The instruments of monetary policy

*In the seventh Mais Lecture,[1] the **Governor** discusses the effects and limitations of the various instruments available to the authorities in the operation of monetary policy.*

There are practical limits to the extent to which reliance can be placed on government funding policy or foreign exchange market intervention, as well as limits to their effectiveness. In practice the authorities are largely dependent on a single instrument—the short-term interest rate. But understanding of the various ways in which interest rates influence economic behaviour is itself limited. The precise effects of these influences are uncertain and can vary with the circumstances prevailing at the time. The authorities are, therefore, circumscribed in their ability to achieve selective effects on particular aspects of the economy. From the point of view of monetary policy, however, it is the aggregate effects on the wider economy that are important, and there is no doubt about the direction of these effects, nor that they are powerful.

It is a pleasure and a privilege for me to have been invited to deliver this year's Mais Lecture. I am not, of course, the first Governor of the Bank of England to have been honoured in this way. My predecessor, Lord Richardson, gave the inaugural lecture in a distinguished series as long ago as February 1978, and I should like, if I may, to take a quotation from his text as my point of departure this evening.

Policy objectives

Speaking against the background of high and variable inflation throughout the industrial world, and not least in this country, Lord Richardson described the essential aim of monetary policy in the following terms:

> 'Our first order of business must 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 about the future value of money, externally and internally.'

Almost a decade later, maintaining confidence in the future value of money remains our first order of business. There is now, I believe, a much wider understanding that this is the limited, but vital, role which monetary policy can play in contributing to the more effective working of the economy. It is a necessary—though not in itself sufficient—foundation for the achievement of the more fundamental aims of economic policy—a strong and growing economy and higher employment and living standards.

The progress made against inflation has been substantial. From well over 20% at times in the 1970s, the annual inflation rate, measured by the retail price index, dropped decisively below 10% in 1982 and has averaged less than 5% over the last four years. Currently the underlying rate is around 4%, but that is still above the inflation rate in most of our major competitors, and still sufficient to cause the value of money to halve in less than 20 years.

At the same time as inflation has been falling, output has recovered. Since 1981, after a severe recession—which was instrumental in breaking the inflationary psychology of the 1970s, however regrettable in many other respects—output has grown at an annual rate of almost 3%. This is close to what would have been regarded, not very long ago, as the limit imposed by the growth of the economy's capacity, and the longest period of sustained expansion since the previous period of relatively low inflation in the 1960s.

Despite this progress towards achieving the ultimate objective of monetary policy, we have been less successful, at a more technical level, in achieving our *intermediate* aims. The policy framework for the past decade has been one of published targets for the growth of the money supply, based upon the expectation of a reasonably stable and predictable relationship between monetary growth and nominal income. In practice, for reasons which I explored at some length in a lecture at the University of Loughborough in October last year, and associated in part with the rapid change affecting our financial structure and our financial behaviour, this relationship, particularly as it applies to £M3—our chosen measure of broad money—has proved less reliable than was initially hoped.

The simple, easily understood, rule which a £M3 target represented was no doubt always an oversimplification. Indeed this was acknowledged, as the policy framework evolved, through the addition of further targets and the progressive elaboration of some of the many other factors

(1) At the City University Business School, on 13 May.

necessarily 'taken into account' in the real-world process of policy decision-making.

Initially, in the high-inflation environment of the time, that oversimplification served a useful purpose, adding credibility to the authorities' counter-inflationary resolve. Subsequently, frequent redefinition of the targeted aggregate and upward revision of the target range—often missed even so—resulted in public confusion rather than confidence, and it was for this reason that we have not set a broad money target for this year. But I would caution you against reading too much into this. In practice, little of substance has changed. The £M3 rule has never operated in a purely mechanical way: we have always been prepared to override its signals in the light of other, contrary, evidence on the state of monetary conditions. Equally the absence of a £M3 target emphatically does not mean that the behaviour of broad money and credit is regarded as of any less importance than before. We continue trying to understand, and to explain publicly, the influences on broad money and their implications for policy. The reality, with or without any particular target, is that policy is directed pragmatically, on the basis of the evidence from a whole range of economic and financial indicators, towards its end objective; and the world is in my judgement too complex for it to be otherwise.

