

# Strategy Document 3/03

## Implementation of monetary policy in the period to 10 March 2004.

*Discussed by the Executive Board at its meeting of 8 October. Approved by the Executive Board at its meeting of 28 October 2003.*

### 1. Introduction

Norges Bank's operational conduct of monetary policy shall be oriented towards low and stable inflation. The inflation target is set at 2½ per cent. Monetary policy influences the economy with long and variable lags, and the Bank must be forward-looking in interest rate setting. The key rate (the sight deposit rate) is set on the basis of an overall assessment of the inflation outlook, normally two years ahead. This time horizon also means that emphasis is placed on dampening fluctuations in the real economy. The key rate will normally be changed gradually so that we can assess the effects of an interest rate change and other new information about economic developments. However, in situations where there is a risk that inflation may deviate from the target over a longer period or when there is considerable turbulence in financial markets or a wage-driven cost shock indicates that monetary policy credibility is in jeopardy, a rapid and pronounced change in the key rate may be appropriate. Short-term interest rates in other countries have been very low for a long period. This influences the degree of uncertainty in our inflation targeting.

In the discussion on monetary policy strategy of 25 June, the Executive Board deemed that a sight deposit rate in the interval 3-4 per cent would be appropriate at the end of October 2003. The interval was conditional on developments in the krone and economic projections. In addition, it was argued that economic developments after the first round of deliberations by the Executive Board on 4 June, with a reduction in key policy rates in other countries and low inflation, could imply an even lower interest rate. The sight deposit rate was reduced by 1 percentage point at the monetary policy meeting of 25 June, by a further 1 percentage point at the meeting of 13 August and by ½ percentage point at the meeting of 17 September. The press release issued in connection with the monetary policy meeting of 17 September stated: "With an interest rate of 2.5 per cent, Norges Bank's assessment is that the probability that inflation two years ahead will be higher than 2½ per cent is the same as the probability that it will be lower."

### 2. Economic developments and the prospects ahead

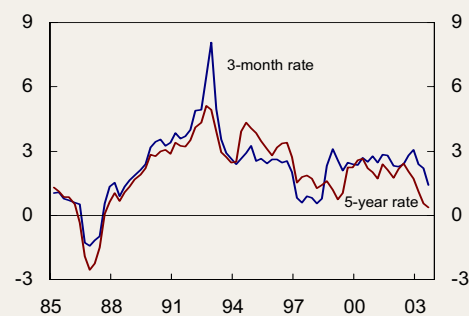
#### 2.1 Economic developments

Interest rates in Norway have fallen considerably in recent months (see Chart 1). The real interest rate is now very low from a historical perspective. The interest rate reductions and expectations of a narrower interest rate differential against other countries have led to a weakening of the krone. Towards the end of October the value of the krone, as measured by the I-44, was about 10 per cent weaker than the peak level in January. The real exchange rate measured in terms of relative labour costs is still high in a historical context, however, and is about 15 per cent stronger than in the period 1994-1997.

Underlying inflation is subdued in Norway. As measured by the CPI-ATE, inflation was 0.9 per cent in September. It is particularly the rise in prices for imported consumer goods that is pushing down inflation below the inflation target. The rise in prices for domestically produced goods influenced by world market prices and services influenced by the exchange rate has also edged down.

GDP and employment growth have been sluggish so far this year. Mainland GDP growth was zero in the first six months of 2003. Employment fell by 0.8 per cent in the first six months of 2003,

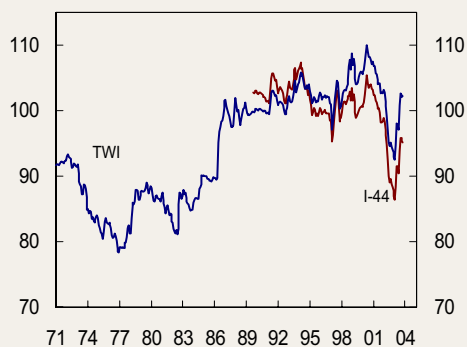
**Chart 1a** Real interest rates after tax<sup>1)</sup>.  
1985 Q1 - 2003 Q3



<sup>1)</sup> 3-month rate deflated by CPI excluding energy products up to 1995. Norges Bank's estimates for the CPI adjusted for tax changes and excluding energy products from 1995 to July 2000, then CPI-ATE. The same deflator is used for 5-year government bond yields, but from 2001 Q2 the inflation target of 2.5 per cent is used.

