# Economic Bulletin Volume LXVIII

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Standard signs used in the tables:

- . Category not applicable
- .. Data not available
- ... Data not yet available
- Nil
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# A HEAVY RESPONSIBILITY

Uncertainty concerning economic developments in Norway is greater than it has been in a long time. The further away the Norwegian economy moves from long-term equilibrium, the greater the correction will be once this situation becomes unsustainable. In this *Inflation Report* we have shown that wage and price inflation may be considerably higher if some of the assumptions are changed, with the attendant risk of economic instability.

The political authorities have defined a division of responsibility for economic policy, whereby monetary policy is assigned the task of ensuring a stable krone exchange rate against European currencies. Norges Bank conducts monetary policy in accordance with these guidelines.

The responsibility for stabilising the Norwegian economy rests with fiscal policy and the social partners. In the current economic situation the political authorities must take into account that monetary policy is contributing to making an already difficult challenge even more demanding.

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.

INFLATION REPORT

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The cut-off date for the Inflation Report was 24 September 1997

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# INFLATION OUTLOOK

Norges Bank projects consumer price inflation at  $2^{1/2}$ % in 1997. The projection for 1998 has been revised upwards to  $2^{1/4}$ %. The upward revision primarily reflects higher wage growth and a higher rise in import prices. Price inflation in Norway is expected to be slightly higher than international inflation.

The fall in consumer price inflation between 1997 and 1998 is primarily due to the elimination of the effect of changes in indirect taxes and the decline in electricity prices from the high levels prevailing last winter. Excluding these effects, "underlying" inflation is forecast to rise from 2% in 1997 to  $2^{1}/2\%$  in 1998.

The Norwegian economy is experiencing a strong expansion. Capacity utilisation is high and employment has shown higher-than-expected growth thus far in 1997. The risk of a markedly higher-than-projected rise in prices and wages is still considered greater than the reverse.

The projections in the *Inflation Report* are based on a number of assumptions concerning economic policy. An alternative scenario is included which describes the effects of a more expansionary fiscal policy and a shift away from the policy of wage moderation so far in the 1990s. The estimates indicate that a marginal shift would put the economy on another track than has been the case so far. According to this scenario, inflation may reach  $3^{1/2}-4^{1/2}$ %, with clear signs of a continued rise in price inflation over a two-year period.

#### 1.1 The economic news

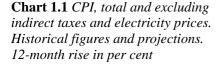
The year-on-year rise in consumer prices has moved steadily downwards from a level of 3.3% in February. In the last two months, price inflation has hovered just above 2%. The more moderate trend must be seen against the background of the changes in indirect taxes and electricity prices.

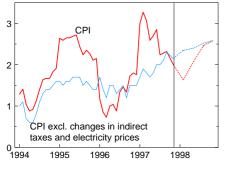
Excluding changes in indirect taxes and electricity prices, the underlying rise in prices was 1.5% in 1996. The underlying 12-month rise has moved on an upward trend this year, reaching 2.1% in August.

Prices for domestically produced goods and services have moved up at a faster pace in recent months, while the rise in prices for imported goods has been moderate, curbing the overall rise in prices.

Over the last year, the rise in consumer prices in Norway has been higher than among trading partners, although price inflation among trading partners has quickened somewhat in

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Source: Statistics Norway and Norges Bank

**Table 1.1** Consumer prices. NorgesBank's projections. Percentagechange from previous year.Consensus Forecasts in brackets<sup>1</sup>)

	1997		1998	
USA	2 1/2	(2.4)	2 3/4	(2.7)
Japan	$1 \frac{1}{2}$	(1.6)	1	(0.8)
Germany	1 3/4	(1.8)	2	(2.1)
UK <sup>2)</sup>	3	(2.6)	3 1/4	(2.8)
Sweden	1	(0.9)	2	(2.1)
Finland	$1 \frac{1}{4}$	(1.3)	$1 \frac{1}{4}$	(2.0)
Denmark	$2^{1/2}$	(2.2)	2 1/2	(2.6)
Norway's trading				
partners	$1^{3/4}$	(1.8)	$2^{1/4}$	(2.2)
EU-12-countries <sup>3)</sup>	2	(1.9)	2	(2.2)

 The average projection for consumer price inflation from various private institutions at August 1997.
Projections for UK from Consensus Forecasts

<sup>2)</sup> Projections for UK from Consensus Forecasts are for the retail price index excluding mortgage interest.

3) ECU index weights.

Source: Norges Bank and Consensus Forecasts

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recent months, up to 2.0% in August. In addition to national consumer price indices, Statistics Norway in cooperation with Eurostat have published harmonised price indices since January 1997. According to these indices, price inflation in the EU was 1.7% in July of this year, while the Norwegian price rise was 2.2% in the same month.

Figures for the economy so far this year indicate that the June *Inflation Report* underestimated employment growth, particularly in the construction industry, but also in manufacturing and distributive trades. Public sector employment may also prove to be higher than projected.

According to Statistics Norway's LFS (Labour Force Survey) figures and employment accounts, employment has increased by almost 65 000 in the first half of 1997 compared with the first half of 1996. However, the marked rise in labour force participation rates is limiting the decline in unemployment. Figures from the Directorate of Labour indicate that it is becoming increasingly difficult to fill vacancies.

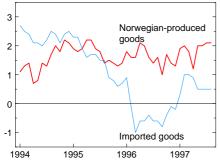
The quarterly national accounts (QNA) for the first six months and developments in short-term indicators over the summer show that the Norwegian economy is expanding at a brisk pace. In the first six months of the year, growth was primarily fuelled by investment and export growth. Investment in the petroleum sector has generated strong demand impulses in the mainland economy. Investment growth has also been buoyant in manufacturing and the construction industry. Total demand in the mainland economy rose by 3.6% between the first half of 1996 and the first half of 1997.

Banks' deposit and lending rates edged down between the first and second quarter of this year. Norges Bank raised its key rates by a quarter percentage point on 16 July 1997, which was the first rate increase since December 1993. This was followed by a half percentage point increase in a number of financial institutions' deposit and lending rates.

Credit growth has been strong this year. Gross domestic debt rose by more than 9% in the twelve months to July of this year, ie by a substantially higher margin than overall growth in the economy. First-quarter figures indicate that the marked growth in corporate borrowing partly reflects a shift away from foreign to domestic borrowing. The rise in credit growth also reflects developments in the household sector. Credit growth in the household sector was 7% in the year to the second quarter of 1997. The expansion in credit must be seen against the background of the high level of investment activity in the business and household sectors, but also higher and rising house and equity prices.

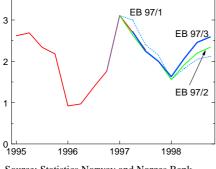
Share prices advanced sharply in the period to the first half of August. Following a decline at the end of the month, share prices returned in September to a level approaching the peak level in August. House prices were 8% higher in the second quarter compared with the same period one year earlier.