Given this reality, public confidence in policy is likely to depend upon the deeds of the authorities rather than on their words, and I am sure that the Chancellor of the Exchequer, Nigel Lawson, had this in mind when he spoke of the future rate of inflation as the judge and jury. After the experience of the 1970s it is hardly surprising that such confidence should have taken years to re-establish: but we are beginning to see it now, though we are continually conscious that it would quickly be destroyed if we were to depart from our intended counter-inflationary course.

Policy instruments

Let me then turn to the deeds of the monetary authorities, and their handling of the instruments of policy, which is the main substance of my lecture.

Outside commentators on monetary developments sometimes create the impression that those responsible for operating monetary policy sit in front of a battery of switches and levers, each one of which will produce a precise and certain response in some area of the financial markets or directly in some more distant part of the economy. I can assure you that there is only one switch in my room, and that is the light switch.

In practice we have only a very limited range of instruments, though they can often be used tactically in different ways, and their effects can vary depending upon the particular circumstances prevailing at the time.

(a) Controls

I leave to one side possibilities in the field of direct controls. I do this not for any doctrinal reason, but for the severely practical one that they are rarely effective in dealing with the source rather than the symptom of the problem. It is very tempting, and not at all difficult, to invent a control to suppress almost any financial development. Such developments are rarely a cause for concern on their own but as portending unfavourable consequences elsewhere. To stop such developments may do little to avert the unwelcome consequences even if it does disrupt the relationship on which the forecast was based. Money is the most fungible of all commodities and our experience over a long period is that the effect of direct controls is largely to divert financial flows, typically into less efficient channels, rather than to achieve any deeper purpose. These difficulties can only be greater now with the disappearance of traditional barriers between different financial functions and of distinctions between different financial activities, and with the merging of national markets into a global whole. Controls in one area would either be ineffective or spread rapidly as further and further controls were introduced to head off successive leakages from those already in place.

(b) Fiscal policy

I leave on one side too the Government's overall fiscal policy. There is no question that co-ordination of fiscal and monetary policy has an important role to play in the effectiveness of policy overall, and we are fortunate that the arrangements in this country adequately provide for this. The nature of the close working relationship between the Treasury and the Bank ensures considerable consistency of purpose. In recent years the medium-term financial strategy has formalised this consistency as it relates to the coherence of the financial consequence of fiscal policy with the Government's monetary objectives. But at most points during the year the monetary policy operators have to take the fiscal stance, like so many other economic factors, as given.

The instruments we are left with then are the terms on which we provide liquidity to the banking system, government funding policy (or as some prefer long-term interest rates), and foreign exchange market intervention. As I shall explain, there are practical limits to the extent to which we can rely upon either funding policy or intervention, as well as limits to their effectiveness. To impose quantitative restrictions on the supply of liquidity to the banks would, as my predecessor pointed out in his Mais Lecture, inevitably risk unacceptable volatility in short-term interest rates. Thus, when you come right down to it, the only effective instrument of monetary policy is the short-term interest rate itself.

(c) Interest rates

I embark upon this next part of my lecture with some trepidation. Generations of eminent economists have tried to identify the effects of interest rates on the economy, producing many valuable insights into a wide variety of different transmission mechanisms, but little overall, practical, consensus and little empirical support for their particular views. I say this without critical intent.