Sources: Statistics Norway and Norges Bank

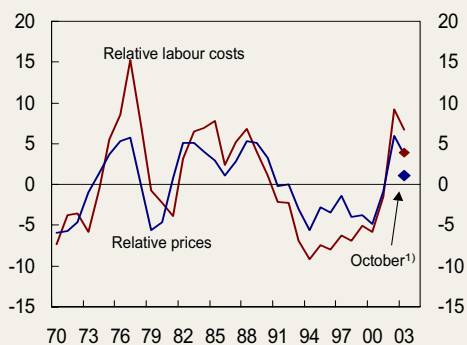
**Chart 1b** Import-weighted exchange rate (I-44) and trade-weighted exchange rate index<sup>1)</sup>. Monthly figures. Jan 1971 - Oct 2003



<sup>1)</sup>A rising curve denotes a weaker krone exchange rate

Source: Norges Bank

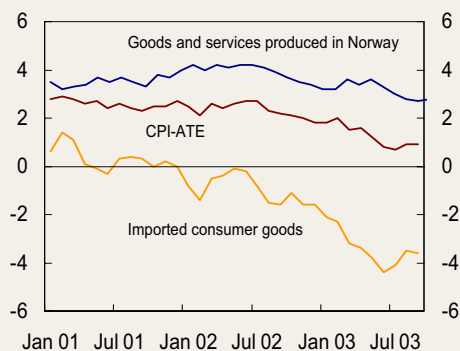
**Chart 1c** Real exchange rate. Deviation from average 1970-2002. Annual figures. 1970 - 2003. Per cent



<sup>1)</sup> Average exchange rate at 23 Oct 2003

Sources: TRCIS, Ministry of Finance, Statistics Norway and Norges Bank

**Chart 1d** CPI-ATE. Total and distributed by imported and domestically produced goods and services<sup>1)</sup>. 12-month rise. Per cent



<sup>1)</sup> Norges Bank's estimates

Sources: Statistics Norway and Norges Bank

compared with the same period one year earlier. Developments have been somewhat weaker than projected, but there have been signs of a levelling off recently. Developments in unemployment (Labour Force Survey, LFS) have been broadly in line with projections, however. Unemployment is now approximately at the level prevailing around 1996-1997, before cost inflation started to accelerate in Norway. Output gap estimates indicate that the output gap is near zero (see Table 1).

Manufacturing output has fallen over the past year. Manufacturing investment was high last year owing to major projects in the aluminium industry, but is now rapidly contracting. Investment growth in other industries is also weak. Non-residential vacancy rates are high, particularly in the central east region of the country. Activity in the construction industry is being buoyed by rehabilitation projects in the school sector and growth in building investment.

Weak developments in manufacturing have aggravated the problems facing industries that supply business services. For example, the hotel occupancy rate for business customers has fallen, and revenues from business air travel have fallen over the past two years.

Growth in credit to enterprises is still contracting, and stood at an annualised 1.9 per cent in August. The debt/income ratio (debt burden) has fallen, but remains at a historically high level. Credit to the commercial property sector is considered to be vulnerable. The interest rate reductions since December have eased the situation for enterprises. Prospects for many companies have also improved as a result of a weaker krone and sharp advances in equity prices in Norway.

In spite of weak developments in the first six months of the year, recent developments suggest that growth in the Norwegian economy may be picking up:

- Mainland GDP growth expanded by 0.3 per cent from the first quarter to the second quarter of this year after falling in the two preceding quarters.
- Growth in private consumption increased in the second quarter, and goods consumption figures indicate high growth also in the third quarter. Household confidence in the country's economy seems to have rebounded, and household expectations concerning their own financial situation next year are more optimistic.

