impact on the upturn. As in the March report, petroleum investment is projected to grow by about 20% this year, implying a further impetus from this sector to mainland demand in the period ahead. Chart 4.8 shows the expected contribution from petroleum investment to mainland growth based on the estimates from the Ministry of Finance presented in the National Budget and Revised National Budget for 1997.

4.4 Fiscal policy

The Revised National Budget for 1997 shows that fiscal policy is more expansionary than the Government budget proposal prior to the budget deliberations in December. In the Final Budget Bill for 1997 real growth in central government underlying expenditure was estimated at 1/4% between 1996 and 1997. The underlying real spending growth is now estimated at 1 3/4%. The higher figure is primarily ascribable to a slightly lower expenditure level for 1996 than estimated earlier and higher expenditure for 1997 in the budget that was adopted in December of last year than was proposed in the Final Budget Bill, particularly as a result of higher allocations to the local government sector. In addition, the Government has proposed an expenditure increase of about NOK 1bn in the Revised National Budget.

Measured by the change in the non-oil, cyclically-adjusted budget surplus net of interest payments, the budget programme for 1997 in the Revised National Budget implies a tightening of domestic demand equivalent to 1/2% of

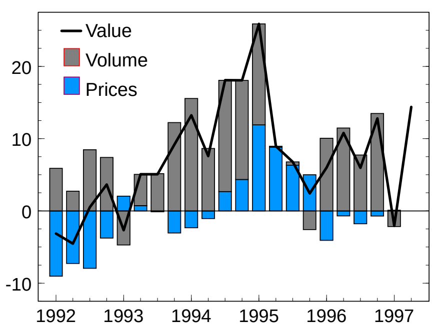
Table 4.2 *Projected GDP. Consensus forecast in brackets. Percentage growth from previous year*

	1997		1998	
USA	3 1/2	(3.4)	2	(2.1)
Japan	2	(1.7)	3	(2.4)
Germany	2 1/4	(2.3)	2 1/2	(2.7)
UK	3	(3.3)	2 1/2	(2.6)
Sweden	2	(2.3)	2 1/4	(2.8)
Finland	4 1/2	(3.7)	3 1/2	(3.3)
Denmark	2 3/4	(3.1)	3	(2.7)
Norway's trading partners[1)]	2 1/2	(2.7)	2 1/2	(2.7)

1) Weighted by export weights.

Source: Norges Bank and Consensus Forecasts

Chart 4.9 *Traditional merchandise exports. External Trade Statistics. Value, volume and prices. Percentage rise from same quarter previous year*[1]



[1]The latest observation for the growth in value is the average growth thus far in the second quarter compared with the same period last year.

Source: Statistics Norway

mainland GDP, whereas the estimate in the Final Budget Bill was 1%.

Real growth in local government revenues now seems set to reach almost 4%, whereas it was estimated at 2 1/4% in the Final Budget Bill. Local government expenditure will also be reduced in 1997 as a result of lower interest rates. Local government consumption is roughly estimated to increase by 3 1/2% in 1997, ie 1 percentage point higher than the estimate in the Final Budget Bill.

Public sector gross investment is estimated to rise by 3 1/2% in constant prices between 1996 and 1997, whereas the Final Budget Bill projected a decline of 3/4%. The higher figure is due in part to local government investment related to the school reform and higher allocations for state road construction. Gross investment is projected to rise by almost 5% between 1997 and 1998.

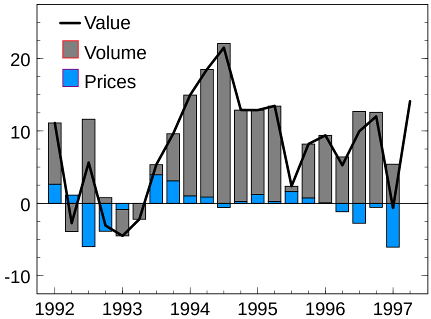
Public consumption is projected to rise by about 2 3/4% in 1997 and 1 3/4% in 1998. The estimate for public consumption in 1997 is based on the Revised National Budget and the rise in local government revenues mentioned above. However, both the level and composition of public expenditure and revenues may change as a result of the final deliberations on the Revised National Budget.

