The Monetary Policy Decision Process in the United Kingdom

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The thing which has been, is that which shall be; and that which is done is that which shall be done; and there is no new thing under the sun.

Ecclesiastes 1:9

Economists outside government frequently criticize governments and central banks. The United Kingdom is no exception. Indeed, it may be a noteworthy example; in 1981, for example, some economists (e.g., Buiter and Miller, 1981) complained that monetary policy was too tight, while others (e.g., Batchelor, Griffiths, Phylaktis, and Wood, 1981) complained that policy was too expansionary. Missing from these and most other discussions of policy, however, was any analysis of *why* the monetary authorities acted as they did.

Few ascribe what they see as the failures of monetary policy to wickedness—although there are exceptions, of which Ham (1981) is a particularly vigorous example. Given that wickedness is ruled out, it is essential to analyze why the monetary authorities behave as they do. This will not necessarily justify their behavior—although it may reveal it to be the best that can be done given constraints on their action. Rather, understanding of why policy is conducted as it is, as well as of interest in itself, can be of assistance in improving the conduct of policy.

This paper attempts to further that process of understanding for the United Kingdom by considering six issues. First, the gradual change in the goals of monetary policy over the past 20 years is set out. Second, the formal aspects of the decision-making process are summarized. This will lead to the examination of three issues: how the target variable for monetary policy was chosen, how the techniques used to attain that target are constrained by the institutional setting, and how the techniques themselves

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constrain what the Authorities can do.1

What is Monetary Policy?

A useful starting point in discussion of the U.K. monetary policy-making process is to ask what monetary policy comprises. This is not simply to ask whether one means money stock policy, interest rate policy, or exchange rate policy. Because of the views of the U.K. monetary authorities on monetary control, the question can be rather wider than that.

The main instrument (for controlling the money supply) must continue to be fiscal policy and interest rates. (Green paper on Monetary Control, CMND No. 7858, 1980.)

That makes it hard to distinguish between the "components" of economic policy. If fiscal policy is used to effect monetary policy changes, then the decision-making process of fiscal policy is relevant to the monetary policy decision process. How can one—indeed, should one try to—circumvent this problem?

In a study such as a paper (rather than a substantial volume), an argument can be put forward for neglecting the decision processes of taxing and expenditure. This argument mainly turns upon the distinction between long-term plans for monetary policy and its short-term operation. Fiscal policy can not be adjusted rapidly, or indeed, at all precisely. The short-term impact of tax changes on public sector borrowing (the PSBR) is uncertain; indeed, control of the PSBR even over a year is very imprecise. This is not really surprising, as the PSBR is the difference between tax revenue and government (public sector in U.K. terminology) expenditure, each of which is of the order of 40 percent of GNP.

Insofar as the interconnection between the PSBR and monetary policy is perceived as important, its importance is over the longer term. This was recognized by the Conservative Government elected in 1979, which saw need for long-term consistency between the PSBR over a series of years and their plans for money growth.² (As sometimes did their predecessors, albeit under IMF suasion.)

If we do not explore the factors motivating the desire of the government for long-term consistency of fiscal and monetary policy, we can regard fiscal and monetary policy as independent. Monetary policy is regarded as concerned with such matters as choice of monetary target, target range, (and indeed, of why one was chosen), and how it responds to the — in the short run independent—PBSR.³ (A second point, reinforcing the decision to set to one side the determination of the PSBR, is that the taxing and spending policies of the government are arrived at by groups some of whom

¹The term "Authorities" (always with a capital A) refers in the United Kingdom to the Treasury and the Bank of England as a collective.

²See the "Financial Statement and Budget Report," for 1980/81 particularly pages 16-19.

are only peripherally involved in policy over money stock and interest rates, and the subjects of pressures by interest groups which express, and probably have, no views on monetary matters.)

The Aims of Monetary Policy

(i) The present government has given a very clear statement of what it believes monetary policy can achieve.

To reduce inflation it (i.e. the Government) will progressively reduce the rate of growth of the money stock . . . Control of the money supply will over a period of years reduce the rate of inflation. (Financial Statement and Budget Report, 1980-81, Part II paragraphs 2 and 3.)

This has not always been the aim of monetary policy, and nor has the quantity of money (or its growth rate) always been its concern. Arrival at the position stated above has been recent, and by an evolutionary process. In this section we outline that process. The process can, broadly speaking, be divided into two phases—before and after concern with some monetary quantity rather than some interest rates.

ii) Monetary Quantities

In the 1960s, in response to balance of payments pressure, Britain resorted to the IMF. In 1972 the response was different; sterling's peg was abandoned. On floating, the currency's value on the foreign exchange fell sharply, but by a modest amount. This was initially welcomed as part of the government's strategy to "go for growth," as a policy of excessive fiscal and monetary expansion was rather quaintly known. But by October 1976 the fall appeared excessive. Britain therefore once more borrowed from the IMF, and a constraint on monetary policy was imposed as a device by which the IMF could monitor the United Kingdom's efforts to repay this new, massive, borrowing.

