Tightening – not if, but how

According to the Exchange Rate Regulation, Norges Bank's monetary policy shall be oriented towards maintaining a stable krone exchange rate against European currencies. The guidelines issued in the Government's supplementary proposition last autumn state that "if appreciation or depreciation pressures on the krone exchange rate should be particularly strong, the Bank shall allow the exchange rate to fluctuate in the short term." In recent months, the krone exchange rate has depreciated to a level lower than the initial range as defined in the Exchange Rate Regulation. The regulation states that "in the event of significant changes in the exchange rate, monetary policy instruments will be oriented with a view to returning the exchange rate over time to its initial range." Monetary policy instruments are now oriented according to this guideline.

These monetary policy guidelines imply that the krone may temporarily deviate from its initial range, partly because of the structure of the Norwegian economy. The reactions we have observed in money and foreign exchange markets reflect the international situation, including the fall in oil prices and the financial crisis in Asia and Russia. However, it is also clear that some of the reason for the problems we are now experiencing is that Norwegian economic policy so far has failed to take sufficient account of the risk of rising price and wage inflation.

The economic developments outlined in this report do not suggest that the pressures in the Norwegian economy will automatically vanish in the course of a short period. This means that it is necessary to remedy the situation by means of immediate action in the form of an active economic policy. A separate box in the *Inflation Report* indicates how a more favourable economic trend may be triggered.

It is uncertain to what extent fiscal tightening will influence financial markets, and the scope this might provide for easing monetary policy. It is possible that the current krone exchange rate and market interest rates already reflect market expectations of some fiscal tightening . In that case, a failure to tighten fiscal policy would make the implementation of monetary policy more difficult. There is every reason to believe that a tightening of economic policy is necessary. The question is not if, but how, this tightening shall be implemented.

National borders are not sufficient to stem the tide of international developments, although we can reorient policy with a view to reducing their effects. However, problems largely stemming from domestic conditions can be addressed, primarily through changes in fiscal 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 state of the Norwegian economy and provides Norges Bank's professional evaluation of the outlook for prices for the next two years. 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 17 September 1998

1 SUMMARY

Price inflation is projected at a little less than 2½% in 1998 and 3¼% next year. Underlying price inflation, ie excluding changes in indirect taxes and electricity prices, is projected at 2¼% in 1998 and 3¼% in 1999. The projections for 1999 have been revised upwards in relation to the June *Inflation Report*.

In our previous reports, an increasingly tight labour market was projected to curb economic growth from the turn of the millennium. In the light of recent international developments and the rise in interest rates, demand is now also expected to contribute to slower growth next year, although a pronounced turnaround as early as 1999 is not likely.

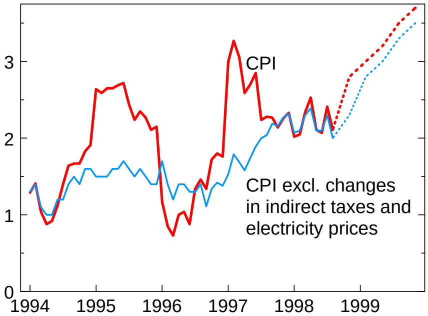
There is a considerable risk of substantially higher inflation in Norway than among our trading partners. In the event it is conceivable that wage and price inflation becomes a dominant problem in an environment of slower economic growth.

In recent weeks the krone exchange rate has been weaker than the initial range as defined in the Exchange Rate Regulation and monetary policy instruments have been oriented with a view to returning the exchange rate to its initial range. As in previous reports, however, the projections are based on the technical assumptions that the average money market rate and exchange rate prevailing in the previous month will remain constant through the projection period. These are purely technical assumptions which do not reflect monetary policy intentions. These assumptions have nevertheless been applied as the projections in inflation reports are intended to illustrate the consequences of the prevailing situation in the economy at any given time.

In a separate box we examine a shift scenario in which monetary policy intentions are reflected in an appreciation of the krone. In this box we also assume fiscal tightening in the order of 1½% of mainland GDP and lower interest rates. Compared with the baseline scenario, this policy mix will contribute to lower wage and price inflation and more balanced economic developments in 1999 and 2000. This in turn provides the basis for a less pronounced turnaround and a more solid foundation for economic growth in the years following the turn of the millennium.

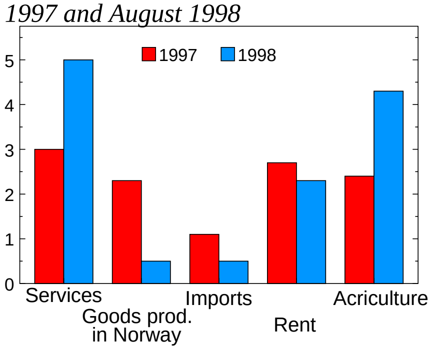
We would emphasise that there is considerable uncertainty linked to responses in the foreign exchange market to fiscal tightening. The estimates in the shift scenario are based on assumptions concerning relationships between fiscal and monetary policy which are uncertain and unstable, and which are difficult to quantify. This shift scenario is intended to illustrate a possible path based on the assumption that this tightening will contribute to enhanced confidence in Norway's economic policy, with an attendant waning of inflation expectations and a reduced need to maintain a high interest rate differential against other countries in order to counteract a depreciation of the krone.

Chart 2.1 *CPI, total and excluding indirect taxes and electricity prices. Historical figures and projections. 12-month rise. Per cent*



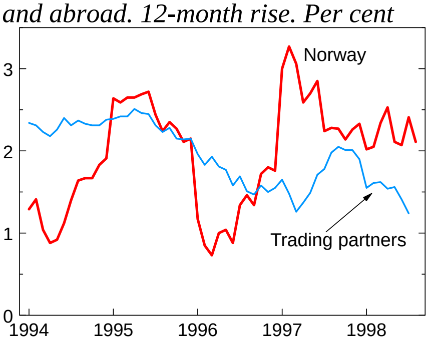
Sources: Statistics Norway and Norges Bank

Chart 2.2 *Price inflation per supplier sector in last twelve months. August 1997 and August 1998*



Source: Statistics Norway

Chart 2.3 *Consumer prices in Norway and abroad. 12-month rise. Per cent*



Sources: Statistics Norway and OECD

2.1 Price trends

Price inflation has been moderate in recent months

As a result of falling electricity prices and low petrol prices in recent months, the overall rise in prices has been moderate and slightly lower than expected. Moreover, traditional seasonal sales both last winter and this summer appear to have been more extensive than usual, which has pushed down price inflation to some extent. The consumer price index showed a year-on-year rise of 2.1% in August. The underlying rise in prices, ie excluding changes in indirect taxes and electricity prices, has also been more moderate than expected, and stood at 2.0% in August. The rise in prices has varied considerably between different consumption groups and supplier sectors. Changes in services and food prices have continued to push up inflation, whereas prices for other domestic goods and imports show a subdued rise.

According to the EU's harmonised price index, which adjusts for various differences in methods for calculating national consumer price indices, prices in Norway increased by 2.0% in August, whereas the rise in EU countries was an average 1.5% in July.

