Svein Gjedrem: Monetary policy and the krone exchange rate

Address by Mr Svein Gjedrem, Governor of Norges Bank (Central Bank of Norway), at the Annual Meeting of ACI Norge - The Financial Markets Association, Oslo, 26 August 2004.

The text below may differ slightly from the actual presentation. The address is based on the assessments presented at Norges Bank's press conference following the Executive Board's monetary policy meeting on 11 August, Inflation Report 2/04 and on previous speeches.

The Charts in pdf-format can be found on the Norges Bank's website.

*   *   *

In most countries, price stability, or low and stable inflation, is the objective of monetary policy. The historical experience of Norway and other countries shows that high and variable inflation results in considerable fluctuations in output and employment. In addition, a fall in the level of prices could easily accompany a period of decline.

The first explicit inflation target was introduced in New Zealand in 1990. Canada followed in 1991, the UK in 1992, and Sweden and Australia in 1993. Norway introduced inflation targeting in the spring of 2001. Approximately 20 countries currently use inflation targeting in their monetary policy.

In this context, I would like to mention that the central bank of Sweden was able to draw on its own experience from the 1930s when it sought to motivate and firmly establish inflation targeting during the 1990s. Admittedly, Sweden did not have an inflation target but a price target for monetary policy in the period 1931-1937. At that time, the concept was inspired by the work of Knut Wicksell 30 years earlier. As early as in 1898, Wicksell argued that price stability should be the central bank's objective.[1]

The conduct of monetary policy

In Norway, the inflation target is set at 2½ per cent.

Norges Bank operates a flexible inflation targeting regime, so that weight is given to both variability in inflation and variability in output and employment. In the long term, there is no conflict between low and stable inflation and stability in the real economy. On the contrary, price stability will be a precondition for high and stable output and employment over time. However, in some periods, there may be disturbances that create conflicts in the short term.

The point of departure for the monetary policy strategy ahead is the very low level of inflation at present. It has been lower than the inflation target since the autumn of 2002. The aim of monetary policy is higher inflation. Therefore, the interest rate is low.

Monetary policy influences the economy with long and variable lags. Norges Bank sets the interest rate with a view to stabilising inflation at the target within a reasonable time horizon, normally 1-3 years. The more precise horizon will depend on disturbances to which the economy is exposed and how they will affect the path for inflation and the real economy ahead.

The economy grows over time. Output will in some periods lie above and in others below the long-term trend.[2] Stabilising output means seeking to maintain actual output near trend.

There is one main monetary policy instrument: the interest rate. The interest rate is set with a view to achieving low and stable inflation, while at the same time seeking to avoid substantial variations in output and employment.

In recent years, household income has shown solid growth, and household confidence has been high. High growth in labour costs over a number of years, the cyclical downturn in the world economy and a strong krone in periods resulted in deteriorating profitability in many companies. Employment and

---

[1] Berg, Clas and Lars Jonung (1998): "Pioneering Price Level Targeting: the Swedish Experience 1931-37", *Conference on Monetary Policy Rules, Stockholm, 12-13 June 1998.*

[2] Trend growth has been used as a rough estimate of potential output. Potential output is the level of output that is consistent with stable inflation over time.

investment fell. The level of household borrowing is high, while enterprises have reduced debt. High debt growth increases the vulnerability of households to economic disturbances.

Wage growth has slowed now and the krone has depreciated. A turnaround is taking place in corporate earnings and there are also signs of this in investment and credit demand.

The interest rate can be used to reduce credit demand. At present - with low interest rates abroad and a close relationship between domestic interest rates and the krone - a tighter monetary policy would curb credit demand primarily because a stronger krone would reduce job security.

A flexible inflation targeting regime reduces the possibility of exposing households to a dual shock in the form of higher unemployment and higher interest rates, as was the case at the beginning of the 1990s. If the economy is exposed to disturbances that can lead to higher unemployment, inflation will normally decline and interest rates will be lowered.

A flexible exchange rate

An important channel for monetary policy in a small, open economy is the foreign exchange market and the exchange rate.

The krone fluctuates. This is not surprising because other countries' currencies also fluctuate. The krone exchange rate is the price of our currency measured in a foreign currency. Developments in other countries are just as important for the krone as developments in the Norwegian economy. Capital flows freely and flows can change rapidly. This can spill over to exchange rates and interest rates as well as output and employment.