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



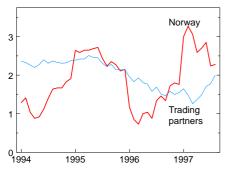
Source: Statistics Norway and Norges Bank

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



Source: Statistics Norway and Norges Bank

**Chart 1.4** *Consumer prices in Norway and abroad. 12-month rise in per cent* 



Source: Statistics Norway and OECD

The consumer sentiment survey, conducted by the Savings Banks' Association, Norsk Gallup (Norwegian opinion polling institute) and Økonomisk Rapport, has reached a record level since the survey was first conducted in November 1992. The survey measures economic expectations in the household sector. The survey was conducted after the largest banks had raised their lending rates. The number of respondents indicating an improvement in their financial position over the last year showed a sharp rise and the proportion that wants to repay their housing loans has never been so low.

#### 1.2 Norges Bank's inflation projections

The average rise in consumer prices between 1996 and 1997 is projected at  $2^{1}/2\%$  as in the previous *Inflation Report*, whereas the forecast for 1998 has been revised upwards from 2% to  $2^{1}/4\%$ . The upward adjustment of a quarter percentage point primarily reflects higher import prices and slightly higher wage growth. House rents have also been revised upwards as a result of the sharp rise recorded so far this year. Section 1.3 in this report indicates that inflation expectations are higher in relation to the previous *Inflation Report*.

Excluding indirect taxes and electricity prices, underlying inflation is put at 2% in 1997, rising to  $2^{1}/2\%$  in 1998. Experience indicates that it takes some time before pressures in the real economy translate into higher inflation. The time horizon in this report is probably too short to capture all the effects of the forces that are contributing to growing price pressures in the Norwegian economy. However, if the Norwegian economy continues to expand at the brisk pace projected, it is likely that prices will rise to a higher level in 1998 and into 1999. Furthermore, our projection for price inflation is based on continued wage restraint, see section 1.4.

Price inflation among trading partners remains subdued in spite of improved growth prospects. In the US and UK, where economic growth has been vigorous in recent years, currency appreciation will have a dampening impact on price inflation. Continental Europe is experiencing an incipient cyclical upturn, but household consumption is still showing a fairly weak trend. Price inflation is therefore expected to remain moderate. Our estimate for consumer price inflation among trading partners is  $1^{3}/4\%$  in 1997 and 2% in 1998.

The exchange rate has in recent weeks appreciated compared with the level in June following a weaker period this summer. In line with previous practice, the average exchange rate over the last month is used as a technical assumption for the projection period. This results in the same exchange rate this year as in 1996 and an average depreciation of manufacturing industry's effective exchange

rate of  $1^{1/2\%}$  between 1997 and 1998. The rise in import prices has been subdued so far this year. Import prices are expected to fall by  $^{3/4\%}$  in 1997. In isolation, the depreciation of the Norwegian krone will result in higher import prices next year, with prices projected to rise by  $1^{1/2\%}$  in 1998.

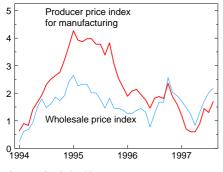
Wage growth is estimated at 4% this year. Both employment growth and the expansion in the labour force have been stronger than expected in the first half of the year. Demand for labour is expected to remain high. The number of registered unemployed is now estimated to be lower both in 1997 and in 1998 than projected in the June Inflation Report, accompanied by a sharper-than-expected fall in unemployment between 1997 and 1998. Based on historical information about wage formation, this will, in isolation, push up wage growth next year. On the other hand, the rise in export prices this year has been adjusted downwards compared with the June figure. In isolation, this will weaken profitability in export-competing enterprises and contribute to reducing the effect of a tighter labour market. Wage growth is now projected at  $4^{1/2}$ % in 1998, or a quarter percentage point higher than in the June Inflation Report.

Electricity prices charged to Norwegian households continued to decline during the summer, and are now only 2% higher than in the autumn of 1996 when they started to rise. Developments in recent months have been broadly in line with the assumptions underlying the previous *Inflation Report*, and the assumption of stable electricity prices through the remainder of the projection period still applies. Changes in electricity prices will push up the average rise in consumer prices by a small margin between 1996 and 1997, but reduce the average rise by about a quarter percentage point between 1997 and 1998.

Changes in indirect taxes continue to affect developments in the CPI. The elimination of VAT compensation from July 1996 and various excise duties from January 1997 will push up the 12-month rise in consumer prices this year. For 1998, we have applied the technical assumption that excise duties are adjusted in pace with the expected rise in prices, ie that changes in indirect taxes will not in isolation influence consumer price inflation.

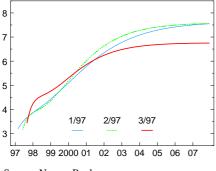
In the June *Inflation Report*, profit margins were projected to increase slightly this year and next as a result of high capacity utilisation in large parts of the economy in conjunction with continued strong demand growth. Pressures in the Norwegian economy are now considered to be even greater than in June. This notwithstanding, the June projection still applies, implying that higher profit margins will result in about <sup>1</sup>/4 percentage point higher rise in prices this year and next. Structural changes in retail trade are expected to prevent a higher rise in profit margins and a further rise in the price of most goods and services.

**Chart 1.5** Wholesale and producer prices. 12-month rise in per cent



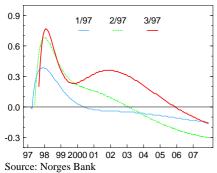
Source: Statistics Norway

**Chart 1.6** Forward rates in Norway. Expected short-term rates in per cent



Source: Norges Bank

**Chart 1.7** *Differential between expected short-term rates in Norway and Germany in percentage points* 



#### **1.3 Inflation expectations**

Statistics Norway's general business tendency survey indicates that enterprises expect higher prices in the next quarter. According to the survey from the second quarter, 16% of manufacturing enterprises expect higher prices in the third quarter for products sold on the domestic market. The percentage expecting higher prices in the next quarter has shown a marginal rise. Only 7% expect a decline in prices.

Producer and wholesale prices can provide an indication of future consumer price movements. The rise in producer prices in manufacturing has been moderate the past year, with prices for goods produced for the domestic market rising by about 2%, see Chart 1.5. Wholesale prices for consumer goods have also increased by about 2% in the past year. The year-on-year rise has edged up in recent months, partly due to higher food prices.

The forward rate curve can provide information about inflation expectations in money and foreign exchange markets. If the real rate of interest is constant, changes in forward rates may be interpreted as changes in inflation expectations. Since the last *Inflation Report*, forward rates have moved up somewhat, see Chart 1.6. This may reflect slightly higher inflation expectations in coming years than in the June report.

If interest 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. There is, however, substantial uncertainty attached to the interpretation of these calculations. Chart 1.7 shows that the differential against German forward rates is positive and has widened since the June report. 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 recovering from a cyclical slump, whereas Norway is experiencing a cyclical boom.

Norges Bank collects inflation projections from 14 private institutions. On average these institutions expect prices to rise by 2.6% in 1997 and 2.7% in 1998, see Table 1.2. The projection for 1998 has been revised upwards by 0.2 percentage point since the last *Inflation Report*. The difference between the estimates has been reduced since the June report.

All in all, the indicators above point to a slight upward adjustment of inflation expectations next year compared with the previous quarter.

