

## Svein Gjedrem: Monetary policy - the importance of credibility and confidence

Address by Mr Svein Gjedrem, Governor of the Norges Bank, at the Annual National Meeting of the Association of Economists, held in Gausdal on 25 January 2001.

\* \* \*

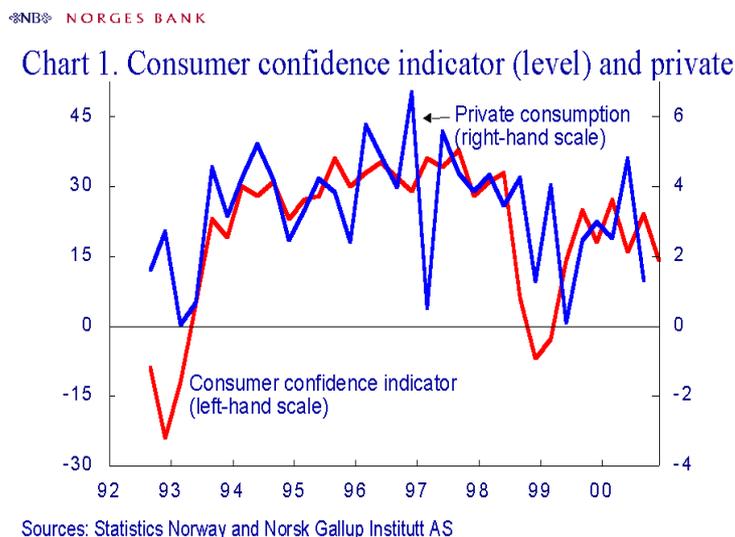
### Introduction

The primary responsibility of monetary policy is to contribute to nominal stability. Nominal stability creates a more favourable operating environment for economic activity, and the prices of goods and services will be better conveyors of information. Consequently, changes in the distribution of income and wealth as a result of variable price inflation are avoided. Nominal stability is important to developments in the real economy, and is the most valuable contribution monetary policy can make to economic growth.

Using this as a starting point, I would like to speak today of the importance of confidence and credibility with regard to monetary policy. I will also evaluate the monetary policy that has been conducted for the last couple of years in relation to the guidelines for monetary policy and our interpretation of them.

### Expectations and confidence

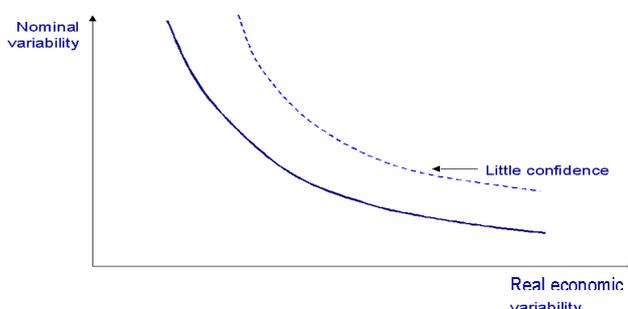
Expectations regarding the future play a large part in all economic activities. Enterprises make decisions on production volume, investments, hiring and prices on the basis of expectations concerning future demand, prices and costs. Households make purchases on the basis of their expectations with regard to future income, wealth, prices and job security. Chart 1 illustrates a possible relationship between households' assessment of prospects for the future and their consumption. Trade unions base their wage negotiations on expectations regarding price inflation and developments in employment over the next few years. Expectations play an important part in financial markets. Equity prices and exchange rates may fluctuate widely as a result of changes in the expectations of market participants.



Because expectations are of such importance to economic planning and decisions, it is essential that there is confidence in the nominal anchor. This makes it possible to achieve nominal stability with smaller disturbances in the real economy and lower unemployment.

Although nominal stability is a prerequisite for sound developments in the real economy over time, conflicts may develop in the short term. Such conflicts may occur if there are disturbances on the production or supply side of the economy which give rise to higher price and cost inflation that does not actually reflect increased pressures in the economy. Examples of such disturbances are cost-push shocks resulting from negotiations, or weaker productivity growth. When disturbances of this type occur on the supply side of the economy, there may be a trade-off between fluctuations in nominal prices and wages and fluctuations in production and employment. A trade-off of this kind is illustrated in Chart 2. The chart shows that using strong instruments to achieve an inflation target or exchange rate target in the short term results in more pronounced fluctuations in the real economy. By allowing greater flexibility with regard to the short-term achievement of goals, it is possible to achieve more stable developments in the real economy. But confidence in the nominal anchor must not be undermined. This may lead to a less favourable trade-off, as illustrated in the chart by the broken line.

