Monetary policy in Norway

Governor Svein Gjedrem, The Royal Norwegian Embassy, London, October 28, 1999

Introduction

Ambassador, ladies and gentlemen, I am happy to have this opportunity to speak to you about monetary policy in Norway. What happens in the financial community in London is important to the Norwegian economy: the financial markets here provides substantial loans for Norwegian firms, and are at the same time an important recipient of Norwegian financial investments. Short-term capital movements between UK and Norway are also important. Against this background, I would like to share with you information about the Norwegian economy. My focus will be on explaining distinctive aspects of the Norwegian economy, which is based largely on a limited number of commodities. My hope is that this understanding may help market operators to make informed decisions when dealing with Norwegian markets.

Background

Trend GDP growth in the Norwegian mainland economy is about 2-2¼ per cent, and the inflation rate is around 2 per cent. GDP per capita is slightly higher than in most other European countries. The high level of per capita income is partly a result of extensive revenues from oil and gas extraction. These revenues also allow Norway to operate with a substantial current account and government budget surplus.

Extraction of North Sea oil started in the 1970s, and the production volume has increased over the years. The petroleum sector employs only a small part of the total labour force, but brings in substantial revenues. A main question for Norwegian economic policy is therefore how to stabilise the Norwegian economy in the face of high, fluctuating revenues from the petroleum sector.

The importance of the petroleum sector

Some figures will illustrate the importance of the petroleum sector in the Norwegian economy. Oil production started in the 1970s and has gradually increased. Given the current estimates for existing resources, production is expected to be at its maximum level between the years 2000 and 2010, and then decrease gradually as the remaining resources are reduced. The level of future oil production is highly uncertain.

Employment in the petroleum sector and related industries is only around 4 per cent of total employment. Investment in the petroleum sector has been substantial compared to investment in the rest of the economy, and as a share of GDP.

Investment has an import share of about 1/3, which means that investment relating to the petroleum sector has had a substantial effect on industries in mainland Norway.

The income from petroleum extraction is of substantial significance to the Norwegian economy and to the public sector in particular. In the 1990s the export value of oil has been around 1/3 of total exports excluding ships and oil rigs .

The petroleum sector is an important source of revenues for the government, both through taxes and through direct government ownership.

Projections indicate that revenues will remain at about the same level until around 2008, when they are expected to gradually decrease as petroleum production declines.

The Norwegian government runs a budget surplus including petroleum revenues.

The columns show the budget surplus (or deficit), excluding petroleum revenues. The line represents total net government surplus, which is transferred to the Government Petroleum Fund. The surplus also includes yields on Fund investments. We note that the amount of petroleum income used to finance public expenditure varies from year to year, while a large portion of the income is saved.

Oil prices and hence petroleum revenues fluctuate over time.

After a period of high prices in the 1970s, when OPEC first demonstrated its power, and the early 1980s, oil prices have been fairly stable.

Focusing on the last 15 years, somewhat larger fluctuations have been observed since 1997. In 1998 the price of oil dropped temporarily below $10 per barrel. This year the price has increased substantially above the $15 to $17 a barrel price range that we consider a more "normal" level.

Fluctuating oil prices and economic stability: Dutch disease and the Government Petroleum Fund

Oil revenues increase consumption possibilities. However, it is a challenge to manage these resources in a way that increases welfare for current and future generations. A rapid expansion of the sheltered sector based on uncertain and perhaps temporary increases in petroleum revenues may lead to the situation called Dutch disease.

The impact of oil price fluctuations on the exchange rate and on economic stability in general will depend on the speed at which petroleum revenues are used. In general, income can either be used now, or saved by accumulating assets abroad, so as to redistribute the increased income and thus consumption between generations. The income can be used to increase net imports while resources from the internationally exposed sector are transferred to the sheltered sector. This will allow for increased consumption of both exposed and sheltered sector goods. If petroleum revenues are to be used for increased sheltered goods consumption, a real exchange rate appreciation will be needed to initiate the reallocation of resources to the sheltered sector. The extent of the reallocation will depend on how fast the revenues are used and how much is saved for future consumption.

Suppose, as one extreme, that all income entering the government budget were used in that same period. This means that an increase in the oil price would increase government income and domestic demand, encouraging a reallocation of resources from the exposed to the sheltered sector. If the oil price fell again later, Norway would be left with an exposed sector that is too small, resulting in a current account deficit and expectations of an exchange rate depreciation that would be needed to restore the exposed sector.

Such fluctuations in the use of oil revenues would lead to considerable instability in the Norwegian economy and large fluctuations in the exchange rate over time. Norwegian economic policy is organised to counteract such instability.

