Norwegian monetary policy

Address by Governor Svein Gjedrem, Copenhagen, 17 November 2000

I am happy to have this opportunity to speak to you here in Copenhagen about trends in the Norwegian economy and about Norwegian monetary policy.

Norway's choice of monetary policy regime is closely linked to the structure of the Norwegian economy. Norway is a welfare society with a large public sector, a high level of transfers to households and enterprises and high direct and indirect taxes. Our economy is also characterised by the great significance of petroleum activities. We have a growing aquaculture industry, and our manufacturing is also partly resource-based. The engineering industry - which is substantial - is partly based on petroleum activities. The exposed sector of the mainland economy has been fragile and vulnerable. A key concern in economic policy since the 1970s has been to avoid undermining the exposed sector too much, in view of our desire to avoid becoming too dependent on petroleum revenues. In this address I will discuss the relationship between the special structure of the Norwegian economy and Norwegian monetary policy. I will attempt to shed some light on certain differences between the Norwegian and Danish economies, and how these differences have influenced the formulation of monetary policy.

Background

Oil production started in the early 1970s and has gradually increased. Forecasts show that production will peak in 2002, and thereafter decrease gradually. Gas production is expected to continue to increase in the years ahead, and will account for a growing proportion of total petroleum production. The long-term forecasts for oil and gas extraction are highly uncertain, and future price movements for oil, market opportunities for gas and production and extraction costs in the petroleum sector are shrouded in uncertainty.

The revenues from the petroleum sector are of great significance to the Norwegian economy as a whole, and to the public sector in particular. In the 1990s, the export value of oil accounted for roughly one third of total exports excluding ships and oil rigs.

Government revenues from petroleum activities are currently extremely high, due to high oil prices coupled with high production volumes. Current projections indicate that petroleum revenues will peak in 2002, and thereafter decline in pace with the production volume and lower oil prices.

Government revenues from petroleum activities have contributed to substantial government budget surpluses in recent years. As can be seen from the chart, considerable surpluses are also expected in the next few years. The amount of petroleum revenues used to finance public expenditure varies from one year to the next. A large portion of the revenues is saved, and is invested in foreign equities and bonds through the Government Petroleum Fund.

Long-term fiscal policy challenges - the role of the Government Petroleum Fund

Nevertheless, the Norwegian economy is facing considerable challenges as a result of an ageing population and a marked rise in pension expenses and in the cost of nursing and care services.

The number of old-age and disability pensioners is estimated to rise by 50 per cent by 2030, and central government expenditure on old-age and disability pensions is expected to increase from approximately 7 per cent of GDP in 2000 to 15 per cent in 30 years' time.

In order to meet these long-term fiscal policy challenges, it is appropriate for resources to be put aside in times of high petroleum revenues. The larger the Petroleum Fund, the less dependent we will be on petroleum revenues in the future.

The Norwegian Ministry of Finance assesses the long-term outlook for public expenditure using generational accounts.[1] Such accounts can be used to assess whether the tax burden will need to be increased in the future to meet the government's long-term social security obligations and to maintain public services and amenities.

The calculations presented by the Ministry of Finance[2] indicate that the generational accounts are more or less balanced. The ministry emphasises the uncertainty shrouding this type of long-term assessment of fiscal policy.

Fluctuations in the oil price and petroleum earnings also create challenges for economy policy in the short and medium term.

Let us suppose that the oil price temporarily increased by USD 1 per barrel. This is a small change, well within normal variations from one year to the next. Government revenues - and thus the budget surplus - would increase by almost 1 per cent of Norway's annual GDP. If the increase in petroleum revenues is used in Norway, it corresponds to almost half of the annual growth in the non-oil economy in a normal year. If the private sector of the economy is also expanding, and the economy is already close to capacity, this policy would swiftly lead to strong pressures on the resources in the economy. This would result in a rise in wages and prices, and would also lead to unstable conditions in the foreign exchange market.

The Government Petroleum Fund shall serve as a buffer against short-term fluctuations in oil revenues. As large portions of the revenues from oil activities accrue to the state, fluctuations in oil prices and oil revenues will primarily result in changes in allocations to the Petroleum Fund. Since all of the capital in the Petroleum Fund is invested abroad, such changes will in principle not influence the level of activity in the economy. This makes the Norwegian economy more robust to fluctuations in oil prices and thus less dependent on oil, even in the short run.

