Reflections on the conduct of monetary policy

The first Mais lecture, given by the Governor at the City University, London on 9 February 1978.

I must begin by saying what a privilege and pleasure it is for me to have been invited to inaugurate this new series of lectures in the field of banking and finance which are to take place annually at the City University. It is a fitting tribute to the energy and broad interests of Lord Mais, who in 1973 as Chancellor of this University and Lord Mayor launched the appeal for funds to set up this University's Centre for Banking and International Finance, that these lectures should bear his name.

This academic occasion provides me with a welcome opportunity to speak at greater length than is usually possible—or indeed acceptable—at a public function, and I propose to use it by sharing with you some reflections on the conduct of monetary policy, as they have formed in my mind over the past five eventful years. By so doing I shall hope to contribute to the public debate on monetary policy—a debate which I wholeheartedly welcome.

The City University is an especially appropriate place for me to do so. A personal reason is that it gives me the occasion, before the departure of Dr Parkes for the University Grants Committee where his expertise in the elasticity or dynamic plasticity of academic structures will be fully tested, to discharge some part of my debt of gratitude for the Honorary Doctorate of Science conferred on me some two years ago by this University during his Vice-Chancellorship—although the moral of my lecture, that the conduct of monetary policy is an art rather than a science, might be taken to suggest that he gave me the wrong degree.

Another reason is that this University, through its relationship with the City and its institutions, established with them in the ten years of its existence, has been able to combine intellectual rigour and practical relevance in its academic approach to banking and international finance: this is one of the objectives of the Centre and finds its personification in its Director, Professor Brian Griffiths.

We are now at an historical juncture when the conventional methods of economic policy are being tested. The principles on which we have conducted economic policy since the war are having to be reassessed, because, with changing conditions, we are no longer so certain of being able to achieve what once seemed possible. At the same time, the greater emphasis on monetary policy has occasioned new initiatives in ways of conducting it. The present is therefore a suitable time to try to take stock.

What I have to say today falls conveniently under three main headings. First, I shall review the change in our ideas about monetary policy since the Radcliffe Committee reported, and will discuss the shift of emphasis towards concern with the monetary aggregates. Secondly, I shall attempt to consider more systematically the place of monetary policy in the management of the economy. And thirdly, I shall review some of the problems of implementing monetary policy—of management of the growth of the aggregates; of the choice of aggregate for the control variable; and the case for what are sometimes known as 'rolling targets'.

The recent development of monetary thought

It may be helpful to start with an historical perspective. We tend to forget how much our ideas change in only a few years. It makes our present ideas clearer if we see them standing in contrast to what we thought earlier; and it is salutary to have to work out why we think that we now know better than we did five or ten or twenty years ago. A convenient landmark is the Radcliffe Report published in 1959.

The change in ideas since the Radcliffe Report

The doctrine of the Radcliffe Report was always complex and is perhaps difficult to summarise fairly in today's changed climate of ideas. The Radcliffe Committee saw the monetary system more as a set of institutions supporting numerous flows of funds, than as a set of institutions providing a stock of means of payment. Monetary policy was seen as acting on total demand mainly by affecting the ease of access to finance, or what was more vaguely called the 'liquidity of the economy'. Changes in monetary policy took their effect through changes in interest rates: the latter (it was argued) altered the liquidity position of financial institutions, and this in turn affected the availability of funds to borrowers. The difference from present-day thought is illustrated by a quotation from the Report. 'The authorities thus have to regard the structure of interest rates rather than the supply of money as the centre-piece of the monetary mechanism. This does not mean that the supply of money is unimportant, but that its control is incidental to interest rate policy.'

The Committee were mainly looking, as we do not today, for quick tangible effects from monetary measures on the level of demand. The Report left a clear impression that its authors believed that monetary policy had little such effect, and that what effect it did have was not all to the good. They found it difficult to believe that 'any of the changes in interest rates' had much influence—though some effect on demand probably resulted from the 'diffused difficulty of borrowing'. But 'the really quick substantial effects', they concluded, 'were secured by the hire purchase controls' —though these had disruptive effects on particular industries. That, as they said, was 'far removed from the smooth and widespread adjustment sometimes claimed as the virtue of monetary action; this is no gentle hand on the steering wheel that keeps a well-driven car in its right place on the road'.