The chart shows the effective exchange rate for Norway and a number of other small countries with inflation targeting. Exchange rate fluctuations are approximately the same for Norway, Sweden and Canada, whereas the krone exchange rate fluctuates less than the exchange rate for Australia and New Zealand. Therefore, the krone does not stand out as particularly unstable compared with other countries' currencies.

The forward exchange and options markets have expanded in recent years. A deeper market reduces transaction costs and it is easier to find counterparties. This has provided companies with greater scope for hedging against exchange rate risk. Instruments that reduce the risks associated with a floating krone are increasingly being used, also in Norway.

Hedging against fluctuations in the krone involves costs for businesses. A krone that is stable - but too strong - also entails costs to the economy in the form of low activity. Similarly, a krone that is stable - but weak - is a source of high inflation.

Petroleum revenues generally provide substantial, but uneven currency inflows into Norway. The currency flows might have resulted in a strong krone and large variations in the exchange rate. This tendency is countered, however, when the annual use of petroleum revenues over the central government budget is predictable and independent of annual revenue flows, and the remaining revenues are saved and invested abroad.

The capital outflows through the Government Petroleum Fund contribute to both curbing the appreciation of the krone and maintaining its stability.

Higher oil prices have resulted in higher current account surpluses. In isolation, this contributes to strengthening the krone. However, higher surpluses are being offset by higher long-term capital outflows through the Government Petroleum Fund. In addition, the oil companies primarily invest their cash surplus abroad. Foreign trade figures indicate that mainland imports have increased sharply in recent months. This increases demand for foreign currency.

As mentioned, the Petroleum Fund acts as a buffer against the wide fluctuations in the krone exchange rate that petroleum revenues could have generated. An increase in petroleum revenues will result in higher capital outflows from the Petroleum Fund. Operators in the foreign exchange market may at times have a tendency to underestimate this stabilisation mechanism. The increase in oil prices has increased the need for allocations to the Government Petroleum Fund, and in July Norges Bank resumed its daily purchases of foreign exchange for the Petroleum Fund. This comes in addition to the regular transfers of profit from the State's Direct Financial Interest in petroleum activities (SDFI) to the Petroleum Fund, which are to be invested abroad.

Higher oil prices mean higher revenues for the oil companies. International and Norwegian oil companies with activities in Norway increase their capital outflows when profits increase. Thus, in the short and medium term, cumulative profits in the petroleum sector do not generate substantial krone holdings in the domestic economy. It is possible to define a "basic balance"[3] in the external account that is found by subtracting the capital outflows from the Petroleum Fund from the current account balance. The basic balance is not affected by fluctuations in oil prices and the currently high price level when the central government's use of petroleum revenues follows a long-term guideline, but it is weakened by the increase in imports.

When the monthly allocations to the Petroleum Fund are larger than the foreign exchange transfers from Petoro (SDFI), Norges Bank will purchase foreign exchange in the market to cover the difference. The Ministry of Finance determines the amount of the monthly transfers to the Petroleum Fund on the basis of its estimates in the National Budgets and the Revised National Budgets. The Ministry may also adjust the amount on the basis of new information concerning, for example, developments in oil prices. Given the current high level of oil prices, purchases in the next few months will probably be considerably larger than they have been during the summer.

Norges Bank has not defined a target for the exchange rate. Nevertheless, developments in the krone are of considerable importance to interest-rate setting because the exchange rate influences inflation and output.

Portfolio investments may easily dominate movements in the krone exchange rate in the short term. Themes in foreign exchange markets shift. In periods, investor focus on stock returns feeds through to exchange rate movements. During periods of political and economic unrest, investors may choose individual currencies as a safe haven - often the Swiss franc. The Norwegian krone was probably also perceived as a safe haven when oil prices rose in the autumn of 2002 as a result of the uncertainty concerning a possible war in Iraq.

In the period from March to May 2003 and throughout the autumn, the krone showed a tendency to appreciate. This partly reflected lowered market expectations concerning an interest rate increase abroad and expectations that interest rates might rise earlier in Norway than in other countries. Changes in the krone resulted in unintended tightening of monetary policy. This trend was reversed, however, by low inflation figures and reductions in the interest rate. The interest rate reduction was probably of considerable importance as it eliminated the excess return on NOK investments.

The krone, measured by a broad index (I-44), appreciated again markedly from mid-February 2004 to the first half of May. After that, the krone depreciated through June. The publication of lower-than-expected consumer price figures for May contributed to weakening market expectations of an increase in interest rates in the near future, and the krone depreciated. After the monetary policy meeting on 1 July, the krone was stable for a long period, but since then it has fluctuated in line with changes in oil prices.

