

Exchange rate target or inflation target for Norway?*

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The purpose of this paper is to discuss the choice between an exchange rate target and an inflation target for Norway. The paper also contains a brief discussion of the objectives of monetary policy and of an optimal delegation of monetary policy in a representative democracy, which serves to place this choice in a broader context.

1 Monetary policy goals

Let me start from the presumption that the ultimate objective of economic policy is to guarantee and enhance the citizens' welfare. This ultimate objective is often expressed as a number of separate goals which contribute to the citizens' welfare, e.g. efficient resource utilisation, full and stable employment, high economic growth, price stability, equitable distribution of wealth, regional balance and environmental protection (see SOU 1993:20).

Monetary policy is part of economic policy. At first, one might think that monetary policy should have the same goals as overall economic policy. However, since monetary policy only has systematic effects on a limited number of variables that affect economic welfare it is more appropriate that monetary policy is assigned a limited number of goals. Specifying goals for monetary policy that it can never achieve would, of course, be unproductive, and even counterproductive. Instead, monetary policy should be assigned goals that it can achieve and that are consistent with the ultimate objective for economic policy. In order to determine which goals are most suitable for monetary policy, one must therefore understand the effects of monetary policy and what monetary policy can achieve.

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In the long term, monetary policy can only control nominal variables such as inflation and the exchange rate. In the long term, monetary policy cannot increase the level of real variables such as GDP and employment, or influence the real exchange rate, i.e. the price of domestic goods and services in terms of foreign goods and services, or the price of nontradable goods and services in terms of tradable goods and services. An unstable monetary policy might, on the contrary, lead to deteriorated resource allocation and possibly to lower growth. In the short and the medium term, a well-balanced monetary policy can, in addition to controlling the inflation rate and the exchange rate, contribute to stabilising business cycles, although it cannot influence average employment and output in the long term.¹

In the short, medium and long term, monetary policy can thus influence inflation. A high and variable inflation rate has adverse effects. It impairs the markets mechanisms' capacity to achieve efficient resource allocations, and the entailing uncertainty makes it more difficult for consumers to make the right decisions. It leads to arbitrary and inequitable redistributions of incomes and assets, e.g., a shift away from small savers to professional investors, and from tenants to owners of houses and property. It is sometimes said that "Inflation is a way for the government to steal from small savers and low-income groups". High inflation has no positive effects and does definitely not lead to higher employment. Instead, the adverse effects eventually become unbearable. To bring inflation down from a high level is costly; as a rule a deep recession with high unemployment is required. Accordingly, it is important to avoid increasing inflation in the first place.

It is thus appropriate to make "price stability", i.e. low and stable inflation, the goal for monetary policy. Without prejudice to the objective of price stability, it may also be appropriate to use monetary policy to stabilise business cycles.

In practice, monetary policy's effectiveness in stabilising the business cycle appears to improve, if the central bank clearly proves that it can achieve low and stable inflation. Experience, not least from Germany and the U.S., indicates that it is easier for a central bank with a reputation for low inflation to play an effective role in stabilising business cycles than it is for other central banks. Such a central bank can, for instance, lower the interest rate during a recession without this being interpreted by the public as the onset of an inflationary period.

¹ The effects of monetary policy are further discussed in Svensson (1994).

Since the central bank can, in principle, control the exchange rate both in the short and the long term, a fixed or stable exchange rate might seem a possible alternative goal for monetary policy at first sight. But a closer look shows that it would clearly be inappropriate to make a fixed (or stable) exchange rate the ultimate *goal* for monetary policy, since the nominal exchange rate does not have an inherent significance for welfare and economic growth. It is rather the *real* exchange rate that has this significance. Under a fixed exchange rate regime, the real exchange rate can only be stabilised in the short term, however. In the medium and long term, monetary policy cannot control the real exchange rate. A fixed exchange rate is therefore only suitable as an *intermediate target* in order to achieve some other ultimate goal. A fixed exchange rate will thus only be discussed here as a possible intermediate target.

Most industrialized countries have, given the above circumstances, specified low and stable inflation as the goal for monetary policy. This is not the case in Norway, which has no explicit long run goal for its monetary policy. There is thus an inherent uncertainty about the goals of Norwegian monetary policy in the medium and long term. The importance of a clear goal for monetary policy is further discussed in the next section.