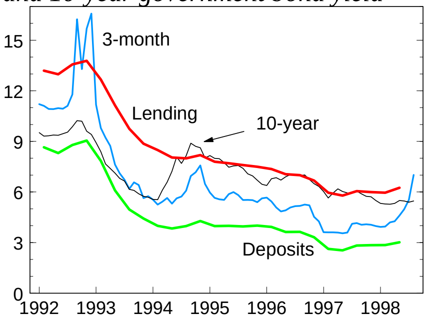
2.2 Exchange rates, interest rates and monetary variables

Sharp rise in interest rates

Since the publication of the previous *Inflation Report*, Norwegian money market rates have risen considerably. The effective three-month rate has risen by 3.7 percentage points and on 16 September stood at 8.5%. The differential against the ECU rate has reached the levels recorded at the end of 1992. Money market rates for loans with maturities longer than three months, however, are slightly lower than the three-month rate. This may indicate that market participants expect interest rates to edge down in the period ahead. Money market rates in Europe have been fairly stable and are still being influenced by the convergence process ahead of stage three of EMU.

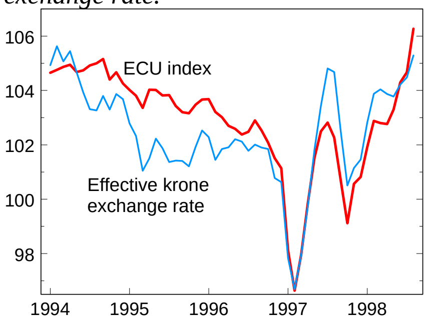
Whereas long-term interest rates in Norway have moved up, interest rates in Europe have declined substantially. The decline has been greatest in Germany, where government bond yields have fallen below 4% for the first time. Yields in the US have also dropped considerably. Turbulence in international money and foreign exchange markets has also resulted in a widening of the differential between German and other European rates. This is probably related to increased demand for low-risk investments, partly as a

Chart 2.4 *Interest rate movements in Norway. Banks' average deposit and lending rates, 3-month Euro-krone rate and 10-year government bond yield*



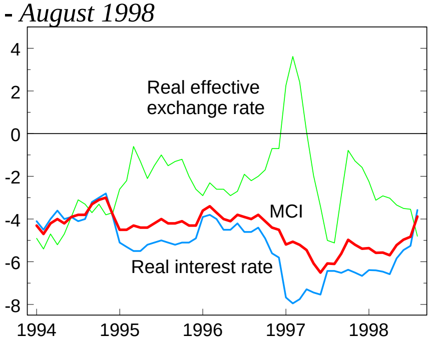
Source: Norges Bank

Chart 2.5 *ECU index and manufacturing industry's effective krone exchange rate.*



Source: Norges Bank

Chart 2.6 *Norges Bank's Monetary Conditions Index (MCI). January 1994 - August 1998*



Source: Norges Bank

result of the unstable situation in Asia and Russia. Stock exchange indices have also fallen by 15-25% since July.

Norway now has a negatively sloping yield curve, even in the segment for relatively short maturities. An inverted yield curve may, in addition to interest-rate expectations, be an indication that market participants expect an economic turnaround.

Interest rate movements reflect conditions in the foreign exchange market. The value of the krone measured against the ECU index has depreciated by 4.3% since the June *Inflation Report*. Measured against the trade-weighted index, however, the krone depreciated by a slightly smaller margin.

The growth in domestic credit (C2) flattened out in the first months of 1998, although the credit supply remains at a high level. This may be an indication of slower growth in domestic demand. Banks' lending growth has tapered off since March, whereas lending growth in finance companies continues to move on an upward trend. In the period to June, credit growth was strongest in the enterprise sector, which probably reflects the robust growth in business fixed investment.

Money supply growth (M2) peaked in May but slowed in the following two months, with a 12-month growth of 7.2% in July. So far this year monetary growth has still been considerably higher than in the same period one year earlier This primarily reflects lower central government surpluses on incoming and outgoing payments, thereby withdrawing less liquidity from the private and municipal sector than in 1997.

Norges Bank's Monetary Conditions Index (MCI) summarises the effect of changes in the real exchange rate and real interest rate on domestic demand. An increase in the index indicates that interest and exchange rate developments are having a more contractionary effect on the economy. Measured by the MCI, monetary policy is now slightly more contractionary than in June. However, the MCI does not show any substantial deviation from the average recorded since 1994, although the composition of the components has changed considerably since the previous *Inflation Report*. In isolation, a weaker exchange rate will in the short run contribute to improved competitiveness, thereby having an expansionary effect on the economy. This is offset, however, by higher interest rates which result in higher interest expenditure for most households and which may have negative wealth effects associated with a fall in house and share prices.

Effects of a stronger krone exchange rate and a different policy mix

The krone exchange rate has depreciated since the publication of the June *Inflation Report*. After averaging about 104.7 in July, the ECU index stood at 108.9 on 17 September. The Exchange Rate Regulation, which was adopted in May 1994, defines Norges Bank's mandate in the conduct of monetary and exchange rate policy. The Regulation states that "in the event of significant changes in the exchange rate, monetary policy instruments will be oriented with a view to returning the exchange rate over time to its initial range." Following the increase of both the deposit and overnight lending rate by 1 percentage point on 24 August, to 8 and 10% respectively, the instruments were oriented accordingly.

In the baseline scenario presented in this *Inflation Report,* the projections are based on the technical assumption that the average effective krone exchange rate and money market rate prevailing in the previous month will remain constant through the projection period. This is a purely technical assumption and, as such, does not reflect monetary policy intentions as set out in the monetary policy guidelines. This box illustrates a different scenario for the Norwegian economy based on the following changes in assumptions:

- Fiscal policy is tightened by the equivalent of altogether 1½% of GDP in 1999, or about NOK 15bn. The tightening is technically distributed on public sector expenditure on goods and services and grants to the private sector.
- The exchange rate appreciates by 4% in relation to the current level in the first quarter of 1999. The krone exchange rate returns to its initial range as a result of this appreciation.
- The money market rate is 2 percentage points lower than at the present time in the first quarter of 1999. This approximately corresponds to the market's implicit expected interest rate in 9-12 months.

This scenario reflects monetary policy intentions as the krone exchange rate appreciates from the current level. Furthermore, it is based on assumptions concerning relationships between fiscal and monetary policy which are difficult to quantify. The various changes are thus apportioned on a discretionary basis. This scenario is intended to illustrate a possible path resulting from a change in the policy mix, whereby a larger share of the tightening is channelled through fiscal policy. Taking into account current market expectations, this scenario must be based on the assumption that fiscal tightening lowers inflation expectations, allowing the krone to strengthen via channels other than high interest rates. In this connection it may be reasonable to assume that the overall policy stance must be more contractionary than in the baseline scenario described in this report. The assumptions in this box are therefore based on a fiscal policy stance which more than offsets the expected fall in interest rates.

The table below shows developments in the alternative scenario compared with the baseline scenario. As it takes some time before interest rate changes and fiscal policy have a full impact, we also provide estimates for 2000. These estimates must be considered illustrative, and they have not been subject to as thorough an evaluation as the estimates for the years 1998 and 1999.

The fall in interest rates will provide scope for slightly higher growth in private demand than in the baseline scenario. As a result of the tightening of public sector expenditure on goods and services, however, demand and production in mainland Norway will be slightly lower than in the baseline scenario. Developments in the labour market will also be affected. Employment levels off at the beginning of 1999 and starts to fall towards the turn of the century and into 2000.