Chart 2 Trade-off between nominal fluctuations and fluctuations in the real economy



© 2001

If there is insufficient confidence in monetary policy, economic agents may expect higher price and cost inflation to persist. This will be taken into account when setting wages and prices. The result will be a wage and price spiral. Experience shows that this in turn leads to slower growth and lower employment. A lack of confidence therefore entails a risk of higher unemployment. In consequence, monetary policy must also focus on movements in nominal variables when the economy is subjected to supply-side shocks in order to prevent the economy from entering a vicious circle. The building of confidence in nominal developments must be given sufficient priority.

If there is confidence in monetary policy, economic agents will expect the rise in price and cost inflation to be of short duration. Higher prices will then not feed through to prices for other goods and to wages to the same extent, and there will be less risk of a recession. Confidence in monetary policy therefore results in a better trade-off between nominal fluctuations and fluctuations in production and employment.

I have been talking about supply-side shocks to the economy. However, there are many types of shock where there is no conflict between stable nominal developments and stable developments in the real economy. For example, a sharp decline in overall demand may give rise to a deflationary recession. In such a situation, an expansionary monetary policy may contribute to both nominal and real economic stability.

Whether disturbances arise on the supply side or the demand side, it should be possible to use the interest rate to influence economic developments. The interest rate is an instrument, rather than a target variable. A passive monetary policy will lead to both price and exchange rate instability and to greater fluctuations in production and employment. However, an active monetary policy does not imply attempting to fine-tune economic developments. We must be mindful of the uncertainty associated with economic developments and the effects of monetary policy. Normally, interest rate changes should be made gradually to allow us to acquire more information, for example about the effects of previous interest rate changes.

## Uncertainty and credibility

According to Norges Bank's mandate, monetary policy is to be aimed at maintaining a stable krone exchange rate against European currencies, based on the range of the exchange rate maintained since the krone was floated on 10 December 1992. 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.

In its conduct of monetary policy, Norges Bank focuses on the fundamental preconditions for achieving exchange rate stability against the euro. First, price and cost inflation must be brought down towards the corresponding aim for inflation for the European Central Bank (ECB). At the same time, monetary policy must not in itself contribute to deflationary recessions as this could undermine confidence in the krone. There are few significant differences between Norway's actual response pattern and that of countries with explicit inflation targets. Price and cost inflation must be steered towards that aimed at by the ECB. However, in Norway fiscal policy has traditionally had an important role in stabilisation policy. This has reduced the burden on monetary policy. In addition, the Norwegian wage determination system has probably contributed in periods to dampening the impact of shocks hitting the economy.

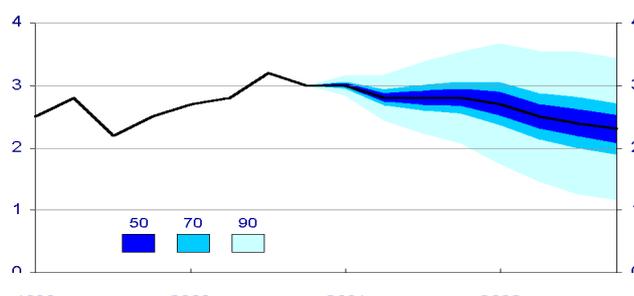
Monetary policy influences price and cost inflation with a time lag of perhaps one to three years. In consequence, projections for price and cost inflation with a horizon of a couple of years play an important part in the setting of interest rates.

From the time interest rate decisions are taken until the interest rate has an impact on prices and costs, various types of disturbance occur which influence price and cost inflation. Thus it is not possible to maintain full control over developments in prices and costs. Actual price and cost developments normally deviate somewhat from earlier projections. On the basis of the deviation between actual price inflation and Norges Bank's projections over the last few years, an uncertainty interval for price inflation can be calculated.

Norges Bank

Chart 3. Uncertainty in inflation projections.

Various probabilities for developments in underlying consumer price inflation, based on historical deviations in the projections



How can monetary policy be credible when it is so difficult to control price inflation? The answer is to be found in two factors. First, economic agents base their decisions on the probable inflation outcome. Although there is considerable uncertainty, monetary policy will be credible if the outcome they consider most probable, and thus base their decisions on, is consistent with the nominal anchor. Second, confidence is linked to the response pattern. If price inflation in Norway is higher than that aimed at by the ECB as a result of shocks, there must be confidence that monetary policy instruments are oriented towards bringing price inflation down towards the level implied by the nominal anchor. Thus temporary deviations do not necessarily lead to a loss of credibility.

Confidence in low and stable inflation contributes to greater stability in the krone exchange rate than would otherwise be the case. However, this cannot prevent changes in the krone exchange rate if the

Norwegian economy is subjected to substantial disturbances in the real economy other than those in the euro area and such disturbances are not countered by fiscal or incomes policy.