- The fall in house prices has come to a halt, and prices showed a rise from the second to the third quarter. Information from Norges Bank's regional network indicates that sales of new dwellings had picked up after summer and that maintenance and rehabilitation activity is strong. Growth in household borrowing seems to have stabilised at a high level.
- Information from Norges Bank's regional network also indicates that cost reductions in many service sectors are now yielding results in the form of improved profitability. Another positive factor is the sharp rebound in the Norwegian stock market.
- The impression provided by the regional network is that the business sector may now have a more positive attitude to investing than earlier this year. The focus may have shifted to some extent away from cost reduction towards income-generating strategies.
- Seasonally adjusted employment increased by 3000 from May to July, after falling consistently from October 2002 to May (LFS figures). There is uncertainty attached to the seasonally adjusted monthly LFS figures, but they indicate that the fall in employment may have come to halt. Information from the regional network indicates that the decline in employment has abated. At the same time, there are signs that unemployment is rising at a slower pace.
- The number of bankruptcies in the business sector fell from the second to the third quarter.

Growth in the global economy has picked up, fuelled by high growth in the US and some Asian countries, including Japan. In the euro area, growth has been considerably weaker.

During the summer, international stock markets advanced. US and German bond yields have shown pronounced movements in recent months. Long-term interest rates fell markedly from April to mid-June, down to historically low levels. From end-June to end-August, long-term rates rose again. The optimism prevailing in the summer was followed by renewed uncertainty and a fall in US and German long-term interest rates. Long-term rates have edged up so far in October. There have also been marked fluctuations between major currencies. Both the Japanese yen and the euro

have appreciated considerably against the US dollar since the beginning of September. The fluctuations between major currencies and movements in long-term interest rates internationally probably reflect to some extent growing concern about the imbalances in the US economy, both in the private and public sectors.

## 2.2 Prospects ahead

In the June *Inflation Report*, growth in the Norwegian economy was projected to pick up in the course of autumn 2003 and winter 2003/2004, based on the assumption of a fall in interest rates to 3 per cent this year and a gradual depreciation of the krone, as measured by the I-44, of around 3 per cent to the end of 2005. The recovery would primarily be driven by an upswing in private consumption and an expected improvement in the global economic environment. Developments since the previous *Inflation Report* essentially support this picture.

We expect global growth to pick up to a more normal level during the projection period. For our trading partners as a whole, growth appears to be in line with that expected in the June *Inflation Report*, although with some adjustments to the distribution of growth across countries.

Uncertainty surrounding developments ahead is considerable, and the world economy seems to be very vulnerable to new disturbances. The main risk is associated with the considerable imbalances in the US economy. The recovery is primarily being driven by fiscal and monetary easing and growth in domestic demand in the US. It is uncertain if and when growth will be self-sustainable. The balance of risks and prospects of low inflation may imply low key policy rates in the US and Europe for an extended period ahead. If the euro continues to appreciate against the US dollar, there may be prospects of even lower inflation and growth in Europe, which may result in further interest rate reductions in Europe.

Oil prices have picked up somewhat since June. Our projections are based on the technical assumption that oil prices will reach a level of USD 20 three years ahead.

There are some signs that growth in the Norwegian economy is picking up (see Section 2.1). However, growth has not yet gained a firm footing. On the whole, demand components are not generating

balanced growth impulses. There are prospects of strong growth in private consumption, but it may take some time before investment and employment show growth. Over the past year, productivity growth in the Norwegian economy has probably been somewhat lower than normal. In the first round, a rise in demand may thus be accompanied by higher production within existing production capacity. Information from the regional network indicates that few, if no sectors, are seeking to increase employment in the short run. Moreover, lower activity in manufacturing industry is likely to act as a drag on growth in the Norwegian economy for several years ahead. Cost competitiveness is weak, even though the situation has improved considerably as a result of the krone depreciation since the beginning of the year.

Petroleum investment is expected to expand by about 15 per cent in 2003 and 2004. In 2005 and 2006, petroleum investment is projected to decline by 5 per cent and 20 per cent, respectively. Even though the import share for many of these investments is high, growth will contribute to holding up activity in oil-related industries in the short term. Subsequently, the impetus to growth in the mainland economy will turn negative.