The Bank did not entirely share this scepticism, as their evidence to the Committee demonstrated. The Radcliffe Report failed to establish a consensus. It did, however, provide a focus for monetary debate, and one strand of the Bank's thinking—and indeed practice—which found an echo in the Report was the importance attached to operations in the gilt-edged market having a wider objective than merely financing the Government—though the objective suggested was couched in terms of the long-term rate of interest rather than, as today, in terms of the monetary aggregates.

Since those days ideas about monetary policy have undergone further evolution. On the theoretical plane, arguments advanced by Keynes and later by Friedman suggesting that there might well be a stable relationship between the demand for money and the level of income and interest rates found apparent statistical verification in the late 1960s. The identification of this function appeared to provide a sound intellectual basis for monetary policy; but it left a practical choice whether the money supply or the level of interest rates should be taken as the proximate objective of policy.

What swung the argument in favour of choosing a quantity rather than a price as the best indicator of the thrust of monetary policy was the acceleration of inflation. Since 1970 not only have prices risen much faster than in the 1950s and 1960s but the rate of inflation has varied considerably from year to year. With increased inflationary expectations, interest rates also have risen greatly. We can, if we like, think of the nominal interest rate as having an 'expected inflation' component and a 'real' interest element. But we can never observe expectations, which are in any case likely both to differ from person to person, and to be volatile. The real rate of interest is an abstract construct. This has made it very difficult to frame the objectives of policy in terms of nominal interest rates.

For these reasons we were led to pay increasing attention to the monetary aggregates as a better guide—though not of course a perfect guide—to the thrust of monetary policy. In this we were not alone; a move in this direction occurred quite widely in the Western world towards the end of the 1960s. This emphasis was reflected in the new approach to monetary policy put into effect in September 1971, on which I must now say a few words.

Competition and credit control

The aims of competition and credit control were twofold. First, it was a move away from reliance on direct restrictive controls in the monetary sphere. They had remained in being far longer than appropriate for the health of the banking system, and such restraining effects as they had were being increasingly eroded. More positively, it was a move towards a system in which market forces could play a predominant rôle. As I have already indicated, importance was now attached to the monetary aggregates; their rate of growth was to be controlled by the market instrument of interest rates.

A change on these lines was clearly desirable and indeed overdue. Nonetheless the results over the ensuing two years have provoked serious criticism. There was rapid expansion of the monetary aggregates, and the economy did in fact expand rapidly—though in some large part no doubt because the stance of fiscal policy was strongly expansionary. And prices later started to rise rapidly—though here again other factors, including a world-wide commodity boom, have also to be taken into account. I shall not attempt to disentangle the complex strands of causation, but some points may be remarked.

The removal of earlier restrictions over the growth of bank lending allowed the banks to recapture a share of the business which controls had caused to be undertaken through non-banking channels. Such reintermediation was indeed natural, as the banks benefited from their comparative efficiency in the provision of services. In addition we had hoped that this process would go further: that some of the business undertaken by the fringe institutions which had grown up during the 1960s would be taken over by the longer-established banks. In the event, however, this transfer was to some considerable degree frustrated by the more general expansion in lending which took place.

In the two years to September 1973, M_3 grew at an average annual rate of about 26%, compared with about a 10% rise in M_1. Part of the increase in broad money was possibly associated with a general preference for increased liquidity at a time of uncertainty surrounding the future course of inflation and interest rates; part undoubtedly reflected the sort of reintermediation I have touched on above; and part reflected the arbitrage which developed when companies found it profitable to borrow on their lines from the banks and on-lend in the wholesale money markets. To the extent that these factors represented shifts in the demand-for-money function rather than an excess creation of money, their effects on the real economy were likely to have been much less significant.