Some of the petroleum revenues are therefore used to finance central government budget expenditure. The portion used by oil companies in Norway, partly to finance investment, also has an effect on the mainland economy.

We can say that oil revenues enter the Norwegian economy through an external and an internal circular flow. The distinction between the external and internal circular flow is important for exchange rate stability. This means, among other things, that short-term changes in oil prices shall not influence the orientation of economic policy. If the distinction between the two circular flows were to break down, and the use of oil revenues were to fluctuate more in step with oil prices, we would have an unstable economy, and hence an unstable exchange rate.

The Government Petroleum Fund thus has two objectives. It serves as a buffer for the mainland economy against fluctuations in oil revenues, and it manages a considerable portion of the government's financial wealth.

In addition to capital outflow from the Petroleum Fund, in recent years there have also been considerable capital outflows from various non-oil sectors. As in other Nordic countries, large asset managers such as life insurance companies and securities funds accumulated substantial holdings of foreign equities and bonds in the latter half of the 1990s. These portfolio investments abroad reflect a desire to diversify risk. The substantial net outflow of long-term capital from the private sector may partly reflect a thin Norwegian capital market. The Norwegian bond market is not very developed and the total value of equities in the Norwegian market in relation to GDP is very low.

Norwegian monetary policy

In the long term, a country's exchange rate tends to move in line with developments in domestic price and cost inflation compared with other countries. If the level of prices in one country rises at a faster pace, that country's currency will tend to depreciate to the same extent over time. Empirical evidence for these effects has been found for a number of countries, although the effects are relatively weak in the short term. However, substantial medium-term convergence in purchasing power parity has also been found between Norway and its trading partners. [3] This means that higher inflation in Norway than in our trading partners has been followed by depreciation of the nominal exchange rate. This is reflected in the fact that the real krone exchange rate has been relatively stable over time.

Movements in the krone exchange rate against the German mark over the past 30 years may serve to illustrate this. In the 1970s and 1980s interest rates were kept low, and they were politically determined. Price and cost inflation was generally higher than that of Norway's trading partners. Frequent devaluations were used to redress the negative effects of high price and wage inflation on competitiveness. The average rate of increase in prices between 1973 and 1987 was almost 10 per cent - twice as high as the level in Germany. The value of the Norwegian krone against the Deutsche mark was nearly halved between 1973 and 1987. We paid about 2 kroner for 1 mark in 1973 and close to 4 kroner in 1987. Since 1987, the krone exchange rate against the Deutsche mark has remained more or less unchanged. During this period, price inflation in Norway has been no higher than that in Germany.

We cannot be sure how fast the inflation differential between Norway and other countries will translate into changes in nominal exchange rates in the future. Nevertheless, we must expect that any differences in the rate of inflation may be a key cause of changes in the nominal krone exchange rate over time.

The Norwegian monetary authorities abandoned the devaluation approach in 1986. From 1986 to 1992 Norway had a fixed exchange rate with a defined central rate and fluctuation margins. This system was abandoned in 1992 following extensive speculation against the krone in connection with the turbulence in European exchange markets. After the krone was allowed to float on 10 December 1992, the guidelines for monetary policy were also revised. Monetary policy was still oriented towards the objective of krone exchange rate stability, but no specific central rate with fluctuation margins was stipulated.

The krone depreciated slightly in 1992, but thereafter it remained relatively stable. Looking back at developments in the Norwegian foreign exchange market in the 1990s, no significant change really appears to have occurred in 1992.

However, there was a marked shift in January 1997. From that time, daily and monthly variations in the krone exchange rate show that the krone is floating. Our analyses suggest that oil price fluctuations are just one of several contributory factors behind the variation in the krone exchange rate in recent years.[4] In the short term the krone exchange rate is also affected by uncertainty in the global economy and turbulence in international financial markets.

The Exchange Rate Regulation - which is the mandate assigned to Norges Bank by the political authorities - states that monetary policy shall be aimed at maintaining a stable krone exchange rate against European currencies. Since 1 January 1999, Norges Bank has defined European currencies as the euro.

The Exchange Rate Regulation takes into account that the krone exchange rate may remain outside its normal range. In the event of significant changes in the exchange rate, Norges Bank shall orient instruments with a view to returning the exchange rate over time to its initial range. The concept "significant changes" is not quantified. The term must be given an economic content. Norges Bank considers an exchange rate change to be significant if it influences expectations concerning price and cost inflation to the extent that the change in the exchange rate may become self-reinforcing.