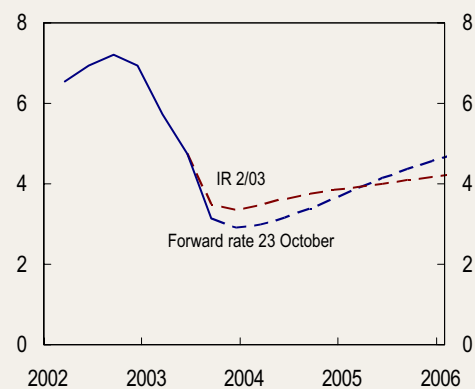
The structural deficit, measured as a percentage of trend mainland GDP growth, has increased since 2001, reflecting an expansionary fiscal stance. In the National Budget for 2004, the Government calls for a further increase in the deficit measured in this way. At the same time, growth in public consumption has been revised upwards. For 2003 and 2004 as a whole, fiscal policy will provide some stimulus to the Norwegian economy. For 2004, underlying, nominal growth in central government expenditure is estimated at 5.4 per cent. Deflated by the expected rise in prices for government expenditure, real, underlying expenditure growth is 2.1 per cent. Deflated by the expected rise in prices for mainland GDP, real, underlying expenditure growth comes to 3½ per cent.

With an expected improvement in cyclical conditions, the structural deficit is not expected to increase in 2005 and 2006. This seems to be in line with the application of the fiscal rule as presented by the Ministry of Finance in the National Budget for 2004. We have assumed that government expenditure growth in value terms will be broadly in line with value growth in revenues.

Developments in wage growth in the period 1998-2003 indicate that the scale of labour shortages in the labour market as a whole plays an important role in wage determination. Profitability in traditional, internationally exposed manufacturing sectors appears to have less influence on the overall outcome of wage settlements, both in manufacturing and other industries. Our projections are based on the assumption that developments in the overall labour market still play an important role in wage determination. Should wage growth in manufacturing regain a more prominent role, wage growth may be lower than we have assumed and suggest a lower interest rate path.

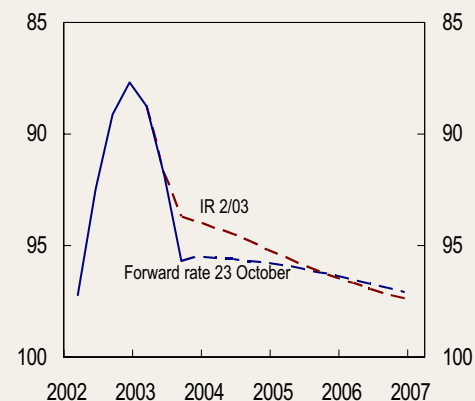
The projections for economic developments for the next few years are based on technical assumptions concerning the interest rate and the exchange rate. We have applied the forward interest rate and the forward exchange rate as a basis for our projections.

**Chart 2a** Assumption for money market rates. Quarterly figures. 2002 Q1 - 2006 Q4



Source: Norges Bank

**Chart 2b** Assumption for the krone exchange rate (I-44). Quarterly figures. 2002 Q1 - 2006 Q4



Source: Norges Bank

Forward interest rates reflect expectations that the sight deposit rate will be held at 2½ per cent this autumn. The forward interest rate edges up from spring 2004. The sight deposit rate is expected to be about 3½ per cent one year ahead (see Chart 2). Interest rates in Norway and abroad move broadly in tandem. As a result, the interest rate increase will be accompanied by some depreciation of the krone. The forward exchange rate shows an exchange rate depreciation of a little less than 2 per cent from the current level to end-2006.

Low interest rates will contribute to high growth in private consumption. Lower interest rates reduce interest expenses and push up household real disposable income. Moreover, experience indicates that lower interest rates lead to a lower saving ratio. Against this background, we expect that a temporary fall in the saving ratio will boost consumption growth. In conjunction with improved profitability and higher demand abroad, consumption growth will gradually push up investment and employment in the service sector. However, we expect that it will take some time before overall employment shows growth. Unemployment is expected to edge up through autumn and remain fairly stable through next year. Furthermore, excess capacity in the non-residential market, particularly in the larger cities, indicates that it will take time for investment to pick up. Overall, GDP growth is projected to pick up to a little more than trend growth next year, primarily fuelled by higher private consumption. In 2005, unemployment is expected to edge down. The output gap is estimated to be positive as from next year (see Table 1 and Chart 3).

This scenario will lead to higher inflation. Within a horizon of 4-6 quarters, however, the path for inflation will to a large extent be influenced by exchange rate developments. The impact on inflation of the appreciation of the krone through last year is estimated to have been strongest around the second-third quarter of this year. The nominal exchange rate (I-44) has depreciated by about 9 per cent since the beginning of the year. The unwinding of the effects of the earlier appreciation and the effects of the depreciation since the beginning of the year will gradually push up inflation. We anticipate a more neutral contribution from the krone exchange rate as from 2004. Inflation will reach the inflation target in the fourth quarter of 2005, and then stand slightly above target (see Chart 3).