This constraint was set in terms of "domestic credit expansion" rather than in terms of some measure of the total money stock, and was a ceiling rather than a target range. At the same time undertakings were made on the size of the public sector borrowing requirement and, much less publicized at the time, for the level of the effective exchange rate (see Foot, 1981), for the years in which the domestic credit expansion ceiling operated. The following identity links these two aggregates with gilt sales, bank lending, and external flows.

DCE = PSBR - Debt sales to the nonbank private sector $+ \pounds$ lending to the United Kingdom and overseas, where PSBR is the difference between public sector expenditure and tax revenue, and DCE is the domestic component of money growth.

A path for DCE is tantamount to a path for the balance of payments; and so long as sterling bank lending is matched by debt sales, the PSBR is broadly equal to the balance of payments.

The transition to announcing targets for a broad measure of the money stock, sterling M3, was effected in 1976. This occurred in two stages. In July the Chancellor (Mr. D. Healey) announced what £M3 "should" do. This became a formal target in November. These targets were not perceived as directly relevant to the balance of payments. Rather, the connection between monetary growth and inflation was increasingly recognized. This was not merely a change of fashion in economic theory. Empirical evidence of the existence of stable demand for money functions was broadcast from the Bank of England. (Goodhart and Crockett, 1970, and Price, 1972.) Further, targets were thought to be of value as a constraint on government. From 1976 targets were announced at six-monthly intervals. In the Budget of April 1978 the procedure was formalized so that one-year-forward plans were fixed and revised every six months. And in culmination of this process, in April 1980 targets were announced five years ahead. These later targets were not revised six-monthly. It should be noted that the target period never actually ends before the announcement of new targets. This is deliberate, to avoid having a month at the end of a target period when it is clear exactly how the Authorities have to behave; the removal of obfuscation associated with the move to targetry was not complete.

Hence, it can be maintained that although the present government has innovated by explicitly announcing monetary target ranges to reduce inflation, monetary constraints, albeit for a variety of purposes, had already been for some years an integral part of U.K. monetary policymaking. These were, it should be noted, originally "imported" at the IMF's prompting.

iii) Interest Rates

Until the adoption of a monetary target, the focus of the U.K. monetary policy was on the level and behavior of interest rates. Aside from the post-Second World War period of "cheap money" under Dalton (1945-47), what factors influenced the Authorities' interest rate policy? Except in times of balance of payments crisis, a consistent theme has been the importance of the public sector deficit. ^{3,4}

As can be seen from Table 1, the scale of the U.K. national debt is large by comparison with other major developed market economies. This large debt generates a continuous interest payment burden, and a proportion of the total matures each year and must be funded. In addition, the U.K. public sector tended to let current expenditure run ahead of income throughout the 1970s, (a practice continued so far in the 1980s) thus accu-

³This also sets aside recent work such as Sargent and Wallace (1981) which deals with the contribution of debt (other than money) to inflation. This is done simply because until 1981 the question was not even raised in discussion of U.K. monetary policy.

⁴In times of crisis, rates were pushed up to "defend the pound." Otherwise, their broad movements were in line with those of the rest of the world; interest rate policy comprised short-term rate manipulation about an externally created trend.

Table 1
National Debts as Percentages of GNP

	1968/9	1977/78		
United Kingdom	59	42.5		
Canada	29	25.7		
United States	29	29.3		
Italy	37.2	62.5		
France	13	N.A.		
Germany	13	13.8		
Japan	6	22.3		

Source: Bank of England Quarterly Bulletin, December 1973, p. 433 and IFS

mulating new debt. The deficits were only partly due to the fact that the economy was running at a higher rate of unemployment in the 1970s than in the 1950s and 1960s; even on a "full employment" basis the public sector was clearly a net borrower. (This is not so clearly true so far in the 1980s.)

The contributions of these factors to public sector borrowing in the financial years 1970-1 to 1978-9 are summarized in Table 2. Also summarized in that table are the chief sources of finance for the public sector deficit. The two crucial features of this are, first, the fact that most finance was raised from domestic rather than overseas sources, and that most domestic financing was effected through the issue of medium- and long-dated government stocks—"gilts" as they are termed—rather than Treasury bills or short-dated stock. This latter feature resulted from a self-imposed limitation. Treasury bills and government stock with less than one year to maturity were defined, under the terms of the Competition and Credit Control document (see below), as "reserve assets" on which the banking system could expand credit. Excessive expansion of the supply of Treasury bills or failure to fund maturing stock was therefore thought to be undesirable on the grounds that unrestrained provision of reserve assets would directly contribute to excessive money supply growth.

In practice the concern to maintain control of monetary growth was undermined by the tactics adopted by the Authorities in marketing medium- and long-term stock. The Authorities never (until very recently) put such stock out to tender. Instead a price is fixed for the stock; it is then sold at that price and any excess supply of the stock is bought in by the Bank of England. This residue or "tap" stock is subsequently released onto the market, usually in small quantities, at times when it can be absorbed at around the original supply price. The continuous existence of such an overhang is intended to stabilize prices, and make gilts an attractive and relatively riskless asset for a wide class of investor.⁵

⁵There have been in recent years occasional sales by tender but these have been viewed as experiments by both sellers and buyers.