As in other areas of economics, behaviour in response to interest rate changes is probably influenced at least as much by people's expectations about the future—in relation to prices as well as interest rates themselves, and I recall here again the passage from Lord Richardson's lecture with which I started—as by perceptions of the cost of money at any particular time. And expectations of course are notoriously difficult to observe, measure or model. Interest rates are almost invariably changed in response to an unanticipated development elsewhere in the system. This development will in itself also affect the financial and expenditure plans on which the interest rate change might be expected to impinge. Its impact can be isolated only if the other development is itself correctly identified. In some cases it will be a change of sentiment which inevitably eludes the statistician. In other cases it may eventually show up in the statistics but the variable delay between the changed perception which affects the financial markets and the events recorded in the statistics may well still confuse the econometric estimates. It is unsurprising therefore that opinions on the effects of interest rates should differ. But, as a central banker claiming to exercise influence over the economy primarily through our influence on interest rates, it is reasonable for you to expect views from me on at least some of the interest rate influences that strike me as potentially important.

One mechanism that might have been expected to operate is an influence running from interest rates—the cost of borrowing—to the demand for credit. In practice an important part of our monetary policy difficulties, running back for most of the post-war period, has been the evident weakness of this influence. The growth of bank (and building society) lending to the private sector has for many years been well in excess of that of national income and has seemed impervious even to very large upward movements in nominal interest rates and even at times has reacted perversely.

In the 1960s and 1970s this could probably be explained by inflation, which meant that in real terms interest rates were in fact negative. More recently an important explanation has been the progressive elimination of direct controls which has resulted *inter alia* in much freer access to mortgage credit. The fact that during the period of controls inflation raised the value of houses, while eroding the real value of the debt secured on it, meant that personal borrowers availed themselves of these new opportunities. Much of the recent growth of personal borrowing has been in this form, and it has been accompanied by a rapid increase in personal sector holdings of financial assets. To some extent, therefore, the personal sector's monetary behaviour during this period may reflect simply a redistribution of its portfolio of assets and liabilities without serious implications for future inflation.

In relation to companies' finances, the role of short-term interest rates may be to influence not so much the total level of their borrowing as their choice between borrowing from the banks and borrowing from the capital market. This choice has important monetary implications, and is a channel on which many foreign authorities rely. Uncertainty about inflation and nominal interest rate prospects made fixed-rate capital market intermediation unattractive to both borrowers and lenders in the 1970s, and companies ceased to issue bonds or debentures. This has changed in recent years and new sources of borrowing have opened up to many companies, including financial companies, as a result of financial innovation, providing new alternatives to bank finance. It seems possible that these developments will now make companies' borrowing from the banking system more sensitive to short-term interest rates.

One might expect the demand for credit as a whole to be influenced primarily by the general level of interest rates. And this is likely to be true also of the demand for non-interest-bearing money. But neither of these effects has direct implication for the behaviour of the broader monetary aggregates. This will depend upon the range of factors determining the size of the banks' aggregate balance sheet. But, whichever side of the banks' balance sheet one looks at, it is clearly relative interest rates that matter. On the assets side, I have already mentioned the significance for companies' bank borrowing of its cost relative to the cost of capital market, or securitised, finance. Similarly, from the liabilities side, the size of the banks' balance sheet will depend upon the return to depositors on bank deposits relative to the return on competing, less liquid assets. In consequence the direct effect of a change in short-term interest rates on broader, interest-bearing, monetary aggregates is ambiguous.

Funding policy—a digression

It may be helpful if I were to digress briefly at this point and talk about funding policy. Given the uncertain response of both the demand for credit and the demand for money to movements in interest rates, funding policy came to play an increasingly important part in the pursuit of monetary targets in the early 1980s. Indeed we pursued a policy of 'overfunding' the public sector's borrowing need in order to neutralise some of the effect of high bank lending on the broad money aggregates. This can equally be seen as an attempt to control the growth of those aggregates by twisting the yield curve in the direction of increasing long rates relative to short rates, and so attracting funds out of the banks from monetary to non-monetary assets. In principle this could simultaneously have encouraged the switching of credit demand into the banking system but in practice for most of the period of overfunding the banks were far and away the dominant source of credit and there was little ground for hoping that modestly lower bond yields would persuade companies to look elsewhere for their funds.