Monetary policy cannot function effectively without good interplay with fiscal policy. In the euro countries, the Maastricht Treaty and the Stability and Growth Pact provide guidelines for fiscal policy, including requirements to reduce government debt and to record a budget surplus during upturns and the establishment of limits on deficits during recessions. Sweden has placed a cap on government expenditure in the medium term, and is systematically reducing government debt. The UK is complying with a guideline stating that public consumption should not be debt-financed. They have also placed a cap on government net debt. The US has created a significant budget surplus, and government debt is being reduced.

In Norway it is important that the annual budgets are anchored in a long-term strategy which takes into account that oil revenues may fluctuate from one year to the next. It is an advantage if fiscal policy can also be used to counter fluctuations in demand and production. Given the policy objective, the government budget should not have a procyclical effect. It would be undesirable for government budgets to contribute to increased demand for labour at times when price and wage inflation is appreciably higher than the rate in other countries.

### Transparency in monetary policy

In order to contribute to greater credibility and confidence, Norges Bank places emphasis on transparency with regard to its interest rate policy. Transparency promotes predictability in the behaviour of the central bank and helps reduce uncertainty for economic agents. The Norwegian economy is accordingly less subject to doubt and speculation about the setting of interest rates, there is greater stability in expectations formation and movements in market interest rates are smoother.

 NORGES BANK

---

#### Chart 4. Duisenberg's definition of transparency

- “Transparency in monetary policymaking should be understood as the extent to which the external presentation of the decisions corresponds to the internal decision-making

---

© 2001

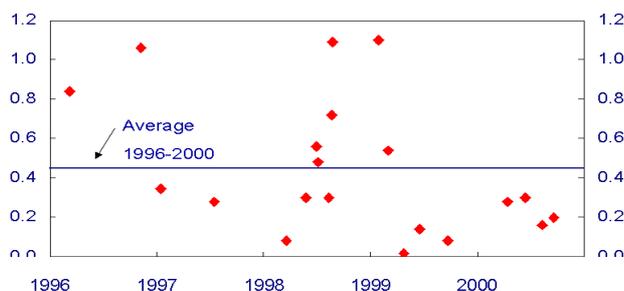
The President of the European Central Bank, Willem F. Duisenberg, has defined transparency as "the extent to which the external presentation of the decisions corresponds to the internal decision-making process."

At the press conferences held in connection with our monetary policy meetings, we provide an account of the background to the interest rate decision. We usually include a statement of bias, ie whether there is a greater probability that the next change in interest rates will be an increase or a reduction. The Bank's inflation reports contain Norges Bank's projections for inflation for the next two years. The annual report provides a review of the use of instruments and the basis for decision-making. An evaluation is also presented of how well we have succeeded in attaining our monetary policy objectives.

It would appear that transparency in our interpretation of the Bank's mandate and our response pattern may have contributed to somewhat greater monetary policy predictability. Chart 5 suggests that money market rates now change less when Norges Bank changes its key rates than in the past.

Chart 5. Predictability in interest rate policy.

Change in 3-month money market rate divided by change in deposit rate (absolute value)



Source: Norges Bank

Another, and at least equally important, aspect of transparency is that transparency concerning our mandate, our interpretation of it, our response pattern and our evaluation of the economic outlook places restrictions on our own freedom of manoeuvre. This helps to ensure that the central bank is consistent over time.

### Monetary policy in recent years

Has monetary policy been successful? Has it contributed to satisfying the preconditions for a stable krone exchange rate? Before I attempt to answer these questions, I will briefly review the actual conduct of monetary policy and the decision-making basis.

Chart 6. Movements in the NOK/ECU-EUR exchange rate and the trade-weighted exchange rate index



Source: Norges Bank

The period between December 1992, when the fixed exchange rate regime was formally abandoned, and 1996 was characterised by balanced growth and a stable krone exchange rate. However, in 1996 the economy began to show signs of overheating. Coupled with an increase in oil prices, this contributed to appreciation pressures on the krone. Interest rates were kept at a low level to counter

appreciation pressures, and fiscal policy was not sufficiently tight to curb pressures in the economy. Developments since the beginning of 1997 show that the exchange rate is no longer suitable as a short-term operational objective of monetary policy. Norges Bank cannot fine-tune the exchange rate. As mentioned, Norges Bank therefore places emphasis on satisfying the fundamental preconditions for stability in the krone exchange rate over time in its conduct of monetary policy.

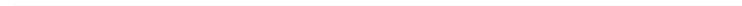
Instability increased further in 1998. In addition to domestic problems of overheating, which translated into strong cost inflation, 1998 was marked by financial crises in Asia, Russia and Brazil, falling commodity prices and general unrest in international financial markets. After it became clear in August that Russia would not, in practice, be servicing its foreign debt, market participants became highly risk-averse. The unrest also spread to European financial markets and to Norway. Investors moved their funds to Germany, the US and Switzerland. The currencies of countries with less liquid and more volatile financial markets, such as Norway and Sweden, depreciated. The Norwegian krone depreciated from around 101 against the ECU index at the beginning of the year to 115 in October, the weakest rate since the objective of exchange rate stability against the ECU was adopted.