## 1.4 The risks to the inflation outlook

The inflation projections in this report represent Norges Bank's professional evaluation of the outlook for prices. The most likely scenario is that increasing pressures in the eco-

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**Table 1.2** Various institutions' projections for consumer price inflation in Norway in 1997 and 1998<sup>1</sup>). Percentage change from previous year

	1997	1998
Ministry of Finance	$2^{1/2}$	_
Statistics Norway	2.5	2.1
OECD <sup>2)</sup>	2.6	2.5
Norges Bank	$2^{1/2}$	$2^{1/4}$
Private institutions <sup>3)</sup>		
highest estimate	2.9	3.4
average	2.6	2.7
lowest estimate	2.4	2.0

1) Latest official projections from the respective institutions.

2) Consumption deflator.

3) Based on projections from 14 private institutions. nomy will translate into slightly higher wage growth next year. Underlying consumer price inflation is also expected to edge up the next 15 months.

The projections in this report are primarily based on our macroeconomic model RIMINI. Due to the revision of the national accounts, where sufficient data for earlier years are still lacking, developments in the Norwegian economy in the past two years are not incorporated in the model's empirical basis. The uncertainty in the model is therefore greater than usual, and it has been necessary to make a number of additional assumptions. The most critical assumptions concern wage formation and private saving behaviour. The assumption concerning moderation in wage settlements and the attendant sustained effect on the level of wage growth in the future still applies. The model has been subject to some judgmental intervention in that we assume that households and banks will exhibit more cautious behaviour than past experience would indicate.

Norges Bank's projections are heavily influenced by key assumptions concerning variables that are not determined in the model, particularly fiscal policy, interest and exchange rate changes, petroleum investment and the demand impetus from abroad.

There are several forces which may result in higher-thanprojected price inflation:

- Local government consumption is projected to expand at the same pace as the mainland economy, whereas it is assumed that spending growth in the central government sector will be fairly subdued. There is a risk that fiscal policy will be more expansionary than assumed. The effects of a more expansionary fiscal policy are discussed in a separate box.
- Indirect taxes will not, in isolation, contribute to price inflation. However, experience shows that a fiscal policy where expenditure is to some extent financed by an increase in indirect taxes will have an influence on price inflation.
- It should be underlined that the estimate for wage growth next year is highly uncertain. The estimates in this report are based on a much lower level of wage growth in Norway than the equilibrium level implied by our macroeconomic model RIMINI. The reference path is therefore based on the assumption that wage formation has been permanently changed as a result of moderate wage growth so far in the 1990s. With a further expected tightening of the labour market, it may be questioned whether this assumption is realistic. A shortage of labour is likely to result in leap-frogging on the part of employers at some stage in the future. With continued moderate

wage settlements, such behaviour may translate into higher wage drift. Furthermore, a tight labour market may impede the implementation of incomes policy. However, there is no basis for predicting when or at what level of employment and unemployment a turnaround in wage formation will occur. The effects of a shift away from wage moderation are discussed further in a separate box.

So far Norway has recruited a large number of workers from the other Nordic countries as a result of a common labour market in several industries. This has been amplified by high unemployment in Sweden and Finland. Higher demand for labour in our neighbouring countries may result in an even greater shortage of labour in Norway. Mobility in the construction industry is discussed in a separate box in section 4.

Strong credit growth may involve a risk of continued high asset price inflation. Experience shows that a sharp rise in share and house prices results in higher consumer demand, which in turn may generate an inflationary impetus.

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

- Profit margins are expected to push up consumer price inflation in 1997 and 1998. Strong competition in retail trade, however, may induce enterprises to reduce their profit margins, thereby pushing down consumer price inflation. Such forces, in addition to brisk productivity gains, have been cited as the explanation for subdued wage and price inflation in many countries.
- A rise in interest rates internationally, for example as a result of higher economic growth in continental Europe, may also result in higher interest rates in Norway, which would curb pressures in the Norwegian economy.

Several production sectors are approaching capacity limits and there is a growing shortage of factor inputs. Slightly lower demand is not likely to curb inflation to any extent, whereas slightly higher demand may in this situation result in mounting wage and price pressures. The risk of a markedly higher rise in prices and wages is therefore considered greater than the reverse.

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## EFFECTS OF A MORE EXPANSIONARY FISCAL POLICY AND CATCH-UP IN WAGES

The projections in the *Inflation Report* are based on number of key assumptions about economic policy and the behaviour of important economic agents:

- A fiscal policy stance broadly in line with that of recent years
- Continued wage moderation
- Stable interest and exchange rate trends
- No significant change in the saving behaviour of households and enterprises

On the basis of these assumptions, developments in the real economy and prices are projected relying on the historical information about the functioning of the Norwegian economy as embodied in Norges Bank's macroeconomic model RIMINI.

If there is a significant change in any of the key policy variables, developments in the Norwegian economy will deviate widely from the projections in this report. There are now certain features of the Norwegian economy and economic policy which may appear more uncertain than previously, for instance the effect of a tight labour market on wage growth and the saving behaviour of the private sector. There is also considerable uncertainty attached to the orientation of fiscal policy in the years ahead, and the response of money and foreign exchange markets to the formulation of economic policy.

The effects of changes in some key variables are illustrated in this box, with particular focus on changes in fiscal policy and wage formation. As the time horizon in the *Inflation Report* is not sufficiently long to capture the main effects of such changes, the estimation of the effects covers the period to end-1999, using a stylised reference path where developments next year are roughly held constant.

It must be underlined that changes in key assumptions may have effects which in turn give rise to changes in other areas, for instance with regard to household saving behaviour and money and foreign exchange markets. The calculations below do not take account of such possible repercussions and must therefore be viewed solely as an isolated illustration and not as a projected alternative scenario.

The assumption here is that fiscal policy will be more expansionary over the next years, with real growth in public expenditure put at about NOK 8-9bn higher than in the reference path (2 percentage points) per year in 1998 and 1999. Growth in public sector employment has also been increased by 2 percentage points in 1998 and 1999. According to the RIMINI model, this will have an effect on wage growth in the first year and on price inflation in the second. In 1999, wage growth will be 2 percentage points higher and inflation 3/4 percentage point higher than in the reference scenario. Unemployment may be a good 1 percentage point lower in 1999 compared with the reference scenario as a result of such a shift in fiscal policy.

As regards wage formation, the historical relationships in the RIMINI model have been adjusted. The model and other estimates predict an equilibrium level for wages. According to the model, low wage growth will normally be followed by a catch-up effect over several years until this equilibrium level is reached. The estimates in the reference scenario are based on the assumption that the wage restraint shown so far in the 1990s has had a lasting effect on wages. The estimate in the reference path for wage growth in 1998 is therefore lower than the equilibrium level.

The assumption relating to fiscal policy in this box implies such a tight labour market that the assumption of continued wage moderation would have to be qualified as unreasonable. The box therefore includes a look at the consequences of a catch-up in wages for the equilibrium level indicated by the RIMINI model.

