Monetary policy experiences and challenges for the central bank

Address by Deputy Central Bank Governor Jarle Bergo Gausdal on 27 January 2000

The primary responsibility of monetary policy is to deliver nominal stability. In Norway we have chosen to link the formulation of this objective to the stability of the krone exchange rate. In a small, open economy, the exchange rate plays an important part in price developments. At the same time, moderate price and cost inflation will be a prerequisite for exchange rate stability over time. I shall use these relationships as a backdrop to a discussion of both past experiences and, above all, the challenges the central bank may face in the future.

Experiences

Central banks have traditionally used short-term interest rates and interventions in the foreign exchange market as instruments in their pursuit of nominal stability. At times central banks have also attempted to talk the market in the desired direction. This method is no longer used extensively - if it ever was. Instead, increased emphasis has been placed on improving the effect of the other instruments through analyses, transparency about objectives, and the exercise of discretion. This is also the case in Norway.

In recent years we have gained valuable experience of using extensive and sustained purchase and sale in the foreign exchange market to influence exchange rates. This experience has been consistently negative, both during the latter part of the fixed exchange rate period, and during the present regime.

If the central bank intervenes heavily to defend the krone, a game situation may evolve in which market participants perceive central bank intervention as an interesting opportunity to make a profit. Market operators know that a situation in which the krone is perceived as "artificially strong" because Norges Bank is buying kroner is unsustainable. It is then tempting to take reverse positions in the foreign exchange market in relation to the central bank. This means that extensive, sustained interventions may increase the pressure on the krone over time, causing a steady increase in the volume of intervention required to support the krone. The prime example of such a situation occurred after Sweden allowed its krona to float on 19 November 1992. In the course of six trading hours over two days, Norges Bank's foreign exchange reserves were depleted by more than NOK 50 billion. Similar experiences in spring 1997 and autumn 1998 suggest that foreign exchange interventions can only curb pressure on the krone for a short time. Even our large foreign exchange reserves are insignificant compared with turnover in the global foreign exchange market.

Nor are large purchases of foreign exchange sustainable. They result in a large supply of krone liquidity, which pushes down the interest rates in the money market. In principle, this liquidity can be mopped up by issuing government paper with short maturities, but this also means extra interest rate expenses for the government. The question of how effective such

liquidity binding will be is also debatable. From the point of view of the individual bank, an increased holding of short-term government paper may be regarded as highly liquid, and may thus form the basis for an even more offensive lending strategy.

If the market players assume that Norges Bank will use the interest rate to defend specific krone exchange rate levels, this may also give rise to a game situation. A sharp increase in interest rates to defend the krone will lead over time to a deflationary recession. The market may therefore try to see how high Norges Bank is willing to set the interest rate. In autumn 1998 speculation against the krone was combined with speculation that Norwegian interest rates would increase when the krone depreciated. If Norges Bank had halted the "game" by stopping interventions and interest rate increases, the economy might have entered a negative spiral.

Norges Bank does not intend to act in a way that will prompt such game situations. Nor can we expect other central banks to come to our aid. 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 such situations there may be less risk of ending up in a losing game situation with exchange market players.

Our experience of using interventions indicates that the interest rate is the central bank's most important monetary policy instrument. Since interventions are difficult to use, it is clear that the central bank cannot fine-tune the krone exchange rate. The interest rate is not an instrument that can be used to control the exchange rate from day to day, week to week or month to month.

Our monetary policy regime is unique, and allows the central bank considerable scope for exercising discretion. I can understand that it is not easy to understand at first glance, for either the general public or market agents.

In order for it to function satisfactorily, we have felt it to be necessary for Norges Bank to be transparent with respect to how we interpret our mandate and exercise discretion. We attempted to the best of our ability to do so through 1999. It is my impression that our message was noted and understood in all respects, but I will nevertheless take the opportunity to recapitulate the general points. A more thorough account was given in the Bank's submission last autumn on economic policy for the year 2000.

Section 2 of the Norwegian Exchange Rate Regulation states:

"The monetary policy to be conducted by Norges Bank shall *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. No fluctuation margins are established, nor is there an appurtenant obligation on Norges Bank to intervene in the foreign exchange market".
(Norges Bank's italics)

Allow me briefly to go through our interpretation of this section. The regulation is based on our having a managed float. Instruments are to be oriented towards maintaining the stability of the krone exchange rate against *European currencies*. Norges Bank has chosen to define "European currencies" as the euro since 1 January 1999.