MONETARI POLICY

Table 2 Financing the Public Sector £Million

	PSBR PSBR				Domestic Finance	
Financial Year	actual	full employment	Debt Servicing	Overseas Finance	Gilts	other
1970/1	840	_	2129		728	-
1971/2	1024	_	2302		3019	
1972/3	2498	_	2423	_	-1386	
1973/4	4432	4421	3018	129	1662	-377
1974/5	7940	6760	3434	1517	2238	751
1975/6	10586	6211	4524	1163	4216	683
1976/7	8523	3757	5667	199	5958	-3301
1977/8	5597	- 2054	7412	-4241	5868	-3442
1978/9	9282	182	9680	936	6146	-7480

Sources: Financial Statistics, National Institute Economic Review

Two problems inherent in the "tap" system have, however, quite often led to a magnification rather than a diminution of interest rate fluctuations.

First, the Authorities have to choose a price at which to market new stock. But the extent of demand for stock at each price is an imperfectly known stochastic quantity. For example the equation for demand for gilts in the model of the economy constructed by the U.K. Treasury at one time predicted the demand for gilts at any interest rate, with 95 percent confidence, to a margin of error of ± 2.1 bil, which would at that time have represented almost 4 percent of the broad money stock, sterling M3. (See Griffiths, 1979.)

This plainly leaves room for mistakes to be made. This room is increased by there being a period of some days between the announcement of a stock and its sale. The price could thus be appropriate when announced, but wrong should there be some news which shifts the market before the day of sale. (It was one particularly notorious such event, the "Battle of Watling Street," 22nd February 1979, when there was a stampede—indeed a fight—for stock, which led the Bank to experiment with issues by tender, albeit tenders with a minimum price.)

How did the Bank respond when gilt sales were inadequate? They were concerned not to let bond yields move more than was necessary.

. . . such a yield adjustment (or the policy action taken to forestall it) may be accepted in retrospect as having been necessary in the light of outside circumstances to maintain monetary control. But in other cases it may appear to have been part of a self-generating spiral, with the initial uncertainty causing an acceleration in sterling M3 which in turn affects expectations about interest (and possibly exchange) rates, leading eventually to upward adjustments of yields which are in excess of those justified by the underlying situation and which may subsequently therefore be reversed. The danger of such unnecessary disturbance and interest-rate fluctuations would be reduced if a somewhat smoother pattern of sales of gilt-edged stocks to the non-bank private sector could be achieved in the first place. (Bank of England, 1979.)

To that end, there were some innovations. First in time, and least successful in effect, variable coupon gilts were introduced. Their yield was related by a somewhat complex formula to the Treasury Bill rate, and this complexity deterred many purchasers. The stock for that reason ended up in the hands of the banking sector, and thus made no contribution to monetary control. Stocks which were partly paid on issue, the balance "payable in installments by reference to the Governments expected funding need" (Bank of England, 1979) were invented. Convertible stocks were used on a much greater scale.⁶

Despite these changes problems of monetary control remained. The Bank nonetheless resisted proposals that it should be willing to cut prices aggressively so as to sell stock.

⁶It is worth noting that the U.K. tax authorities make a distinction between capital gains and income, and tax the former at lower rates. This may well also have affected tactics in the gilts market.

. . . the market in long-term debt is dominated by expectations of future prices, and is *therefore seriously likely to react perversely* to a movement of prices. (Treasury Evidence to Radcliffe Committee, emphasis added.)

Or in the Bank's words

A difficulty with this approach (i.e., with cutting prices to sell stock) is that such behaviour, in the conditions of weakening confidence where it would be relevant, could tend to add to, rather than diminish, the uncertainties in the minds of investors. (Bank of England, 1979.)

The Bank used changes in Minimum Lending Rate (MLR) under such conditions. Such changes do, feeding through the yield curve, affect bond yields and can thus facilitate sales at reduced prices without the Bank cutting prices directly. It has nevertheless remained the Bank's position, that when they raise MLR at times of a monetary overshoot, they are not cutting prices to sell gilts. They defend this position on three grounds.

First.

changes in MLR are made as a result of varying considerations not necessarily immediately related to developments in the gilt-edged market, and their effect on gilt-edged prices is indirect and may be greater or smaller depending on the surrounding market circumstances. (Bank of England, 1979.)

Second,

... a change in the yield on a three-month bill from, for example, $9\frac{1}{2}\%$ to 10% changes its price by only one tenth of a percentage point, while to secure a similar change in the yield on a 20-year stock would require a change in price of about 5%. Such changes in price imposed unilaterally by the authorities would involve heavy capital losses which operators would be likely to regard as beyond the normal hazards of business; and the only defence for the marketmakers against such behaviour on the part of the authorities would be to narrow the market drastically whenever such conduct appeared to be in prospect. (Bank of England, 1979.)