A more expansionary fiscal policy and a wage catch-up engender a markedly higher wage growth in the coming years. According to RIMINI, wage growth may reach almost 6% next year, which is considerably higher than our projection of  $4^{1/2}$ % in the *Inflation Report*. This would imply a rise in prices of  $2^{3}/4\%$ , ie half of a percentage point higher than our pro-

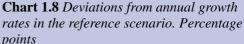
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jection. Private consumption and mainland GDP would grow at a faster pace.

The effects of a more expansionary fiscal policy and a departure from the wage moderation approach to income settlements will be felt in earnest in 1999. Wage growth may be as much as 4 percentage points higher than in the reference path. This would increase household income and, according to RIMINI, may bring consumption growth to a level  $1^{1/2}$  percentage points higher in 1999 than in the reference scenario. Inflation may be  $1^{1/4}$  percentage points higher than our projection and may range between  $3^{1/2}$ - $4^{1/2}$ % in 1999. Price inflation will then be rising through the period to the year 2000. Mainland GDP growth in Norway may be close to 2 percentage points higher in 1999.

Such developments cannot be sustained over time and eventually the situation will have to be reversed to put the economy back on a balanced growth path.

The estimated effects illustrate that a change in the key assumptions underlying our projections will put the economy on another track than has been the case so far. Continued wage restraint depends on factors both in and outside the labour market. Should domestic demand increase beyond the level projected in the *Inflation Report*, for example as a result of a more expansionary fiscal policy, there would be even less slack in the labour market, which may in itself jeopardise the wage moderation approach. Supply conditions may also have a significant impact. Similar effects may therefore occur if assumptions other than those cited above change. For example, it is highly uncertain that labour participation rates will increase as expected without an associated rise in wages.



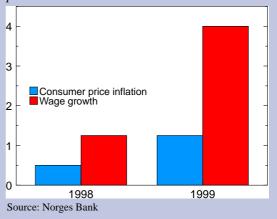
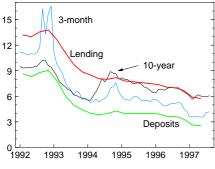
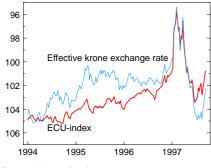


Chart 2.1 Interest rate movements in Norway. Banks' average deposit and lending rates, 3-month Euro-krone rate and 10year government bond yield



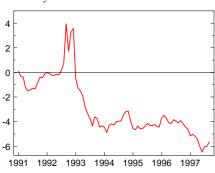
Source: Norges Bank

**Chart 2.2** ECU index and manufacturing industry's effective krone exchange rate. Rising curve denotes appreciation





**Chart 2.3** 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

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# INTEREST RATES, EXCHANGE RATES AND MONETARY VARIABLES

### 2.1 Interest and exchange rates

Three-month rates in Norway have risen from 3.5% to 3.9% since the June report. The rise in short-term rates must be seen in connection with Norges Bank's increase in the sight deposit rate for banks, from 3.25% to 3.5%, with effect from 16 July. The level is nevertheless considerably lower than 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.

German 3-month rates were fairly steady through the summer months. Norwegian money market rates are now about 0.5 percentage point higher than German rates and about 0.5 percentage point lower than the corresponding ECU rate.

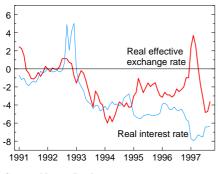
Norges Bank's interest rate statistics show that lending and deposit rates continued to decline between the first and second quarter. Commercial and savings banks' average lending rate fell by 0.2 percentage point in this period, to 5.8%. Since then some financial institutions decided to increase their rates on a moderate scale. The State Housing Bank's variable rate loans are now at about 3.8%.

Demand may also be influenced by long-term rates although loans with a long fixed-interest period are of limited scope in Norway compared with many other countries. The yield on 10year government bonds has moved up 0.1 percentage point since the June report, to 5.8%. The differential against the corresponding German yield is about 0.3 percentage point.

The krone has appreciated by 1.8% measured against manufacturing industry's effective krone exchange rate and by 2.9% against the theoretical ECU since the June report. The average exchange rate for the previous month still applies as a technical assumption for the remainder of the projection period, implying that the value of the krone will remain virtually unchanged between 1996 and 1997, as measured by manufacturing industry's effective exchange rate, and result in an average depreciation of  $1^{1/2}$ % between 1997 and 1998.

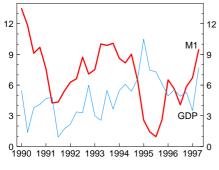
Norges Bank's Monetary Conditions Index was constructed to summarise the effects of changes in the real exchange rate and the real interest rate on domestic demand, see Chart 2.3. A fall in the index indicates that interest and exchange rate movements are having a more expansionary effect on the real economy. The index showed only minor variations in the three years to the autumn of last year, but between the autumn of 1996 and first half of 1997 lower real interest rates have contributed to a more expansionary monetary policy. This was partly offset by the real appreciation of the krone up to January 1997. Up to the end of the second quar-

**Chart 2.4** *Components of the MCI. January 1992=0* 



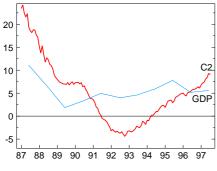
Source: Norges Bank

**Chart 2.5** *Money supply (M1) and nominal mainland GDP. Growth from same period previous year* 



Source: Statistics Norway and Norges Bank

**Chart 2.6** Total domestic credit (C2) and nominal mainland GDP. Growth from same period previous year



Source: Statistics Norway and Norges Bank

ter, however, the krone weakened, thereby having a more expansionary effect.

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*.

#### 2.2 Monetary growth

Changes in the money supply are used in many countries as an indicator of future inflation. Studies of Norwegian data indicate that historically there has not been a close correlation between monetary growth and inflation in Norway, but a fairly stable relationship in the long term between changes in monetary growth and growth in nominal mainland GDP has been observed.

In the first quarter of 1997 the year-on-year growth in the money supply (M2) fell from 6% to 0.9%, but has been rising steadily since March. M2 includes notes and coin, sight deposits, unutilised overdraft facilities, building loans and time deposits. At the end of July annual growth in M2 was 4.5%. Broken down by source, a substantial withdrawal took place in the first quarter through the central government's revenue surplus and loan transactions in particular, whereas bank lending was the predominant source of money supply growth in the second quarter.

The narrow monetary aggregate M1 (M2 less time deposits) has shown sharp growth so far in 1997, with M1 expanding by 8.4% in the first seven months of this year compared with the same period one year earlier, ie well above mainland nominal GDP growth, see Chart 2.5.

#### 2.3 Credit growth

Private and municipal gross domestic debt (C2) rose by 9.1% in the 12 months to end-July. Annual growth has generally moved on a steadily rising trend since October 1992, primarily reflecting the fall in interest rates over recent years and the favourable cyclical trend in the Norwegian economy. Chart 2.6 shows the changes in annual growth rates for C2 and nominal mainland GDP from 1987 to end-July 1997. The growth in domestic credit, which so far in the 1990s has generally been lower than mainland GDP growth, has during 1997 risen faster than nominal mainland GDP. Total private and municipal debt in relation to value added in the economy is, however, considerably lower than at the end of the 1980s and early in the 1990s.