**Table 1.** Projections based on forward interest rates and the forward exchange rate

	2003	2004	2005	2006
Mainland demand	1¼	3¼	3¼	2¼
Private consumption	3¼	5	3½	2
Public consumption	1	2	1½	1½
Total gross investmt.	-5	1	4½	5
Export	1	2	3¼	3¼
Imports	2	5¼	2½	0
Mainland Norway GDP	¾	3	2¾	2¼
Output gap	-¼	¼	½	¼
Employment	-1	¼	1	½
LFS unemployment	4½	4¾	4½	4½
Annual wages	4½	4¾	4¾	4¾
Wage gap	0	-¼	¼	¼
CPI-ATE	1¼	2	2¼	2½
Note:				
Petroleum investments	15	15	-5	-20

Source: Norges Bank

### 3. Monetary policy assessments and strategy

Norges Bank's operational conduct of monetary policy shall be oriented towards low and stable inflation. The inflation target is set at 2½ per cent. The key rate is set on the basis of an overall assessment of the inflation outlook, normally two years ahead. The key rate will normally be changed gradually so that we can assess the effect of interest rate changes and other new information about economic developments. With financial market confidence in the inflation target, Norges Bank has greater scope for promoting stability in the real economy than would otherwise be the case. This scope will increase as the inflation target is incorporated as the anchor for wage formation.

With a flexible inflation target, developments in output and employment are also taken into consideration. An assessment of output and employment stability must take into account the long-term output potential of the economy. The output potential depends on productivity, capital stock and the labour supply. The share of labour that can be absorbed without an attendant acceleration in wage growth depends on wage formation.

The output gap measures the extent to which actual output deviates from trend. Although the output gap is not directly observable, rough output gap estimates provide a concise basis for monetary policy assessments and for considering trade-offs.

The choice of horizon for monetary policy implicitly provides some information about the trade-offs in monetary policy. A central bank that places considerable emphasis on inflation and little emphasis on the real economy will choose a short horizon. A central bank that places considerable emphasis on developments in the real economy will choose a long horizon.

The possibility of smoothing fluctuations in the economy largely depends on how firmly the inflation target is anchored among economic agents. The more confidence there is that the inflation target will be achieved, the wider the scope for stabilising the real economy.

Normally, the interest rate is set with a view to attaining an inflation rate of 2½ per cent two years ahead. However, it is generally possible to achieve the inflation target in the shorter run through more rapid and pronounced interest rate changes. The conduct of monetary policy is based on a flexible inflation target, whereby both variability in output and inflation are given weight. A time horizon for monetary policy of two years will normally reflect how the inflation target can be attained with reasonable weight assigned to stability in output and employment.

In line with this approach, interest rate setting must take into account the outlook for inflation and goods and services production. A monetary policy stance that results in an inflation rate that is below target and a negative output gap will normally be too tight. Likewise, a monetary policy stance that results in an inflation rate that is above target and a positive output gap will normally be too expansionary.

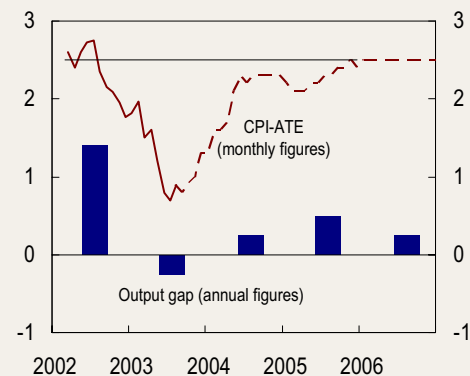
In a situation where our projections imply that considerable imbalances in the real economy would emerge if the interest rate were set so that the two-year-ahead inflation projection was on target, it may be appropriate to apply a somewhat longer time horizon. This is in line with Norges Bank's previous declarations, stating that the path for inflation and the real economy ahead will be taken into account in our assessments. If such a situation should arise, Norges Bank will also place considerable emphasis on avoiding a loss of confidence in the inflation target.

A monetary policy strategy in the period to the next strategy period should be seen in the light of the assessment of the economic outlook for the coming years.