The process of reintermediation was accompanied by a number of other developments. In the financial sphere the banks—here and in many industrialised countries—were shifting towards 'liability management'. In expanding their loan books they began to pay less attention than before to the resources already available to them, since they could if necessary make up any deficiency by recourse to the wholesale money markets. This was facilitated by the encouragement of competition in the banking system in 1971. With banks increasingly prepared to compete for wholesale deposits in this way, the development of the broader monetary aggregates came increasingly to depend on interest-rate relativities—between wholesale money rates, Treasury bill and local authority rates on the one hand and bank lending rates on the other—rather than on the average level of rates. In 1972 and 1973 for example the major banks competed extremely vigorously to expand the size of their books and their individual share of the market; this helped to bring about a pattern of interest rates conducive to very rapid expansion. The supplementary special deposits scheme was precisely tailored to arrest this development: after its introduction at the end of 1973 the differential between rates of interest offered on wholesale deposits and charged on loans widened and the rate of growth of wholesale deposits fell back. However, it is hard to know how much this was due directly to the impact of the scheme and how much due to other factors.

The Government over this period were deliberately promoting a faster rate of economic growth. To revive slack domestic activity against a background of mounting concern for unemployment, an expansionary Budget in the spring of 1971 was followed by further tax reductions and increases in expenditure in July, and another reflationary Budget in the following spring. The PSBR began to move upwards.

The monetary expansion which occurred largely resulted from the conjunction of these separate factors—reintermediation, the banks' aggressive search for new business and with it their move to liability management, and fiscal expansion. Monetary expansion must have contributed to the rapid rise in asset prices that occurred, notably in real property. It is more difficult to decide how far it caused the boom in the real economy, and the acceleration in the rate of inflation that began to set in. Some would regard the monetary development as the sole, or at least the dominant, cause; others would see it as a minor contributing factor accompanying, and in part reflecting, other more powerful forces. Despite such uncertainties about the nature and the effects of the monetary expansion, it cannot be judged other than excessive.

It had proved difficult to raise interest rates sufficiently to match the worsening inflationary environment, and braking the monetary expansion by this means was in any case proving unacceptably slow to show its results. In these circumstances, after raising minimum lending rate from $7\frac{1}{2}\%$ to 13% during the second half of 1973, the Bank introduced the new mechanism of supplementary special deposits.

Since then emphasis has continued to be placed on controlling the growth of the monetary aggregates as a specific proximate target for policy. Only since 1976 has this taken the form of publicly declared quantitative targets. Before that it constituted an internal aim: I think it is not therefore entirely accidental that during each of the three years 1974–76 the growth of sterling M_3 was about 10%, well below the rate of expansion of national income in current prices. This was achieved during a period in which inflation, though latterly declining, was at an explosive rate and in which the financing requirement of the public sector increased notably.

The place of monetary policy in the scheme of things

I now turn to discussing the place of monetary policy in the context of economic policy generally, and what we hope to accomplish by monetary policy.

I am conscious that this aim is ambitious. This is a subject much written about and much disputed by economists and non-economists alike. Moreover a statement of view by an institution is something very different from that of an individual expert. An institution like the Bank differs in being first a collectivity, a team; in having primarily operational responsibilities; and, as such, in operating in a political environment. We hope to be sensitive to new currents of thought; yet at the same time we must exercise our judgment and not be too ready to accept every change of intellectual fashion. Formulating a line of practical policy and trying to stick to it, while yet remaining appropriately flexible amid the uncertainties of day-to-day affairs, feels very different from devising ideal solutions in the seclusion of a study.

It is, however, reasonable to expect us to seek to abstract ourselves from day-to-day pressures, and to try to systematise the philosophy that underlies our actions, though of course I have no illusions that I am stating the last word. Indeed, I hope that our critics will say why they disagree, and that thus we will together participate in a dialectic which will contribute to the evolution of a new climate of public opinion.

Monetary targets and their part in general economic policy

I will start by trying to say something about the nature of monetary targets; and go on to touch on some current issues about the proper way to conduct economic policy.