Non-financial enterprises still account for the highest growth in credit, with the 12-month growth in domestic debt at about 19% at the end of the second quarter, according to preliminary estimates. This growth partly reflects a shift from foreign loans to domestic loans. The corresponding figure for households was a good 7%.

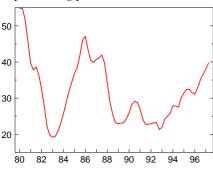
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**Table 3.1** Supply and use ofgoods and services. Percent-age growth from previous year

	1996	1997	1998
Mainland demand	4.7	3 3/4	3
Private consumption	4.7		3 1/4
Public consumption	3.3	2 3/4	$2^{1/4}$
Mainland fixed investments	6.6	6 <sup>1</sup> /4	$3 \frac{1}{2}$
Fixed investment in oil ex-			
traction and pipeline transp.	-4.4	27	4
Exports	10.0	5 3/4	6 1/2
Of which:			
Oil, gas and pipeline			
transport	16.0	7	10 3/4
Traditional goods	10.3		
Imports	6.5	8 1/2	4 3/4
Traditional goods	9.3	7	4
GDP	5.3	4	4
Mainland GDP	3.7	3 1/2	3

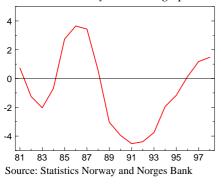
Source: Statistics Norway and Norges Bank

**Chart 3.1** Indicators of resource shortages in manufacturing industry according to the general business tendency survey. Per cent of enterprises experiencing production constraints



Source: Statistics Norway

**Chart 3.2** *Output gap. Difference between actual and trend GDP in mainland Norway. Percentage points* 



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# **CYCLICAL DEVELOPMENTS**

#### 3.1 Main features

Preliminary national accounts figures show that mainland GDP at constant prices grew by 2.4% between the first half of 1996 and first half of 1997. Total domestic demand expanded by 4.8% in the same period. The cyclical upturn has now continued for five years, and demand growth is expected to remain high this year and next. The buoyant growth in demand has translated into a sharp rise in imports.

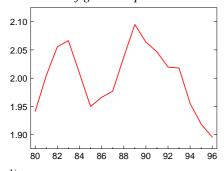
The upturn is broadly based. Household consumption has been, and will continue to be, a main driving force behind the upturn. Consumption growth is being fuelled by a sharp increase in income and wealth, partly reflecting the rise in house and share prices. Consumption growth is projected at  $3^{1/2}\%$  in 1997 and  $3^{1/4}\%$  in 1998, implying a reduction in the saving ratio both this year and next.

Growth in public consumption appears to be rising, partly ascribable to higher-than-expected local government tax receipts. All total, public consumption is projected to rise by  $2^{3}/4\%$  in 1997 and  $2^{1}/4\%$  in 1998. This estimate is highly uncertain. Although local government spending growth is expected to be higher than the estimate in the Revised National Budget, our estimate is relatively cautious in view of the sharp growth in local government revenues.

Business fixed investment is still at a high level. Preliminary QNA figures show that mainland business fixed investment was about 5% higher in the first half of this year compared with the first half of last year. Mainland business fixed investment is projected to grow by about 5% in 1997 and about 1/2% next year. Traditional merchandise exports showed record-high growth in 1996 followed by a continued strong performance in 1997, albeit slightly lower than in the previous year.

Indicators of resource shortages as illustrated in Chart 3.1 and 3.2 show that the Norwegian economy has reached a stage of the business cycle with growing shortages of various factor inputs. The scope for further production growth is limited. At this stage of the previous cyclical upturn this translated into price pressures. However, the uncertainty attached to the quantification of trend GDP in Chart 3.2 should be emphasised. Over time, for example, high business fixed investment will result in increased production capacity and higher productivity gains than has been the case thus far in the cyclical upturn. However, the capital-output ratio, ie the ratio of the amount of capital to the amount of output produced, has declined for mainland enterprises in recent years, see Chart 3.3. A fall in the capital-output ratio means that gross output is expanding at a faster pace than capital stock. Chart 3.3 indicates that capacity utilisation has risen in spite of higher investment.

**Chart 3.3** *Capital-output ratio in mainland enterprises*<sup>1)</sup>. *Capital stock as a share of gross output* 



<sup>1)</sup> Capital consumption figures from Statistics Norway, and thus capital stock, are only available to 1994. For 1995 and 1996 it is assumed that changes in capital consumption in per cent of gross output are the average in the period 1978-1994.

Source: Statistics Norway and Norges Bank

**Chart 3.4** New car registrations and housing starts. Smoothed. 12-month growth in per cent

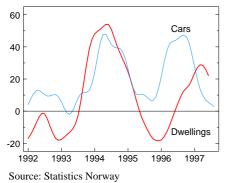
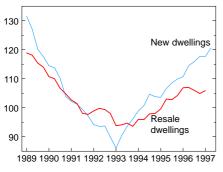


Chart 3.5 Real house prices. Index 1991=100



Source: Statistics Norway and ECON

#### 3.2 Households

Household consumption has been an important driving force behind this upturn. In spite of several years of brisk consumption growth, household wealth has improved steadily, partly reflecting the sharp rise in household income as a result of advances in house and share prices. These factors have contributed to paving the way for consumption growth.

The decline in money market rates last winter triggered a wave of activity in the housing market, with resale home prices rising by a further 3% in the second quarter of this year. The nominal rise in resale home prices is estimated at 12% for 1997, with a further nominal increase of 7% in 1998. Housing starts have exhibited marked growth so far this year, with housing investment projected at 12% in 1997 as in the previous *Inflation Report*. Housing investment is expected to continue to show strong growth next year, at about 14%.

According to preliminary national accounts figures, private consumption rose by 3.4% in the 12 months to end-June 1997. Car purchases, which made a strong contribution to consumption growth last year, have levelled off this year, whereas purchases of durables such as furniture, electrical appliances and leisure goods have continued to stimulate consumption growth. In other words, the interest-sensitive components of consumption continue to show the sharpest rise, while the consumption of other goods and services is moving on a more moderate trend.

Consumption growth is expected to remain a primary source of growth over the next two years, largely reflecting continued robust growth in real household income in conjunction with the positive trend in households' financial position and housing wealth.

Consumption growth is projected at  $3^{1/2\%}$  in 1997 and  $3^{1/4\%}$  in 1998. The projections remain unchanged on the June *Inflation Report*. The estimates imply that household saving as a percentage of disposable income will decline in 1997 and 1998, reducing the saving ratio to about  $4^{1/2\%}$  in 1998. The increase in housing investment will result in lower financial saving.

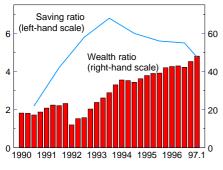
### 3.3 Fiscal policy

The fiscal policy proposed for 1997 in the Revised National Budget was briefly discussed in the June report. Our estimate for public demand broadly reflects the budget proposal in the Revised National Budget. The underlying real growth in central government expenditure is estimated at  $1^{3/4\%}$  this year. 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 entails a tightening of domestic demand corresponding to 1/2% of mainland GDP.