The last sentence in the regulation specifies that our system is not a traditional fixed rate system. It does not stipulate a central rate with specific fluctuation margins. To the extent that the system gives rise to associations of a fixed rate regime, the concept *initial range* is to be understand as meaning a broad indication of a central rate around which the krone may fluctuate without specific fluctuation margins.

The second sentence in the regulation refers to *significant changes* in the exchange rate in relation to the initial range. *Significant* must 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.

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

The regulation's requirement as regards returning the exchange rate over time to its initial range may - in an extreme interpretation - contain too strong an element of parity policy. In a hypothetical scenario with a sharp, prolonged fall in oil prices, for example, the krone exchange rate could remain outside the initial range for some time. If Norges Bank responds by raising interest rates in order to force the exchange rate back to its initial range, monetary policy could lead to a deflationary recession that would undermine confidence in the krone. Similarly, after an appreciation, a situation could arise in which a movement of the exchange rate back to the initial range would require interest rates to be reduced to levels that generated inflation. This would weaken the basis for exchange rate stability. Therefore Norges Bank cannot with open eyes orient monetary policy instruments towards triggering inflation or a deflationary recession. Should a situation arise in which Norges Bank is not able to return the krone to its initial range without such consequences, the Bank will inform the authorities that measures other than those available to the central bank are required. One possibility could then be to recommend fiscal measures that would make it possible to bring the krone exchange rate back to its initial range and stabilise it. In the event of fundamental changes in the operating parameters for the Norwegian economy, on the other hand, it might be appropriate to consider changing the guidelines for monetary policy.

In exercising this discretion, Norges Bank focuses on the fundamental preconditions for achieving exchange rate stability. In order to achieve exchange rate stability against the euro, monetary policy instruments must be oriented in such a way that price and cost inflation is brought down to the corresponding aim for inflation of the European Central Bank (ECB). At the same time, monetary policy must not in itself contribute to deflationary recessions, as this would undermine confidence in the krone.

During the past year, the krone exchange rate has remained stable, especially in the light of the wide fluctuations we have seen in exchange rates between the most important currencies and in the oil price.

At the beginning of 1999, the krone was still weak compared with the initial range. When the euro was introduced, we had to pay NOK 8.88 for it. However the euro depreciated substantially through 1999 in relation to the other major currencies. The krone has also weakened in relation to the US dollar and the Japanese yen during the past year, but has strengthened against the euro. Viewed in relation to an average of our trading partners, the krone has remained very stable.

Challenges

Confidence in monetary policy is fragile, vulnerable asset. It takes time to build up confidence, and it takes little to destroy it. If confidence is undermined, sacrifices may be required to restore it. We all remember the price we had to pay to recover from the devaluation syndrome in the latter half of the 1980s. In many respects, the greatest challenge ahead of us therefore lies in building up and reinforcing the confidence we have already gained.

Conditions for success

Allow me first to talk about some of the prerequisites that must be fulfilled if we are to succeed in achieving nominal stability.

First, it is important that the various policy elements contribute jointly to the achievement of the primary objectives. In Norway, fiscal policy has played an important part in stabilisation policy, partly because the sound government finances allow freedom of manoeuvre. In other countries, a heavy burden of government debt means that fiscal policy cannot be used very actively any more for stabilisation purposes, at least not during recessions.

The social partners have the opportunity to influence the overall level of employment over time through the wage formation process. By comparison with other countries, Norway has generally had a low unemployment level and a high participation rate during the past twenty five years. Many countries that have been through long, profound recessions have experienced a significant, lasting increase in unemployment. An important feature of wage formation in Norway has been the strong emphasis placed in wage negotiations on the conditions for competitiveness in the business sector. This also applies to wages in sectors that are not especially exposed to foreign competition. The willingness to take long-term factors into consideration has contributed to stabilising the operating parameters for the exposed sector and to keeping employment at a high level. The most important contribution such settlements can make is to ensure that structural unemployment in Norway remains low and employment high.

In the short term, fiscal policy may influence developments in production and employment. In the longer term, the formulation of fiscal policy, including the tax system, public sector investment, and expenditure for research and education are of great significance for the growth potential of the economy. In addition the growth in public expenditure planned by the authorities will influence the *allocation* of labour and capital to the various sectors of the economy. Unless there are reserves of labour or capital, increased use of resources in the

public sector will absorb production factors that could otherwise have been used in the private sector.