The achievement of a monetary target is not an end of policy in itself. The real objectives of policy include economic growth—in the short term, and also in the long term: and stemming from this the provision of sufficient investment for the future, and of adequate employment opportunities. They include also price stability, both as a major end in itself, and as a means to much else; and as a means if not an end, they include maintaining an appropriate relation to the rest of the world and a prudent balance of payments stance. It could be argued that monetary policy is but one instrument of policy, along with fiscal policy, exchange rate policy and, to the degree that it is possible, incomes policy; and that all such policies should be jointly set so as to achieve the desired feasible combination of final objectives, and should be adjusted from time to time as circumstances change.

In such a context, is there a place for having a target for the single instrument of monetary policy? Might this not introduce an element of undesirable rigidity—particularly inappropriate, it might be thought, for monetary policy, whose advantage has often been claimed to be that it was flexible?

To this, however, it can be replied that we should beware of over-reacting to changing circumstances, and of being over-active in economic management. Policy changes are unsettling and disturbing in themselves. It is right that people should know what the broad lines of policy are, and that such policy should be kept on its stated course until circumstances clearly call for a reappraisal. There has in any case been a reaction against frequent policy adjustments, or attempts at what has popularly been dubbed 'fine tuning'—a reaction which is part of a wider disillusion with the possibilities of economic policy and the post-war enterprise of trying to manage the economy.

This spirit of disillusion with demand management is justified up to a point, but is capable of being carried too far. To eschew demand management entirely would involve tenacious faith in the self-correcting properties of the private sector of the economy, for which the evidence is not strikingly clear. Moreover, the economic functions of government have become so extensive that it is difficult to define what a neutral policy is.

What, however, does seem clear to me is that the conventional methods of demand management can only work well against a background of financial stability. In recent years the economic system has received so many shocks that the stability of the post-war world has been fractured.

Our first order of business must, therefore, be to restore confidence in the framework of the system. The crucial economic decisions, for example to undertake investment, involve an act of faith in the future. That faith has been undermined by uncertainty—uncertainty in particular about the future value of money, externally and internally. In times past other features of the economic system, such as fixed exchange rates or Gladstonian budgetary principles, were thought to provide some guarantee of stability. These restraints have now gone. The main rôle therefore that I see for monetary targets is to provide the framework of stability within which other policy objectives can be more easily achieved.

It is essential for this purpose that monetary targets should be publicly announced, and that the authorities' resolve be sufficient to make that announcement credible. Our acts have, I believe, given observers cause to regard our resolve as strong. This in itself has dampened fears of worsening inflation, and provided an appropriate backdrop against which we can continue the struggle to bring inflation steadily down. I would not claim that monetary policy can or should be left to fight inflation singlehanded —I shall turn to this subject again later. But monetary targets have an important place in the relevant armoury.

Monetary targets represent a self-imposed constraint or discipline on the authorities. This can at times seem irksome, the more so perhaps because the permissible thresholds cannot be precisely and scientifically set, involving a considerable element of judgment. Yet the layman's apparently intuitive perception of the broad relationship between monetary growth and inflation —clearer perhaps to him than to the professional who knows all the necessary qualifications—may well make it easier to explain and justify measures necessary to achieve the goal of stability but with immediately unpopular effects. We need a basis of public support and understanding of the limits to prudent action. Furthermore, quantitative monetary targets can provide a useful trigger for more expeditious policy decisions.

The main purpose of having publicly announced monetary targets is, therefore, to provide a basis for stability. Stability does not, however, imply rigidity. There can be occasions when policy needs to be adjusted because circumstances have changed. There is a case for adjusting monetary policy, as well as fiscal policy, to offset cyclical swings in the economy. In recent years, however, severe cyclical disturbances have been overlaid and accompanied by an even more menacing inflationary trend. We will not, in my judgment, be able to deal satisfactorily with the present recession until we can conquer our inflation problem, whose implications for monetary policy I now turn to discuss.