4.5 Foreign trade

GDP growth among trading partners is projected at 2 1/2% in 1997 and in 1998. The growth in imported goods among trading partners was 4.5% in 1996 and is expected to reach 6-7% this year and next. The brisk pace of growth in the US, eastern Europe and Asia is expected to continue, whereas a number of continental European countries are expected to continue on a relatively weak trend. The estimate for economic growth among trading partners is based on the assumption of a pick-up in investment, particularly in Germany and France.

In the light of the sluggish cyclical trends in continental Europe, growth in traditional exports has been unusually high over the last year, with exports rising by 10.3% in constant prices between 1995 and 1996. Growth was much higher than market growth among trading partners. The high level of export growth is probably related to newly acquired market shares. Moreover, a considerable share of this growth has been in countries which have not been among our traditional trading partners, which implies that export growth in the period ahead may be less related to market growth among our traditional trading partners with new trading partners taking on increasing importance. About 80% of Norwegian exports have traditionally been to Europe, primarily to the EU. The share of Norwegian exports to the EU fell from 75% in 1995 to a little more than 71% in 1996.

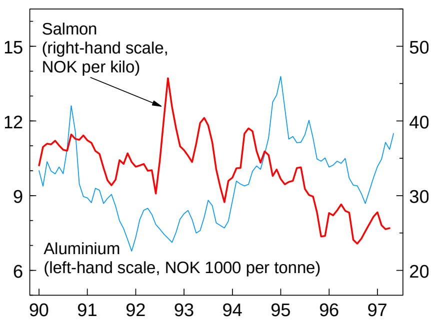
Chart 4.10 *Traditional merchandise imports. External Trade Statistics. Value, volume and prices. Percentage rise from same quarter previous year[1]*



[1] The latest observation for the growth in value is the average growth thus far in the second quarter compared with the same period last year.

Source: Statistics Norway

Chart 4.11 *Prices for aluminium and salmon. In NOK*



Source: Statistics Norway and The Economist

In the first quarter traditional exports showed a smaller-than-expected rise, with the volume of exports falling by a seasonally adjusted 2.4% between the fourth quarter of 1996 and first quarter of this year, according to the quarterly national accounts. The weak trend may partly be due to problems related to seasonal adjustments as a result of the occurrence of Easter in the first quarter. The value of traditional exports was 9.4% higher in May of this year than in the same month one year earlier, which indicates that export growth is picking up on the figures for the first quarter of this year. On average, traditional exports are projected to grow by 4% this year and 5% in 1998.

Norwegian export prices depend on price movements in international commodity markets. Prices for a number of important traditional export goods fell through 1996, following a sharp rise in the previous year. Prices for metals, paper and pulp and industrial chemicals showed the sharpest fall. Since the beginning of the year prices for aluminium and other metals have risen sharply. If the current price of aluminium remains unchanged, the rise will come to a good 13% this year, measured in NOK. Pulp prices have continued on a sluggish trend. The price of Norwegian salmon edged down in late spring following the high prices prevailing earlier this year. At the beginning of June an agreement was signed with the EU providing for minimum prices and limitations on growth in Norwegian salmon exports.

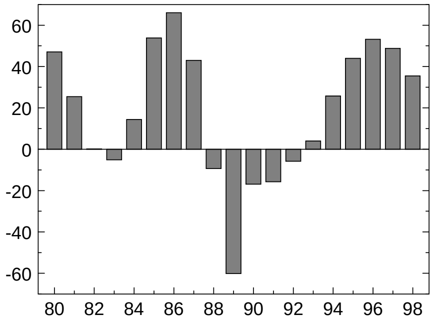
The total fall in export prices for traditional goods came to 1.3% between 1995 and 1996, followed by a further decline of 0.3% in the first quarter of 1997 compared with the previous quarter. Prices for traditional export goods are expected to rise by an average of about 3% for 1997 as a whole, reflecting higher commodity prices. In 1998, export prices are estimated to rise by a further 2% as a result of a continued and broad increase in commodity prices.