Norges Bank responded to the sharp depreciation of the krone by raising its key rates in several steps through 1998. Following the last increase in interest rates on 25 August, the sight deposit rate stood at 8.00 per cent, 4.50 percentage points higher than at the beginning of 1998. Kjell Storvik stated a few days later that "The interest rate level which has now been established should, in addition to directly contributing to stabilising the krone exchange rate, dampen price expectations, which in turn implies that expectations of a further depreciation will gradually recede."

 NORGE BANK

### Chart 7. Kjell Storvik, 28 August 1998

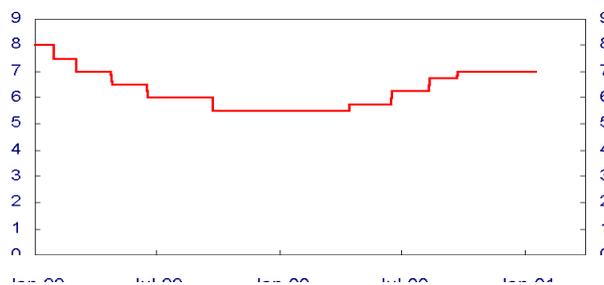
“The interest rate level which has now been established should, in addition to directly contributing to stabilising the krone exchange rate, dampen price expectations, which in turn implies that expectations of a

  
© Norges Bank 2001

During the autumn, it appeared that the effects of the depreciation of the krone on inflation would not be as great as assumed originally. First, the krone had depreciated less against an average of trading partners' currencies than against the ECU. Second, price inflation in the global economy fell. At the same time, it appeared that the turnaround in the real economy would be considerable. Low oil prices amplified the fall in investment in the petroleum sector.

At the beginning of 1999, the outlook for the Norwegian economy seemed fairly bleak. In this situation, the possibility that Norway would enter a recession of a type that would further reduce confidence in the krone was considered a definite risk. This is why Norges Bank decided at the beginning of 1999 to reduce interest rates. Owing to the uncertainty associated with economic developments and the effects of interest rate changes, Norges Bank adopts a gradual approach to the setting of interest rates. Interest rates were therefore reduced in five steps by a total of 2.50 percentage points in the period from 28 January to 23 September 1999. The lowering of interest rates contributed to strengthening the krone.

Chart 8. Movements in the deposit rate. Per cent



Source: Norges Bank

05.05.2001

In mid-1999, Norges Bank considered the risk of a recession of a type that would reduce confidence in the krone to be substantially reduced. In addition to the reduction in interest rates, this was partly due to brighter prospects for international growth and higher commodity prices. However, we still envisaged a growth pause in the Norwegian economy. The projections for price and cost inflation in the next few years were then in accord with the corresponding aim for inflation for the ECB. Following the last decision to reduce the interest rate on 22 September 1999, we signalled that our forecasts indicated a greater probability that the next interest rate change would be a reduction, although we did state that there was little room for further reductions in interest rates.

Chart 9. Decisions on changes in the deposit rate 1999 – 2001

Date	Deposit rate	Bias
27.01.99	8.00 ⇨ 7.50	-
03.03.99	7.50 ⇨ 7.00	-
23.04.99	7.00 ⇨ 6.50	Downward
16.06.99	6.50 ⇨ 6.00	Downward
22.09.99	6.00 ⇨ 5.50	Downward (but ...)
12.04.00	5.50 ⇨ 5.75	Upward
14.06.00	5.75 ⇨ 6.25	Upward
09.08.00	6.25 ⇨ 6.75	Upward (but ...)
20.09.00	6.75 ⇨ 7.00	Neutral

Source: Norges Bank

05.05.2001

Through the latter half of 1999, economic indicators suggested that we had underestimated economic growth. The projections for price and cost inflation in the mainland economy over the next few years were revised up. This was why Norges Bank, following its monetary policy meeting on 16 March 2000, at which interest rates were left unchanged, signalled for the first time that the next interest rate change was more likely to be an increase. On 12 April 2000, Norges Bank decided to increase the sight deposit rate by 0.25 percentage point to 5.75 per cent.