Monetary policy and inflation

There is, I think, a two-way connection between inflation and economic expansion. The common wisdom used to be that there was a trade-off: high levels of activity led to high rates of inflation, and lower levels of activity similarly to lower rates of inflation. Nowadays, with the elusiveness of what economists call the 'Phillips curve', this route to controlling inflation has seemed to become less sure. And yet some important part of that connection must surely remain. The governments of almost all industrial countries have acquiesced in low rates of economic expansion in the last three years. Their motives have been manifold, but a main one has been fear of inflation; and inflation rates have fallen. And in this country, I think it is generally accepted that the practicable rate of economic expansion will depend in large part on how successful we are in moderating the pace of inflation. The connection is in part a matter of market forces—strong demand pressure would generate larger wage increases, in part semi-political —unrestrained expansion would erode the braking power of the present policy of pay restraint.

The reverse connection is that—quite apart from this connection via economic policies—inflation impedes economic expansion by inducing caution among consumers, and by making business, and in particular investment, so much less predictable. If we could reduce inflation, this would itself generate a faster expansion in the private economy. The expansion we sacrifice in order to deal with inflation is less than might appear.

One should recognise that the blame for inflation rests not on any simple cause, but rather on a multitude of political and economic pressures. Is it not clear enough that our system has a strong inflationary bias? In recent years annual wage increases have become the accepted norm, though there is no logic in this. The size of wage increases moreover depends on an unco-ordinated and to some degree competitive process in which, to say the least, the collective effect on price stability does not naturally act as a dominant consideration. Governmentally-inspired efforts at pay restraint take their rationale from these circumstances. In our post-war history there has been a succession of attempts at such policies, some more successful than others; and I would guess that we are destined to continue the effort. Such policies have their obvious shortcomings and considerable attendant disadvantages. Nevertheless from the point of view of monetary policy we should welcome whatever success they can achieve, while giving them in turn all the support from monetary policy that we can devise.

I would not want to suggest that there is always a direct, simple chain of causation running from the money supply to the price-level. Indeed, it is generally recognised that inflation can, at least for a time, follow a life of its own quite independent of current or past monetary developments. The peak of recent inflation in the United Kingdom three years ago owed much both to the rise of world commodity prices in 1973 and to the repercussions this had—through the unfortunate accident of the threshold agreements then in force—on domestic wages. Equally, exchange rate movements had important effects—though I know this raises more complicated issues on which I shall comment later.

But though the causation may not be simple, there is an observable statistical relation between monetary growth and the pace of inflation. I am not here thinking of the short-term relationships which underlie the demand-for-money equations to which I have already referred. There has been a fair measure of success in establishing such relationships, even though the success is far from complete. I think however that what is far more important is the relationship between monetary growth and inflation over the longer term. A great deal of work has been devoted to the study of this relationship over long time periods and in many countries; and that there is such a relationship cannot, I think, be doubted. To many this provides adequate intellectual justification for establishing medium-term aims for the rate of growth of the money supply.

Some I know may still feel doubts as to how the statistical relationship between money and prices should be interpreted. Governments and central banks are often in effect under pressure to validate price increases stemming from non-monetary sources because the alternatives have seemed to be pressures on interest rates or on employment. It might then be questioned whether under such circumstances the causality could not run as much from prices to money as from money to prices.

To those who doubt on some such grounds how far monetary policy can be of help in dealing with inflation, I would venture to address a more general defence of our present line of policy. The latest issue of the *National Institute Economic Review* suggests for instance that the Institute are of this school. The Institute base their contention on the grounds that labour market pressures in general and unemployment in particular do not serve greatly to moderate the wage spiral, unless extremely severe. With wages in their view thus determined by non-market pressures, they argue that financial targets will either fail to bite, and thus be ineffective, or alternatively that they will have their major impact on real output. But in the same issue I note that the Institute declare that the early re-establishment of reasonably full employment would be foolhardy until a solution is found to the problem of inflation—which, from the viewpoint of the Institute, depends on the adoption of incomes policies on a permanent basis. Until then, it is implied, the pace of expansion will have to be kept down to a strictly moderate pace.