Over time, changes in the price level are influenced through monetary policy. Employment may be influenced through the wage formation process. The allocation of resources to the sheltered sector and the exposed sector will be influenced through fiscal policy. Over time, the size of the exposed sector will be determined by a contest between the public sector and the exposed business sector for economic resources.

It is important that these considerations of what the various policy elements can influence in the long term also be kept in mind when the more short-term operational objectives of policy are formulated.

There appears to be fairly strong agreement about the long-term division of responsibilities and the relations of mutual dependence in economic policy. When the Ministry of Finance addressed the Standing Committee on Finance on 4 November 1999, he said:

"Finally, I wish to stress that in my view there is no conflict between Norges Bank and the Government when it comes to interpreting the monetary policy guidelines, or the division of the responsibilities involved in economic policy. In a discussion of division of responsibilities it is essential to take account of the mutual interdependence and the close interplay between the various elements of policy. There is not, nor can there be, water-tight bulkheads between the various parts of economic policy. A successful implementation of monetary policy is therefore dependent on fiscal and incomes policy remaining on course."

I agree with this. I said that our monetary policy regime was unique, but what really distinguishes us from other countries we should otherwise like to be compared with, is our petroleum.

There is reason to give the political system credit for the mechanisms that have been built up through the petroleum fund scheme to achieve a prudent handling of Norway's petroleum revenues and, even more so, for the fact that these mechanisms have been allowed to function according to intention. Not that we do not use petroleum revenues in Norway, but at present we have at least succeeded in limiting this use to what the economy can reasonably tolerate.

It will be important, also for monetary policy, that the Petroleum Fund functions according to intention. The Fund plays a significant part in stabilising economic developments. The investment abroad of foreign exchange revenues from the petroleum sector serves to maintain the balance in the market for Norwegian kroner, thereby dampening the effect of fluctuations in the oil price on the krone exchange rate. The Petroleum Fund also acts as a shock absorber against short-term fluctuations in petroleum revenues. Since much of the flow of capital from petroleum activities accrues directly to the state, fluctuations in the oil price will in the first instance lead to transfers of capital to the Fund varying in size. A change in the oil price will thus not impact with full force on public sector expenditure. This makes the Norwegian economy more robust in the face of fluctuations in the oil price, and thus less dependent on petroleum, also in the short term.

This can be illustrated with an example. Let us suppose that the oil price temporarily increases by NOK 10, or just under one and a half dollars per barrel. This is a small change in the oil price, well within the normal variations from one year to the next. The Government's revenues - and thus the budget surplus - will accordingly increase by about NOK 10 billion the first year and NOK 12-13 billion the next year. This corresponds to almost 1 per cent of Norway's annual GDP. If the increased revenues are included in the economy in the form of increased expenditure or reduced taxes in the national budget, total domestic demand will be affected. Increased expenditure requires an increase in public sector use of real resources - first and foremost labour. In this context, 1 per cent of GDP will be a very large amount. If the increase in petroleum revenues is used in this manner in Norway, it corresponds, for example, to almost half of the annual growth in the non-oil economy in a normal year. If the private sector of the economy also grows, and the economy is already near capacity, such a policy will rapidly lead to strong pressure on the resources in the economy. This in turn will give rise to wage and price inflation. The idea behind the Petroleum Fund is that the revenues from such a small increase in the oil price should accrue to the Fund, and that the increase in the oil price should not affect the rest of the budget. The increased revenues will then be invested abroad through the Petroleum Fund, and will not have an impact on the domestic economy. Similarly, it will not be necessary to make dramatic cuts in public expenditure if the oil price should be low for a while. Our challenge in the future will be to keep this mechanism intact.

Instruments and transparency

The most important monetary policy instrument is the interest rate. Norges Bank can only influence interest rates at the very short end of the market. In practice, this is primarily the sight deposit rate and overnight lending rate - the interest rate commercial and savings banks receive when they have deposits in the central bank and the rate they pay when whey borrow from Norges Bank. As far as we know, the key rates are not used in other transactions that are of importance to economic developments. The direct impact of a change in these interest rates is therefore limited. Monetary policy only has macroeconomic effects to the extent it can influence prices in financial markets that are of importance to household and enterprise behaviour, such as banks' deposit and lending rates and long-term bond yields, but also exchange rates, share prices and other asset prices. These variables will in turn influence economic activity one to two years ahead. The interest rate will gradually influence prices and wages via the effects on the real economy. Monetary policy can also influence these nominal variables directly through the formation of expectations.