Imports of traditional goods rose by 9.3% in constant prices in 1996. The volume of imports fell by a seasonally adjusted 1.5% between the fourth quarter of 1996 and first quarter of 1997. The value of imports showed a year-on-year rise of 5.3% in May, with average annual growth estimated at 6% in 1997 and 4% in 1998. The total growth in imports may reach close to 7% this year, partly reflecting investment in oil extraction and pipeline transport and brisk growth in direct consumption abroad by residents.

The rise in import prices for traditional goods was 0.4% in 1996, according to the quarterly national accounts. In the first quarter of this year import prices were a seasonally adjusted 2.4% below the level in the previous quarter. In 1997, import prices for traditional goods are projected to fall by $^1/_4$% compared with 1996 and rise by $1^1/_4$% in 1998. The estimates for import prices are somewhat higher than in the March report, primarily reflecting the assumption of a weaker exchange rate for 1997 and 1998.

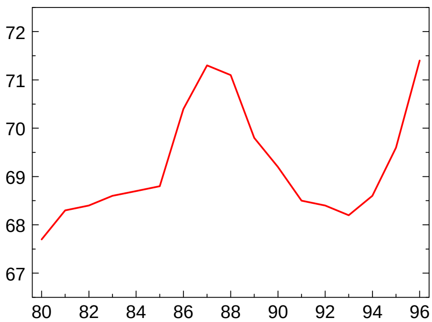
5 Labour market and cost trends

Chart 5.1 *Number employed. Change from previous year, 1000 persons*



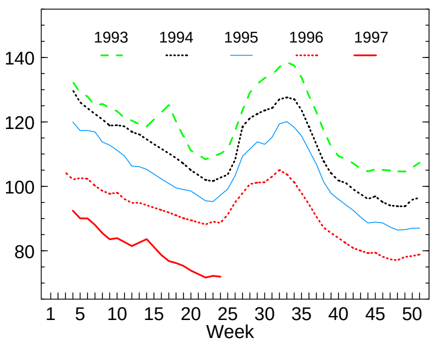
Source: Statistics Norway

Chart 5.2 *Participation rates. Labour force as a share of the working-age population*



Source: Statistics Norway

Chart 5.3 *Registered unemployment. Weekly figures. 1000 persons Week*



Source: Directorate of Labour

5.1 Employment and unemployment

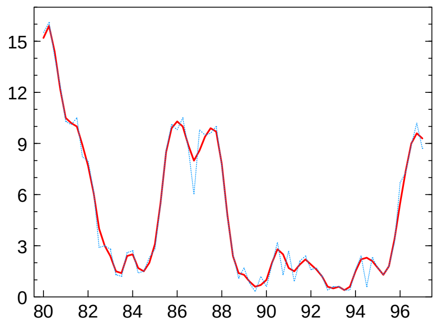
The robust employment growth recorded last year looks set to continue. According to Statistics Norway's Labour Force Survey (LFS), employment rose by 59 000, or 2.8%, from the first quarter of 1996 to the first quarter of 1997. When adjusted for the fact that Easter was in March this year, whereas last year it was in April, the rise in employment totalled 67 000. Distributed by sector, manufacturing, distributive trades and health and social services accounted for the largest share of the increase. According to the LFS, the number employed is rising at a much faster rate than the number of person-hours worked, which in part reflects a higher incidence of sickness leave and in part increased absenteeism in the first quarter due to holidays.

In the last four quarters, the labour force swelled by 42 000, with an associated fall in unemployment of 17 000. Unemployment has edged down by 0.9 percentage point compared with the first quarter of last year. The unemployment rate was 4.3% in the first quarter of 1997, adjusted for normal seasonal variations. Based on earlier LFS definitions, this is equivalent to roughly 4%.

Figures from the Directorate of Labour also indicate that unemployment continue to decline. Adjusted for normal seasonal variations, the number of registered unemployed was 3.5% in May, ie 0.9 percentage point lower than one year earlier. The total number of unemployed and persons participating in ordinary labour market programmes has fallen by 1.5 percentage points over the past twelve months, and now stands at a seasonally adjusted 4.6%. The figures reflect a substantial decline in the number of persons participating in these programmes.