I concur with this last judgment—as I have already indicated, I take the view that we cannot allow the economy to expand very vigorously until inflation has been brought down to a lower level and we have some assurance that this achievement will not be threatened by faster expansion.

A monetary target both provides an overt public expression of this need for caution, and embodies some assurance that action will be triggered if the need for it arises. In the short term, if things go wrong adherence to an unchanged monetary target will be the equivalent of early restraining discretionary action. In the longer term, the commitment to monetary targets will also ensure a general degree of caution. One may therefore say that in a figurative sense to announce such a commitment is to serve notice on all those concerned, including those concerned with wage bargaining, how far the authorities are prepared to finance inflation. It will be said that those involved in wage bargaining pay no heed to the size of the monetary targets. This may be so—though I would think it better if it were not. Yet, over time, perseverance with a policy of the sort I have outlined will, I believe, have an increasingly pervasive effect. As it becomes clear to all that faster growth can only be had with less inflation, will there not be more pressure to see how this can be done?

I think one thing will be evident from what I have said. Monetary policy is often classed as an instrument of demand management: in practice, until we have made more progress with inflation, its services are likely to be pre-empted by the need to use it as an instrument against inflation. Nevertheless, it is clear also that we need a reasonable rate of expansion; and the prospect I see is not of no expansion, but of a reasonably controlled expansion.

I should now refer to the relation between monetary policy and the exchange rate. Many monetarists would I know see the chief influence of monetary policy on prices as coming via this route, and would regard a floating exchange rate as an essential concomitant of a sound monetary policy.

It will be plain that the Bank have not adopted the whole of this intellectual position. The advantages of an appreciating rate for domestic prices are evident enough. But as a recent issue of the Bank's *Quarterly Bulletin*[1] made plain, we are also concerned with the effect on export prices and on the profitability of exports. Nor did we wholly accept the argument that capital inflows, arising at a time when we were intervening on the exchanges to keep the rate lower than it would be on a free float, must necessarily undermine the effectiveness of our monetary control. Indeed for ten months of last year—when massive inflows occurred—this was not the case. A time came however when we felt unable any longer to maintain full control over the growth of the money stock without setting the exchange rate free to float—concern about exports notwithstanding. The decision made in those circumstances emphasises our commitment, in conditions of conflict, to controlling the monetary aggregates.

The implementation of monetary policy

I should now like to turn from the broad general principles of policy to the more technical problems of implementing monetary policy in practice.

Management of the monetary aggregates

The difficulties of achieving the desired path for the monetary aggregates can be described in various ways. Let us start by considering what influences the demand for money. Given the level of national income, and neglecting temporary influences, we work on the theory that interest rates are the main determinants of the demand for money. That is the logic of our method of operating, as I have sought to describe it earlier in this lecture—we seek to manage the course of the monetary aggregates by bringing about changes in interest rates. But it is, of course, difficult to predict the level and structure of interest rates at which the stock of money the public wants to hold will be brought into equality with the stock the authorities would like to see being held. I need not apologise for this: the converse of this ignorance is that how interest rates will be influenced by various factors is highly uncertain, a fact of life known to all market operators.

In practice we often try to get round this difficulty by building up a forecast from, as it were, the 'supply' side. Thus, we look separately at the main items which statistically speaking are the components of the money

[1] See the September 1977 issue, page 299.

supply on a broad definition—such as the PSBR, sales to the public of government debt, the volume of bank lending to the private sector and external flows to the private sector. What we are in effect doing in such an exercise is to attempt to predict what the rate of monetary expansion will be if we refrain from trying to change interest rates—as a preliminary to considering the need for intervention. This may disguise, but does not really evade, the central difficulty of prediction which I have just mentioned.

We are, of course, kept constantly awake to this difficulty by the sheer erratic variability of the counterparts of the money stock with which we are dealing. For example, since 1974 the mean error of forecasts of the PSBR made at the beginning of each financial year has been of the order of £3 billion. Again, the monthly growth of bank lending frequently fluctuates from its trend by over £100 million; extreme fluctuations in recent years have been as much as three times as large as this. Moreover, in the last two decades bank lending has been greatly affected by numerous types of official intervention and control; and, partly no doubt in consequence, we do not now know at all exactly how it is likely to respond to changes in economic or financial conditions.