In the June report, the real growth in local government

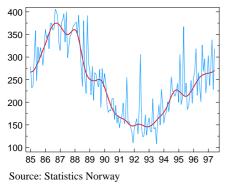
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**Chart 3.6** Household saving ratio and wealth/disposable income ratio

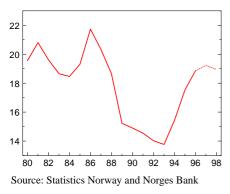


Source: Statistics Norway and Norges Bank





**Chart 3.8** Investment rate for mainland enterprises. In per cent



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revenues was put at close to 4%, whereas local government consumption was estimated to rise by 31/2% in 1997. According to the quarterly national accounts, local government consumption has risen by 2.7% in the year to end-June. This has been accompanied by a strong expansion in investment, particularly in connection with the school reform. In the latter six months, once the reform has been implemented, investment growth is expected to edge down and consumption to rise. The figures for local government tax receipts for the first seven months show an increase of 6.4% compared with the same period last year. The sharp growth in local government tax revenues primarily reflects the brisk growth in employment so far this year. Higher local government revenues may lead to higher expenditure next year. Local government consumption is projected to grow by  $3^{1/2}$ % in 1997, whereas the figure for 1998 has been adjusted upwards to 3%, ie in line with mainland growth. Total growth in public consumption is projected at  $2^{3}/4\%$  in 1997 and 2<sup>1</sup>/4% in 1998.

In the Revised National Budget, public sector gross investment was estimated to rise by  $3^{1/2}$ % at constant prices between 1996 and 1997, primarily as a result of local government investment in connection with the primary school reform and higher allocations for state road construction. However, public sector gross investment rose by close to 9% in the year to end-June. In the light of this, our estimate for 1997 has been revised upwards to 7%, with the rise in public sector gross investment estimated at about 3% in 1998.

### 3.4 Fixed investment

According to preliminary QNA figures, business fixed investment in the first half of 1997 was a good 5% higher than in the same period one year earlier, with manufacturing industry accounting for most of the growth. High capacity utilisation and the prospect of output growth in both 1997 and 1998 point to a continued expansion in business fixed investment.

Statistics Norway's investment intentions survey indicates somewhat slower growth in manufacturing investment this year. However, manufacturing investment has expanded by about 10% in the first half of 1997 compared with the first half of last year. High imports of machinery and transport equipment, as well as figures on commercial building starts, point to a continued high level of investment. In the first seven months of 1997 commercial building starts were nearly 10% above the level recorded in the same period last year.

Mainland business fixed investment is projected to expand by about 5% in 1997. Investment growth in services and distributive trades is expected to be slightly lower, whereas the manufacturing sector is expected to record slightly higher

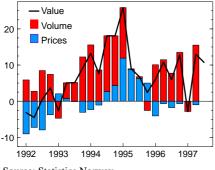
**Table 3.2** Projected GDP. Consensus Forecasts in brackets. Percentage change from previous year

	1997		1998	
USA Japan Germany UK Sweden Finland Denmark	3 <sup>3</sup> / <sub>4</sub> 2 2 <sup>1</sup> / <sub>4</sub> 3 <sup>1</sup> / <sub>4</sub> 2 4 <sup>3</sup> / <sub>4</sub> 3	(3.5) (1.9) (2.4) (3.5) (2.2) (4.0) (3.0)	$\begin{array}{c} 2 \ \frac{1}{4} \\ 2 \ \frac{1}{2} \\ 2 \ \frac{1}{2} \\ 2 \ \frac{1}{2} \\ 3 \\ 3 \ \frac{1}{2} \\ 2 \ \frac{3}{4} \end{array}$	(2.5) (1.9) (2.8) (2.5) (2.9) (3.5) (2.9)
Norway's trading partners <sup>1)</sup>	2 3/4	(2.7)	2 3/4	(2.8)

1) Weighted by export weights.

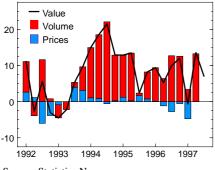
Source: Norges Bank and Consensus Forecasts

**Chart 3.9** *Traditional merchandise exports according to External Trade Statistics. Volume, prices and value. Percentage rise from same quarter previous year* 



Source: Statistics Norway

**Chart 3.10** *Traditional merchandise imports according to External Trade Statistics. Volume, prices and value. Percentage rise from same quarter previous year* 



Source: Statistics Norway

growth. The growth rate is projected to slow in 1998, but the level of investment will remain high. Investment linked to the construction of the new main airport Gardermoen will decline substantially from 1997 to 1998. This will be partly offset, however, by the planned construction of a new gas-generated power station in the western part of Norway as well as some major projects in the power supply sector. The investment intentions survey also indicates that manufacturing investment will continue to increase. Total business fixed investment is projected to grow by about 1/2% next year.

Petroleum investment will show sharp growth this year. With growth projected at 27%, petroleum investment will be twice the level of housing investment in Norway. Statistics Norway's investment intentions survey for the third quarter also indicates that petroleum investment will remain at a high level next year.

Whereas petroleum investment declined in the period 1994-1996, thereby dampening the upturn, this investment is expected to impart a further stimulus to mainland demand in both 1997 and 1998.

#### 3.5 Foreign trade

GDP growth among trading partners is projected at  $2^{3}/4\%$  in 1997 and in 1998, ie a slightly higher rate than expected earlier. In particular, growth appears be higher than expected in the US and UK, but slightly weaker in Asia. It appears that economic growth in continental Europe is picking up. So far the recovery in continental European countries has been export-led, but we expect a traditional business cycle to emerge where investment gradually takes over as the driving force behind economic growth.

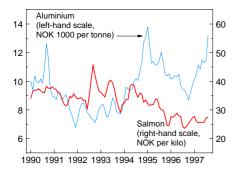
Traditional merchandise exports were at a high level in the first half of 1997, with the volume of exports 5.9% above the level in the same period one year earlier, according to QNA figures. Export growth in 1997 is nevertheless lower than in 1996 when traditional merchandise exports grew by 10.3% and Norway acquired considerable market shares.

Figures from External Trade Statistics so far in the third quarter confirm continued robust growth in the value of exports even though this probably also reflects some price increases. The value of traditional exports was almost 13% higher in August this year than one year earlier. Traditional merchandise exports are projected to expand in volume by an average 6% in 1997 and 5% in 1998. The upward revision of the estimate for exports compared with the June *Inflation Report* primarily reflects somewhat higher-than-expected market growth abroad.

Traditional merchandise imports have grown at a faster pace than projected in the June report, expanding by 8.7% compared with the first half of last year. Higher import volumes through the year are confirmed by External Trade Sta-

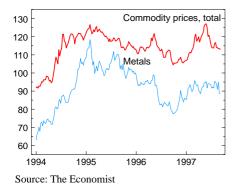
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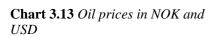
Chart 3.11 Prices for aluminium and salmon. In NOK

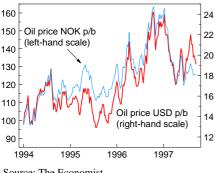


Source: Statistics Norway and The Economist

**Chart 3.12** *Commodity prices measured in SDRs, total and metals.* 1990=100







Source: The Economist

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tistics for July and August, and the volume of traditional merchandise imports is estimated to rise by 7% in 1997 and 4% in 1998. Total import growth may reach nearly 8<sup>1</sup>/2% this year, reflecting investment in petroleum production and pipeline transport and buoyant growth in direct purchases abroad by resident households.