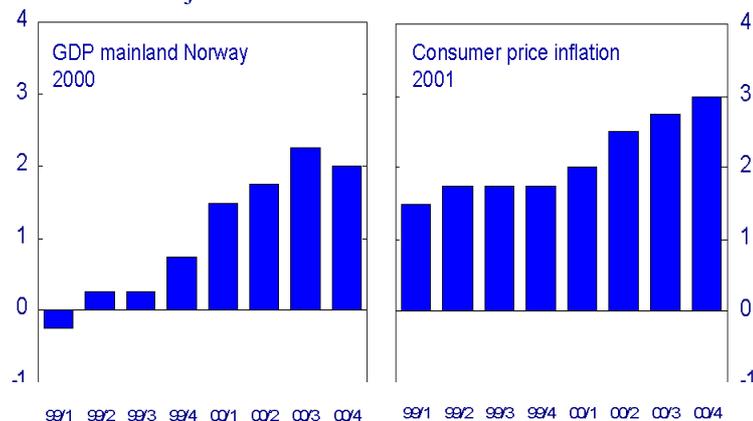
The decision to raise our key rates was taken in a period when the krone had depreciated against an average of trading partners' currencies, but was stable and strong against the euro, primarily reflecting the weakness of the euro. Given the prevailing situation in the Norwegian economy, we were of the view that an unchanged interest rate would not contribute to bringing price and cost inflation down

towards the corresponding aim for inflation of the ECB. An unchanged interest rate would therefore undermine the objective of a stable exchange rate over time. At the same time, growth in the economy was so strong that a higher interest rate would not increase the risk of a deflationary recession to any significant extent. The interest rate increase of 0.25 percentage point was in itself modest. We did indicate, however, that it was more likely that the next change in interest rates would be an increase.

Growing evidence of continued pressures in the economy emerged during the summer of 2000. The wage settlement resulted in an increase in labour costs of about 5 per cent in both 2000 and 2001. The projections for price and cost inflation in the years ahead were revised up as a result of the higher rise in labour costs, a weaker effective krone exchange rate and stronger external inflationary impulses. It appeared that the growth pause in the Norwegian economy would be shorter than expected.

NORGES BANK

Chart 10. Projections made at different times for GDP and



02/06/2001

Against the background of an upward revision of the projections for price and cost inflation in the next few years, Norges Bank decided on 14 June to raise the interest rate by 0.50 percentage point. This was followed by another increase of 0.50 percentage point on 9 August. We then indicated that it was more likely that the next change in interest rates would be an increase, but also stated that substantial steps had been taken in the adjustment of the interest rate that was appropriate on the basis of our analyses. Following the next decision to increase interest rates by 0.25 percentage point on 20 September, we indicated that the probability that the next change in interest rates would be a reduction was the same as the probability of an increase. The sight deposit rate has since remained at 7.00 per cent.

In the December 2000 Inflation Report, it was estimated that price inflation would decline gradually in the years ahead, but remain higher than 2 per cent in 2003 and 2004. However, the projections were based on the assumption that interest rates move in line with market expectations, as implied by the forward rate curve. The market had factored in a decline in interest rates over the next two years. It thus appeared that market participants had a different perception of the probability of a reduction in interest rates than the one expressed by Norges Bank. The technical assumption of a fall in interest rates influenced the projections. In the report, we also indicated that given an unchanged interest rate, projected price inflation would be below 2 per cent from the end of 2002.

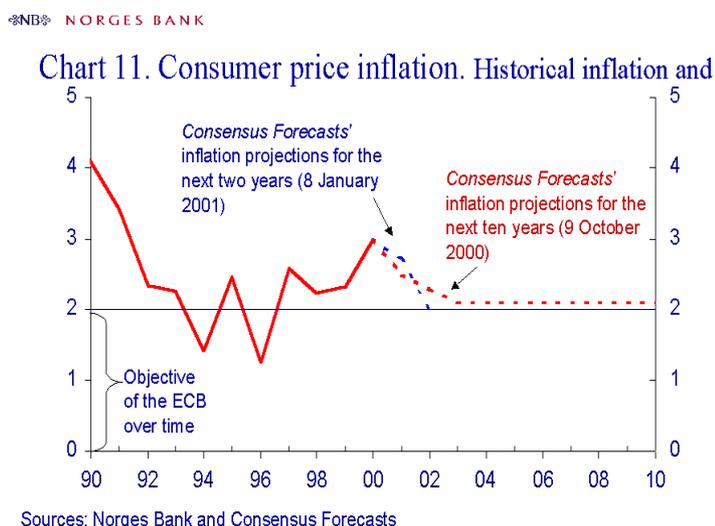
### Has monetary policy been successful?

It is not possible to find a simple performance measure that makes it easy to determine in retrospect whether monetary policy has been successful. As noted earlier, confidence and credibility are important for achieving the objectives of monetary policy. The degree of confidence and credibility will be an indication of how successful monetary policy has been.

Confidence and credibility cannot be measured directly. There are, however, various indicators that provide some information. Credibility is reflected in the accord between the public's expectations

concerning future nominal developments and the nominal anchor. One test might be whether economic agents expect inflation to be reduced towards the corresponding aim for inflation for the ECB. The ECB's primary objective is the maintenance of price stability, which it has defined as an annual increase of below two per cent in the Harmonised Index of Consumer Prices.