The essence of monetary management, as I see it, is to act to offset divergences from forecast in these sources of monetary expansion—difficult to predict and control—as soon as it becomes reasonably clear that inaction is likely to undermine achievement of the monetary target. Such divergences from forecast are difficult to identify quickly, partly because of inevitable delays in statistical information about the recent past.

A corollary is, I believe, that so long as we can see our way to bring it back within a few months to the charted path, we should not be unduly concerned when monetary growth goes temporarily off course. I do not for example see much case for supposing that the temporary slow-down in monetary growth last winter, or the temporary acceleration last autumn—largely influenced by massive inflows of funds from abroad—had or will have a significant effect on the development of the economy. Nevertheless, the long run is a summation of short periods; and what is above all important is that we do not allow monetary developments to diverge too long from trend.

I know that there are critics and commentators who believe that the problem of maintaining control over these short-term developments could be more satisfactorily achieved by a change in our form of operations. They argue that control over some form of high-powered or base money would be more effective in controlling monetary growth than are our present methods. This same debate is occurring in several countries between central banks and their academic critics. It is the case that most central banks, including most of those with publicly quantified monetary targets, seek to affect monetary growth by varying the general level of interest rates. The monetary authorities in the United States, in Canada and in Germany, for exam ple operate by this method. I would not seek to suggest however that the methods adopted by the major central banks are, *ipso facto*, right.

This is too large a subject to enter at this stage in my address, and I would hope to return to it on some future occasion. What I want to say now is that I doubt whether a move to base money control would enable control to be achieved with less variation in interest rates than at present. Indeed, the extent of interest-rate variation that the system would have to tolerate might be considerably greater, in the short run at least, if base money control was to be rigorously imposed.

Choice of monetary aggregate

I turn now to the question of which of the monetary aggregates is the most appropriate series on which to set the target. If you plot the rate of growth of the alternative monetary series in the United Kingdom since 1970, particularly the series of M_1 and M_3, you will see that they have followed markedly differing paths. For the technically minded, the correlation of the quarterly changes in these aggregates over this period has been only $+0.1$. Which series one chooses to look at can clearly affect one's interpretation of monetary developments.

The broad monetary aggregate, sterling M_3, in terms of which our present target is expressed, has a number of advantages over its rivals. As I have already said, it can be linked to changes in certain key credit counterparts, such as the PSBR, bank lending, government debt sales, DCE and external financial flows, in a way that helps our understanding of the course of monetary developments. It has also some comparative statistical advantages; for example, it is proportionately less disturbed by transit items—somewhat arbitrarily treated as they are—than M_1.

Nevertheless, there are certain shortcomings in this series which call for caution in its interpretation. The velocity of M_3, the ratio of incomes to broad money, has exhibited very sharp fluctuations, with a major fall during the period of adjustment to competition and credit control, and subsequently a return to—or above—its previous average level. The econometric equations, estimated earlier, neither forecast nor have since adequately explained this development. It probably arose because (as I have already noted) the rate of growth of one of the major constituents of M_3, wholesale deposits, depends on relative interest rates, rather than their general level.

Increases in minimum lending rate and in the general level of interest rates do not of themselves bring about a shift in the relative pattern of interest rates that would serve to moderate the growth of wholesale deposits within M_3. Indeed, if the increase in rates is closely connected, as it often is, with pressure on banks' liquidity, the relative pattern of rates is liable to adjust adversely, leading to even faster growth in wholesale deposits, at least temporarily. On occasions the path of M_3 can be significantly influenced by changing competitive conditions within the banking industry—conditions which can change for reasons quite separate from the course of nominal incomes in the economy, or the actions of the monetary authorities.