The greatest difference from the baseline scenario is found in the nominal path. It usually takes some time, however, for changes in the exchange rate to feed through to consumer prices, partly because importers usually allow fluctuations in import prices to be absorbed by profit margins and because many enterprises agree on prices far in advance. According to the RIMINI model, about 25% of the exchange rate effect will have fed through to consumer prices after two years. The stronger the appreciation is, the greater the effect will be on wage and price inflation. Combined with fiscal tightening, the appreciation of the krone will contribute to a more moderate trend in wages and prices than in the baseline scenario. Consumer price inflation will remain around 2¾% the next two years. For 1999, this is a quarter percentage point lower than the estimate in the June *Inflation Report* and half a percentage point lower than in the baseline scenario in this report. The model-based calculations also imply that wage growth will be 6% in 1999 and 4¾% in 2000, entailing that wage growth is brought more quickly in line with that of our trading partners and that the basis for stable growth in the Norwegian economy improves compared with the baseline scenario.

Table. Growth on previous year

	Alternative scenario (baseline scenario in brackets)	
	1999	**2000*)**
3-month interest rate	6 (8)	6 (8)
Non-oil cyclically adjusted government budget surplus net of interest payments	1 ½ (¼)	¼ (¼)
Consumer prices	2 ¾ (3 ¼)	2 ¾ (3 ½)
Wage growth	6 (6 ½)	4 ¾ (5 ¾)
Mainland demand	0 (¼)	¼ (0)
Mainland GDP	¾ (1 ¼)	¼ (¼)
Employment	¼ (1)	- ¼ (0)

*) The baseline scenario in this report stops in 1999. Projections for 2000 are based on a model-determined technical continuation of the baseline scenario.

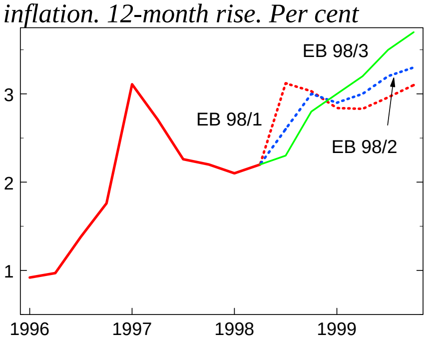
*) The estimates are illustrative, and based on simplified assumptions concerning the orientation of fiscal policy. The individual elements of the government budget have not been evaluated. Technically, the tightening has been distributed equally between public consumption, investment and grants to the private sector.

3 NORGES BANK'S INFLATION PROJECTIONS

3.1 Norges Bank's inflation projections

Consumer prices are projected to rise by a little less than 2½% in 1998, the same as projected in the previous *Inflation Report*. The projection for next year has been revised upwards to 3¼%. The upward revision can be ascribed to the depreciation of the krone over the last month, which as a technical assumption remains constant through the projection period. This does not reflect monetary policy intentions. Underlying price inflation, ie excluding changes in indirect taxes and electricity prices, is projected at 2¼% in 1998 and 3¼% in 1999. The projection for next year embodies the assumption that indirect taxes will increase in pace with the overall rise in consumer prices, ie that these taxes will not make a direct contribution to price inflation next year.

Chart 3.1 *Current and earlier projections for consumer price inflation. 12-month rise. Per cent*



Sources: Statistics Norway and Norges Bank

Subdued international price inflation

Economic growth among our trading partners is expected to be slightly lower than projected in our June *Inflation Report*, and the uncertainty concerning international developments has increased considerably. As a result of a continued decline in prices in international commodity markets and falling import prices, price inflation among our trading partners has subsided. The full impact on prices of the currency crisis in Asia last year has probably not yet been felt, thereby pointing to lower export prices for these countries in the period ahead. This will probably have a further dampening impact on price inflation among our trading partners. Import prices, measured in foreign currency, are therefore expected to fall this year and remain unchanged next year.

The import-weighted krone exchange rate has depreciated by a smaller margin than the ECU index, showing a 3.0% depreciation since June. As in previous reports, the underlying technical assumption is that the average exchange rate prevailing in the previous month will remain constant through the projection period, and as such does not reflect monetary policy intentions. This assumption implies a depreciation of the import-weighted krone exchange rate of 4.3% this year and 2.2% in 1999. The assumption concerning the exchange rate also implies that the overall impulse from import prices in the period ahead will be slightly higher than assumed earlier.

Table 3.1 *Consumer prices. Norges Bank's projections. Percentage change from previous year*

	1997	1998	1999
US	2.3	1 ¾	2 ½
Japan	1.7	½	0
Germany	1.8	1 ¼	1 ½
UK	2.8	2 ¾	2 ¾
Sweden	0.5	½	1
Finland	1.2	2	2 ¼
Denmark	2.2	2	2 ½
Norway's trading partners	1.7	1 ½	1 ¾
EU - 12 countries[1)]	1.9	1 ¾	2

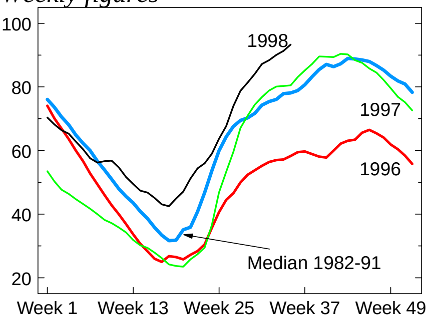
[1)] ECU index weights

Sources: OECD and Norges Bank

Continued high wage growth

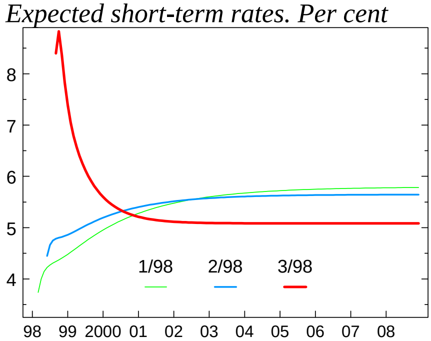
Wage growth is projected at 6% in 1998. In 1999, the

Chart 3.2 *Water reservoir levels. Weekly figures*



Source: Statistics Norway

Chart 3.3 *Forward rates in Norway. Expected short-term rates. Per cent*



Source: Norges Bank

growth in employment and fall in unemployment are expected to be slightly lower than estimated in the June *Inflation Report*. This may contribute to slightly lower wage growth than previously projected , although the labour market is expected to remain very tight. At the moment lower prices for many Norwegian export goods and higher capital costs for companies that have raised domestic loans are being offset by a weaker krone exchange rate. This will help to maintain profitability in tradeable goods sectors in the short run. Based on the historical information embodied in the RIMINI model, wage growth is projected at 6½% next year, ie a quarter of a percentage point lower than estimated in the June report. The estimate is based on our technical assumption of a constant exchange rate, which does not reflect monetary policy intentions.

Electricity prices reflect precipitation and seasonal variations

Substantial precipitation levels this summer have increased levels in reservoirs by a considerable margin, and electricity prices continued to fall through the summer. Electricity production has been relatively low so far this year, whereas consumption has reached record levels. The gap between consumption and production has been covered by high imports. In the coming months a seasonal increase in prices is expected, but for 1998 as a whole electricity prices are expected to fall by 6-7% on the previous year. After January 1999 we project that electricity prices will continue to show seasonal variations, but as an average for the year will increase in step with the overall rise in consumer prices.