2 Optimal democratic delegation of monetary policy

The situation in Norway differs from that in other European countries with regard to the central bank's independence and the extent to which monetary policy is delegated. This motivates a discussion on the optimal delegation of monetary policy in a representative democracy.

In a representative democracy, the government and/or parliament should be ultimately responsible for economic policy. This also applies to monetary policy. It does not preclude, however, that the political authorities may find it appropriate to *delegate* the formulation and implementation of the policy to independent authorities when this is considered the most efficient means of achieving the objectives of economic policy. A representative democracy is in itself based on delegation - the people delegate legislative powers to parliament, but hold the political authorities accountable through general elections; the administration of justice is delegated to independent courts which are to judge in accordance with the laws passed by parliament.

Delegating monetary policy to an independent central bank is naturally not a goal in itself. It is solely motivated by its advantages when it comes to achieving the economic policy objectives. What are these advantages? This question has been thoroughly analysed in the scientific literature. There is also plenty of practical experience from different countries. Research as well as practical experience clearly show that the most important parts of a successful delegation can be summarised in three points:

(1) The political authorities define a clear *goal* for monetary policy. This should preferably be legislated, as proposed in SOU 1993:20 and Ds 1997:50. According to the discussion above, price stability is the most appropriate goal for monetary policy.

(2) The central bank is given “*operational independence*” (sometimes also called “instrument independence”), which implies two things. First, the central bank must have an independent management, so that it can pursue its monetary policy goal free of short-term political pressure from the government and from various interest groups. The terms of office and the principles for appointing and removing the central bank’s management must be drawn up with a view to this. Second, the central bank must be given full control over the instruments for monetary and exchange rate policy, i.e. control over open market operations and foreign exchange interventions.

(3) An important condition, not only for democratic control but also for effective delegation, is that the central bank is held accountable to the political bodies for the monetary policy conducted. This requires, in addition to a clear monetary policy goal and operational independence for the central bank (points (1) and (2) above), a transparent reporting system for the central bank’s policy actions. The central bank’s policy actions can, for instance, be reported and motivated in the central bank’s publications, but also through subsequent - and public - questionings of the central bank management in parliament. If the central bank is to be held genuinely accountable, specific sanctions may be needed, in the event that the central bank does not achieve the established goal in a satisfactory manner. This is the case in New Zealand, where the governor of the central bank is personally responsible for fulfilling the goal for monetary policy and he or she can be removed from office if mistakes in monetary policy result in the target being missed. If inflation deviates more than one percentage point from the announced inflation target in the U.K., the governor of Bank of England is

obliged to send an open letter to the Chancellor of Exchequer, stating the reasons for the breach, what action the bank is taking to deal with it and when inflation is expected to return to the target.

Another important element of political and democratic control is a so called escape clause. In extreme circumstances, such as disasters or major international political or economic disturbances, the government or parliament should have the power to issue laws or decrees, temporarily absolving the central bank of its obligation to pursue price stability. In view of democratic control, it is essential that this is made public and that the central bank cannot be required to depart from this objective secretly. This reduces the risk of short-term abuse, for instance by stimulating the economy before a general election in order to win votes in the short run.

What are the benefits of an executive delegation in relation to the three points above? Decades of research and practical experience show that *direct* government control over monetary policy entails, as a rule, great temptations to abuse monetary policy in order to gain short-term benefits. One may, for instance, be tempted to increase the level of output and lower unemployment in the short-term, often also to gain party political advantages for the political party in power, not least in connection with general elections.

The general public, trade unions and firms - not least financial markets - sooner or later realise the ramifications of these temptations. This tends to lead to high inflation expectations and thus high wage increases, high long interest rates and high actual inflation. Confronted with this, the government often finds the short-term costs - in the form of recession - of conducting a tight monetary policy aimed at low inflation too high. The government therefore shifts towards an accommodating policy, thus allowing the exchange rate to fall and inflation to take off. The high inflation expectations are thereby fulfilled. The government's repeated assertions that the goal of price stability remains firm may then easily lose credibility. Various explanations indicating that this is merely a temporary departure have little credibility. (Public announcements from the Swedish Government and from Sveriges Riksbank during the 1970s and the 1980s provide many such examples.)