There is also, I believe, worthwhile information to be obtained from looking at series other than M_3. Over the period for which we have complete data since 1963 the relationship between movements of narrow money (M_1) on the one hand and of incomes and interest rates on the other has been closer and more stable than has been the case with M_3. Though for some economists that alone would be reason for putting chief emphasis on M_1, I would not go that far. First, the relatively stable relationship involving M_1 has been observed for a comparatively short period, during which the authorities have not given emphasis to controlling M_1: this does not guarantee that the relationship would remain as stable under differing conditions, particularly if the authorities were to seek to control it more closely. Secondly, I value the broader descriptive analysis that reference to M_3 allows, which one cannot obtain with M_1.

Reasons could also be advanced for paying attention to wider liquidity series than M_3. There is a high degree of substitution between some assets included in M_3 and some excluded, Treasury bills and certificates of deposit for example. Moreover, the growth and evolution of the building societies has blurred the distinction between deposits with banks and shares and deposits with building societies. This development raises a number of issues, among them the scope and coverage of any series intended to measure private sector transaction balances.

One specific proposal put to us is that we should once again provide a refurbished M_2 series, which would aim to exclude wholesale deposits (whose course is so hard to predict or control) and to include retail-type time deposits. We welcome and seriously consider suggestions of this kind. However, we have certain doubts about this particular suggestion. We doubt whether the addition to the existing M_1 series of seven-day deposits with the clearing banks would provide much additional information. A theoretically better split between retail and wholesale-type deposits might be obtained by grading deposits by size, over and under £50,000 for example. However, not only would any such dividing line be arbitrary, but it would impose a new, onerous burden on the banks' statistical systems. Moreover, for the reasons I have already indicated, I am not sure that it would be sensible to restrict a statistic measuring private sector retail-type deposits to the banks alone, excluding similar-type deposits with building societies.

More generally, there will be some information to be had from observation of virtually any financial and economic indicator. But we cannot and should not translate all such indicators into targets for policy. That would be a recipe for confusion. We need to have clear and simple targets, and I am satisfied that in the present state of the art we have chosen best in selecting sterling M_3.

Rolling targets

Finally, I might comment on the question of how often targets should be reviewed and revised. The present monetary target was set in last March's Budget to last without review for the whole financial year. But it is open to question whether this is the optimum strategy. New information on the economy is continually becoming available and it is my view that we should reassess developments as often as sufficient information makes this worthwhile.

A drawback of the present annual targets has been the implied requirement to hit a particular number on a particular date. The various time-lags in the system make it difficult, and certainly highly undesirable, to try to offset undesired monetary movements very rapidly. Firm deadlines can force one either to try to adjust too fast to an unforeseen trend developing late in the period; or to appear to accept a failure to reach one's target. For such reasons it is for consideration whether it would not be advantageous to rebase the target before the previous target period has been fully completed.

The Federal Reserve undertakes a reassessment each quarter. I believe that for us that would be too frequent. Such a reassessment might however be undertaken along with a review of fiscal policy, for instance at the Budget and again in the autumn.

Targets operated in this way have come to be called 'rolling targets'—yet another addition to our growing dictionary of economic jargon, though perhaps a useful and expressive one. I am aware that some people fear that a move to rolling targets would permit much greater elasticity, so that over a period monetary growth could drift further and further away from a desirable medium-term trend. The ability to reassess policy at six-month intervals, however, would not necessarily entail altering course. Indeed I would hope that, more often than not, it would validate staying on the same course for an extended period. I need hardly stress again the value that I place on the importance of maintaining monetary stability.

I would not of course support the adoption of rolling targets if this implied a change of direction in our present strategy. But I could see it as a minor, but useful, technical change to our continuing policy of having publicly announced monetary targets—a policy which I have sought to defend and explain this afternoon.

In doing so, I have covered a lot of ground and will therefore spare you—and myself—the added burden of summarising what I have had to say. We have not, it is plain, adopted a wholehearted monetarist philosophy. But what we do is likely to give a monetarist a good deal of the prescription he would recommend, which may be what Mr Volcker, President of the Federal Reserve Bank of New York, implied in his phrase 'practical monetarism'. But the essence of what I have been saying is indeed very old-fashioned—the predictable caution of a Central Banker.