Inflation expectations cannot be measured precisely, but a rough estimate may be obtained through surveys. Chart 11 shows market participants' expectations concerning inflation over the next ten years, according to Consensus Forecasts.



With a proviso regarding the accuracy of such measures, the survey indicates that price inflation is expected to be reduced in the years ahead and approach the interval aimed at by the ECB. In its latest survey of 8 January 2001, Consensus Forecasts' projection for inflation was 2.0 per cent in 2001.

Changes in long-term interest rates are another indicator of inflation expectations. Implied forward rates, which measure market expectations concerning future short-term rates, can be derived from long-term rates. If Norwegian long-term forward rates are substantially higher than corresponding rates in the euro area, this may be an indication that, over time, market participants expect higher price inflation in Norway than in euro countries. However, because interest rate expectations cannot be directly observed, some uncertainty with regard to the calculation method must be taken into account.

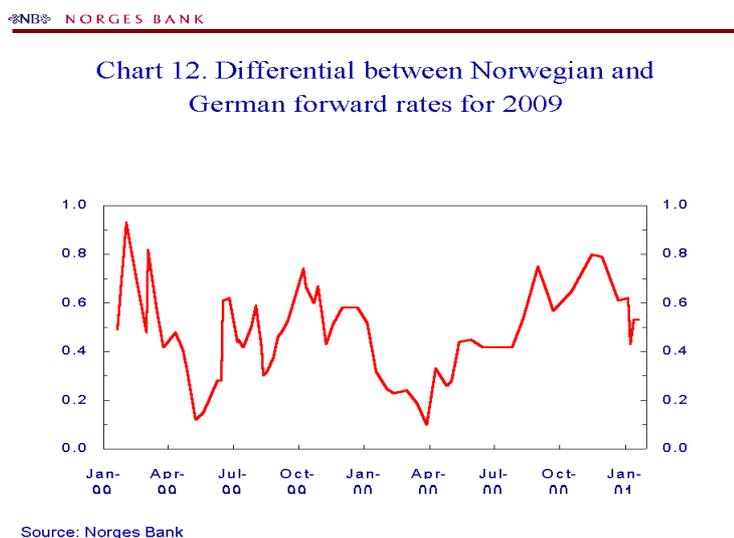
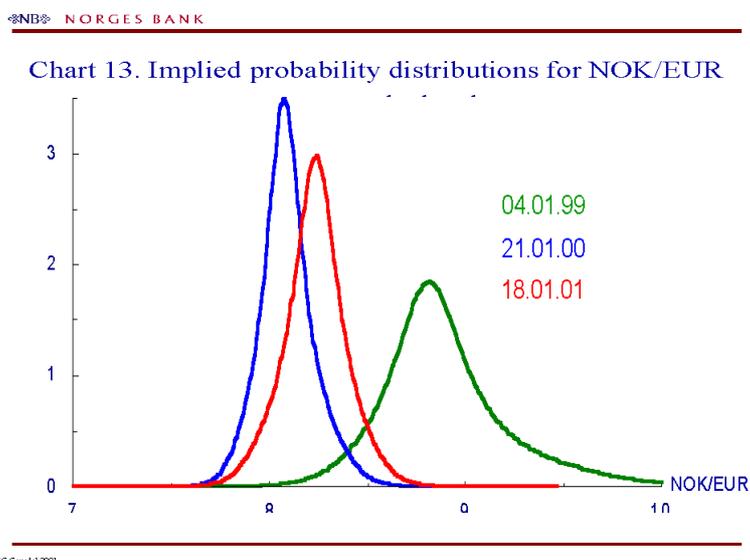


Chart 12 shows movements in the long-term forward rate differential against Germany. A positive forward rate differential reflects to some extent a relatively small market for Norwegian government bonds compared with other countries. The yield on Norwegian government bonds is therefore normally higher than the yield on corresponding German bonds in order to compensate for liquidity risk.

The forward rate differential is generally low, indicating that in the long run inflation in Norway is not expected to be substantially higher than in euro countries. As with the information provided in Consensus Forecasts, forward rates also indicate that participants in financial markets have a reasonable degree of confidence in monetary policy.

The degree of confidence in monetary policy is also reflected in the foreign exchange market. Waning confidence results in a weaker and more unstable krone exchange rate. Chart 13 shows developments in the market's evaluation of the probability distribution for the krone exchange rate one month ahead. A flat curve reflects considerable uncertainty. The curves, which are derived from prices for currency options, show that the uncertainty surrounding the future krone exchange rate is considerably less today than at the beginning of 1999.