Past experience shows that the krone is at times heavily influenced by developments in the interest rate differential between Norway and other countries. This is given weight in interest-rate setting. However, as mentioned, themes in foreign exchange markets shift, and Norges Bank does not have instruments to fine-tune the exchange rate.

Normally, Norges Bank will not intervene in the foreign exchange market in order to influence the exchange rate. Exchange market interventions, either buying or selling foreign currency, are not suitable as an instrument for influencing the krone exchange rate over a somewhat longer period. If Norges Bank intervenes in the foreign exchange market instead of changing the interest rate, foreign exchange market participants may receive ambiguous signals, and complicated game situations may arise between the market participants and the central bank. However, interventions may be appropriate if the krone exchange rate differs substantially from what is reasonable on the basis of fundamentals, and exchange rate movements also reduce the prospect of achieving the inflation target.

Although the krone may fluctuate in the short term, it will tend to stabilise over time when inflation is low and stable. When inflation has been higher in Norway than among our trading partners for a longer period, the krone has tended to depreciate. When inflation in Norway is expected to be broadly

[3] The basic balance is normally defined as the current account surplus minus net long-term capital outflows.

in line with that of other countries, the exchange rate will usually also return to its normal range following periods when the krone has been particularly strong or particularly weak.

The real exchange rate

The real exchange rate may be measured in a number of ways, for example, by relative consumer prices and relative labour costs between Norway and its trading partners, measured in a common currency. The real exchange rate measured by relative labour costs in a common currency is an expression of the cost competitiveness of Norwegian companies. The real exchange rate measured in terms of developments in relative prices is an expression of the Norwegian krone's purchasing power. The real exchange rate has fluctuated considerably over time and has deviated substantially from the average level since 1970 over longer periods. Nevertheless, there has been a tendency for the real exchange rate to revert to this level. Relative prices in a common currency are now approximately 2 per cent lower than the average since 1970.[4] Relative labour costs in a common currency are approximately 3.5 per cent higher than the historical average.

As mentioned, high wage growth over a period of several years starting in 1998 eroded the competitiveness of the Norwegian business sector. Even though the krone has depreciated since 2002, the competitiveness of Norwegian companies is still fairly weak due to the high cost level. The nominal krone exchange rate has now reverted to around the level prevailing in the mid-1990s, while labour costs in manufacturing have risen considerably more than among our trading partners in the same period.

Asymmetric cyclical developments

Cyclical developments in Norway and other countries have been divergent. This was most pronounced in the 1980s when we had a strong upturn while Europe was in a recession. Even though business cycles have gradually become somewhat more synchronised, there is still a time lag. While the global turnaround took place in 2000, with a subsequent reduction in interest rates abroad, the Norwegian economy continued to show a high level of activity. Towards the end of the upturn, the economy was facing labour shortages, accelerating wage growth as well as a sharp increase in household consumption and debt. Interest rates in Norway were kept high and the interest rate differential gradually widened.

Cyclical developments in Norway have also differed in other ways from developments in other countries. The expansionary period in Norway led to strong wage growth from 1998 to 2002. The upturn in the global economy at the end of the 1990s was largely driven by business investment, and wage growth was moderate.

On the other hand, wage growth in the Norwegian business sector from 1998 to 2002 was higher than the level that over time is consistent with the inflation target and with normal productivity growth.

Consumer price inflation in Norway declined sharply through 2003. In 2003, wage growth was considerably lower than in the previous five years. This provided a sounder basis for substantial reductions in Norwegian interest rates, resulting in a narrowing of the interest rate differential between Norway and other countries. The reduction has contributed to a weakening of the krone since December 2002. Thus, the real krone exchange rate has also depreciated and business sector competitiveness has improved. However, the business sector is still burdened with the loss in competitiveness that is due to high wage increases. The exposed sector has been scaled back. Those companies that are still operating may be in a better position to sustain the high wage level. Nevertheless, costs may hamper activity and employment growth.

Petroleum wealth and the krone exchange rate

In the long term, the exchange rate tends to adjust so that there is a balance both within the domestic economy and in the current account.

---

[4] The point for 2004 shows the real exchange rate with wage and inflation projections for 2004 from *Inflation Report* 2/04.