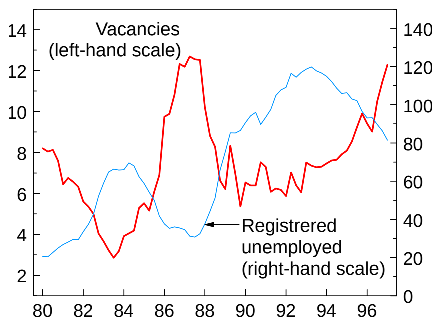
LFS figures indicate somewhat stronger growth in employment than estimated in the last *Inflation Report*. Employment growth is now estimated at 50 000 in 1997, or around $2^1/4$%. The rise in employment will thereby be roughly 170 000 from 1993 to 1997. More moderate growth in demand and an estimated slower reduction in average working hours in 1998 will probably curb employment growth next year. Labour force participation is expected to continue increasing, so that the supply of labour will grow at a slightly higher pace than demographic trends would indicate. An increasing number of workers from neighbouring countries explains some of the growth in the labour supply. To some extent, there is a common Nordic labour market within some sectors, which has enhanced the flexibility of the labour supply. LFS unemployment is projected to decline from 4.9% in 1996 to about 4% in 1997, and may fall to

Chart 5.4 *Indicator of labour shortages. Unadjusted and smoothed. Per cent*



Source: Statistics Norway

Chart 5.5 *Number of registered unemployed and vacancies. 1000 persons*



Source: Directorate of Labour

about 3^3/4% in 1998. Based on earlier LFS definitions, this corresponds to 3^1/2 and 3^1/4% respectively.. The number of registered unemployed is projected at around 3^1/2% this year and just over 3% in 1998.

5.2 Wages

Last year's wage settlement indicated that the moderation shown in wage settlements in the past three to four years had less support. Wage growth moved up to 4^1/2% in 1996, after having remained at around 3% for several years. Growing pressures in the labour market and solid corporate profitability are two factors that contributed to the increase, which was in part reflected in a higher level of bonus payments than usual.

The wage settlement in the private sector this year, however, points to somewhat lower wage growth than in 1996. Based on information from the settlement between the Norwegian Confederation of Trade Unions and the Norwegian Confederation of Business and Industry, negotiated pay increases may contribute just under ^{3}/4% to annual wage growth for industrial workers in 1997. Combined with a 1^1/2% carry-over, this results in a wage increase before wage drift of almost 2^1/2%. As usual, there is considerable uncertainty attached to local pay increases in the manufacturing sector. Local negotiations are based on corporate profitability, competitiveness and future prospects. The supply of labour also plays a part. With the same contribution from wage drift as in 1996, wage growth in manufacturing may approach 4%. The wage settlement in services and distributive trades also indicates wage growth of around 4%.

In the public sector, the centrally negotiated pay increases and allocations for centralised and local negotiations will contribute 1 percentage point to annual wage growth. Combined with a wage carry-over of 2^1/2% in 1997 and normal wage drift, annual wage growth may be estimated at around 3^3/4%.

All in all, annual wage growth is projected at 4% in 1997, which is half a percentage point lower than projected in the March *Inflation Report*.

The estimate for 1998 is based on historical experience relating to wage formation as embodied in Norges Bank's macroeconomic model RIMINI. It is assumed that wage growth will not be influenced by a catch-up effect following previous moderate wage settlements, and that the moderation shown in recent years will have an impact on the nominal wage level. Based on this assumption, the implementation of a relatively moderate wage settlement this year will improve the likelihood of moderate wage growth again in 1998. Moreover, a lower wage carry-over into 1998 will contribute to slower wage growth next year than was envisaged in the last *Inflation Report*. An expected sharper rise in export prices will, however, result in higher earnings in the export sector, indicating higher wage growth. Against this background, wage growth in 1998 has been revised downwards by about $^{3}/_{4}$ percentage point, and is estimated at around $4^{1}/_{4}$%. This still implies an increase in real wage growth from $1^{1}/_{2}$% this year to $2^{1}/_{4}$% next year.