Delegating monetary policy according to the three points above is therefore a means for parliament and the government of strengthening the *credibility* of the announced policy. It should be emphasised that the purpose of operational independence for the central bank is not to achieve any

other goal than the announced one, instead the principle is to increase the likelihood of achieving the democratically established goal. The experience of many countries reveals the advantages of such delegation (see, e.g., SOU 1993:20 and Calmfors et al. (1997)). Numerous studies show that countries with a clear delegation of monetary policy to an operationally independent central bank have been more successful in keeping inflation at bay, without sacrificing other economic policy goals such as economic growth and employment.

Given these experiences, many countries in Europe and in the rest of the world have implemented institutional reforms in order to permit a clear delegation of monetary policy, most recently in the U.K. Such a reform is also underway in Sweden.

In Norway, Norges Bank must follow the economic policy guidelines issued by the government and the Ministry of Finance, and before the Bank makes decisions of particular importance, the matter must be submitted to the Ministry of Finance. As far as I can see, this means that the government and the Ministry of Finance have direct control over monetary and exchange rate policies, i.e. that there is no clear delegation of monetary policy. Formally, Norges Bank sets the interest rate, but any changes in the interest rate are considered to be decisions of particular importance and must first be submitted to the Ministry of Finance. Even if the Ministry of Finance does not oppose a certain decision, this system clearly entails a substantial restriction of Norges Bank's control over the interest rate. This arrangement also seems to give the general public and the markets strong possibilities to exert pressure on monetary policy, via pressure on the government and the Ministry of Finance. In the light of vivid discussions in other countries and the strong tendency towards a clearer delegation of monetary policy in the rest of the world, I find the Norwegian system much outdated and rather unsatisfactory. I am surprised that these issues seem to be subject to very little discussion in Norway.

If a delegation is desirable but institutional reforms of monetary policy's institutional framework are, for various reasons, not on the immediate agenda, the above optimal delegation should be imitated as far as possible. Within the existing institutional framework, the Norwegian government should be able to formulate a long-term goal for monetary policy, preferably low and stable inflation, and assign to Norges Bank to achieve this goal, abstaining from any other interference in monetary policy. The government could even allow the Bank to decide which intermediate target would be most appropriate for achieving the goal.

3 How to fulfil the monetary policy goal?

How can the goal for monetary policy best be fulfilled? Above, I have discussed the advantages of an optimal delegation of monetary policy. I will now turn to the implementation of the policy, more precisely to the choice of a so-called intermediate target for monetary policy.

The terms (ultimate) goals, intermediate targets and instruments are very useful for discussing and understanding monetary policy. I have already discussed the goal of monetary policy. The instruments of monetary policy are prices or quantities over which the central bank has direct control and which it uses to implement monetary policy. These are normally a short interest rate and exchange market interventions. A recurrent problem is that there is normally such a large distance between the instrument and the goal that the central bank has very little immediate control over the goal. Effects on inflation caused by changes in instruments, for instance, usually occur with a considerable lag. It may therefore be practical to specify an intermediate target, and to direct monetary policy towards this target. If the intermediate target is well-chosen, it may be an effective means to achieve the goal.

Which criteria should be satisfied by an ideal intermediate target? An ideal intermediate target should:

- have a high degree of correlation with the goal
- be easier for the central bank to control than the goal
- be easier to observe than the goal, and
- be transparent.

A high degree of correlation with the goal means that there is no conflict between the intermediate target and the goal and that achieving the intermediate target is an effective means of fulfilling the goal. That the intermediate target is more easily controlled than the goal naturally makes it easier to fulfil for the central bank. That the intermediate target is more easily observed makes it easier for the general public, the markets and the political authorities to monitor whether the central bank fulfils the intermediate target, and makes the central bank more accountable for achieving the intermediate target. That the goal is transparent simplifies the central bank's communication with the

general public, the markets and the political authorities, and also contributes to their better understanding and predicting monetary policy.