The key issue is to prevent increased petroleum revenues from leading directly to increased government consumption, in other words to reduce the dependence of government spending on oil revenues. The share of government spending financed by oil revenues varies over the business cycle. For the past few years this share has averaged around 3 per cent and it is expected to be kept at about that level over the coming years. To this end, Norway has created the Government Petroleum Fund, which receives revenues from the petroleum sector, transfers the amount necessary to produce a balanced government budget and invests the surplus abroad. As long as the increase in petroleum income is kept outside the domestic economy, there will be less need for structural change and thus less need for exchange rates to change.

The Petroleum Fund serves many purposes. It is a means of storing wealth and redistributing income from oil extraction between generations, of buffering against changes in oil prices, and of facilitating demand management. Thus, the Fund facilitates the fiscal policy tasks of maintaining the desired size of the exposed sector and stabilising the economy.

North Sea oil and gas reserves are part of Norway's economic wealth. Extracting the oil and allocating the revenues to the Petroleum Fund is a way of transforming this wealth into financial assets abroad. The purpose of accumulating capital in the Fund is to redistribute petroleum revenues between generations and ensure the long-term stability of state finances. The larger the Fund, the less dependent Norway will be on petroleum revenues in the future, and the more prepared we will be to meet the challenge of an ageing population.

Furthermore, the Petroleum Fund acts as a buffer against short-term variations in petroleum revenues by separating the cash flow from oil extraction from current expenditure. Since a large share of the revenues from petroleum activities accrues to the state, any fluctuations in oil prices will primarily result in changes in allocations to the Fund. Since all of the Fund's capital is invested abroad, such changes will in principle not influence economic activity. This makes the Norwegian economy more robust to oil price fluctuations, thereby reducing oil dependence in the short term.

To illustrate the importance of the buffer function, let us assume that the oil price shows a temporary rise of NOK 10 per barrel, or a little less than USD 1.50 per barrel, lasting for about a year. This is a small change in the oil price, well within normal variations from one year to the next. Government revenues - and hence the budget surplus - would then increase by around NOK 10 billion in the first year and NOK 12-13 billion the next year. This corresponds to around 1 per cent of Norway's annual GDP. By comparison, annual trend growth in the mainland economy is slightly over 2 per cent. Note that a price increase on the margin will be reflected mainly in an increase in government revenues and will have limited effect on private sector incomes. This means that the effect of the price increase on the Norwegian economy depends on how the government spends the additional revenues. If they are absorbed into the economy through higher expenditure or reduced taxes, when the economy is already nearing capacity, such a policy would rapidly lead to substantial pressures on resources in the economy. This would translate into an acceleration of wage and price inflation and unstable conditions in the foreign exchange market. The Petroleum Fund is designed to channel the revenues resulting from an increase in the oil price to the Fund for investment abroad, in order to prevent an increase in oil prices from influencing the budget. The increased revenues would thus not have an impact on the domestic economy, but be invested abroad through the Petroleum Fund.

The current account balance and government budget surplus show that Norwegian consumption has adjusted to petroleum wealth by increasing net imports and by maintaining a budget deficit excluding petroleum revenues. At the same time some of the wealth is saved abroad to redistribute income between generations. This means that there has already been a gradual resource reallocation from the exposed to the sheltered sector. As long as consumption is fairly well adjusted to the expected level of the petroleum wealth, there may not be a need for substantial exchange rate movements in the near future to achieve further adjustment.

Stability of the Norwegian krone

Let us turn to the stability of the krone. People in the banking industry often suggest that the krone is a petro currency fluctuating widely with the price of oil. Is this the case, or has stabilisation policy been successful in Norway so far?

Looking at the data, we note that the krone exchange rate has been fairly stable over time. Since 1986 the authorities have focused on stability of the krone exchange rate. From 1986 to 1992 Norway had a fixed exchange rate system with a defined central rate with fluctuation margins. This system was abandoned in 1992 after extensive speculation against the krone during the period of unrest in European exchange markets. Following the decision to allow the krone to float on 10 December 1992, the guidelines for monetary policy were revised. Monetary policy was subsequently oriented towards exchange rate stability, but without stipulating a central rate with fluctuation margins.

The krone depreciated slightly immediately after the crisis, but then remained stable without extensive use of Norges Bank's instruments. Since 1996, the exchange rate has fluctuated more widely. There may be several reasons for this. During part of this period, the government budget has not contributed sufficiently to smoothing growth in domestic demand and production. Wage inflation in 1997 and 1998 was higher than in other countries. Turbulence in international financial markets has also had an important contagion effect on the krone. In addition, oil revenues have fluctuated, which may have affected investors' expectations regarding future developments in the Norwegian economy.