And third, they argue that the MLR is raised at times of monetary overshoot to contain bank lending to the private sector; any gilt sales which result are simply a by-product of this exercise. Outsiders remain skeptical of this claim, however. First, there is little evidence that a rise in interest rates significantly reduces bank lending, indeed, in the short run (a quarter at least) the effect may be perverse, as borrowing is used to pay higher interest charges. Second, MLR increases have appeared when the public sector as well as the private sector has been a major contributor to money growth. (Although of course it is generally true that if private sector lending disappeared money growth would be within target.) Third, the Bank almost always takes the opportunity to sell gilts which an increase in MLR produces—it seldom spurns the "by-product." (Although it can be argued that such behavior is only prudent in view of likely future funding needs.) There is one notable recent exception—an exception which reinforces outsiders' disbelief of the Bank's statements on this matter. In October 1981

MLR was pushed up to 14 percent. It was generally the view in the markets that this was not enough to contain money growth or stop the slide of sterling, so there was no surge of gilts buying to tempt the Authorities. Accordingly, two weeks later MLR was pushed up to 16 percent. Buying of gilts started—and a new stock was issued.

And there is surely a question which reinforces still further the view that manipulation of short-term rates is used to sell gilts. If the Authorities use neither short rates nor long rates to control gilt sales, what do they use?

In any event, whether or not the Bank has been unwilling to change prices so as to encourage gilt sales, it has continued to seek *to appear* to be unwilling to behave in that way. It is therefore not surprising that various novel approaches to monetary control have been tried in an attempt to control the monetary consequences of fluctuations in gilt sales.⁷

Examination of these novel approaches sheds light on some of the Authorities' priorities; for control techniques are chosen, and are chosen not randomly but with the aim of attaining the Authorities' objectives. If there are two ways of attaining the same main objective of policy, choice between them will be influenced by how each assists attainment of subsidiary policy objectives. Before examining the techniques, though, it is useful to set out the institutional setting in which decisions are taken. This will help understand just why such techniques, often to the outside observer doomed from inception, were adopted.

The Process of Decision-Making

The three permanent participants in the process (i.e., excluding the changing army of government ministers and their special advisers) are the Treasury, the Bank of England, and the Government Broker. Constitutionally, all the power lies with the Government. This might suggest that the Treasury is the most important of the three permanent participants, as it works directly to and for the Chancellor of the Exchequer of the day. But most of the relevant information is in the hands of the Bank. This inevitably produces an effective relationship rather different—though perhaps no less unequal—than envisaged in law.

i) The Formal Framework

The "Government Broker" is the individual who is charged with mar-

⁷An additional problem arises because of the large unanticipatable fluctuations in government borrowing month by month. These can upset plans for gilt sales—but if allowed to have monetary consequences, intrinsically short term though they are, will cause interest rate volatility.

It can be objected that they *need* not cause such volatility, because the financial markets will realize they are short term. This is probably true; but since the markets have not been allowed to respond in that way, they will need time to learn. There may well be better monetary control techniques available; but there are problems, in addition to bureaucratic inertia, in moving them so long as the Authorities are heavy net sellers of stock.

keting of the government's debt (excluding Treasury bills). He is a partner in the private firm of Mullens and Co., as is his deputy, who is chosen with the aim of succeeding him in due course. This arrangement, with Mullens or its predecessors, has prevailed since 1786. One of the Government Broker's main tasks in carrying out his role is to advise on the price at which stock should be sold, and the maturity to choose when selling it. He walks around (literally!) the market, consulting with stock jobbers (the market makers and position takers) and outside the market (by telephone or in person) consults with stockbrokers (who act for clients and take positions only on their own account, not as firms). He would also be consulted on such matters as deciding to issue new forms of stock (such as indexed stock). His views have some weight; changes of tactics can on occasions be seen quite clearly to follow a change of Government Broker.

The Bank of England, nationalized since 1946, has a dual role—it is at once the operating arm of the Government in the City, and the City representative in Whitehall. Legally, it is under the control of the Chancellor of the Exchequer, who also is supposedly in charge of the Treasury. (Sometimes, however, a Prime Minister takes his/her title of First Lord of the Treasury seriously; Edward Heath, whose Chancellor Anthony Barber was soon regarded by his civil servants as a mere cipher, is the leading example of this.) The Government appoints the Governor of the Bank and his deputy, and the 16 directors (of whom four are full-time "Executive Directors"). Both Governor and Deputy are appointed for five-year terms; the others for four-year terms. All are eligible for reappointment.

iii) Operational Practice

The part of the Bank concerned with monetary policy (as opposed to regulation, supervision or running the Bank, for example) the Policy and Markets area, has eight divisions. They are as follows:

a) *Industrial Finance*. This is responsible for liaison with the private sector.

⁸This succession is usual but not inevitable. Recently, after the death in an accident of the Government Broker, his successor was the Senior Partner in the firm of Pember and Boyle. He gave up his partnership in that firm, and became a partner in Mullens and Co. Presumably this break with tradition occurred because the just deceased government broker had been in the post for only some two years, as had his deputy; the latter had less experience than is usual in the position before succeeding to the senior post.