A fixed (or stable) exchange rate, an explicit inflation target, or a money supply target are possible monetary policy strategies. A money supply target is hardly relevant for Norway, since money demand is highly unstable in most countries and the correlation between the money supply and prices is therefore very weak in the short and the medium term; the money supply target does not fulfil the first criterion above. The choice is therefore between a fixed exchange rate on the one hand and an explicit inflation target on the other. A fixed or stable exchange rate means that the nominal exchange rate is the intermediate target. An explicit inflation target means a quantified inflation target, e.g. 2 per cent per year, and a tolerance interval around it of for example plus/minus one percentage point. An explicit inflation target is sometimes said to imply the absence of an intermediate target. As emphasized in Svensson (1997a), an explicit inflation target instead implies that the central bank's inflation forecast 1-2 years ahead effectively becomes an intermediate target. If the inflation forecast for a given interest rate exceeds (falls short of) the inflation target, monetary policy must be tightened (eased) in the interest rate raised (lowered): if the inflation forecast is sufficiently close to the target, the existing monetary policy stance is appropriate. From this perspective, the choice between a fixed exchange rate or an explicit inflation target is a choice between having the exchange rate or the inflation forecast as the intermediate target. These two alternatives will now be evaluated with respect to the above criteria.

3.1 A fixed exchange rate

Choosing the exchange rate as the intermediate target has two obvious advantages. First, the exchange rate can be directly observed. At a fixed exchange rate, i.e. with a fairly narrow band, it is also easy to determine whether the intermediate target is fulfilled, i.e. if the exchange rate is kept within the fluctuation margins. At a "stable" exchange rate, i.e. with a broad band around a central rate or no explicit band, it is more difficult to judge whether the intermediate target is fulfilled. If the exchange rate deviates substantially from the target, there may be uncertainty about how soon the bank intends to bring it back. If the exchange rate is allowed to deviate for a longer period of time, expectations may arise that the bank has secretly given up the target. A stable exchange rate is thus a less transparent regime than a fixed exchange rate regime.

Second, under normal circumstances, it is easy for the central bank to control the exchange rate. The exchange rate can usually be controlled over a few days solely by relying on foreign exchange interventions without changing the interest rate (so-called sterilised interventions). Extensive research and empirical evidence show, however, that such interventions do not have a persistent effect on the exchange rate. In order to achieve a persistent effect, the interest rate must be changed (so-called unsterilised interventions). This implies that monetary policy is entirely oriented towards controlling the exchange rate and that there is no leeway for other goals of monetary policy.

The above applies under normal circumstances. The situation is very different if a speculative attack against the currency occurs. Experience shows that the central bank may easily be overwhelmed by the scale of the attack and forced to abandon the exchange rate regime.

Having the exchange rate as an intermediate target incurs a number of important disadvantages.

The first disadvantage is connected to the most important aspect of an intermediate target, i.e. its correlation with the goal. A fixed or stable exchange rate is generally not very closely correlated with low and stable inflation. Low and stable inflation under a fixed or stable exchange rate regime requires low and stable international inflation and a stable real exchange rate. It is hardly likely that the inflation in the countries that are Norway's major trading partners will become high and unstable, considering the orientation of their monetary policy towards low and stable inflation. But it is highly probable that the real exchange rate may vary considerably. This means that there is an inherent conflict between a fixed or stable exchange rate and low and stable inflation.

A number of factors increase the likelihood of substantial variability in Norway's real exchange rate. Lack of synchronised business cycles is one factor. A boom in Norway while its trading partners are experiencing a downturn means high demand for Norwegian goods relative to the demand for foreign goods. This normally leads to a real appreciation of the krone. Structural differences in exports and production is another factor. In this regard, Norway's large oil sector and oil revenues stand out. Changes in world prices of oil which affect Norway differently than its trading partners, and normally require a change in the real exchange rate. International portfolio shifts, e.g., international investors choosing to invest a larger share of their capital in Norway, either as portfolio investments or direct investments, is another reason for variability of the real exchange rate.

The situation is very different for Austria and the Netherlands. These countries have achieved low and stable inflation by pegging their exchange rates to the Deutsche Mark. However, these countries are so closely integrated with the German economy, that the real exchange rate between these countries and Germany is more likely to remain stable.

It is only in the short term that monetary policy can prevent the real exchange rate from varying due to the above circumstances. A real appreciation or depreciation will eventually occur, in one way or the other. If the nominal exchange rate remains stable, a required real appreciation will take place through higher domestic inflation. As inflation has such inherent persistence, it easily overshoots and results in an overvalued currency, i.e., the real exchange rate has appreciated to an excessive level and must eventually come down, one way or another. Under a fixed exchange rate regime, this requires lower inflation than abroad, and even deflation if inflation abroad is low. All experience shows that deflation is normally very costly, and often accompanied by a deep recession and high unemployment.