House rents will rise slightly faster

In recent months house rents have risen at a somewhat slower pace than assumed. As a result of higher interest rates, house rents are gradually expected to rise more sharply, but on average are not projected to increase more than the overall rise in prices next year.

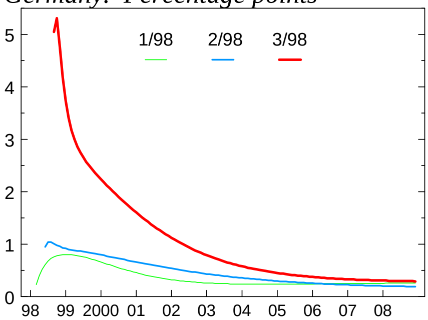
3.2 Inflation expectations

Expectations of higher inflation

The number of enterprises expecting higher prices is approximately the same as in the June *Inflation Report*. According to Statistics Norway's latest general business tendency survey, 57% expect higher prices in the third quarter of this year for products sold on the domestic market.

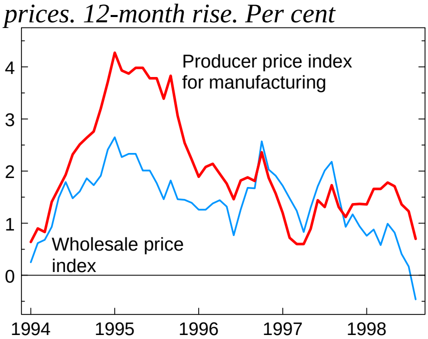
Market participants' expectations concerning future short-term interest rates are reflected in the forward rate curve in money and bond markets. Forward rates may - under certain conditions - be viewed as the sum of the expected real rate of interest and expected future inflation, plus a possible

Chart 3.4 *Difference between expected short-term rates in Norway and Germany. Percentage points*



Source: Norges Bank

Chart 3.5 *Wholesale and producer prices. 12-month rise. Per cent*



Source: Statistics Norway

risk premium. In the short term, they probably reflect expected movements in Norges Bank's key rates, but in the longer run changes in forward rates may provide an indication of changes in inflation expectations.

Chart 3.3 shows that forward rates for the next two years are substantially higher than the level in June, but slightly lower for subsequent years. Lower forward rates in the longer term probably do not reflect reduced inflation expectations, but are more a result of the sharp decline in international long-term bond yields. This may be interpreted as a decline in the real rate of interest internationally, which has also influenced Norwegian rates.

This interpretation is supported by Chart 3.4, which shows the forward rate differential against Germany as well as the change since the June *Inflation Report*. In the very short term the curve falls sharply, probably reflecting expectations of a narrower differential between key rates in Norway and Germany. In the slightly longer run it seems likely that market participants expect approximately the same real interest rate in Norway and Germany, so that the difference reflects the expected inflation differential plus a risk premium. In the light of this, the wider differential in two to five years may be interpreted to mean that inflation expectations relative to Germany have increased somewhat since the last report. Expectations of higher relative inflation in coming years may be seen in connection with the transitory depreciation of the krone and growing uncertainty about fiscal policy in the period ahead. Furthermore, the steadily lower rate of inflation in Germany and increased confidence in price stability in the euro area have contributed to increasing relative inflation expectations for Norway.

However, the higher forward rate differential does not necessarily reflect expectations of higher inflation in Norway compared with the euro area. Higher forward rates may also be related to a higher risk premium for the Norwegian krone. As a result of the turbulence in financial markets, with declines in equity prices and currency unrest in a number of countries, market participants are less willing to assume risk. Market participants require a higher expected return, ie higher risk premium, if they are to invest capital in small markets like Norway. This is reflected in higher bond yields in Norway compared with major countries like Germany and the US.

Producer and wholesale prices can also provide an indication of future consumer price movements. The rise in producer prices in manufacturing has been moderate in the year to August, with prices edging up by 0.7%, cf Chart 3.5. Producer prices partly reflect movements in commodity prices. In recent months the rise in wholesale prices has been low. In August, these prices fell by about 0.5% compared with the same month one year earlier.

Norges Bank collects inflation projections from 10 private institutions. On average, these institutions expect prices to rise by 2.4% in 1998 and 3.3% in 1999, cf Table 3.2. All in all, the indicators above suggest that market participants expect rising price inflation next year.

3.3 The risks to the inflation outlook

The uncertainty associated with our projections has increased considerably as a result of the recent turbulence in foreign exchange and financial markets. The projections for economic developments are based on historical relationships embodied in our macroeconomic model RIMINI, and are partly dependent on a number of assumptions concerning variables determined exogenously. This particularly applies to the technical assumptions regarding interest and exchange rates, fiscal policy, petroleum investment and external demand and price impulses. A change in these variables which differs considerably from that assumed may result in a path other than that described by our projections.

There are several forces which may contribute to higher-than-projected price inflation next year:

– We have assumed that the indirect tax programme for 1999 will not make a direct contribution to price inflation. Historically, indirect taxes have increased at a faster rate than the overall rise in prices. Fiscal tightening through higher indirect taxes will quickly push up inflation next year.

– Wage growth may be higher than projected. Both the growth in vacancies and changes in the ratio of number unemployed to vacancies indicate that it is becoming increasingly difficult to find suitably skilled labour. This may indicate that pressures in the labour market are greater than the number unemployed alone would imply.

– The rise in house rents may be stronger than projected. Housing cooperatives account for about two thirds of the house rent index, and the feed-through of interest rate increases will depend on both the scale of fixed-rate loans in the Norwegian Housing Bank and how quickly housing cooperatives decide to increase house rents. A decline in resale home prices, however, points to the opposite.

Some forces may contribute to lower-than-projected price inflation:

– If the crisis in Asia spreads to other regions, the fall in commodity prices may continue and international inflation may be even more subdued than we have assumed.

Table 3.2 *Various institutions' projections for consumer price inflation in Norway in 1998 and 1999[1]. Percentage change from previous year*

	1998	1999
Ministry of Finance	2.6	-
Statistics Norway	2.5	3.6
OECD[2]	2.5	2.9
IMF	2.5	-
Norges Bank	2½	3¼
Private institutions[3]		
Highest estimate	2.6	3.6
Average	2.4	3.3
Lowest estimate	2.2	3.0

[1]Latest official projections from the various institutions
[2] Consumption deflator
[3]Based on projections from 10 private institutions

– The technical assumption concerning the exchange rate does not reflect monetary policy intentions. A stronger-than-projected exchange rate will reduce the impetus to price and wage inflation next year.

Effects of a stronger krone exchange rate

A technical assumption in the baseline scenario presented in this *Inflation Report* is that the average effective krone exchange rate prevailing in August remains constant through the projection period. This assumption does not reflect monetary policy intentions. In this box we look at the effects of a stronger krone exchange rate, using our macroeconomic model RIMINI. Without changing any other assumptions, we assume that manufacturing industry's effective exchange rate appreciates by 4% from the current level in the first quarter of 1999.. This implies that the effective krone exchange rate will roughly return to the average level recorded in the first half of 1998, thus returning to its initial range as defined in the Exchange Rate Regulation.