⁹Whether a Government can dismiss a Governor is not clear. The issue surfaced with the recent announcement of a replacement for Gordon Richardson as Governor. The replacement, Robin Leigh-Pemberton, made himself unpopular with the opposition parties in Parliament by announcing that he was opposed to inflation, and some members of the main opposition party sought to dismiss him. The problem is that although the Governor is quite clearly chosen by the Government of the day, the appointment is nominally made by the Monarch. Therefore only the Monarch can dismiss the Governor. Presumably a Government which wished to do so would advise the Monarch of that desire and the Monarch would, in accordance with custom, act accordingly. But this chain of events is hypothetical, based on no precedent.

- b) Financial Statistics—concerned with the collection of data. It also claims to comment on the data. This it may do within the Bank; its outside "comments" are usually just descriptions.
- c) Economics Division. This analyzes developments in the economy, so as to inform, and formulate advice for, the Government.
- d) The Gilt-edged Division. This is concerned with all operations of long-term borrowing.
- e) The Money-Markets Division. This is responsible for the Bank's day-to-day operations in short-term money, for liaison with the main financial institutions, and for overseeing the short-term markets.
- f) Foreign Exchange Division. This division operates the exchange equilization account, manages the U.K.'s reserves, and acts in the foreign exchange markets for the Bank's customers.
- g) A Territorial Division, and
- h) An International Division. Together, these last two monitor developments external to the United Kingdom.

The Policy and Markets area is at the centre of U.K. monetary control. It is coordinated by the Deputy Governor, who was assisted until the last "Economic Director" retired by the Home Finance Director, the Economic Director, and the Overseas Associate Director. (The Economic Director's replacement took much less interest in economic policy matters than did his predecessor, rather being particularly concerned with the provision of finance to industry.)

There are also two "Chief Advisers," one concerned with the real economy and the other monetary matters. To these two reports the Bank's Economics Division, wherein the bulk of the Bank's economists are concentrated.

It can be seen that the Bank is placed so as to have a central role in policymaking. It gathers information on the state of industry, analyzes the state of the economy, and is intimately concerned with the markets central to the conduct of monetary policy. With a central bank in such a position, and a Treasury (unlike the U.S. Treasury) with no direct relationship with any markets, it is not implausible to suggest that monetary policy is usually made by the Bank rather than the Treasury or Government. (The policy of the Administration elected in 1979 may appear an exception to this; the Bank has remained highly skeptical about this policy, an issue noted further below.)

This suggestion is still more plausible when the "monetary" strength of the Treasury is considered.

The Treasury

The Treasury's basis for contributing to economic policy is a model of the economy. This was until recently of the large "Keynesian" type, highly disaggregated by sector, with interest rates the channel of transmission of monetary policy. That in itself may be thought to have placed the Treasury

at a disadvantage when contributing to monetary policy. (The model has been modified recently in an attempt to incorporate roles for the exchange rate, corporate liquidity, and personal wealth, thus continuing the tradition of constructing large-scale econometric models primarily in line with their operator's preconceptions.) Nonetheless, the Treasury's contribution is in anticipating the consequences of policy actions, and in formulating policy, rather than in carrying it out. They are just not equipped—nor indeed expected—to deal with arguments based on operational difficulties associated with particular policies.

Within this framework, the Treasury is divided into divisions broadly analogous to those of the Bank, one division being concerned with monetary policy and reporting to both the Government's Chief Economic Adviser and to the Head of the Domestic Economy Sector. The former is currently, and has normally been, an economist with an academic career (to which he often returns); the latter is a permanent civil servant, quite often of course one with an extensive background in economics.

The Treasury is thus placed to analyze the consequences of monetary policy, just as the Bank is, but can not really advise on its implementation. This position is confirmed by the supremacy of the Bank in debt management, a task which, it has been argued at several points in this essay, has overridden or at least circumscribed monetary policy.

The Choice of Monetary Target Variable

The above description of the formal setting, and the actual position of the Bank of England generally being supreme except when overridden by external events or a strong government view of monetary policy, is reinforced by examination of the present state of monetary policy discussion in the United Kingdom, and of how the choice of monetary target was made.

£M3 was chosen as the U.K. monetary indicator, or, as it is more usually called in the United Kingdom, monetary target. The target has been published since 1976. Originally it was published at six-month intervals. Then, in the April 1980 Budget, a succession of targets for the succeeding five years was announced. In this announcement the target was set in terms of £M3. There was, however a footnote to the table (in the financial statement accompanying the Budget) in which the series of ranges was set out.

This footnote observes:

As the Green Paper on Monetary Control (CMND 7858) explains, the way in which the money supply is defined for target purposes may need to be adjusted from time to time as circumstances change.

Following that clue leads to a paragraph (number 10) in the introduction to the Green Paper, which summarizes why the target was set in terms of £M3. That paragraph is worth quoting extensively—not for what is there, but for what is not.

If one aggregate is to be chosen for the target, there seems to be considerable agreement that £M3 bests suits the present circumstances of the United Kingdom. It is well understood in the markets. It indicates links with the other policies—fiscal policy, debt marketing policies, policies to restrain bank credit and exchange market management—and gives a general assurance that the macroeconomic policies available to the government will be used in a way which mutually support each other in the reduction of inflation. It is also relatively easy to define in terms of the banking system. . . .