The conclusion is that a fixed exchange rate with a fluctuating real exchange rate leads to alternating inflation-deflation periods, with high variability not only in inflation but also in employment, with costly periods of unemployment during periods of deflation.

The experience of other countries, such as the U.K., Sweden and Finland, at the beginning of the 1990s provides support for this conclusion. These countries have suffered such cycles of booms and recessions, and attempted to maintain a fixed exchange rate when a real depreciation was required. The experience shows that, in practice, the costs of maintaining a fixed exchange rate are so substantial that the fixed exchange rate may have to be abandoned, especially when these costs are understood by market participants and a speculative attack on the currency is induced.

Another disadvantage is that a monetary policy with a fixed exchange rate tends to be procyclical. With a fixed exchange rate, the central bank is compelled to set the interest at the same level as the interest rate for the currency to which the exchange rate is pegged. Suppose a boom occurs. Demand rises and inflation starts to increase. The real interest rate then falls and monetary policy will, in effect, stimulate the economy and further fuel the boom. A rational policy would be to revalue the currency, and this way dampen the boom. Revaluation expectations may therefore arise. This will

stimulate an inflow of capital which tends to appreciate the currency. To maintain the fixed exchange rate, the central bank must lower the interest. Thus real interest then becomes even lower and monetary policy becomes even more expansionary. Similarly, in a recession monetary policy becomes contractive and further deepens the recession.

This tendency to a procyclical monetary policy has previously been observed by Walters (1986) for the U.K. and Svensson (1994a) for Sweden, and recently by Storvik (1997) for Norway.

A third disadvantage is that a fixed exchange rate regime makes utterly unrealistic demands on fiscal policy to stabilise the economy. As monetary policy has a destabilising effect and increases the fluctuations in the business cycle, only fiscal policy remains to stabilise the economy. Experience shows that fiscal policy cannot, as a rule, satisfy these demands. Fluctuations in aggregate demand are often so large that they cannot be reduced by variations in public expenditure or taxation. Moreover, decisions regarding taxation and public expenditure are inherently political, and interest groups and their representatives often find it difficult to agree on the changes required. There is also a risk that the weakest groups, whose voices are seldom heard, are hit the hardest. The decision-making process is too slow. There are many examples that attempts to conduct an active fiscal policy have in reality resulted in a procyclical policy. For example, by the time it has been decided to implement an expansionary policy in a recession, the recession may already have come to an end, such that the expansion occurs in the beginning of a boom.

If, against all odds, a sufficiently flexible and stabilising fiscal policy were implemented, it would still have the disadvantage that taxes and the provision of public services would vary extensively with the business cycle, which would, most likely, have very uneven effects on different groups in society. A poor balance between monetary and fiscal policy would be normal: one would be too expansionary and the other too contractionary.

For these reasons, a fixed or a stable exchange rate regime in Norway would, even if it could be sustained when tested by the market, probably lead to wide business cycle fluctuations and more variability in the inflation rate than the alternative, an explicit inflation target.

An exchange rate target is transparent in the sense that it is easy to understand whether the bank should buy or sell foreign exchange, and whether to increase or lower the interest rate, in the event

that a currency is subject to pressure. At the same time, it is difficult to understand why the interest rate has to be lowered during a boom and increased during a recession, especially if the goal for monetary policy is low and stable inflation and the exchange rate is supposed to be only an intermediate target. Instead the fixed exchange rate may be perceived as a goal for monetary policy rather than an intermediate target. This seems to have been the case in Sweden when the Swedish economy started to show signs of overheating in the mid-1980s. At that time, it would have been rational to revalue the Swedish krona in order to stabilise the economy and counter the increasing overheating and increasing inflation. This could have been justified by arguing that a fixed exchange rate was only an intermediate target to achieve the goal of low and stable inflation, and that this goal could be better achieved by revaluing. However, this view of the exchange rate as an intermediate target was not anchored among the general public or the market, and possibly not in Sveriges Riksbank or the government either. Instead, the fixed exchange rate had, in practice, become a goal which must be maintained at any cost. The authorities feared that a revaluation would indicate a readiness to devalue in the future at the slightest sign of overvaluation of currency (rather than at signs of an excessively low inflation). The central bank therefore decided to retain the fixed exchange rate regime, thus contributing to further overheating of the economy until the dramatic turn into a deep recession at the beginning of the 1990s (at which point the fixed exchange rate implied an over-contractionary monetary policy which further deepened the recession).