### 3.1 Assessment of developments in inflation and the output gap over the coming years

Chart 3 shows that inflation will run considerably below the inflation target over the next year. With an interest rate ahead in line with the forward interest rate, inflation is projected to reach target two years ahead. Wage growth is projected to edge up to 4¾ per cent in 2005 and 2006. Growth in mainland output is projected to be slightly higher than trend growth in 2004 and 2005, declining to somewhat below trend in 2006. According to our estimates, the output gap will be slightly positive from 2004.

**Chart 3** Projected CPI-ATE and output gap with forward interest rate and forward exchange rate. Per cent



Sources: Statistics Norway and Norges Bank

According to the one-year-ahead projections, the inflation gap will be negative while the output gap will be slightly positive. In isolation, the low one-year-ahead inflation projection might suggest a somewhat lower interest rate in the short run than implied by the forward interest rate path. However, monetary policy will have little impact on consumer price inflation in the next months. The negative inflation gap and output gap is primarily attributable to weaker-than-expected developments in the world economy over the past year and the effects of low import prices. If the objective of monetary policy were to rapidly return inflation to target, e.g. in the course of six months, the interest rate would probably have to be set at a level that

would lead to a marked change in the exchange rate. Such a monetary policy approach might also entail a pronounced impact on demand for and production of goods and services and employment. The output gap would then be wider in 2005 and 2006. In addition, wage growth would probably be higher than projected so that the inflation gap would widen three years ahead.

A markedly lower interest rate than the forward interest rate in the short term might necessitate a higher interest rate later in order to attain the inflation target. It is likely that this would be reflected in market expectations fairly rapidly, and it would be less likely that an interest rate reduction would lead to a weaker krone. It may thus prove difficult to achieve higher inflation in the short term through an interest rate reduction. Such a policy might, however, lead to higher inflation two years ahead.

### 3.2 Monetary policy in the period to 10 March 2004

In the press release issued following the monetary policy meeting of 17 September, where the sight deposit rate was reduced to 2.5 per cent, Norges Bank stated that the probability that inflation two years ahead would be higher than 2½ was the same as the probability that it would lower.

With an interest rate path ahead in line with the forward interest rate and a weaker krone in line with the forward exchange rate, there are now prospects that inflation will move up and reach 2½ per cent two years ahead. Growth in goods and services production is also expected to pick up. The analysis is based on an upturn in the world economy with rising interest rates, an oil price that gradually falls from today's level to about USD 20 per barrel and a fiscal policy in line with Government's budget programme as described in the National Budget for 2004.

In this context, the rise in interest rates internationally is a critical precondition for Norwegian interest rates to rise gradually with an attendant depreciation of the krone. Forward interest rates imply an interest rate at approximately today's level over the next four months. Under these assumptions, and with a

normal level of uncertainty, our analysis implies an interest rate in the interval 2-3 per cent at the end of the strategy period.

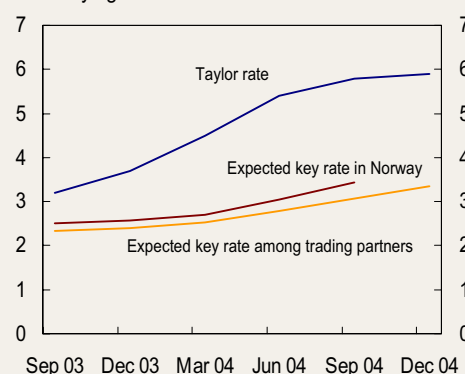
The *Taylor rule* is a simple interest rate rule that is not based on a model for the economy. As such, the interest rate rule is not forward-looking. Nevertheless, the rule has still yielded sound policy results in various types of models.<sup>1</sup> The rule may therefore be a robust cross-check for the Bank's interest rate assessments.

Chart 4 shows the estimates for the Taylor rate based on our projections for the inflation and output gap. The Taylor rate is estimated to increase from the current level of about 3½ per cent to 4½ per cent in February. The increase is attributable to an upward movement in both inflation and output over the next months. According to the rule, the nominal interest rate should increase so that the real interest rate also increases when inflation rises. The main reason for the relatively wide difference between the Taylor rate and the recommended interest rate interval is that the Taylor rule does not take account of exchange rate changes or developments in the global economy. With an interest rate path for the next four months that is consistent with the Taylor rate, the probability of an appreciation of the krone will increase.