Both surveys and financial indicators, such as forward rates and prices for currency options, can provide information about confidence in monetary policy. Even though such information is useful, it does not provide a sufficient basis for evaluating whether monetary policy has been successful in relation to the objective set out in the Exchange Rate Regulation. In order to evaluate in retrospect the monetary policy that has been conducted, we can also examine developments in actual inflation and the krone exchange rate. It should be mentioned, however, that we cannot solely consider whether developments in inflation and the exchange rate have been satisfactory in relation to the objective. We must also, on a discretionary basis, evaluate whether the exchange rate and inflation could have been stabilised at lower real economic costs.

When assessing monetary policy in retrospect, the decision-making basis that existed at the time must be taken into account. The decision-making basis may change as a result of revisions to data or new information about economic developments, or our interpretation of the information available may simply change.

Even though it is difficult to find a simple and precise performance measure, some general evaluation criteria may be identified. If the krone exchange rate is stable at approximately the initial range, as defined in the Exchange Rate Regulation, and inflation is approximately on a par with the level aimed at by the ECB, it may be said that monetary policy, on the basis of the objective established, has been successful. With a weak exchange rate and high inflation, it is natural to raise critical questions about monetary policy. It may then have been too expansionary. Similarly, with a strong exchange rate and with inflation close to zero or deflation, monetary policy has probably been too tight.

If price and cost inflation is on a par with the level aimed at by the ECB, one of the fundamental preconditions for exchange rate stability has been satisfied. The exchange rate may nevertheless be

regarded as "too strong" or "too weak" in relation to the initial range. This may be because conditions in the real economy imply a real appreciation or real depreciation of the krone. The reason for these exchange rate changes may be a deterioration or improvement in the cost competitiveness of the Norwegian business sector. For example, a greater use of petroleum revenues in the government budget may mean that the internationally exposed sector has to be scaled back in order to create room for higher domestic consumption. The equilibrium level for the krone exchange rate may therefore change. In this situation, Norges Bank should have carefully evaluated the reasons for exchange rate movements. If there is reason to believe that the exchange rate will remain strong or weak for a prolonged period, Norges Bank will have to decide whether to notify the government authorities that measures other than those available to the central bank may be necessary.

We can imagine situations in which the interest rate had to be kept at a high level, leading to a deflationary recession, in order to allow the krone exchange rate to remain close to its initial range for a period. However, this situation would hardly be stable. As long as economic fundamentals do not support the krone exchange rate at the initial range, it is highly unlikely that this would persist. If monetary policy has contributed to a deflationary recession, it could not be characterised as successful even if the krone has been stable around the initial range for a period, because this would have created the basis for future fluctuations in the exchange rate. Similarly, a krone exchange rate around the initial range combined with high inflation will not be sustainable. Monetary policy could not be said to have been successful in relation to the guidelines because, also in this case, it must be assumed that it was partly responsible for creating the basis for an unstable krone exchange rate at a later stage.

The Norwegian economy may be exposed to economic disturbances that contribute both to higher inflation and to a temporary appreciation of the krone exchange rate. In this situation, monetary policy should have attempted to counter a sustained higher level of inflation because higher inflation provides the basis for subsequent krone instability. However, Norges Bank should in advance have notified the government authorities, which should also have evaluated other measures for stabilising economic developments.

The Norwegian economy may also be exposed to negative events that provide the prospect of a deflationary recession and a depreciation of the krone. For example, a fall in oil prices may influence the economy in this direction. Monetary policy should in retrospect be evaluated on the basis of whether it has contributed to countering deflationary tendencies. In such a situation, as well, there may be reason for Norges Bank to notify the government authorities that measures other than those available to the central bank are necessary.

⌘NB⌘ NORGES BANK

State	DEFLATION	INFLATION ON A PAR WITH EURO COUNTRIES	INFLATION
PERSISTENTLY WEAK KRONE	A deflationary recession undermines confidence in the krone. Can monetary policy be used to stimulate the economy?	Do e.g. low oil prices imply a weak krone?	Has monetary policy been too expansionary?
KRONE APPROX. IN INITIAL RANGE	Has a tight monetary policy contributed to a recession? Will the evaluation of the krone remain unchanged?	Monetary policy has been successful	Has an expansionary monetary policy contributed to inflation? Will the evaluation of the krone remain unchanged?
PERSISTENTLY STRONG KRONE	Has monetary policy been too tight?	Does e.g. greater use of petroleum revenues imply a stronger krone?	Has an expansionary monetary policy contributed to inflation? Has the Petroleum Fund functioned as intended?