In its conduct of monetary policy, Norges Bank places emphasis on satisfying the fundamental preconditions for exchange rate stability against the euro: instruments must be oriented with a view to reducing price and cost inflation to the level aimed at by 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.

According to the Maastricht Treaty, the main objective of the ECB is the maintenance of price stability. The ECB has defined price stability as inflation of less than 2 per cent.

Inflation in Norway cannot remain higher than inflation in the euro area year after year without this having consequences for the exchange rate of the Norwegian krone against the euro. If price and cost inflation remains higher than the rate of increase aimed at by the ECB over a long period, our experience indicates that the krone will depreciate against the euro sooner or later. Norges Bank must therefore counter such a development.

There are institutional differences between the Norwegian monetary policy regime and monetary policy in countries with an inflation target.

Norges Bank will inform the government authorities (via the Ministry of Finance) if measures other than those available to the central bank are required in the event that the krone exchange rate cannot be returned to its initial range without creating inflation or a deflationary recession. For instance, in the UK the Bank of England reports to the Treasury if inflation deviates by more than 1 percentage point from the inflation target of 2½ per cent. Other inflation targeting countries have chosen various other reporting arrangements.

The Norwegian system allows economic policy as a whole to focus more strongly on movements in exchange rates. The reason for this is the considerable emphasis placed on the consideration of healthy growth in the exposed sector. This in turn reflects the risk of the Norwegian economy becoming too dependent on oil. In the medium term, growth in the exposed sector is affected to a large degree by the proportion of petroleum revenues included in the Norwegian economy via the government budget.

With large and to some extent varying budget revenues, the basis for determining central government expenditure and taxes from one year to the next may easily be impaired. If budget expenditure is allowed to fluctuate in step with oil prices, the result may be abrupt shifts and instability in the Norwegian economy. Changes in oil prices may then quickly influence wage and price expectations, the exchange rate and long-term rates. In that case it will be very demanding to achieve nominal stability. Short-term interest rates will have to be adjusted frequently and sharply and will generally reflect a high risk premium for the Norwegian krone. It is therefore important that the annual budgets are anchored in a long-term strategy that takes into account that oil revenues can 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. In this way fiscal policy can contribute to ensuring stable operating parameters for the exposed sector. When fiscal policy is given responsibility for stabilisation policy, the government and the Storting have a firmer basis for their annual budget decisions. The political authorities also place emphasis on the fact that by using the fiscal budget to stabilise economic growth, they are able to dampen fluctuations in short-term interest rates. This is important because, for instance, dwellings are to a large extent financed through short-rate loans, and many Norwegians have owner-occupied dwellings.

It is the political authorities, ie the government and the Storting, which formulate the guidelines for monetary policy in Norway. The Norges Bank Act also states that the King makes decisions regarding the exchange rate arrangement for the krone. The Exchange Rate Regulation is based on this provision. The actual conduct of monetary policy is the responsibility of Norges Bank. The Bank has explained its interpretation of the Exchange Rate Regulation, and the Bank's Executive Board makes decisions concerning the use of monetary policy instruments.

Executive and advisory authority is invested in Norges Bank's Executive Board, which consist of the Central Bank Governor, the Deputy Central Bank Governor, and five external members appointed by the government. As in Australia, it is thus a body consisting partly of external members which makes decisions on interest rates. As in Australia and Canada, by law the political authorities have the right to issue instructions to the central bank in matters of special importance. However, this right has never been exercised.

The Norges Bank act requires Norges Bank to inform the ministry when, in the opinion of the Bank, there is a need for measures to be taken by others than the Bank in the field of monetary, credit or foreign exchange policy.

For example, in a scenario with a sharp and prolonged fall in oil prices, the krone exchange rate may remain outside the initial range for an extended period. If Norges Bank responds by raising interest rates in order to force the krone back to its initial range, monetary policy could trigger a recession of a type that will undermine confidence in the krone. Similarly, after an appreciation a situation may arise in which interest rates must be set at such a low level to return the krone exchange rate to the initial range that this results in higher inflation. The basis for exchange rate stability is weakened in both cases. Hence, Norges Bank cannot with open eyes orient policy instruments in such a way that they fuel inflation or lead to a deflationary recession.