Petroleum wealth, defined as the value of oil and gas under the seabed and the value of the Government Petroleum Fund, provides the basis for substantial foreign exchange revenues in the years ahead. The relative significance of these revenues will nevertheless decline gradually. The share of Norwegian imports that can be financed by foreign exchange revenues from petroleum wealth will become increasingly smaller. Other export earnings must then be increased substantially. This will require a considerable improvement in competitiveness over time.

Norway's history as an oil nation goes back to the end of the 1960s. Rough estimates[5] suggest that the real exchange rate that ensures balance in the external account when petroleum wealth no longer has the same significant role in the economy is more in line with the real exchange rate that we started with. This is shown in the chart, where the real exchange rate in the very long term will revert to the level prevailing before petroleum extraction began.

On the basis of these analyses, a strong real krone exchange rate and weak competitiveness will apply to a period from the beginning of the 1970s in which the petroleum industry is expanding and we are reaping the largest economic benefits.

Main features of the economic situation

Inflation is low. The rise in prices is being curbed by the appreciation of the krone in 2002, the fall in prices for imported consumer goods in foreign currency and strong competition in many industries in Norway. Monetary policy in Norway is oriented towards returning inflation to target. The sight deposit rate has been lowered to 1.75 per cent.

Low interest rates and the global upturn are stimulating activity in the Norwegian economy. The output level will be somewhat lower than implied by the trend level. This means that the output gap is projected to approach zero, but will continue to be marginally negative in 2004.

Growth in the Norwegian economy is projected to pick up markedly this year and remain relatively high next year. The most important contribution comes from private consumption, fuelled by low interest rates and high real wage growth. The global upturn will probably have a positive effect on the internationally exposed sector. Petroleum investment will continue to expand in the next couple of years. Mainland business investment is also expected to pick up gradually.

In recent years, many enterprises have rationalised operations. As a result, they have been, and probably still are, able to increase production to a fairly large extent without any substantial increase in real capital and employment. There are prospects of solid growth in productivity in 2004. Nevertheless, our regional network reports that companies in a number of industries are now considering an increase in employment.

After rising sharply for several quarters, economic growth in the US slowed in the second quarter and employment growth appears to have stalled this summer. Economic growth has picked up from a low level in the euro area. Economic growth has also gained momentum in Sweden and the UK. Strong growth in the US and China exerted upward pressure on commodity prices in 2003 and the beginning of 2004. Since then, price inflation has been dampened. Oil prices have risen considerably during the summer. Interest rate expectations indicate interest rate increases in a number of countries.

The effects of oil price developments on the Norwegian economy are mixed. Persistently higher oil prices may eventually contribute to higher petroleum investment and increased activity in sectors affected by petroleum activities. A sharp rise in oil prices, however, restrains global economic growth and affects demand for our other export products.

The analyses in Norges Bank's last *Inflation Report* in July 2004 are based on the technical assumption that interest rates will move in line with forward interest rates. The analyses are also based on the assumption that the krone exchange rate will shadow the path for the forward exchange rate as observed on 24 June. At that time, market pricing reflected expectations of a fairly stable exchange rate ahead.

---

[5] See Akram, Farooq Q. (2003): "Reell likevektsvalutakurs for Norge" (Real equilibrium exchange rate for Norway), in *Norsk Økonomisk Tidsskrift* 118, pp 89-112.

Given the assumptions underlying the projections in the last *Inflation Report*, inflation will be considerably lower than the inflation target in the period to the summer of 2006.

Monetary policy also places emphasis on avoiding imbalances in the real economy. Capacity utilisation in the economy is rising, but the output gap, as it is measured by Norges Bank, will only be marginally positive during the period.

Our assessment is that monetary policy should be aimed at increasing inflation at a somewhat faster pace than projected in the last *Inflation Report*. In connection with the monetary policy meeting on 11 August, the Executive Board stated that the inflation outlook may imply an unchanged interest rate for a longer period than implied by the interest rate assumptions in the last *Inflation Report*. On the other hand, the prospect of continued low inflation in Norway implies that Norway should not be the frontrunner when interest rates are increased in other countries.

Following the monetary policy meeting on 11 August, the Executive Board stated that with the prospect of continued low inflation for a period ahead, wide deviations from projected economic developments would be required before the interest rate should be increased. The Executive Board also stated that uncertainty concerning the effects of previous monetary policy easing and the unusually low interest rate imply, on the other hand, that we should exercise caution with regard to further interest rate reductions.