What is notably missing is any statement that £M3 is more closely related to future inflation (the reduction of which was the explicitly stated objective of policy) than is any other monetary aggregate. And indeed, no published official studies seem to have addressed the question of whether that really is the case.

In fact, regarding £M3 (or a series closely related to it, such as M3) as the best measure of money in the United Kingdom is, certainly in official quarters, a long-standing tradition. For example, Bell and Berman (1956), wrote:

The "money supply" is defined for the purpose of this article as: (i) estimated currency in circulation with the public (that is, other than with the banks); plus (ii) net deposits of London Clearing, Scottish and Northern Ireland banks (the domestic banks); plus (iii) deposits in sterling and foreign currencies of United Kingdom residents with accepting houses and overseas banks (excluding interbank deposits).

No justification is given for this choice of definition, apart from the aside that,

Any definition of money becomes arbitrary as soon as the theoretical concept of money is widened beyond assets that serve primarily as a medium of exchange to include assets that serve primarily as a store of value.

This attachment to £M3 may have been the result of two factors. ¹⁰ First, it is related by an identity to variables with which the Authorities and in particular the Bank had been greatly concerned before they acquired interest in money stock control.

This identity is as follows:

Change in £M3 = Public Sector Borrowing Requirement (PSBR; i.e., the consolidated borrowing of central government, local government, and some nationalized industry borrowing)

- increase in public sector debt held by nonbank public

¹⁰Had the Authorities set out to construct a long run of monetary data, they would have been driven by a third factor to £M3 aggregate, for in the 19th century the data do not allow one to distinguish between interest-bearing time accounts and noninterest bearing demand accounts.

- + bank lending in £ to the private sector.
- net external flows to the private sector.
- growth in nondeposit liabilities of the banking system.

Second, the approach to monetary control also led towards £M3 as a target. The U.K. Authorities have never simply supplied the amount of reserves to the banking system which they thought would yield their desired money stock. Rather they first tried to set the interest rate which would make money demand equal to the amount they wished to supply. As was very lucidly described by the Governor of the Bank of England (1978) this approach broke down. The Authorities then fell back on another approach. They attempted to predict—at a given level of interest rates and the exchange rate—the growth of all items in their own balance sheet and in the consolidated balance sheet of the banking system *except* the money stock. If the forecast for all these items implies undesired money supply growth, the Authorities then have to adjust their policy instruments. Hence it follows that, to repeat the quotation from the Green Paper on Monetary Control (CMND 7858).

The main instruments (of monetary control) must continue to be fiscal policy and interest rates.

Treating money growth as a residual from fiscal and debt policies does not necessarily lead to a broad aggregate; an identity can readily be constructed linking the monetary base (defined as notes and coin with the public and the commercial banks plus bankers' balances at the central bank) to fiscal and debt management policies.

Change in monetary base = PSBR - sales of government debt to private sector.

+ Increase in gold and foreign exchange reserves.

But in a system where that relationship is not allowed to lead to cash base control because of the effect it is feared such control would have on interest rate variability (see Goodhart, 1980), one is led very readily to focusing on and ultimately targeting on a broad aggregate.

This certainly seems consistent with the remarks about £M3 quoted above from the Monetary Control Green Paper. In any event, it is clear that £M3 was not chosen as the U.K. monetary indicator by the criterion one would expect—best indicating the effect of current monetary policy on future inflation. It may be the best available indicator; but its choice has not been justified in these terms by the Authorities.

It is therefore not surprising that the "considerable agreement that £M3 best suits the present circumstances of the United Kingdom" has come to an end, and that the position of £M3 as the U.K. monetary indicator was

challenged.

This challenge has been of two rather different types. One type is quite happy to confine the debate over choice of monetary indicator to a choice between monetary aggregates. Allan Meltzer's (1981) paper is a challenge of this type. In that paper he argues that M1 is in the United Kingdom a better monetary indicator than £M3. If this is so, then, in the United Kingdom as in the United States (for example) a narrow monetary aggregate would better indicate the stance of monetary policy than would a broad aggregate.

The other type of challenge is very well illustrated by the *Bank of England Quarterly Bulletin* for March 1981, in its "Evaluation of Past Monetary Trends" (p. 18-19). After observing that over the past year both notes and coin in the hands of the public and M1 had grown moderately (by 7.2 percent and 5.8 percent respectively), while the growth of the broader aggregates had by any normal standards been rather rapid (£M3 grew by 18.5 percent) the Bank went on;

The evidence, diverse as it is, of the monetary aggregates needs to be interpreted in the light of wider financial and economic indicators.

This clearly states that it is the Bank's belief that no monetary aggregate or set of aggregates can be a consistently useful monetary indicator. Indeed, the "Evaluation of Past Monetary Trends" concluded with a paragraph which implied that, despite the continued publication of a monetary target expressed in terms of a single monetary aggregate, this belief of the Bank's had been accepted and acted on by the Government.

The decision in the context of the budget (i.e., that of March 1981) to reduce MLR from 14% to 12% was based therefore, as were the cuts in November and July last year, on a range of considerations going wider than the evidence of the monetary aggregates. Thus, in addition to a prospective slowing down in the growth of broad measures of money, the level of real interest rates, and developments in the economy more generally, were judged important.