#### Implications of new information

The interest rate interval for the period ahead, as proposed here, should be assessed regularly on the basis of new information emerging during the strategy period that is of significant importance for the outlook for the real economy and inflation.

**Chart 4** Taylor rate and expected key rates<sup>1)</sup>. Quarterly figures. 2003 Q3 - 2004 Q4



<sup>1)</sup> The expected key rate is estimated on the basis of 3-month FRA rates in Norway and among trading partners on 23 October 03.

Source: Norges Bank

<sup>1</sup> See, for example, the articles in Taylor, J. (red.), *Monetary Policy Rules*. NBER – Business Cycles Series, Volume 31, 1999.

If developments deviate markedly from our projections and the assumptions underlying our analysis, this may in isolation suggest a deviation from the recommended interval for the sight deposit rate.

A stronger *krone exchange rate* will make it more demanding to attain the inflation target. Our model-based calculations indicate that an appreciation of close to 3 per cent or more could bring the inflation projection well below target two years ahead. Consequently, a pronounced appreciation of the krone may in isolation suggest that the interest rate should be set in the lower end of, or below, the recommended interval. A depreciation of the krone might result in a faster rise in prices. The krone appreciated somewhat after the monetary policy meeting in September. Because inflation is already at a low level, a more pronounced depreciation of the krone must occur before it would be appropriate to consider an interest rate that is higher than the recommended interval in the strategy period.

Any interest rate reactions must, however, be based on an analysis of the background for exchange rate movements and an assessment of the duration of the change in the exchange rate. A change in the exchange rate tends to be long-lasting if the change is driven by economic fundamentals, and not by sentiment and portfolio shifts in the foreign exchange market.

In the baseline scenario, the *year-on-year rise in the CPI-ATE* moves up from 0.9 per cent in September to 1.3 per cent in January 2004. The last inflation figures to be published in this strategy period are the inflation figures for January. Wide deviations from the projections in the coming months may suggest that the interest rate should be set outside the interval. After a fairly long period of low inflation, it is appropriate to be particularly vigilant in monetary policy if inflation does not increase as expected. In that case, it will be appropriate to reduce the interest rate or alternatively keep the interest rate unchanged at the low level even when interest rates start to rise abroad.

With lower *inflation expectations* in the longer term, it may be more demanding to push up inflation. There is no indication that inflation expectations are now deviating from the inflation target in the long term. Table 2 shows that economic agents expect inflation to be around target 5 years ahead. The next survey will be published at the beginning of December.

**Table 2** Expected consumer price inflation 2 and 5 years ahead

	2 years ahead	5 years ahead
Experts	2.3 (2.2)	2.4 (2.5)
Employees' organisations	2.3 (2.6)	2.6 (3.0 <sup>1)</sup> )
Employers' organisations	2.1 (2.2)	2.4 (2.4)
Business leaders	2.8 (3.0)	

<sup>1)</sup> The figure is significantly influenced by an extreme value. Expected inflation excluding this extreme value is 2.6 per cent.

Source: TNS Gallup

If the expectations survey or other indicators such as Consensus Forecasts or the forward 10-year interest rate differential against other countries indicate a pronounced change in inflation expectations, this would in isolation suggest that we should consider more pronounced monetary policy measures. The risk of a fall in inflation expectations is assessed as being greater than the risk of an increase.

The Government's national and central government budget proposal for 2004 was presented on 8 October. The recommendation of the Standing Committee on Finance and Economic Affairs will be issued no later than 20 November. Higher growth in *public employment and consumption* than that proposed in the budget may, in isolation, suggest another interest rate path.

The projections in the baseline scenario imply sharp *growth in consumption* in the period ahead. Growth in private consumption this quarter is projected at 1¾ per cent in the baseline scenario. In the first quarter of next year, growth is projected at 1½ per cent. The goods consumption index, Quarterly National Accounts (QNA) figures and other indicators will provide new information about consumption in the period ahead. If growth in private consumption does not materialise, it would in isolation be appropriate to consider an interest rate below or in the lower end of the interval.

*Credit growth and house price inflation* provide an indication of the sustainability of the rate of increase in these two variables over time. With the pronounced easing of monetary policy through 2003, there is a risk that credit growth will accelerate. It may then be appropriate to set the interest rate higher than the recommended interval. However, growth in credit to the household sector and the rise in house prices must be considered in relation to growth in credit to the enterprise sector and the rise in non-residential rental prices.