In normal situations, changes in key rates have a fairly direct impact on short money market rates. The effect on market rates with longer maturities and on asset prices depends on how the change in interest rates influences the economic outlook and expectations concerning future monetary policy. In a given situation, a reduction in key rates can trigger fears of overheating and higher inflation and result in a rise in long-term interest rates, with the yield curve becoming steeper. In this situation, it is likely that an increase in the short rate would have a smaller effect on long-term rates, or even reduce them, because the central bank's

measures had the effect of enhancing market confidence in relation to the objective of nominal stability.

Can we find an indication of confidence in a country's monetary policy, ie the ability in a broad sense to provide nominal stability? We can calculate implied forward rates on the basis of the yield curve. Forward rates can be interpreted as the expected interest rate between two future points of time.

Forward rates can be used to provide an indication of inflation expectations if we assume that the nominal interest rate is approximately equal to the sum of the expected real interest rate and expected inflation. In the short term, interest rate expectations will be influenced by expected cyclical developments. It may then be difficult to know exactly how much may be ascribed to the expected real interest rate and how much is due to expected inflation. On the other hand, in the long term, ie up to ten years ahead, it is highly unlikely that market participants have specific expectations about the economic situation. Forward rates may then be interpreted as the sum of the expected real interest rate and expected inflation when the economy is in equilibrium. Any risk or maturity premia come in addition. If the equilibrium real interest rate is the same between countries, the differential between Norwegian and foreign long-term forward rates can be interpreted as differentials in expected inflation plus any risk premium. The long-term forward rate differential between Norway and Germany will then provide an indication of how confident market participants are that economic policy will, over time, result in an inflation trend on a par with that of euro countries.

The chart shows that the forward rate differential between Norway and Germany, ie the difference between the short-term interest rate on future dates, is fairly narrow if we look a few years ahead, and not much greater than that for the other Nordic countries. This can be interpreted as meaning that economic policy is helping to provide a sound nominal anchor.

Credibility and confidence can contribute to more predictable monetary policy effects. With sufficient confidence in monetary policy, the real economic costs of monetary policy tightening can be reduced through a swift normalisation of inflation expectations when the central bank signals a need for tightening. Actual inflation would then also be reduced without the central bank having to maintain a high interest rate for a long period, with attendant negative effects on production and employment.

Unfortunately, the world is not so simple and the relationships are probably not so straightforward. There is a cost associated with eliminating inflation - even in countries that have been successful in gaining considerable confidence in monetary policy. This is because the stylised assumption of full credibility for the central bank and perfect foresight in markets never fully apply.

We must therefore assume that there are costs associated with reducing inflation that has built up. The costs are lowest if we ensure that price and wage inflation are never out of control. This is the central bank's most important challenge.

However, the central bank can help to reduce the costs by eliminating inflation through transparency and good external information about monetary policy. This is why Norges Bank

has attached considerable importance to openness concerning objectives, analyses and its exercise of discretion.

As I emphasised earlier, the effects of monetary policy are channelled through complicated mechanisms and with a considerable lag. Our analyses of economic prospects and price developments a few years ahead represent an important basis for Norges Bank's setting of interest rates. Norges Bank places considerable emphasis on providing information concerning evaluations of the economic outlook, primarily through the Bank's Inflation Reports, which are published four times a year. We are candid about our analyses, the use of models and the assumptions underlying them. In connection with the presentation of the Inflation Report, press conferences are always arranged where the Bank's management provides information about our analyses and replies to questions.

Analyses of earlier forecast errors are important for making better and more accurate projections through improvements in our analytical system and its use. The projections are therefore systematically evaluated and the results are published in the quarterly publication Economic Bulletin.

By announcing in advance the dates for meetings of the Executive Board at which the question of interest rates is normally discussed, all market operators know when any interest rate changes can be expected to take place. The Bank's management has placed considerable emphasis on providing information about the evaluations that have been decisive when interest rates are changed, both by inviting the press to press conferences following the monetary policy meetings and through other channels. We also have meetings with the press even when interest rates are not changed.

The interaction between different policy areas is important if we are to succeed in achieving nominal stability. The challenges to monetary policy are easier to cope with if fiscal policy and the social partners play their role. There will, however, always be a risk of an inappropriate policy mix. A situation may arise where Norges Bank, on the basis of its evaluation of the economic outlook, maintains a high interest rate, while the government authorities increase spending in order to stimulate employment. This is a genuine dilemma. The best way for Norges Bank to address this challenge is probably to promote transparency in its analyses and reaction pattern so that the government authorities can take into account the implications for the setting of interest rates when decisions concerning the government budget are taken.