The calculations indicate that in the short term the real economy will only be slightly affected by different assumptions about the exchange rate. The calculations indicate that the overall effect of a stronger krone will be a decline in mainland GDP of as little as 0.1 percentage point in 1999. Growth in employment will be reduced by about the same margin. Primarily it is the nominal path that changes. A sustained appreciation of the krone will predominantly be reflected in lower import and consumer prices, but this may take some time. The shift calculations using our RIMINI model indicate that a return of the exchange rate to its initial range will reduce price inflation in 1999 by 0.3 percentage point compared with the baseline scenario. In 2000, price inflation will be reduced by 0.5 percentage point as a result of the stronger krone. After two years, one fourth of the effect of the rise in the exchange rate will have fed through to consumer prices. The effect on wage growth is of approximately the same magnitude as the effect on consumer prices, with only a minor effect on real wage growth.

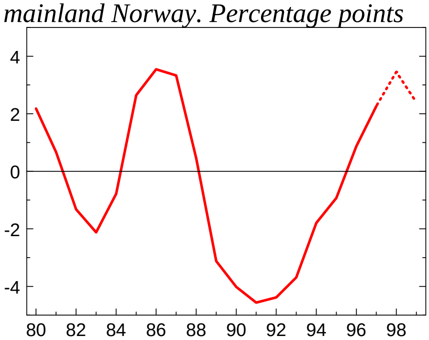
4 Cyclical developments

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

	1997	1998	1999
Mainland demand	4.5	4	¼
Private consumption	3.4	4 ¼	2
Public consumption	3.0	2 ½	1 ½
Mainland fixed investment	9.7	4 ¾	-6
Fixed investment in oil and pipeline transport	15.5	17	-10
Exports	5.8	2 ¾	4 ½
Of which:			
Oil, gas and pipeline transport	2.3	½	6 ½
Traditional goods	8.0	5	4
Imports	12.3	7 ¾	- ¾
Traditional goods	8.6	9 ½	0
GDP	3.4	3	2
Mainland GDP	3.7	3 ½	1 ¼

Sources: Statistics Norway and Norges Bank

Chart 4.1 *Output gap. Difference between actual and trend GDP in mainland Norway. Percentage points*



Sources: Statistics Norway and Norges Bank

4.1 Main features of economic developments

Increase in interest rates will curb demand

In earlier reports we argued that constraints in the labour market would gradually have an impact and contribute to a cyclical turnaround in 2000. The increase in interest rates, however, may contribute to curbing growth in domestic demand, thereby entailing that growth in 1999 will also be lower than projected earlier. How quickly this turnaround will take place will also depend on whether market participants are more uncertain about economic developments in the period ahead as a result of developments in capital and foreign exchange markets.

An underlying technical assumption is that both interest rates and the exchange rate will remain constant at a level corresponding to the average of the previous month, and as such does not reflect monetary policy intentions. Compared with the June *Inflation Report*, this translates into a considerably lower projection for GDP growth next year. This primarily reflects the increase in interest rates, but is also ascribable to downward revisions in estimates for fixed investment and exports.

Private consumption will continue to be the main driving force in the period ahead, but a more moderate trend is now expected. Lower growth in both employment and wages, and a substantial negative impetus from interest rate increases will contribute to lower growth in household real disposable income in 1999 than we projected in the June *Inflation Report*.

Changes in fixed investment will be an important factor behind the expected cyclical turnaround. In 1999, fixed investment is likely to fall for the first time in many years. The rise in interest rates, decline in equity prices, the approved cyclical tax and a reduced need for expanding production capacity are new factors indicating that the contraction in fixed investment will be greater than assumed earlier.

Our projections point to slower growth in the economy in the period ahead. Mainland GDP is expected to expand by 3½% in 1998 and 1¼% next year. This entails that the growth rate will be below long-term trend growth in 1999.

4.2 The international environment and the balance of payments

The international economic situation has deteriorated somewhat since the June *Inflation Report*. The crisis in Asia has proved to be more extensive and deeper than assumed earlier. In addition, turbulent conditions in financial markets

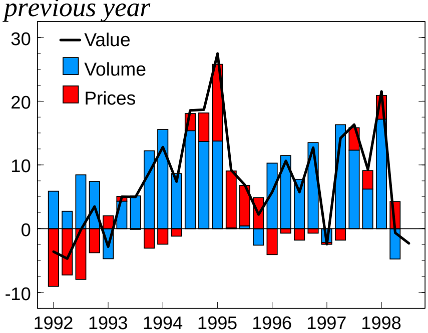
Table 4.2 *Projected GDP. Percentage change from previous year*

	1997	1998	1999
US	3.9	3 ½	2
Japan	0.8	-2 ¼	¾
Germany	2.2	2 ½	2 ¾
UK	3.4	2 ½	1 ½
Sweden	1.8	3	3
Finland	5.9	4	3
Denmark	3.4	2 ¾	2 ½
Norway's trading partners[1)]	2.9	2 ¾	2 ½

[1)] Weighted by export weights

Sources: OECD and Norges Bank

Chart 4.2 *Traditional merchandise exports according to* External Trade Statistics. *Volume, price and value. Percentage increase on same quarter previous year*



The last observation upon which value growth is based is the average value so far in the third quarter compared with the same period in 1997.

Source: Statistics Norway

and potential contagion effects on vulnerable countries in other regions have resulted in greater uncertainty concerning future developments in the world economy. Among our traditional trading partners, the decline in interest rates and falling commodity prices have partly offset the negative impetus from developments in Asia. In several continental European countries there are now signs that domestic demand is taking over as the main driving force behind growth, and on balance we therefore expect only slightly lower growth rates in main trading partner countries from 1998 to 1999.

Fall in oil prices results in lower current account surplus

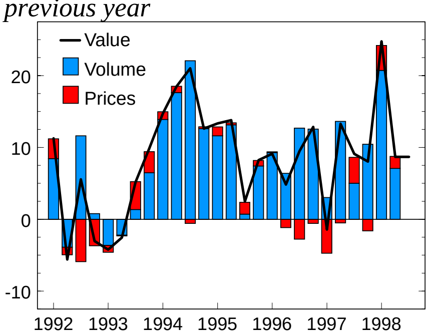
Although the value of Norwegian exports to the US and Europe has risen during the first eight months of 1998, and to some extent compensated for the downturn in Asian markets, there are now signs that export growth is slowing. New orders for export enterprises showed signs of levelling off in the first quarter, and Statistics Norway's general business tendency survey indicates that companies expect a lower level of new orders in the period ahead.

Traditionally, production capacity in export-oriented industries has been the most important factor behind developments in exports. The fall in commodity prices and higher wage and capital costs will push down profitability, which suggests a slightly slower growth in production capacity in the period ahead. The estimates for wage growth also point to a sharp increase in labour costs compared with wage growth among our trading partners, although the depreciation of the krone will partly offset this in 1998. Over time, however, this increase in labour costs could result in a loss of market shares. Overall, we therefore expect lower growth in traditional merchandise exports both in 1998 and 1999 than projected in the previous *Inflation Report*.

Prices in international commodity markets have continued to fall. The economic setback in Asia and Russia appears to be more severe than previously anticipated, and commodity prices are expected to remain low in the period ahead. Intensified competition from Asian countries is likely to result in very moderate international price inflation. The depreciation of the krone will have an offsetting effect and, all in all, export prices measured in NOK are expected to rise at a slightly faster rate than previously envisaged. This is a result of the technical assumption concerning the exchange rate and does not reflect monetary policy intentions.