*The international economic situation* may have passed a trough. It is particularly difficult to project economic developments around a turnaround. Over the next 4 months, we will receive current data indicating whether our assumptions are consistent with actual developments.

Growing focus on the imbalances in the US economy is the likely cause behind the fluctuations between major currencies in recent weeks. The euro has appreciated. Should this lead to a change in the prospects for European economies, interest rates may be further reduced in Europe. In such a situation, the krone may appreciate. Interest rate cuts in other countries mean that it will be appropriate to consider an interest rate in the lower end of, or below, the recommended interval.

*Labour market* developments will influence price and wage inflation ahead. LFS unemployment is projected at 4¾ per cent at the end of the strategy period. Wide deviations from this level imply in isolation that it will be appropriate to set the interest rate outside the recommended interval.

### *3.3 Monetary policy in response to particularly adverse developments*

Some central risk factors have been listed above, and we will receive more information about these factors during the strategy period. It is relatively unlikely that many of these factors will take a severely negative turn at the same time. Monetary policy strategy should be robust to such particularly adverse developments, which in the short run are characteristic of a serious conflict between the objective of attaining the inflation target and stability in the real economy.

A serious conflict will occur if the global economy experiences a new downturn without a fall in oil prices, and at the same time domestic consumption growth proves to be higher than projected. This could result in expectations of a wide interest rate differential against other countries and a marked appreciation of the krone. If such a combination of disturbances should occur, it may prove particularly difficult to bring inflation up to target while ensuring stability in the real economy over the next two to three years.

A scenario of this type involves a difficult trade-off. A possible strategy might be to keep the interest rate at a very low level to counter a marked

appreciation of the krone, even though this may aggravate the imbalances in the real economy. Global developments may, however, improve again so that the krone returns to a more normal level. If there are strong pressures on domestic real economic resources at the same time, inflation might accelerate.

An alternative strategy might be to raise the interest rate to curb pressures in the real economy, even though this may lead to a further appreciation of the krone. However, it cannot be ruled out that it may take a long time for world economic growth to pick up so that inflation becomes entrenched at a very low level.

If the above scenario should occur, we will place considerable emphasis on ensuring that the inflation target is a credible anchor for inflation expectations. If inflation runs well below target for a longer period, inflation expectations may become entrenched at a level that is too low. If the credibility of the inflation target is impaired, bringing inflation up towards target will be associated with greater real economic costs.

A somewhat more likely scenario than that described above is that global economic developments ahead are less auspicious than projected and that the Norwegian economy is also affected, with low oil prices, weak growth in output and employment and low inflation. Such a scenario does not, however, involve the same difficult trade-offs in interest-rate setting as that outlined above.

## Conclusion

- Norges Bank's operational conduct of monetary policy shall be oriented towards low and stable inflation. The inflation target is set at 2½ per cent.
- The key rate is set on the basis of an overall assessment of the inflation outlook, normally two years ahead. The key rate will normally be changed gradually so that we can assess the effects of an interest rate change and other new information about economic developments.
- With financial market confidence in the inflation target, Norges Bank has greater scope for promoting stability in the real economy than would otherwise be the case. This scope will increase as the inflation target is incorporated as the anchor for wage formation.

- Economic developments broadly in line with projections and the current balance of risks suggest a sight deposit rate in the interval 2-3 per cent at the beginning of March 2004.
- Exchange rate developments and the effects of a stronger krone on inflation and output are uncertain. If the krone remains strong, it may be appropriate to consider an interest rate in the lower end of, or below, the interval. Likewise, it would be appropriate to consider an interest rate in the upper end of, or above, the interval if the krone should depreciate markedly. Any interest rate reactions must, however, be based on an analysis of the background for exchange rate movements and an assessment of the duration of the change in the exchange rate.
- After a fairly long period of low inflation, it is appropriate to be particularly vigilant in monetary policy if inflation does not increase as expected. In that case, it will be appropriate to reduce the interest rate or alternatively keep the interest rate unchanged at the low level even when interest rates start to rise abroad.
- The interest rate interval for the period ahead should be assessed regularly on the basis of new information emerging during the strategy period and information that is of significant importance for the outlook for the real economy and inflation.