Such operations might be considered part of the essence of the operation of monetary policy, and indeed they are. But by 1985 it had become clear that much of the faster growth of broad money relative to the growth of nominal income was due to changes in financial behaviour and the increasingly competitive and innovative financial system, with less disturbing implications for future inflation and nominal income growth. In these circumstances it would have been inappropriate to continue to pursue—whether through funding policy or interest rates—the original path for broad money growth which had been set on the basis of different assumptions about the relationship between money and income.

Moreover, overfunding increased the need for money-market assistance; and by 1985 it had produced very large systemic shortages of cash in the money market, which we had to relieve by purchases of commercial bills. Some commentators saw these multiple transactions as producing only the form rather than the substance of monetary control, while others suspected that they produced significant distortions in the short-term markets, possibly adding to the growth of bank lending. Whatever the justification for these concerns, they risked undermining the credibility of the policy stance as a whole and the decision was taken to stop overfunding. It was, of course, recognised that this decision would increase our dependence upon short-term interest rates as effectively the only instrument of policy. This in turn involved a change in the operational significance of the targets set at the time for non-interest-bearing narrow money (M0) and for largely interest-bearing broad money (£M3) because of their different responses to interest rate changes. In particular it had to be recognised that reliance on interest rates to bring £M3 back within its target range meant that it was unlikely that this could be achieved within the timespan of the target period.

Returning to my main theme, a further influence of a change in interest rates is likely to be its effect on wealth and incomes. For example, the value of many financial assets, such as government bonds and equities, will tend to fall as interest rates rise, and wealth-determined expenditures might then also fall. Similarly, economic agents that have net short-term or variable-rate assets will enjoy higher income, which may lead them to spend more, while the effect on net debtors will be the reverse. There is no guarantee that these effects will balance each other. Households in total, for example, are net depositors with banks and building societies and are likely to benefit from higher cash receipts, as interest rates rise; but this is not true of each individual household nor of other sectors. Individuals with variable-rate obligations will find their cash flows adversely affected, and their response to rising interest rates is likely to be sharper than that of its beneficiaries. Here too therefore the effect of interest rates is uncertain.

A more obvious effect of interest rates is on the exchange rate, though even this influence is not fully understood. At times the initial causality is reversed, running from the exchange rate to interest rates, perhaps as a result of some external development or shift in inflationary expectations. In these circumstances particularly, a rise in interest rates—if it is less than expected by financial markets or less than they suppose to be necessary to bring the situation under control—may have the effect of depressing the exchange rate. Similarly it may take quite sizable reductions in interest rates to prevent a currency from rising if confidence is running in its favour. But generally the likely direction of interest rate influences on the exchange rate is reasonably clear: a more serious problem is that on occasion this effect may be an unwelcome consequence of interest rate action which is otherwise desirable on domestic grounds.

I suppose that many commentators might regard the experience of 1980-81 as a classic example of this kind of dilemma. This you will recall was a period of exceptional strength for sterling, partly as a consequence of North Sea oil—and despite the ending of exchange controls—but partly too as a result of the tight monetary policy which we were pursuing. My own view in that instance is that the combined financial pressure from interest rates and the exchange rate was necessary to break the inflationary psychology and I doubt whether we would have reached our present relatively favourable position without it.

But our more recent situation certainly provides a good example. The fall in the oil price last year required an accompanying fall in the exchange rate if we were to avoid an unsustainable balance of payments problem; it also provided an unusual opportunity in that lower oil prices were an offset to the inflationary effects of the depreciation. Since then, the situation has changed. The domestic economy is buoyant in substantial part because of the competitive gains to the non-oil sectors from last year's depreciation, the demand for credit and broad money growth are both somewhat rapid, and asset prices—for example equities and house prices—are also advancing strongly. Despite some more reassuring evidence, for example from the behaviour of M0 and more direct indications of the rate of inflation over the next year or so, these are grounds for not wanting at present to see interest rates fall too far or too quickly. But equally we do not wish to see the exchange rate rise—because of the damage this would inflict on industrial confidence at a critical juncture—especially when we cannot be sure whether the present shift of sentiment in sterling's favour is relatively short-term speculation or something more lasting.