The pressure against the krone exchange rate was particularly strong in the autumn of 1998. The crisis, first in Asia and later in Russia, led to considerable turbulence in international markets. At the same time, pressure in the labour market led to high wage increases, while the current account was negatively affected by a fall in export prices, combined with increases in imports. All in all, these factors contributed to creating depreciation expectations. Thus, fluctuations in oil prices represent only one of many causes of exchange rate variability over the past few years.

Monetary policy is aiming at exchange rate stability. The krone exchange rate depreciated gradually through the first half of 1998, and in August there was a strong pressure against the krone. Norges Bank responded by increasing its key rates seven times through 1998, with a total of 4 ½ percentage points. After the last interest rate increase, in August 1998, the interest rate on banks' deposits in Norges Bank was 8 per cent. The strong increase in interest rates was not sufficient to bring the exchange rate back to its initial range. However, Norges Bank evaluated that further interest rate increases would not lead to a further appreciation of the krone, as a higher interest rate might contribute to a recession and thereby destabilise the economy. This would not be a credible monetary policy.

In 1999 the economy has been cooling off, wage settlements have been moderate, and oil prices have increased again. The krone has returned to its initial range, while interest rates have been cut by a total of 2.5 percentage points this year, by 0.5 percentage point each time. The last cut was on 22 September, when the interest rate was reduced to 5.5 per cent.

Since 1992 the nominal value of the krone has remained close to the same level. Moreover, the average inflation rate in the 1990's has been 2 ¼ per cent, indicating real exchange rate stability. Thus, the exchange rate has been surprisingly stable in the face of fluctuating oil revenues.

We can conclude that the exchange rate has been fairly stable over a long period. However, developments in recent years indicate that Norges Bank cannot fine-tune movements in the krone exchange rate. Norges Bank will therefore focus on factors determining long-term exchange rate stability.

The mandate

Let us turn to the mandate for monetary policy and how Norges Bank interprets its role and responsibilities. The political authorities formulate Norges Bank's mandate for the conduct of monetary policy. The mandate is laid down in the Exchange Rate Regulation, adopted by Royal Decree of 6 May 1994. Section 2 of the Regulation states:

"The monetary policy to be conducted by Norges Bank shall be *aimed at* maintaining a stable 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, policy instruments will be oriented *with a view to* returning the exchange rate *over time* to its initial range. No fluctuation margins are established, nor is there an appurtenant obligation on Norges Bank to intervene in the foreign exchange market" (my italics).

The first sentence in the Regulation indicates that we have a managed float of the krone, based on the range of the exchange rate maintained since the krone was floated in December 1992. Instruments are to be oriented towards maintaining a stable krone exchange rate against European currencies. Norges Bank has chosen to define the term *European currencies* as the euro from 1 January 1999.

The Regulation does not stipulate a central rate with specific fluctuation margins. Norges Bank interprets the concept *initial range* as a broad indication of a central rate around which the krone can fluctuate.

The second sentence refers to *significant changes* in the exchange rate in relation to the initial range. It is important to note that the concept *significant changes* is not quantified. *Significant* must therefore be given an economic content. A reasonable interpretation is that a *significant change* is a change that influences expectations concerning price and cost inflation to the extent that changes in the exchange rate become self-reinforcing through a wage-price spiral.

The expressions *with a view to, over time, aimed at* and *based on* also show that Norges Bank has considerable latitude for exercising discretion.

The instruments

Monetary policy is conducted through two main instruments - exchange-market interventions and the Bank's key interest rates. Interventions influence the supply of kroner in the exchange market. A change in interest rates influences both conditions in the exchange market and total demand and production. Monetary policy may thus influence price and cost inflation through both these channels.

In Norges Bank's experience, extensive exchange-market interventions have yielded poor results. If the central bank intervenes heavily to defend the krone, this may evolve into a game situation in which market participants perceive central bank interventions as an interesting opportunity to make a profit. Market agents know that a situation in which the krone is being propped up because Norges Bank is intervening cannot be sustained. It is then tempting to take positions in the foreign exchange market against the central bank. This implies that heavy interventions may intensify the pressure on the krone over time, steadily increasing the necessary volume of interventions. If market participants assume that Norges Bank will use the interest rate to defend specific exchange rate levels, this may lead to a similar game situation.

Norges Bank does not intend to behave in a way that will prompt such game situations. However, the Bank may use interventions to a limited extent if the exchange rate moves substantially 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 agents.