The evaluation criteria I have outlined are summarised in the matrix in Chart 14. At the beginning of 1999, the krone was weak, interest rates were high and there was a considerable risk of a recession of the type that would further reduce confidence in the krone. We could thus easily have ended up in a situation that is represented by the box in the upper left-hand corner of the matrix. Norges Bank decided to reduce interest rates in order to stimulate the economy. As I mentioned earlier, the krone

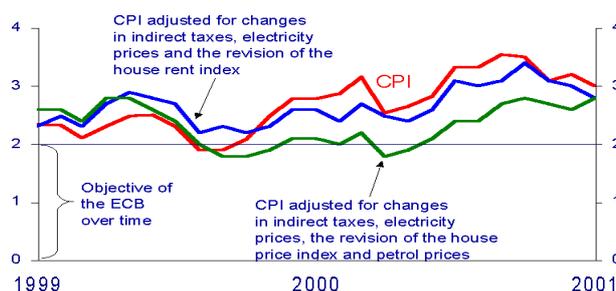
appreciated when interest rates were reduced, indicating that the decision resulted in increased confidence in the krone.

Following the interest rate reductions in 1999, the krone exchange rate against the euro was approximately at its initial range, while price inflation was approximately on a par with the level aimed at by the ECB. We were thus in the situation represented by the box in the middle of the matrix. During the autumn of 1999 and spring of 2000, however, there was growing evidence that the growth pause in the Norwegian economy would be shorter than assumed, and it appeared that price and cost inflation was picking up. In order to contribute to satisfying the fundamental preconditions for stability in the exchange rate, Norges Bank decided to increase interest rates. This occurred at a time when the krone exchange rate against the euro had strengthened further and was stronger than the initial range. There was thus a risk that we would end up in the situation represented by the box in the lower right-hand corner of the matrix, in other words the exact opposite of the situation expected at the beginning of 1999. The fact that in the first case we decided to lower interest rates, even though the krone was weak against the euro, while in the second case we decided to increase interest rates, even though the krone was strong against the euro, reflects the symmetry in our response pattern.

In this period, movements in the euro exchange rate against the US dollar have influenced the krone exchange rate against the euro without this being driven by conditions in the Norwegian economy. This is a factor that we have not emphasised when setting interest rates.

⌘NB⌘ NORGES BANK

Chart 15. Consumer price inflation.  
Total and underlying. Twelve-month rise. Per



Sources: Statistics Norway and Norges Bank

If we look at the two-year period as a whole, consumer price inflation has averaged about 2.7 per cent. However, a more accurate impression of inflationary impulses is obtained when we exclude factors that have only a short-term effect on inflation, such as changes in indirect taxes, electricity prices, the revision of the house rent index and changes in petrol prices. The underlying rise in consumer prices has averaged about 2.3 per cent in this period. It is nevertheless relevant to raise the question as to whether monetary policy in general has been too expansionary. I would, however, point out that monetary policy must be evaluated in relation to the decision-making basis that existed at the time the decisions were made. Given the decision-making basis prevailing in 1999, it seemed likely that the Norwegian economy would experience a growth pause and that price and cost inflation would fall. Moreover, the international financial market was fragile as a result of the many financial crises the previous year. As new information gradually pointed to higher growth in Norway and internationally, coupled with the prospect of higher-than-expected price and cost inflation, we raised the interest rate. It may be that the combination of the decline in interest rates in 1999 and the brighter international growth outlook, partly reflected in higher oil prices, had an impact on expectations formation that we underestimated.

Today, the krone exchange rate is approximately in the initial range, while inflation is higher than the level aimed at by the ECB. However, the interest rate is oriented towards bringing price and cost inflation down towards this level. If price and cost inflation remains too high, this will translate into a weak and unstable krone exchange rate sooner or later.

## **Conclusion**

In the conduct of monetary policy we have two objectives. First, we have a long-term perspective where building confidence and credibility is important for ensuring nominal stability. Second, the conduct of monetary policy is based on day-to-day discretion. The exercise of this discretion, however, is limited by Norges Bank's mandate and our interpretation of it. Furthermore, we have ourselves contributed to restricting the exercise of discretion by being transparent in our response pattern, our analyses of economic developments and our assessment of the results of the monetary policy that has been conducted. We hope, and believe, that this contributes to consistency over time and makes an important contribution to building confidence and credibility.

Thank you for your attention.

## **References:**

Duisenberg, Willem F. (2000): "Making monetary policy in a broad monetary union", BIS Review 2000/88.

Eitrheim, Øyvind, Espen Frøyland and Øistein Røisland (1999): "Can the price of currency options provide an indication of market perceptions of the uncertainty attached to the krone exchange rate?", Economic Bulletin 3/1999, Norges Bank.

Kloster, Arne (2000): "Estimating and interpreting interest rate expectations", Economic Bulletin 3/2000, Norges Bank.

Storvik, Kjell (1998): "Current economic and monetary policy issues", address given by Kjell Storvik, Governor of Norges Bank at the 43rd annual general meeting of FOREX NORWAY on 28 August 1998.

Svensson, Lars E.O. (1997): "Inflation forecast targeting: Implementing and monitoring inflation targets", European Economic Review 41, pp. 1111-1146.