That such a challenge by the Bank to the conduct of policy could be published supports the assessment of the relative positions of the Bank and Treasury in the area of monetary policy. (And that £M3 could "emerge" in such a way as a target certainly lends support to the view of the official who suggested that there is no monetary policymaking process.)

New Targets

In the April 1982 Budget, it became clear that the Bank had not only issued a challenge; if the challenge had led to a battle the Bank had won it. For 1981-82 there had been a target range of 6-10 percent growth for £M3. The outcome was that £M3 grew by 15 percent.

In his 1982 Budget, the Chancellor responded to that by announcing targets for a range of aggregates. M1, £M3, and PSL2 were all planned to

grow within the range 8 to 12 percent over 1982-83, followed by 7 to 11 percent in 1983-84, and 6 to 10 percent in 1984-85.

In 1982-83, the outcome was, for the first time, within the target range—and was so for every aggregate. Curiously, this seems to have been accompanied by a waning of confidence in target-setting; for while the target for 1983-84 was confirmed in the 1983 Budget as being what had been announced in the 1982 statement, the targets for subsequent years, set out in the "Financial Statement and Budget Report" which accompanies the Chancellor's Budget speech, were described as being "illustrative"—of what was not specified. The waning of confidence of the previous year seemed to carry forward.

It should also be observed that at the same time as announcing targets for a range of aggregates, no information was given on what would be done were one aggregate ouside the range and the others inside. And the inconsistency does not end there; for in both his 1982 and 1983 Budget Statements the Chancellor warned that M1 was expected to exceed its target growth rate in the earlier part of the year. Such an announcement is, of course, in keeping with the spirit of reducing uncertainty which is behind the announcement of monetary targets and thereby in some contrast with other parts of the statements.

How these targets evolved is a process consistent with the importance ascribed to the Bank of England in the decision process; and the announcement of an expected transitory overshoot in M1 is fully consistent with the Bank's concern over debt management—for, if the market believes that the overshoot will be transitory, there would be little sharp upward pressure on the yields of government securities. The comments are an interesting precedent, perhaps a new instrument in the debt management tool kit.

Control Techniques

Adding further support to the assessment of the importance of the Bank relative to the Treasury and of the importance given by the Bank to bond market stabilization is the series of ad hoc control techniques that have been used through the years.

While maintaining their strongly interventionist posture in the market for government bonds, the Authorities embarked on two initiatives aimed at allowing greater scope for the unimpeded working of markets. The first of these initiatives, the introduction of the regulatory framework of the Competition and Credit Control document in 1971, was born of the dissatisfaction with the directives to, and controls over, banks' asset growth which typified monetary policy in the 1960s. The second was the adoption of preannounced targets for monetary growth from 1976.

Controls on bank lending had grown up in the 1960s for want of any effective alternative. More natural devices such as the restriction of supplies of cash reserves or the imposition of tight reserve ratios were ruled out by the Authorities' tactics in the gilts market. The knowledge that the

Authorities stood ready to trade in large quantities of stock at around its current price made medium- and long-dated stock close substitutes for bills and bank deposits with the Bank of England, and the Authorities rarely made use of their capacity to call for Special Deposits with the Bank of England when a squeeze on banks seemed desirable. The instruments used—ceilings on bank lending—seemed to work to a limited extent, but caused disintermediation and impaired competition and efficiency within an already oligopolistic banking structure. The Authorities' view of just how severe were the anticompetition effects was implied in a speech by the Governor of the Bank of England who preceded Mr. Gordon (now Lord) Richardson.

... basically what we have in mind is a system under which the allocation of credit is determined primarily by its cost. . . . What we are therefore adopting is a new approach to credit control designed to permit the price mechanism to function efficiently in the allocation of credit and to free the banks from rigidities and restraints which have for far too long inhibited them from efficiently fulfilling their intermediary role in the financial system. (Address by L. K. O'Brien, Governor of the Bank of England, May 28th, 1971. Emphasis added.)

The Competition and Credit Control reforms which were a response to these concerns had four main features. First, the authorities formally withdrew their unconditional undertaking to support the gilts market. Second, a new minimum balance sheet ratio (8:1)—between eligible liabilities and reserve assets—was specified for the London and Scottish clearing banks, (as the main U.K. banks are known because of their joint ownership of the Cheque Clearing system), and extended to certain other financial institutions. (How many clearing banks there are depends on the degree of independence ascribed to the Scottish and regional subsidiaries of the London Clearing banks.)

Until August 1981 these eligible liabilities covered current and deposit accounts including certificates of deposits, and also net interbank transactions. Reserve assets cover some liquid liabilities of the monetary authorities—principally Treasury bills and gilt-edged stock with less than one year to maturity. They did not include cash, but *did* include a substantial private sector liability—money at call with the discount market. Third, the authorities signalled their intention of reactivating the use of special deposits. Fourth, the clearing bank cartel was supposedly ended.

There were, however, major weaknesses in this new system. These are further indications of the attitudes of the Authorities.