Inevitably one is left wondering whether perhaps an explicit exchange rate objective would be helpful in such circumstances. It is possible that it would if the markets were convinced that the conflicting pressures were likely to be short-lived and the exchange rate target capable of being adhered to. But it is important to recognise that in other circumstances the essential dilemma would remain unchanged. The major EMS countries, for example, have domestic monetary objectives as well as their exchange rate targets, and they take both seriously enough to be presented with serious dilemmas from time to time.

Intervention—a further digression

As it is we have, as you will be aware, tried to help square the circle by sizable exchange market intervention. This has certainly given us some added room for manoeuvre on interest rates. But, like funding policy, intervention too has practical limits, especially for one country acting alone. Concerted intervention by several countries, whether designed to bring about an agreed realignment or to stabilise one or more currencies, can be more potent. In either case, intervention to restrain upward pressure on the exchange rate has the immediate consequence of adding to domestic liquidity and producing a bulge in broad money growth. These effects can, over time, be sterilised through additional funding, but this would not be without consequences for government bond yields; and there could come a point at which intervention intensified the inflow of foreign exchange both through this effect on yields and by obstructing the movement in the exchange rate itself and preventing it from equilibrating opposing views among market participants. Intervention therefore cannot be an adequate solution to a *sustained* conflict between domestic and external objectives, though it can help to make the situation more manageable for a time, and avoid unnecessary internal or external adjustments where the inflows subsequently reverse. Given the present-day scale of capital flows through the foreign exchange markets, the scale of intervention may need to be very large indeed if it is to be at all effective.

The mechanisms that I have identified—and my list is certainly not intended to be exhaustive—will, each individually, affect economic behaviour and the development of nominal income, their precise effects depending upon the surrounding circumstances at the time. But the important point is that they do not operate in isolation but simultaneously and in combination. Though, at any particular time, one or other individual effect may be comparatively weak or ill-determined, what matters from the standpoint of the impact of monetary policy is their aggregate effect, which may be greater than the sum of the parts. And it is broad assessments of the likely aggregate effects—rather than detailed, partial analysis—that seem to me in practice likely to determine the responses of both the financial markets and the wider economy.

So far I have confined myself largely to the effects of interest rates on financial flows and asset prices and have alluded only in passing to possible implications for real expenditure. This has enabled me to place little emphasis on the distinction between nominal and real interest rates. With given inflation expectations a rise in nominal rates implies that real rates are also higher—and in many cases higher nominal rates will lead to a downward revision of inflation expectations. Higher real interest rates mean that resources today become more expensive relative to resources at future dates. Thus more future consumption can be bought by giving up a given amount of consumption, or leisure, today, and more machines could be bought in future for each machine not put in place today. This change in relative prices should in principle have the direct effect of discouraging current consumption and investment expenditures and encouraging their planned deferral. In practice this would be a difficult relationship to exploit for policy purposes. First, the evidence suggests that the intertemporal substitution effect is relatively weak compared with cash flow and other effects of interest rate changes. Second, inflation expectations, and thus real interest rates, are very difficult to measure, and while there is a presumption that raising nominal interest rates raises real ones, possibly more than point for point, it would be quite wrong to assume that real interest rates were higher in one period than another merely because nominal ones were.

As a result, our discussions about interest rate policy, though grounded in economic analysis, will often be concerned too with the likely overall impact on financial and business confidence in the given situation, and with the tactical implementation of interest rate decisions to try to achieve the required effect. I should like therefore to conclude with a few remarks about how, in an operational sense, we seek to exert our influence on interest rates.