Norwegian export prices largely depend on price movements in international commodity markets. Prices for a number of commodities have been volatile in recent years. Prices for metals, paper and pulp and industrial chemicals fell through 1996. All total, prices for traditional export goods declined by 1.5% between 1995 and 1996.

The Economist's commodity price index rose sharply in the period to mid-June 1997 and then declined slightly in the following months. The commodity price index for the first three quarters of 1997 was nevertheless about 8% higher than in the same period last year. Movements in the commodity price index reflect a pronounced rise in prices for some food products. The price of coffee, in particular, has surged in periods, and in May the price of some qualities was at the highest level recorded since 1977. However, metal prices, especially aluminium, have also contributed to movements in the commodity price index. If the current price of aluminum remains unchanged the rest of the year, the rise will come to a good 17% compared with the average level in 1996, measured in NOK. The price of Norwegian salmon edged down in late spring followed by a rise in recent periods towards the level prevailing at the beginning of the year.

Oil prices fell from about USD 24 p/b at the beginning of the year to USD 17 p/b at the beginning of June. Oil prices were relatively stable through the summer months, hovering between USD 18-19 p/b. Measured in NOK, the price of oil has risen from NOK 128 p/b in June to NOK 134 p/b in September.

According to QNA figures, export prices for traditional goods have dropped by 1.6% so far this year compared with the same period one year earlier. Export prices are projected to rise through the second half of 1997, partly reflecting higher commodity prices, and for the year as a whole average prices for traditional export goods are expected to remain unchanged. In 1998, export prices are estimated to rise by 2%.

So far this year import prices have been nearly 2.5% lower than in the same period last year, partly reflecting the strong krone exchange rate in the early part of 1997. Import prices thus far in 1997 have risen at a somewhat slower pace than expected earlier. The estimate for import prices in 1997 has therefore been revised downwards, whereas the estimate for 1998 has been revised upwards compared with the last *Inflation Report*. Import prices for traditional goods are projected to fall by  $^{3}/_{4\%}$  between 1996 and 1997, whereas prices are expected to rise by  $1^{1}/_{2\%}$  in 1998.



#### 4.1 Employment and unemployment

The robust employment growth recorded last year and in the first quarter of 1997 appears to be continuing. According to preliminary LFS data and QNA figures, employment rose by 3%, equivalent to nearly 65 000, in the first six months of this year compared with the same period in 1996. The rise was particularly pronounced in the private service, manufacturing and construction industries. So far this year, growth has been stronger than anticipated in the previous *Inflation Report*, where employment was projected to increase by  $2^{1/4\%}$ .

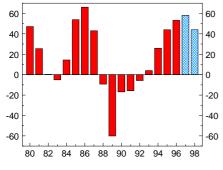
The growth in employment has been accompanied by a considerable expansion in the labour force. According to Statistics Norway's LFS figures, the labour force swelled by nearly 50 000, or 2.2%, in the first six months of the year compared with the same period in 1996. The LFS also shows that unemployment as a share of the labour force has edged down by 0.7 percentage point in the same period. This trend is confirmed by figures from the Directorate of Labour for registered unemployment, which show an average decline of 0.9 percentage point in the unemployment rate in the first eight months of 1997 compared with the same period last year. The fall in registered unemployment is therefore slightly higher than the drop in LFS unemployment. This is primarily due to the sharp increase in the number of youth without previous work experience who are now seeking employment. This group is included in the LFS, but is not necessarily fully reflected in the Directorate of Labour's figures, as many are not registered as unemployed at their local employment offices.

Based on information about trends in the labour market so far this year, projections for employment and labour force growth have been adjusted upwards for 1997. Employment is now projected to rise by around  $2^{3}/4\%$  or roughly 60 000 from 1996 to 1997. Growth in the labour force may be as high as 2% in the same period, somewhat higher than previously anticipated. Registered unemployment is now projected at a little more than  $3^{1}/4\%$  this year, which is marginally lower than projected in the last *Inflation Report*. LFS unemployment is projected at a good 4%.

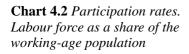
It appears that there is still considerable flexibility in the labour market. Despite an estimated growth of 180 000 in employment in the past four years, unemployment has only fallen by around 40 000, as more people have joined the labour force in response to improvements in the labour market. Labour force participation has risen at a considerably swifter pace than the annual 10 000-15 000 that demographic trends alone would indicate and is now even higher than

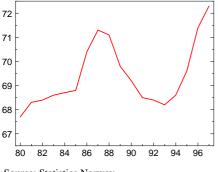
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**Chart 4.1** Number employed. Change from previous year. 1000 persons



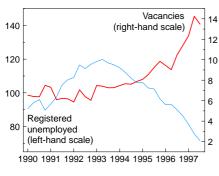
Source: Statistics Norway and Norges Bank





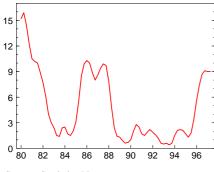
Source: Statistics Norway

**Chart 4.3** Number of registered unemployed and vacancies. 1000 persons



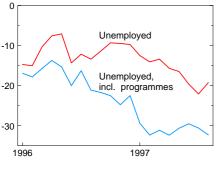
Source: Directorate of Labour

**Chart 4.4** Indicator of labour shortages. Per cent



Source: Statistics Norway

**Chart 4.5** Registered unemployed and persons participating in labour market programmes. Change from same period previous year. 1000 persons



Source: Directorate of Labour

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during the last upswing in the 1980s. This trend is in line with previous experience of developments in the labour force during a cyclical boom. Following several years of sharp growth in the supply of labour, it is now highly uncertain whether this trend can continue without an accompanying rise in wages. There is evidence of a steadily tighter labour market, such as a sharp increase in unfilled vacancies.

It is assumed that growth in the supply of labour will continue to be higher in 1998 than demographic trends alone would indicate and somewhat higher than projected in the last *Inflation Report*. More moderate growth in demand next year will probably curb the rise in employment in 1998 compared with 1997. Employment growth is projected at 2% in 1998, half a percentage point higher than in the last *Inflation Report*. In line with the trend decrease in average working hours in recent years, a slight decline in average working hours has been taken into account for next year, partly reflecting that a share of employment growth will come in the form of part-time employment. It is also assumed that the rise in employment in the public sector will be somewhat stronger than anticipated in the last report.

These adjustments imply that unemployment will fall by a somewhat greater margin between 1997 and 1998 than previously projected. Registered unemployment is projected to fall from  $3^{1}/4\%$  in 1997 to around  $2^{3}/4\%$  in 1998. LFS unemployment is expected to edge down to  $3^{3}/4\%$  in 1998. Based on the LFS' earlier definitions, this corresponds to  $3^{1}/4\%$  or slightly lower.