If a situation arises where Norges Bank is not able to return the krone to its initial range without such consequences, as already mentioned, the Bank will inform the government authorities that measures other than those available to the Bank are required. This may involve recommendations concerning fiscal measures that make it possible to return the krone exchange rate to its initial range and to stabilise it. In the event of pronounced and prolonged shifts in the economy, fiscal policy and wage determination must contribute to restoring balance in the economy. However, if fundamental and permanent changes have taken place in the framework conditions for the Norwegian economy, it may also be appropriate to consider a revision of the guidelines for monetary policy.

Monetary policy instruments

In theory, Norges Bank conducts its monetary policy through two main instruments: the interest rate and exchange market interventions. However, in Norges Bank's experience, extensive and sustained interventions to influence exchange rates have yielded poor results. Interventions can often lead to game situations in which market operators regard the central bank's attempts to influence the exchange rate as an interesting opportunity to make a profit. Events in autumn 1992, at the start of 1997 and in autumn 1998 show that exchange market interventions cannot stem the pressure on the krone. This is why Norges Bank's primary instrument of monetary policy is the interest rate.

The interest rate is a powerful instrument for influencing cyclical trends, and thus inflation, in Norway. Long-term fixed-rate financing is far less common in Norway than in Denmark, for instance for financing dwellings. As a result, interest rate changes have a greater impact in the relatively short term. However, the strong impact of the interest rate also places constraints on its use to underpin the exchange rate.

The situation in Denmark, with its well-developed bond market, is somewhat different, since here the short-term interest rate has rather less pronounced effects on the real economy and prices, and can therefore be used to a greater extent to underpin the exchange rate. Consequently, a monetary policy strategy in which interventions are used to influence the exchange rate will have greater credibility, and the risk of ending up in game situations with the market is smaller than in Norway.

Norges Bank does not intend to act in a way that will prompt game situations. The bank may nevertheless use interventions to a limited degree if the exchange rate moves significantly out of line with what we consider to be reasonable on the basis of fundamentals or in the event of exceptional short-term volatility in thin markets. In such circumstances, there is less risk of ending up in a game situation against exchange market operators.

We have also experienced game situations in which one or more major operators were behind the krone exchange rate fluctuations at the same time as they took speculative positions in the bond market in the expectation that Norges Bank would raise its key interest rate to defend the krone. If we focus too narrowly on the exchange rate when setting the interest rate, we are liable to end up in a game situation. Speculators have little to gain from such game situations if Norges Bank adopts a gradualist approach and avoids abrupt changes in interest rates.

In practice, the interest rate is therefore the only monetary policy instrument available in Norwegian monetary policy. The interest rate can influence the exchange rate directly through the differential between domestic and foreign interest rates, and indirectly through inflation expectations.

Higher interest rates normally make it more attractive to hold NOK-denominated assets. An increase in the interest rate will result in an appreciation of the krone, and a lower interest rate will weaken the krone. However, this relationship presupposes that the market is confident that monetary policy provides the economy with a nominal anchor. In some situations, interest rate changes may have the opposite effect. A higher interest rate can weaken the krone if it contributes to a deflationary recession, and a lower interest rate can strengthen the krone if it contributes to preventing a deflationary recession. The interest rate only has a predictable effect on the krone exchange rate when it affects price inflation in the right direction.

The interest rate functions in different ways in our two economies. There are also other dissimilarities between the functioning of our respective economies and between our institutional frameworks which may shed some light on the differences between our monetary policy regimes:

- Denmark has a long history of a fixed exchange rate which inspires credibility
- Denmark's membership of ERM II provides exchange rate policy with an institutional anchor
- Denmark has more stable terms of trade than Norway

Moreover, there is strong and well-deserved confidence in the ability of fiscal policy to stabilise economic growth in Denmark.

The most substantial changes in the Norwegian terms of trade are due to fluctuating oil prices. Variations in Denmark's terms of trade are negligible.

In this sense the Norwegian economy has more in common with countries like New Zealand and Australia, which are also large exporters of commodities. A substantial change in the terms of trade translates into considerable changes in these countries' earnings and balance of payments. Over the years this has resulted in sizeable exchange rate fluctuations.

The exchange rate is a buffer against changes in the terms of trade. While a country like Denmark has maintained a stable exchange rate, commodity-producing countries typically experience fluctuations in the exchange rate in tandem with changes in the terms of trade.

In New Zealand, Australia and many other countries monetary policy is oriented directly towards price stability, and these countries permit short-term fluctuations in the exchange rate. This means that monetary policy bears the primary responsibility for price stability, whereas fiscal policy is to a greater extent oriented towards long-term stability in government finances.