The operation of interest rate policy

There is a popular perception that the monetary authorities dictate the general level of interest rates, and it is of course true that we are able to exert a very considerable influence on it. But the extent of our influence should not be exaggerated. The financial markets are themselves an immensely powerful influence which we can never afford to ignore. At times, if market sentiment is uncertain and if the authorities are relatively confident in their view of the appropriate policy stance, the Bank's lead may be readily followed. But at other times, if we sought to impose a level of rates against strong market opposition, we are liable to be forced to change our stance. This could result from pressures at other points on the money-market yield curve beyond the point at which we were ourselves operating, or in the foreign exchange or gilt-edged or equity markets, any or all of which could have effects on the wider economy that were inconsistent with our policy aims at the time. We need always therefore to try to work with the grain of the markets to achieve the required effects.

This is true whatever the particular technical arrangements for exerting official influence on interest rates that are in place. Some people have read into the changes in those arrangements that have occurred over the years—from Bank rate to minimum lending rate to our present somewhat more flexible method of operation through the rate at which we purchase eligible commercial bills from the discount houses—much greater significance than is justified. While it is the case that the particular technical arrangements can provide for a greater or lesser *degree* of market or official influence, and that the relative influence exerted by the market and the Bank can change with circumstances, both influences are always present.

Operating within this constraint, the Bank can vary its tactics flexibly in order to try to achieve different effects on sentiment. Often our aim will be to slow the momentum of an interest rate movement sought by the markets rather than obstruct it altogether. In that case we need to think ahead to the possibility of further moves, and there are major tactical decisions to be made as to whether a move made sooner rather than later, or a larger rather than a smaller move, will produce the best eventual outcome from a policy perspective. In some circumstances, as for example last autumn, delaying a move can result in a smaller eventual move than the markets were suggesting; in others, such as the ½% reduction made ahead of the Budget this year, the judgement was that, had we delayed further, until the facts of the Budget were known to the markets—which would normally have been desirable—the pressure would have intensified for an overall larger reduction than the eventual 1% that seemed prudent to us at the time on policy grounds.

In seeking to influence the size and timing of interest rate changes we can operate with a higher profile—through publicised 2.30 pm lending to the market, for example, which is the equivalent of the earlier MLR announcement; or we can operate more discreetly through varying the scale of assistance in relation to the market's needs or the terms on which we lend privately to the discount houses. When there is an interest rate change we can either follow a move in base rates initiated by the clearing banks or we can choose to anticipate a move that they might make on the basis of the rates prevailing in the interbank market.

Depending on market perceptions of the stance of policy, and the strength of prevailing pressures, these different tactics can have different effects on sentiment in the financial markets, and that in turn, as interpreted by the media, can have different effects on the perceptions and behaviour of the wider economy.

Conclusion

Chancellor, I have deliberately set out in this lecture to explain some of the limitations that apply to the operation of monetary policy, because I believe that this central part of the Bank of England's function will be better understood if there is a clearer perception of what we can and what we cannot hope to achieve. I am frequently asked why we do not take some particular action, for example, to raise or lower interest rates, to have this or that impact on some other particular aspect of the economy, such as the exchange rate or the growth of consumer borrowing, which my questioner sees as self-evidently desirable. I hope to have explained to you that the process of monetary management is rarely as simple as that; our ability to achieve selective effects is circumscribed and we need to be conscious of the *overall* effects of what we do.

The reality is the following:

- The instruments of monetary policy are limited, indeed in essence we are dependent upon a single instrument—the short-term interest rate.
- Our understanding of the precise effects of interest rates on the economy is limited, though I have no doubt of the direction of those effects in the round, and no doubt that they are powerful.
- Our ability to determine interest rates is limited, though, here too, I have no doubt that it is a powerful influence.

But we have a clear understanding of the aim of monetary policy. This aim, too, is limited—though, I would argue, crucially important. Monetary policy cannot, of itself, deliver a strong economy or full employment or greater industrial efficiency. It can lay an essential foundation for the achievement of those aims by resolutely pursuing the stabilisation of the value of money. That, I can assure you, remains our central banking purpose.