The value of imports rose sharply earlier this year, but has moved on a more moderate trend in recent months. According to the quarterly national accounts (QNA), the volume of

Chart 4.3 *Traditional merchandise imports according to* External Trade Statistics. *Volume, price and value. Percentage increase on same quarter previous year*



The last observation upon which value growth is based is the average value so far in the third quarter compared with the same period in 1997.

Source: Statistics Norway

imports was 12.8% higher in the first half of 1998 compared with the same period last year. The contraction in petroleum investment and weaker growth in domestic demand in 1999 suggest an approximately unchanged volume of imports next year.

Oil prices continued to fall through the summer, but have edged up in recent weeks. Oil prices are expected to hover at a level slightly higher than NOK 100 1998-prices per barrel, which corresponds to the average recorded so far this year. Oil and gas production is also projected to be slightly lower next year than previously assumed. The current account surplus has been adjusted downwards by NOK 8bn in 1998 and NOK 30bn in 1999 as a result of higher deficits on the non-oil trade balance and a lower value of oil and gas exports.

4.3 The labour market

Lower unemployment, but employment may level off

Experience shows that it takes time to reverse labour market trends, but the first signs of slower employment growth

Effects of an increase in interest rates

Since the June *Inflation Report* Norges Bank has raised its deposit and overnight lending rate by a total of 3¾ percentage points in response to developments in money and foreign exchange markets. This box looks at the isolated effects of these interest rate increases using our macroeconomic model RIMINI.

As a technical assumption, money market rates are increased by 3¾ percentage points from the third quarter of 1998. In the model we have allowed this increase to feed fully through to interest rates charges to households and businesses over a six-month period. This is a shorter period than the empirical basis embodied in RIMINI, but is closer to actual developments currently observed in the market. Increased competition among banks and market-determined market rates in state banks have contributed to accelerating the effect compared with the situation in the 1980s.

The household sector is in a net financial asset position, and the improvement in household wealth largely reflects capital gains on equities and securities funds. The effect of higher interest rates on dividend payments (the income effect) for these assets is uncertain, at least in the short term, and we have thus chosen to disregard this. Capital losses on equities and securities as a result of higher interest rates will, however, reduce the market value of household net wealth. This may lead to slower growth in household demand, as pointed out in previous inflation reports. The estimated wealth effects in the RIMINI model do not take into account, however, the changes in the value of households' equity and securities holdings. This may imply that we are underestimating the effects of the slide in equity prices on the Oslo Stock Exchange as far as households are concerned. On the other hand, an increase in interest rates in the RIMINI model contributes to a fairly sharp impact on private consumption as a result of lower house prices. There is thus reason to believe that the RIMINI model, applied in this way, does not distort the relationship between movements in wealth and consumption.

Excluding investments in equities and securities (including insurance claims), household net debt in the form of loans comes to around NOK 300bn. As long as their loans are higher than their bank deposits, higher interest rates will have a negative income effect on household liquidity, and thereby household demand.

Furthermore, higher interest rates will curb the rise in resale home prices, and thereby housing wealth. On balance, this indicates that the increase in interest rates will have a relatively strong negative effect on household demand.

According to the RIMINI model, an interest rate increase of 3¾ percentage points from the third quarter of this year will generally not be felt until next year. Growth in domestic demand is reduced, according to the RIMINI model, by about 2 percentage points in both 1999 and 2000. Private consumption and business fixed investment are the main components contributing to lower domestic demand, but housing investment also falls sharply, particularly in 2000. The effects of reduced domestic demand on domestic production are partly offset by inventory accumulation and lower imports. Mainland GDP growth is reduced by close to 1¼ percentage points in 1999 and 1 percentage point in 2000.

According to the model, the increase in interest rates has marginal effects on price and wage inflation in the first two years. In the short term productivity is reduced because production is adjusted more quickly than employment as a result of the labour hoarding effect. The short-term effect of an increase in interest rates is thus slower productivity growth rather than reduced employment. According to the RIMINI model, the impact on the labour market is thus relatively moderate, with only a marginal contribution to lower price and wage inflation. In our view, however, the effects of an increase in interest rates on productivity depend on the situation and are hardly symmetrical in the event of an increase or decrease in interest rates when capacity utilisation in the economy is high.

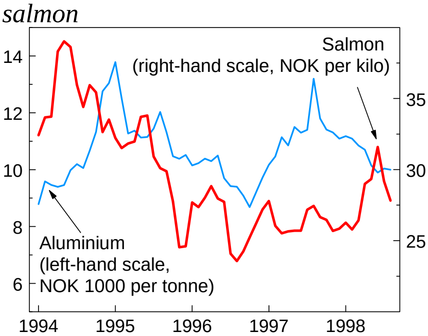
It should be underlined that these calculations represent isolated effects of changes in interest rates. The effects of the increase in interest rates which has actually taken place might be countered by other conditions in the economy. Moreover, such calculations are sensitive to changes in expectations, which traditional model-based calculations do not always manage to take into account.

Effects of an interest rate rise of 3 ¾ percentage points from the third quarter of 1998. (Deviation from the baseline scenario in percentage points)*

	1999	2000*)
Private consumption	-2	-1 ¼
Mainland business fixed investment	-5 ¼	-6 ¼
Mainland demand	-2	-1 ¾
Mainland GDP	-1 ¼	-1
Employment	- ¼	- ½
Wages	-0.1	- ½

*) The baseline scenario in this report stops in 1999. Projections for 2000 are based on a model-determined technical continuation of the baseline scenario.

Chart 4.4 *Prices for aluminium and salmon*



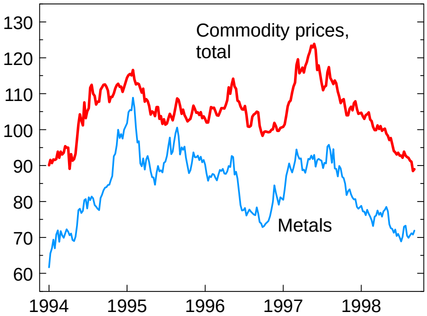
Sources: Statistics Norway and Financial Times

may already be in evidence. According to preliminary LFS and QNA figures, employment grew by 2.7% in the first half of 1998 compared with the first half of 1997, although there were signs of levelling off in the second quarter. However, the strikes may have had a dampening effect on the demand for labour during this period, impying that the reduction in employment growth was temporary.

The labour force also showed signs of levelling off in the second quarter, with the result that seasonally adjusted LMS unemployment remained virtually unchanged. So far in the third quarter, the decline in registered unemployment has also slowed. At the end of August, there were close to 54 000 registered unemployed (seasonally adjusted), corresponding to 2.3% of the labour force.