The objective of monetary policy is linked to the exchange rate, albeit without the establishment of specific requirements concerning short-term movements. Low inflation is a precondition for exchange rate stability over time. It is therefore natural that developments in inflation and the exchange rate form the basis for subsequent evaluations of whether the monetary policy conducted has been successful. However, developments in these variables can also shed light on whether other economic policy components have been appropriate. It must be emphasised that developments should be evaluated over a longer period. The results cannot be judged merely by looking at exchange rate and price movements. It is also necessary to make a discretionary evaluation of whether the exchange rate and inflation could have been stabilised at lower real economic costs.

The prospects of achieving objectives in the near term

With regard to the prospects of achieving nominal stability in the years ahead, it is natural for us to start with the last Inflation Report, which was presented in December 1999. As I noted earlier, the analyses in the Inflation Report, along with current evaluations of the outlook for prices and costs and conditions in money and foreign exchange markets, form the basis for decisions concerning the orientation of monetary policy instruments.

The economy is experiencing a period of lower growth than we recorded in 1994-1998. Norges Bank expects mainland GDP to expand by ¾ per cent this year, with growth moving up to 1½ per cent in 2001. In subsequent years, it appears that growth will rise to the long-term trend rate of the economy. There now appears to be less of a risk of a pronounced downturn in the mainland economy than we envisaged earlier. Consumer price inflation is projected to slow over the next two years and fall to the rate of increase aimed at by the euro area. These projections are based on the assumption that wage growth will slow between 1999 and 2000, falling to 3¾ per cent this year.

Our projections indicate developments that we deem most probable, provided that key variables, such as the interest rate, exchange rate and public sector demand, develop as assumed and no structural changes take place in the economy. The world, however, is difficult to predict, and many conditions may change along the way.

The turnaround now appears to be concentrated in manufacturing industry, partly as a result of deteriorating profitability and a loss of competitiveness, but also because of a decline in petroleum investment. The impact of the turnaround on total activity in the economy will partly depend on the restructuring capacity of the manufacturing sectors affected. The demand for labour from the public sector and service industries is expected to remain high.

It is uncertain how wage formation will function with considerable adjustments across sectors of the economy. Traditionally, manufacturing industry has been a wage leader. This implies that wage growth slows when profitability in this sector is reduced. Tensions in the labour market and continued high demand in some labour market segments may contribute to pushing up wage growth even with a slight rise in total unemployment. Price inflation will then be higher than we projected in the last Inflation Report.

Systematic evaluations of earlier forecasts show that a substantial portion of forecast errors for the real economy and growth in mainland demand has been due to an underprediction of growth in public expenditure. In recent years, and perhaps particularly in 1999, there has been a tendency for growth in public expenditure to be higher than the level adopted during the budget deliberations. This may indicate the existence of strong underlying pressures on public expenditure. We cannot rule out the possibility that this is a more permanent trend. If growth in public expenditure is higher than we have assumed in our calculations, demand and the level of mainland activity will also show stronger-than-projected growth. Pressures in the labour market will then be maintained and may contribute to increasing wage and price inflation rather than reducing it.

Conclusion

We do not want to repeat the negative experiences of the 1970s and 1980s with high inflation and pronounced cyclical fluctuations. Nominal stability will be necessary in order to avoid this. In accordance with its mandate, Norges Bank will attach considerable importance to achieving this objective. We left the 1990s with the prospect of reasonable balance in the Norwegian economy following problems that could have become serious. In order to prevent nominal instability, monetary policy was tightened substantially in 1998. As fiscal policy and wage trends gradually became better adapted to the economic situation, interest rates could be reduced last year, despite a continued weak krone exchange rate. We thereby prevented the overall orientation of policy from becoming too tight.

Following this, some observers appear to be of the view that the short-term interest rate is also a measure of how successful economic policy has been. I would therefore like to repeat myself: the interest rate is an instrument, not an objective. Over time, symmetry in setting interest rates is important in the sense that the instrument must be used with the same force, both for curbing and stimulating growth in the economy. This symmetry is necessary to maintain confidence in nominal stability. Our approach must not be that we only increase interest rates when this is absolutely necessary, but lower them as soon as we can.