Norges Bank's most important instruments are its two key rates - the interest rate on banks' deposits and the overnight lending rate. Experience shows that the central bank's key rates have a fairly substantial impact on money market rates at the very short end of the market, ie overnight and one-week rates. The effect on interest rates on financial instruments with longer maturities is not as direct. Here, expectations concerning the central bank's course of action and general confidence in monetary policy play a role, as does the level of very short-term rates.

Money market rates influence the krone exchange rate directly through the return that can be achieved on krone positions, but also indirectly through the effect on the outlook for the real economy and price and cost inflation in Norway. A higher interest rate will, therefore, normally result in an appreciation. Both the appreciation and the interest rate increase will lower demand. The appreciation will also in itself lead to lower inflation on imports, while lower demand will reduce the general inflation level.

Over time both the inflation rate and the activity level will influence the exchange rate. Thus, Norges Bank needs to exercise discretion in monetary policy by considering the effects of interest rate changes not only directly on the exchange rate, but also on the rest of the economy, and to focus on the fundamental conditions for exchange rate stability over time.

Exercising discretion in monetary policy

The mandate stipulates the objective of monetary policy, but Norges Bank has to choose how to achieve the objective. As shown, the krone exchange rate has fluctuated in recent years in spite of Norges Bank's active use of instruments, indicating that Norges Bank cannot fine-tune movements in the krone exchange rate.

The exchange rate will also in the future be influenced by factors that are not under the control of Norges Bank, like fluctuations in international financial markets, the evolution of the price of oil, fiscal policy, and developments in domestic prices and costs. Thus, in its use of the interest rate Norges Bank focuses on the preconditions for stability of the krone exchange rate over time.

The interest rate affects the exchange rate directly through returns on holding kroner, but also indirectly through the effects of the interest rate on inflation and output. More specifically, stability of the exchange rate requires that:

1. Price and cost inflation must be brought down to the level aimed at by euro countries.
2. Monetary policy must not in itself contribute to deflationary recessions, as this would undermine confidence in the krone .

Let me explain in more detail. Suppose that price and cost inflation in Norway were allowed to be higher than in the euro countries. The nominal exchange rate would then have to depreciate in order to keep the real exchange rate constant over time. Thus, stabilising inflation at around the level aimed at by the ECB is a means of achieving exchange rate stability against the euro.

In a situation with the prospect of increased inflationary pressure and a depreciating exchange rate, an increase in the interest rate may at the same time bring the exchange rate back towards its initial range and reduce inflationary pressure through lower demand and lower imported goods inflation. This in turn will contribute to long-run stability in the exchange rate. Similarly, with an appreciating exchange rate and a low inflation and activity level in the economy, a lower interest rate will contribute to stabilising the exchange rate in both the short run and the long run through a stable inflation level.

On the other hand, we can think of situations where we would need to set a high interest rate in order to keep the exchange rate close to the initial range in the short run, creating a deflationary recession in the economy. Normally, a deflationary recession will lead to a weakened krone exchange rate, which means that the high interest rate set to keep the level of the exchange rate unchanged in the short run in itself will induce exchange rate instability in the long run. Similarly, the opposite situation may occur, where a low interest rate is required to keep the exchange rate stable in the short run, creating inflationary pressure in the economy. In both situations, however, a policy aimed at stabilising the exchange rate in the short run will weaken the basis for exchange rate stability over time. Hence, Norges Bank cannot with open eyes set interest rates to levels where monetary policy in itself contributes to a higher inflation or a deflationary recession, which would undermine the confidence of the krone.

If price and cost inflation is in line with the level aimed at by the euro countries, one of the fundamental conditions for exchange rate stability is satisfied. In spite of this, the exchange rate may be perceived as "too strong" or "too weak" in relation to the initial range. This may be due to conditions in the real economy, which could imply a real appreciation or real depreciation of the krone. The background for such changes in the exchange rate may be that the cost competitiveness of Norwegian industry has to be adjusted and that the equilibrium range of the krone exchange rate has changed. In this situation Norges Bank should carefully evaluate the reasons for exchange rate movements. If we have reason to believe that the exchange rate will remain permanently strong or weak, Norges Bank will inform the authorities that measures other than those available to the Bank are required.

We note, however, that the present exchange rate level has more or less prevailed for more than ten years. On the basis of its analyses, Norges Bank does not find grounds for regarding this level as inappropriate.

How does the Norwegian regime differ from inflation targeting?

Price stability is an important part of long-term exchange rate stability, and the setting of interest rates will often be the same whether the goal is exchange rate or inflation targeting. However, Norwegian monetary policy differs in some respects from monetary policy in countries with an inflation target.