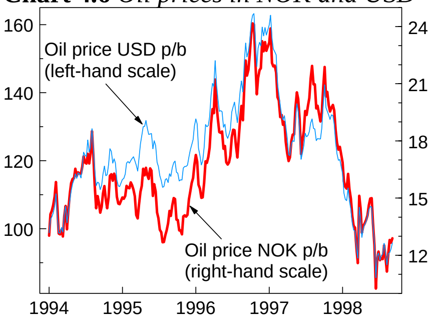
Developments in the labour market indicate that growth

Chart 4.5 *Commodity prices measured in SDRs. Total and metals. Index 1990 = 100*



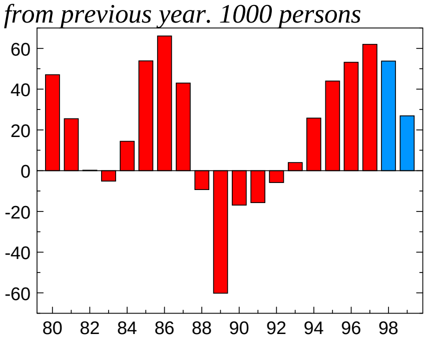
Source: *The Economist*

Chart 4.6 *Oil prices in NOK and USD*



Source: Norges Bank

Chart 4.7 *Number employed. Change from previous year. 1000 persons*



Sources: Statistics Norway and Norges Bank

in employment may be slightly lower than projected in the previous *Inflation Report*. Growth from 1997 to 1998 is now estimated at about 2½%, or 55 000. Labour force growth may reach 1¾% during the same period. Consequently, the unemployment estimate in previous inflation reports, 3¼% in 1998, appears to be relatively robust.

Reduced growth in demand for labour is expected to result in a somewhat weaker increase in employment next year than projected earlier. Growth is estimated at 1%, ie slightly lower than in the previous report. We assume that the labour supply will continue to increase at a faster rate than demographic trends would imply. The labour force may nevertheless expand by a smaller margin than employment so that average unemployment in 1999 will be somewhat lower than in 1998. However, unemployment is expected to start rising towards the end of next year and into 2000. Overall, LFS unemployment is projected to drop to 3% in 1999, ie a little higher than the estimate in the previous report.

4.4 Wages

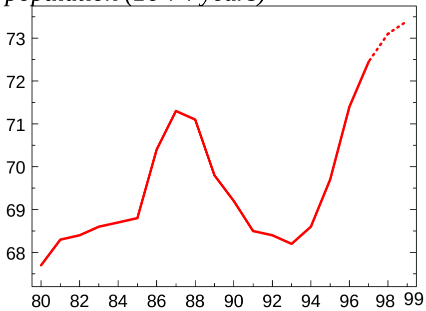
Wage growth will remain high

The projected 6% growth in wages in 1998 remains unchanged. The figure is based on the results of the 1998 wage settlements, and Norges Bank's assessment of wage drift. One imponderable is the extent to which the recent fall in commodity prices will curb profitability, and hence local pay increases in some exposed sectors, but in 1998 this will be offset by a weaker exchange rate.

Pressures in the labour market remain strong, however. Although in our scenario unemployment will not drop to the lowest levels recorded in the1980s, it cannot be ruled out that equilibrium unemployment has risen during the 1990s, with the result that pressures are stronger than the empirical basis would imply. For example, the increase in vacancies is a sign of growing pressures in the labour market. At the end of August the number of vacancies was 48% higher than one year earlier. This indicates that it is becoming steadily more difficult to fill vacancies, which may drive up wages in the competition for qualified labour. The drop in long-term unemployment underlines the trend. In the second quarter, 21% of the unemployed had been without work for a spell of over six months. The figure for the same quarter of 1997 was 24%.

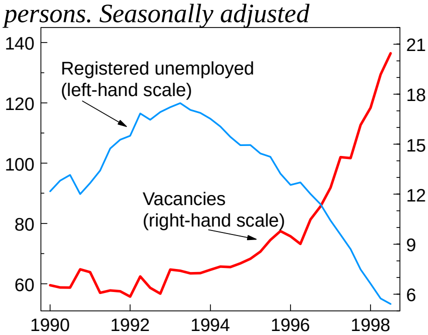
Despite continued strong pressures in the labour market, some important factors indicate that wage growth may be lower in 1999. First, reduced demand has led to a slight downward revision of the estimate for employment, and hence a smaller decline in unemployment than was projected in June. In the RIMINI model, this will reduce wage pressures. Second, a weaker trend for commodity prices is

Chart 4.8 *Participation rates. Labour force as share of working-age population (16-74 years)*



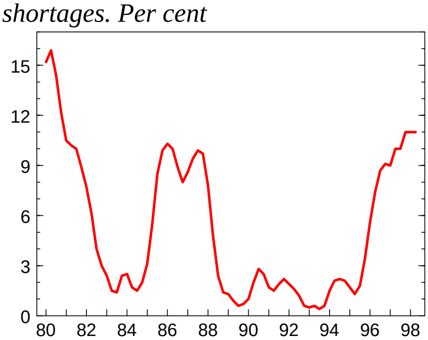
Sources: Statistics Norway and Norges Bank

Chart 4.9 *Number of registered unemployed and vacancies. 1000 persons. Seasonally adjusted*



Source: Directorate of Labour

Chart 4.10 *Indicator of labour shortages. Per cent*



Source: Statistics Norway

projected, and this, coupled with the rise in interest rates, will result in reduced profitability for commodity-producing enterprises. So far, however, this has been offset by the depreciation of the krone exchange rate. Last, but not least, the recent turbulence in money and foreign exchange markets may encourage the social partners to recognise the need for caution.

According to historical information about wage formation, as embodied in the RIMINI model, annual wage growth is projected at 6½% next year. This is substantially higher than wage growth among our trading partners. The projection is model-based, and further based on other assessments of key variables in the RIMINI model, including technical assumptions about interest and exchange rates, which do not reflect monetary policy intentions. Combined with a high wage carry-over, particularly in the public sector, but also in the private sector, our projections imply that pay increases next year will be lower than in 1998. It nevertheless appears that profitability in tradeable goods sectors will deteriorate slightly over the next few years. A stronger exchange rate and social partners who are willing to attach greater importance to future developments in the labour market will produce a different trend.

4.5 Domestic demand

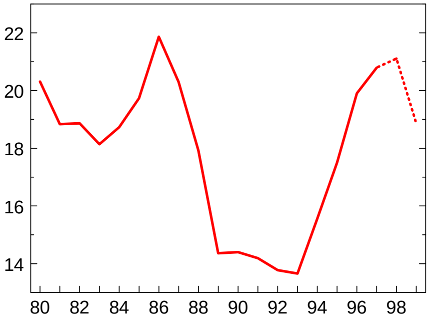
Sharp fall in mainland business fixed investment next year

Investment will be the main factor contributing to slower growth in the economy next year. The increase in interest rates has led to higher capital costs and a higher required rate of return. Hence, fewer investment projects will appear profitable at the present time, compared with the situation just a few months ago. Stock market developments may also make it more difficult to raise new capital. At the same time, a lower rate of economic growth will reduce the need to expand production capacity.

Although the Asian crisis has only had a limited impact on Norwegian economic trends so far, renewed turmoil in the global economy and hence greater uncertainty may rapidly reduce the willingness to invest, particularly in manufacturing. The investment intentions survey for the third quarter also indicates a sharp drop in investment next year. Moreover, expectations of future currency unrest in small economies may make it more attractive to invest in the EMU area for enterprises with markets in these countries.