#### 4.2 Wages

In the last Inflation Report, annual wage growth was projected at 4% in 1997, rising to  $4^{1/4}$ % in 1998. The projection for the current year was based on the results of the 1997 wage settlements and our estimates for wage drift. Wage statistics from the Confederation of Norwegian Business and Industry for the first quarter of 1997 show slightly lower wage growth for manufacturing workers than previously assumed for this year. On the other hand, the construction industry recorded considerable wage growth. There are also indications that wage increases for salaried employees covered by the Norwegian Federation of Trade Unions/Confederation of Norwegian Business and Industry will be considerably higher than for industrial workers. As yet there are no indications that wage growth will deviate from the projection in the last Inflation Report for the public sector, services and distributive trades. The estimate in the June report of 4% wage growth this year still applies.

When assessing future wage trends, several forces point to higher wage pressures:

- The wage estimates for 1997 and 1998 are based on a continuation of the moderation approach in income settlements, which has been applied so far in the 1990s. Should demand growth in the economy or labour market flexibility prove to be lower than assumed, an even tighter labour market may result in a shift away from the wage moderation approach. The box in section 1 discusses the effects of such a development.
- The number of registered vacancies has risen sharply in 1997, with an increase of around 40% compared with the first six months of 1996, see Chart 4.3. There has also been a considerable reduction in the number of registered unemployed. Whereas there were roughly nine unemployed persons per vacancy last year, the ratio was closer to five in the first six months of 1997. This indicates that it is increasingly difficult to fill vacancies, which may result in wages being pushed up in the competition for skilled employees.
- There is a shortage of qualified labour in most sectors, but particularly in the public health sector and construction industry. In some segments of manufacturing industry, the shortage of qualified labour also seems to be a problem. This is underlined by figures from Statistics Norway's general business tendency survey which show that nearly 10% of manufacturing enterprises report that labour shortages constitute a production constraint. Chart 4.4 shows that whereas this share was close to zero in the first half of the 1990s, it is now at the same level as during the previous upturn in the mid-1980s.
- The Directorate of Labour's figures for registered unemployment show a continued decline. Chart 4.5, which shows changes in the number of registered unemployed on the previous year, clearly illustrates that the fall in the number of registered unemployed has accelerated in 1997, with around 20 000 fewer registered unemployed in August than in the same month last year. In addition, the number of persons participating in ordinary labour market programmes has fallen by a good 10 000 in the last year. If the fall in unemployment continues at a similar pace, the labour market may be considerably tighter than assumed in this report.

The rise in export prices is expected to be somewhat lower this year than in the last *Inflation Report*. In isolation, this weakens profitability for exposed enterprises and points to lower wage inflation in 1998 than estimated in the June report. On the other hand, registered unemployment is projected to be lower in 1997 and 1998 than in the last *Inflation Report*, accompanied by a sharper fall in unemployment be-

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## MOBILITY IN THE CONSTRUCTION INDUSTRY

Employment in the construction industry has grown by nearly 10% per cent in in the second quarter compared with the same quarter one year earlier, according to QNA figures. In 1996, 88 000 were employed in this industry.

However, employment statistics only capture a limited share of foreign workers in Norway as the figures only include employees of companies registered in Norway who have been registered as residents for more than six months. Shorter periods than this are not included in the statistics.

Figures produced by the Central Tax Office for Foreign Matters show that in September 1997 more than 7 000 foreigners work in the construction industry in Norway, ie an increase of more than 50% since 1993. About half of this group are Swedish, whereas almost 8% are Finnish and 7% Danish. In addition, there are close to 6 000 foreigners working for foreign companies with contracts in Norway. The total number of foreign construction workers in Norway comes to about 13 000. Unlike the employment statistics, these figures also comprise workers with contracts for periods shorter than six months.

A common labour market in the construction industry has important implications for the Norwegian economy:

 The supply of foreign workers has been important for the completion of large-scale projects such as the expansion of Gardemoen Airport and a new national hospital. The flow of foreign labour to Norway has probably reduced the tightness of the labour market.

- Labour mobility will continue to restrain pressures in this cyclical upturn. On the other hand, the supply of foreign labour tends to be fairly volatile. An improvement in economic conditions abroad may drive up wage pressures in Norway as foreign workers return to their home country. The cyclical situation in Sweden now appears to be improving.
- Stronger competition between Norwegian and foreign companies in the period ahead for example in tender competitions - may indicate a permanent dampening effect on wage formation.

A number of factors indicate that labour mobility is higher in industries other than the traditional industries, such as the construction and offshore industry. The health and social sector and parts of the private service industry in Norway have greatly benefited from the mobility in the Nordic labour market. As a percentage of total employment, the number of foreign workers is still relatively modest. Higher cross-border mobility is not likely to alleviate the pressure in the large regions, or more generally in the labour market, to the same extent as reduced bottlenecks in some industries.

tween 1997 and 1998. Both the level and rate of change of registered unemployment have an influence on wage growth in Norges Bank's macroeconomic model RIMINI. Experience would indicate that unemployment is now at such a low level that relatively small changes in unemployment may have a fairly substantial impact on wage growth. Based on this, wage growth is now projected at  $4^{1/2}\%$  in 1998, an upward adjustment of a quarter of a percentage point on the last projection. As usual, it is assumed that wage growth will on a lasting basis remain lower than the equilibrium level indicated in the RIMINI model, and we have assumed that the wage moderation shown in recent years will continue to apply. However, our estimates nevertheless imply that wage

growth in Norway may be 1 percentage point higher than among trading partners from 1996 to 1998. The uncertainty attached to the estimates, primarily relating to developments in the labour market and total demand, would all in all indicate that the deterioration in cost competitiveness may prove to be more substantial than this.

#### 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	$2^{3/4}$	2 1/4
Total gross fixed investment	4.8	11	3 1/2
Oil extraction and pipeline transport	-4.4	27	4
Mainland Norway	6.6	6 <sup>1</sup> /4	3 1/2
Enterprises	11.1	4 3/4	1/2
Dwellings	-6.0	12	14
General government	4.8	7	3
Mainland demand	4.7	3 3/4	3
Exports	10.0	5 <sup>3</sup> /4	6 1/2
Oil, gas and pipeline transport	16.0	7	10 3/4
Traditional goods	10.3	6	5
Imports	6.5	8 1/2	4 1/2
Traditional goods	9.3	7	4
GDP	5.3	4	4
Mainland Norway	3.7	3 1/2	3
Labour market			
Employment	2.5	2 3/4	2
Labour force, LFS	2.1	2	$1 \frac{1}{2}$
Unemployment, LFS	4.9	4 1/4	3 3/4
Prices and wages			
Consumer prices	1.3	2 1/2	2 1/4
Annual wages	4.4	4	4 1/2
Import prices, traditional goods	0.4	- 3/4	$1 \frac{1}{2}$
Export prices, traditional goods	-1.5	0	2
Crude oil prices, NOK (level)	133	135	125
External account			
Trade surplus, NOKbn (level)	93.0	95	93
Current account surplus, NOKbn (level)	72.7	85	85
Current account surplus, % of GDP (level	) 7.1	7 3/4	7 1/4
Memorandum item			
Household saving ratio	5.5	4 3/4	4 1/2

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