A fixed exchange rate therefore also seems have the disadvantage of lacking transparency, in the sense that it does not deepen the understanding of monetary policy but rather fuels the view that the fixed exchange rate is a goal rather than an intermediate target.

These major disadvantages have been confirmed, in that fixed exchange rate regimes have failed in many cases, partly because they have first failed to prevent overheating and increasing inflation and then resulted in recession and high unemployment, and partly because they have not been feasible to defend at reasonable costs against speculative attacks.

3.2 An explicit inflation target?

An explicit and quantified inflation target, e.g. 2 per cent per year, entails, as mentioned above, and as discussed in further detail in Svensson (1997a), that the central bank's inflation forecast becomes

the intermediate target. An evaluation of an explicit inflation target thus entails an evaluation of the inflation forecast as an intermediate target.²

Selecting the inflation forecast as an intermediate target has several obvious advantages. A first obvious advantage is that, by definition, an inflation forecast has the highest correlation with actual future inflation. This is, of course, contingent upon its being constructed on basis of all relevant information. Naturally, this does not mean that the forecast is flawless, but that the errors are as small as economic analysis allows.

Another advantage is that an inflation target provides an automatic business cycle stabilisation for demand disturbances. A rise in demand leads to a higher inflation forecast, with an associated tightening of monetary policy, and vice-versa. This is particularly important in the case of a contraction in demand and a tendency towards deflation. It is important to recognise that an inflation target, if achieved, is a guarantee not only against excessive inflation but also against deflation, especially as the inflation target is normally set a few percentage points above zero.

With an inflation target it may, at first, seem difficult to observe the extent to which the target is fulfilled, since one has to wait 6-8 quarters before seeing the result of the present monetary policy. But what is relevant is to observe the intermediate target, i.e. the inflation forecast. This is not very difficult for the general public and the market, provided that the central bank openly reports its analyses and forecasts. Central banks which operate an inflation target actually publish inflation reports on a regular basis. Norges Bank also publishes an excellent inflation report on a regular basis with an explicit inflation forecast.

Another advantage is that the principles of monetary policy are easily understood, i.e. that monetary policy must be tightened when the forecast exceeds the inflation target and eased when it is below the target. The relationship between the intermediate target (the forecast) and the ultimate goal (future inflation) becomes very clear and almost trivial. The discussion of monetary policy naturally becomes very goal-oriented.

² The literature on inflation targets is increasing quickly, see e.g. Leiderman and Svensson (1995), Haldane (1995) and Federal Reserve Bank of Kansas City (1996) (see Svensson (1997a) and (1997b) for further references).

The advantages of an explicit inflation target are thus very obvious. However, there are also some conspicuous problems and difficulties associated with an inflation target. One such problem is that all inflation targeting regimes have initially faced serious problems regarding their credibility, as expectations about inflation a few years ahead, either calculated on basis of surveys or estimated from yield-curves and forward rates, clearly have exceeded the inflation target. But the credibility of these regimes has been substantially improved the last year or two. In Sweden, expectations in 1994-1995 about inflation 2-3 years ahead were generally around 3-4 per cent per year, i.e. well above the inflation target of 2 per cent per year, and even above the tolerance interval's upper limit of 3 per cent per year. The Swedish krona was also very weak. During the last two years, inflation expectations for up to five years ahead have fallen sharply and are now very close to the inflation target. The krona has also strengthened and reached more reasonable levels. The problems of low credibility, inflation expectations above the inflation target and a weak exchange rate, which several countries with an inflation target have been faced with during the first few years, are probably related to the difficult circumstances under which the new monetary policy regime was introduced, either with high initial inflation (as in New Zealand and Canada) or after an overvalued fixed exchange rate had been abandoned (as in the U.K., Sweden and Finland; in the latter two cases also during a period of very deep recession and high unemployment). In addition, Sweden has suffered from a precarious fiscal situation. Against such a background, it is hardly surprising that building credibility of a new monetary policy regime takes time.