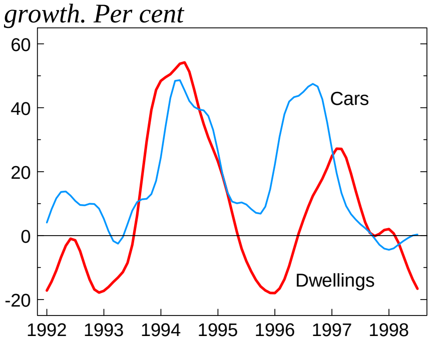
Mainland business fixed investment will probably fall in 1999 for the first time in many years. Following projected growth of around 5% in 1998, investment is projected to decline by 9% next year. In addition to the factors mentioned, the scaling back and completion of major govern-

Chart 4.11 *Investment rate for mainland enterprises. Per cent. Gross investment as a percentage of value added*



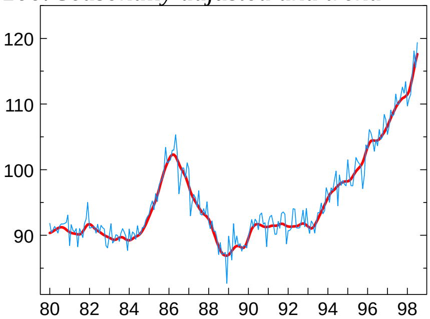
Sources: Statistics Norway and Norges Bank

Chart 4.12 *New car registrations and housing starts. Smoothed. 12-month growth. Per cent*



Source: Statistics Norway

Chart 4.13 *Retail sales index. 1995 = 100. Seasonally adjusted and trend*



Source: Statistics Norway

ment investment projects such as the main Oslo airport at Gardermoen and the new National Hospital will contribute to reducing investment growth next year.

Given the current uncertainty characterising both the Norwegian and international economy, however, the fall in investment may be underestimated. The approved cyclical tax on investment is a further factor that contributes to reducing the profitability of investing further in fixed assets.

Based in part on information in the Revised National Budget and assessments of the investment intentions survey for the third quarter, petroleum investment is projected to expand by 17% this year, while a decline of 10% is expected next year, ie the same impulse from petroleum investment to the mainland economy as assumed in the June *Inflation Report* .

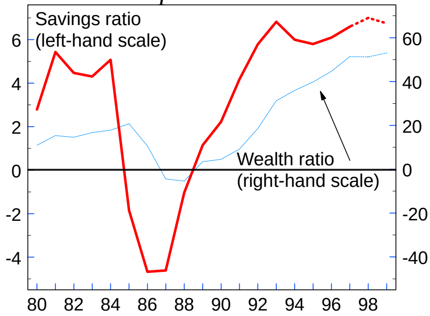
Growth in private consumption will slow in 1999

According to the preliminary quarterly national accounts, private consumption in the first half of this year increased by 3.8% compared with the first half of last year. Growth in retail sales, excluding cars, showed a markedly stronger rise, but low sales figures for new cars pushed down total retail sales. According to the latest figures from Statistics Norway's retail sales index, growth in consumer spending on goods excluding cars edged up in July.

Continued employment growth and high wage growth will in isolation contribute to relatively brisk growth in household income. However, the recent interest rate increases will result in more moderate growth in consumption than previously estimated. The rate increases will translate into both higher interest expenditure for households and an increased return on financial assets. Although households as a whole are in a net asset position, the improvement in household wealth largely stems from capital gains on equities and securities funds. For these assets, the rise in interest rates will have no manifest effect on income in the short term. However, higher interest rates will result in capital losses and thus reduce household net wealth. Such a decline in wealth may translate into lower growth in household demand. At the same time, households have net liabilities in the form of loans. As long as household loans are larger than their bank deposits, higher interest rates will have a negative income effect on household liquidity, and hence demand. The net effect is that the rise in interest rates will have a relatively strong negative effect on household consumption.

We now estimate consumption growth at 4¼% this year and 2% next year. These figures represent a downward revision of¼ and 2¼ percentage points respectively compared with the estimates in the previous *Inflation Report*. Despite

Chart 4.14 *Household savings ratio and wealth/disposable income ratio*



Sources: Statistics Norway and Norges Bank

the downward revision, private consumption is still likely to be the main source of impetus to economic growth next year. The projections indicate a weak rise in the saving ratio in 1998, and an approximately unchanged saving ratio in 1999. However, it is not inconceivable that households will react by increasing their saving ratio as a result of higher net interest expenditure and the reduction in wealth associated with the rise in interest rates, as witnessed at the end of the previous cyclical upturn. Such a reaction will lead to even lower demand growth next year.

Housing starts have moved on a weaker trend than expected since the previous *Inflation Report*. In conjunction with increased bank lending rates, this points to weaker-than-projected growth in housing investment both this year and next.

Resale home prices continued to rise sharply in the second quarter. However, seasonal variations and the rise in interest rates could lead to a downward correction of prices from the second half of the year.

Lower crude oil prices reduce the surplus on the government budget surplus and the Petroleum Fund

As in previous reports, our projections are based on the fiscal policy programme outlined in the Revised National Budget for 1998, and developments so far this year. In the Revised National Budget, the total central government budget surplus was estimated to amount to NOK 47bn this year, based on an oil price of NOK 110 per barrel. Lower oil prices and lower oil production have reduced the estimate from the approved budget.

Local government revenues increased sharply in 1997. Figures from the tax accounts for the first seven months of this year show that this tendency has continued, indicating a high level of activity in the period ahead. The wage settlement and rise in interest rates will have the opposite effect, however. The investment level this year is shrouded with considerable uncertainty. Large investments in the health and care sector may imply a continuation of last year’s high level. Investment is therefore projected to remain unchanged in 1998.

Aggregate public consumption is projected to increase by about 2½% this year, and 1½% in 1999.

Underlying real government spending growth is thus projected at a little less than 2¾% in 1998 and 1¾% next year. This means that we have based our baseline scenario on a tightening of the non-oil cyclically adjusted budget surplus net of interest payments of about¼% of mainland GDP in 1999. A tighter fiscal policy programme than in the baseline scenario has been assumed in the alternative scenario.

MAIN ECONOMIC AGGREGATES

Percentage change from previous year, unless otherwise indicated

	1997	1998	1999
Real economy			
Private consumption	3.4	4 ¼	2
Public consumption	3.0	2 ½	1 ½
Total gross investment	12.6	7 ¼	-6 ¾
Oil extraction and pipeline transport	15.5	17	-10
Mainland Norway	9.7	4 ¾	-6
Enterprises	9.1	5	-9
Dwellings	9.0	2 ¾	-2 ¾
General government	12.1	6	1
Mainland demand	4.5	4	¼
Exports	5.8	2 ¾	4 ½
Oil, gas and pipeline transport	2.3	½	6 ½
Traditional goods	8.0	5	4
Imports	12.3	7 ¾	- ¾
Traditional goods	8.6	9 ½	0
GDP	3.4	3	2
Mainland Norway	3.7	3 ½	1 ¼
Labour market			
Employment	2.9	2 ½	1
Labour force, LFS	2.1	1 ¾	¾
Unemployment, LFS	4.1	3 ¼	3
Prices and wages			
Consumer prices	2.6	2 ½	3 ¼
Annual wages	4.3	6	6 ½
Import prices, traditional goods	-1.1	1 ¾	3 ¼
Export prices, traditional goods	0.5	1	3
Crude oil prices, NOK (level)	134	101	104
External account			
Trade surplus, NOKbn (level)	76.3	20	43
Current account surplus, NOKbn (level)	56.9	8	30
Current account surplus, % of GDP (level)	5.2	¾	2 ½
Memorandum item			
Household savings ratio	6.6	7	6 ¾