In Norway, the Government Petroleum Fund acts as a buffer against fluctuations in petroleum revenues. This makes the Norwegian economy more robust and in the short term less dependent on oil, at least as long as the government budget is running a substantial surplus. The Government Petroleum Fund is Norway's most important shock absorber against shifts in the terms of trade. This explains why we have had far greater exchange rate stability than New Zealand or Australia.

For the past 15 years, cyclical trends in Norway have been desynchronised in relation to other European countries. Because of the stagnation in the 1990s, inflation has been particularly low in Europe in recent years. Norway, on the other hand, experienced a long period of economic expansion in the 1990s. Since 1997, price inflation in Norway has been higher than in the euro area countries. This is reflected in the higher level of interest rates in Norway compared with the euro area. Even if instruments are oriented with a view to stability in the krone exchange rate against the euro, cyclical differences will result in inflation differentials between Norway and euro area countries.

This year we have seen a tendency for the krone exchange rate against the euro to be strong at times. This is due in part to the weakness of the euro, not least against the US dollar and the Japanese yen. On the other hand, the effective krone exchange rate - the krone exchange rate measured against an average of our trading partners' currencies - has not been particularly strong. If Norges Bank were to respond to this situation by using the interest rate to attempt to fine-tune the krone exchange rate against the euro in the short term, this would lead to higher price and cost inflation. This would lay the foundation for subsequent instability in the krone exchange rate.

The orientation of monetary policy in the past year (and in the future)

Projections of future inflation and macroeconomic developments play an important part in the orientation of monetary policy. Norges Bank's projections are published in quarterly Inflation Reports, which provide an overview of recent price trends and factors influencing price and cost inflation. These Inflation Reports contain a review of the outlook for the Norwegian economy, and the Bank's projections of inflation with a two-year horizon. Norges Bank's assessments are summarised in a leader in each report.

If the Bank's inflation projections, for a given interest rate scenario, do not approach the level of inflation aimed at by the euro area countries at a two to three-year horizon, this will constitute grounds for adjusting interest rates. This system has similarities with what Lars Svensson terms "inflation forecast targeting".

In recent years we have attached importance to contributing to a transparent monetary policy. This is in keeping with trends in many other countries. Transparency promotes predictability in the behaviour of the central bank and helps diminish uncertainty for all participants in the economy. It is our hope that in this way the Norwegian economy will be less exposed to doubt and speculation concerning the setting of interest rates, with attendant greater stability in the formation of expectations and smoother movements in long-term interest rates. We aim to create a pattern of continuity and consistency in the implementation of monetary policy.

Developments in financial indicators do not indicate that there is great uncertainty in the markets regarding developments in the internal and external value of the Norwegian krone. For instance, developments in bond yields show that the risk premium has been relatively stable in recent years. The pricing of the Norwegian krone in the options market indicates that substantial uncertainty with regard to movements in the value of the krone against the euro is not factored into the price of options.

Norges Bank's Executive Board engages in a broad discussion of monetary policy every six weeks. Any decisions concerning interest rate changes or other important changes in the use of monetary policy instruments are normally taken at these meetings. Monetary policy decisions made by the Executive Board (be they decisions to change key rates or to leave them unchanged) are announced in press releases at 2 pm on the day of the meeting. Monetary policy decisions usually include a statement of bias, ie the probability that the next change in interest rates will be an increase or a reduction. At the same time as the press release, a press conference is held at which a more detailed account of the background for the decision is given.

On 20 September this year, Norges Bank decided to increase its key interest rate, the deposit rate, by 0.25 percentage point to 7 per cent. This has brought the overall increase in interest rates this year to 1.5 percentage points. This has happened in a climate of interest rate rises in other countries and a relatively weak effective krone exchange rate. Moreover, the past year has seen increased risk that price and cost inflation may remain considerably higher in Norway than in other European countries. Norges Bank had no choice but to counter this, in order to satisfy the fundamental preconditions for exchange rate stability. This is why the Bank has raised its key rates.

I would like to conclude by once again thanking you for inviting me to give this account of the basis for Norwegian monetary policy.

Footnotes:

[1] See Auerbach et al (1993).
[2] See Report to the Storting no. 1 (2000-2001), the National Budget for 2001.
[3] See Akram (2000).
[4] See Bernhardsen and Røisland (2000).

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