If Norway were to choose an explicit inflation target, there is no reason why the country should experience similar credibility problems, at least if the shift is made before the incipient overheating reaches excessive proportions. Norway's fiscal situation is sound and inflation remains subdued in spite of low unemployment.

The main problem with an inflation target is that the central bank's control over inflation is very imperfect, as inflation reacts to changes in the instrument with a considerable lag and is also influenced by factors beyond the control of monetary policy. As I have developed in depth in Svensson (1997a) and Svensson (1997b) the solution to this problem is to consider a conditional forecast of inflation 1-2 years ahead as an intermediate target, and conduct a monetary policy ensuring that the forecast is in line with the inflation target. The central bank must then have the analytical competence required to make such a conditional forecast. All central banks which have introduced an explicit inflation target have developed such competence. There is already substantial

experience in this area, and new central banks which introduce an explicit inflation target have the advantage of being able to draw on the experience already acquired. There is now also an extensive of literature on inflation targeting (see above).

Achieving an explicit inflation target is no doubt more technically difficult than achieving a fixed exchange target under normal conditions (i.e. in the absence of speculative attacks). It is therefore of great interest to observe the extent to which central banks with an inflation target have succeeded so far. The practical experience of inflation target covering a fairly short period, the longest being about seven years for New Zealand. So far inflation-targeting regimes have worked very well.

Norges Bank already seems to have the analytical competence required to successfully achieve an inflation target. The Bank's analysis and forecast activity appears to be of high international standard. For example, the Bank already publishes an excellent inflation report on a regular basis. The Bank's inflation forecast is actually more explicit and detailed than Sveriges Riksbank's forecast.

An important issue is what exchange rate variability can be expected under inflation targeting. It should be emphasized that an inflation target in itself entails a considerable stabilisation of the nominal exchange rate, in that an excessive appreciation or depreciation via direct effects on import prices and through several indirect channels results in inflation or deflation pressure. A monetary policy aiming at countering such inflation and deflation pressure tendencies will therefore end up stabilising the exchange rate. So far, experience with inflation targeting regimes indicates that the widest exchange rate fluctuations are prompted by a lack of credibility of the regime. As credibility improves, the exchange rate variability should generally be limited to normal (equilibrium) fluctuations in the real exchange rate. The experience with inflation targets is however much too short to draw any firm conclusions about exchange rate variability.

4. Conclusion

In this paper, I have discussed the choice between a fixed exchange rate target and an inflation target in Norway. In order to place this choice in a broader context, appropriate goals of monetary policy and the optimal delegation of monetary policy in a representative democracy have also been examined.

Low and stable inflation seems to be the most appropriate goal for monetary policy. Low and stable inflation is the best contribution monetary policy can make to efficient allocation of resources, economic development and economic growth. It is remarkable that there is no stated (ultimate) goal for monetary policy in Norway. This absence entails an inherent uncertainty about the orientation of monetary policy in Norway in the medium and the long term.

An optimal delegation of monetary policy can be described in three points. (1) The government and/or parliament specify a long-term goal for monetary policy. (2) The central bank is given operational independence, i.e. independent management and full control over monetary policy instruments with the task of achieving the goal laid down by the political authorities. (3) The central bank is held accountable for fulfilling the goal. A delegation in accordance with these point makes it very likely, and very credible, that the goal of monetary policy can be fulfilled, without jeopardising other goals of economic policy. In other European countries, particularly in the EU, these issues have been subject to a lively debate, and most European countries have reformed their monetary policy regime in favour of a more specific delegation of monetary policy. I find it striking that similar reforms do not seem to be discussed in Norway.

The choice between an exchange rate target and an explicit inflation target should be seen as the choice between different intermediate targets in order to fulfil the goal for monetary policy. If low and stable inflation is the goal for monetary policy, an explicit inflation target seems to be the best means of achieving the goal. A fixed exchange rate target for Norway involves the risk of more variability in inflation and more pronounced business cycles than for an inflation target, since the Norwegian real exchange rate will probably in any case show considerable variability. Monetary policy cannot prevent such variability in the real exchange rate. But the negative consequences of such variability can be minimised with an inflation target.

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