1. Norway has a long tradition of co-operation between the political authorities and social partners. Income and wage determination is fairly centralised, and the social partners evaluate the effects of wage outcomes on employment.

2. In a number of countries that have switched to a monetary policy regime based on inflation targeting, fiscal policy is oriented towards reducing government debt and deficits. A passive fiscal policy implies that in practice monetary policy assumes a greater role in stabilising the economy. In Norway fiscal policy has an important role in demand management. The fulfilment of this task is facilitated by the fact that the Norwegian government has greater financial leeway than most other countries due to its oil revenues. Fiscal policy has been fairly well adapted to the economic situation over the last decade. The active role it has played in demand management has functioned as an anchor for fiscal discipline.

   The Government Petroleum Fund is meant to be a buffer against changes in the terms of trade. In other countries this role must be filled by the exchange rate.
3. Monetary policy in Norway is oriented towards stability of the exchange rate and not an explicit inflation target. The setting of interest rates will more or less be the same. Norges Bank focuses on keeping a low rate of inflation and on avoiding a situation in which monetary policy in itself contributes to a recession that may threaten the fundamental conditions for stability of the krone.
4. The institutional set-up for monetary policy in Norway is different. In a country with inflation targeting, the central bank will inform the political authorities if the inflation target is not met. In Norway, Norges Bank will inform the authorities that measures other than those available to the Bank are required if a situation arises where we are unable to return the exchange rate to its initial range without causing inflation or a deflationary recession. This implies a greater focus in the conduct of fiscal policy on factors that influence the exposed sector of the economy. This is consistent with our concern that the economy may run into a Dutch disease.

Economic developments

From looking at the principles of Norwegian economic policy, let us turn to Norges Bank's view of the current situation. The high and steady rate of growth from 1992 and onwards has been moderated this year. The overall picture indicates that the exchange rate is stable, while the economy is showing signs of cooling off.

Each quarter Norges Bank presents an inflation report with an assessment of the outlook for the Norwegian economy and for price inflation for the next two years. The projections in the Inflation Report provide a basis for the Bank's conduct of monetary policy.

The Inflation Report published in September indicates that price and cost inflation in Norway will gradually slow to the level aimed at in the euro area. Among other things, this is based on the assumption that growth in public expenditure will be approximately in line with the trend rate of growth in the mainland economy.

For 1999 Norges Bank expects a growth rate of ½ per cent. Growth is anticipated to be low also next year and approach trend growth in 2001. Demand growth could be higher than expected, which would contribute to maintaining the pressure in the labour market. Employment is still high and near capacity level, while we see a tendency towards higher unemployment in sectors such as the construction and engineering industries.

Inflation is expected to remain at around 2 per cent for the next two years, with inflation rates of 2¼ per cent this year, 2 per cent next year and 1¾ per cent in 2001.

Chart 14 shows the key technical assumptions underlying Norges Bank's projections. Short-term interest rates are assumed to move in line with market expectations, as reflected in forward rates in September (Chart 15). According to market expectations, the differential against European rates will narrow from the current level of a little more than 3 percentage points to around 1 percentage point at the end of 2001. The krone exchange rate is assumed to be NOK 8.30 against the euro throughout the projection period.

Developments, as indicated by Norges Bank's analyses, imply that there is little room for further decreases in interest rates. It is more likely that the next change will involve a reduction rather than an increase. If developments are in line with expectations, any further reduction will, however, be smaller than the reductions implemented so far.

Norges Bank has changed its procedures this year. The goal is to achieve predictability and transparency. Each month the Executive Board of the Bank discusses monetary policy. The dates for the monthly meetings are announced ahead of time. Changes in interest rates will normally be decided at these meetings. After each meeting there is a press release at 2 pm and a press conference at 4 p.m.

The quarterly Inflation Report presents analyses that provide a basis for the Bank's conduct of monetary policy.

Additional information from Norges Bank in English, such as articles and speeches, is available on Norges Bank's web site www.norges-bank.no.

Conclusions

Oil and gas provide substantial wealth for the Norwegian economy, while fluctuations in the price of oil give rise to variations in the value of this wealth.

Norwegian economic policy is organised so as to maintain stability in the face of these variations.

Fiscal policy carries a responsibility for stabilising the real economy, while monetary policy is aiming at price stability and preventing a deflationary recession with a view to maintaining exchange rate stability over time.

Changes in the price of oil may influence expectations about future economic development in Norway independently of how much of the petroleum revenues are absorbed into the economy in the short run. However, successful use of the Petroleum Fund will provide financial leeway for an active stabilisation policy, the redistribution of wealth between generations and to a large extent protect the Norwegian economy from oil price fluctuations.