In this year's wage settlements the social partners agreed on the financing of the pension reform providing for early retirement. From 1998, the scheme will also include persons aged 62 and 63 who have been employed for at least 10 years after the age of 50. The Norwegian Confederation of Business and Industry has estimated that the costs associated with this reform for enterprises will be roughly 20 øre per hour per employee in 1998, equivalent to around $^{1}/_{4}$% of total labour costs.

As usual, there is considerable uncertainty attached to the projection for wage growth one year ahead:

- The pension agreement helped to moderate the centrally negotiated increases in this year's settlement. The main settlement will take place in 1998, and as the pension reform has now been adopted, employees may place greater emphasis on higher pay increases.
- The continued fall in unemployment this year and in 1998 implies growing pressures in the labour market. Registered unemployment may near 3% next year, ie the lowest level recorded since 1988. There is a shortage of qualified labour in some sectors and according to Statistics Norway's general business tendency survey, more than 10% of manufacturing enterprises report that the shortage of labour is limiting or might limit production, see Chart 5.4. This share has been close to zero in recent years.
- The ratio of number of vacancies to registered unemployed indicates growing mismatches in the labour market. Chart 5.5 shows that whereas the number of vacancies is the same as in the mid-1980s, the number of registered unemployed is now far higher, which indicates that the qualifications of the unemployed match vacancies to a lesser extent than was the case in the mid-1980s. The shortage of labour may therefore develop into a more serious problem than the level of unemployment alone would indicate. This further complicates the challenges facing the social partners regarding a continuation of the moderation in wage settlements shown thus far in the 1990s.
- If commodity prices increase at a faster pace that anticipated, a further improvement in earnings may contribute to higher wage growth.
- On the other hand, continued emphasis on the wage moderation policy, highlighting real wage trends, may also have a dampening impact on wage growth in 1998.

Calculations are based on the assumption that productivity growth in manufacturing will be around 1 3/4% both this year and next. Growth in ULCs may therefore be projected at 2 1/4-2 1/2% annually. This is considerably higher than expected growth among our trading partners, where productivity gains are projected at over 3% in 1997 and 1998, with an average 0.5% fall in the growth in ULCs. However, different methods of calculation may entail that international comparisons of productivity growth are misleading. If hourly wage costs are compared instead, growth in Norway will be 3/4 percentage point higher than among our trading partners from 1996 to 1998.

MAIN MACROECONOMIC AGGREGATES

Percentage change from previous year, if not otherwise stated

	Accounts 1996	1997	1998
Real economy			
Private consumption	4.7	3 1/2	3 1/4
Public consumption	3.3	2 3/4	1 3/4
Total gross fixed investment	4.8	10 1/4	4 1/2
Oil extraction and pipeline transport	-4.4	20	4
Mainland Norway	6.6	7 1/2	4 3/4
Enterprises	11.1	7 1/2	2
Dwellings	-6.0	12	15
General government	4.8	3 1/2	4 3/4
Mainland demand	4.7	4	3 1/4
Exports	10.0	5	6 1/2
Oil, gas and pipeline transport	16.0	7	10 3/4
Traditional goods	10.3	4	5
Imports	6.5	7	4 3/4
Traditional goods	9.3	6	4
GDP	5.3	3 3/4	4
Mainland Norway	3.7	3 1/4	3
Labour market			
Employment	2.5	2 1/4	1 1/2
Labour force, LFS	2.1	1 1/2	1 1/4
Unemployment, LFS	4.9	4	3 3/4
Prices and wages			
Consumer prices	1.3	2 1/2	2
Annual wages	4 1/4	4	4 1/4
Import prices, traditional goods	0.4	- 1/4	1 1/4
Export prices, traditional goods	-1.5	3	2
Crude oil prices, NOK (level)	133	130	125
External account			
Trade surplus, NOKbn (level)	93.0	95	99
Current account surplus, NOKbn (level)	72.7	86	93
Current account surplus, % of GDP (level)	7.1	8	8
Memorandum item			
Household saving ratio	5.5	4 1/2	4 1/4