Most obvious, the supply of reserve assets could not effectively be restricted since banks could at any time create a call money deposit by inducing the discount houses to hold bank bills. The Bank of England did introduce a requirement that at least 50 percent of discount house assets should consist of eligible public sector debt (defined as Treasury bills, central government bonds, local authority bills and bonds, and a particular

issue of bills of the British Steel Corporation) but this created a fresh problem. It led to a "false market" in Treasury bills, so that their rate often moved quite distinctly from other rates in the market. As MLR was linked to the Treasury bill rate, MLR was in turn dragged out of line with market rates.

More important, however, were the Authorities' failures of nerve in making credit and bond markets competitive, with freely moving interest rates.

One notorious result of this ambivalence towards competition was the phenomenon known as "round tripping." Because the main clearing banks were very reluctant to move—and particularly to raise—their base rates for loans (a result of pressure on them from politicians) there were often opportunities for prime commercial companies to borrow in the capital markets, or from the banking system itself, and redeposit the loan with the banking system at a profit, or at very low cost.

Not surprisingly when such opportunities were present bank lending to the U.K. private sector, and consequently money growth, exploded. The peak of money growth was in July 1973 when the annual growth rate of £M3 was 52.9 percent. Of course such borrowing opportunities did not last long, and when they reversed so did the burst of money growth. Money growth was thus very volatile. In an attempt to depoliticise interest rate changes the Authorities had in 1971 surrendered their discretion over the rediscount rate, formerly Bank Rate, but now called Minimum Lending Rate. This was pegged ½ percent above the market determined Treasury bill discount rate. Since the clearing banks' base rate for lending was effectively fixed at a markup on MLR this might have encouraged more frequent, market-determined movements in base rates. But in the event, political considerations, essentially the desire to protect mortgage holders, (over 95 percent of U.K. mortgages are floating rates) still restricted MLR movements, and the formula was abandoned in 1977.

Second, because of the Authorities' attempts to "administer" the gilts market calls for special deposits tended to be made when the price set for gilt sales produced an inadequate or excessive volume of buying. Monetary over or undershoots were, however, endemic to the system.

The problems culminated in the reintroduction, in December 1973, of direct controls on bank operations, the "Supplementary Special Deposits" Scheme. These avowedly temporary controls operated from then, with short breaks in 1975 and 1978, until the scheme was abolished in 1980. The distinguishing feature of the supplementary special deposit scheme, known as the corset, is that, unlike the controls of the 1960s, it constrains bank liability expansion rather than bank asset expansion. Like the earlier scheme, however, it encouraged disintermediation and introduced distortions into credit markets.

The scheme set a limit on the expansion of the interest-bearing portion of banks' eligible liabilities from some specified base. Banks overstepping that limit were required to lodge noninterest-bearing supplementary special

deposits with the Bank of England. The scale of these deposits varied directly with the excess growth in interest-bearing liabilities.

As will be observed, the scheme was initially introduced at a time when there was no published commitment to control either DCE or money growth. When introduced it was in fact not intended as a device for the implementation of long-term monetary control. It was intended to inhibit banks from bidding for funds, thus prevent round tripping by removing the scope for profit to which it was the response, and thereby smooth money growth.

The conjunction of the corset with monetary targets did however prove self-defeating, for the anticipatory possibilities opened up by the existence of preannounced monetary targets made the corset ineffective as a means of control over money growth. Further the disintermediation caused by the corset devalued the usefulness of sterling M3 as a measure of monetary growth.

These features did not, however, lead to the abolition of the corset. This did not happen until after the aboliton of exchange controls (in October 1979), an event which not only opened up still further ways of evading the corset, but made it impossible to quantify the extent of the evasion.

Responses to Failure

The Authorities recognized the failure, and did something about it. What they did was not, however, a reform of the system. Rather there was adjustment to existing policies. Interest rate stabilization was still important. The Authorities had been willing to use interest rates to control money growth—but the system of setting MLR had not proved satisfactory. To quote:

... the announced MLR attracted a degree of public attention that had become detrimental to monetary control. Declared changes in MLR tended to be political events of considerable significance for the government. (Allen, 1983)

Linking MLR to Treasury bill rates had also produced problems, as noted earlier, and it was observed that another possibility, influencing interest rates through open market operations without changes in MLR, had its own difficulties. Bank base rates (which determine rates for lending at overdraft) were related to MLR. If market rates rose above them, there was round tripping, so that the aggregates did not move as intended.

Rather than give up setting rates, it was decided (1980) to stop announcing where they had been set. The Bank now deals in bills in the market rather than lends directly to the discount houses at administered rates; and it no longer tries to create a shortage of funds in the money market (the objective of which was to increase its control of rates).¹¹

¹¹It is sometimes asserted that the Authorities deal in the market "at market prices." This is tautologous, or misleading, or both. It is tautologous in that in the absence of price discrimination they must deal at market prices. It is misleading if it is intended to imply that they do not affect market prices—for by the act of dealing they shift the supply curve.

These changes mean that interest rates at which the Bank supplies cash to the market, or withdraw cash from the market, are no longer *directly administered* by the Bank. (Allen, 1983, emphasis added).

Controls over a quantity—the monetary base somehow defined—were eschewed, both because the relationship between the base and the broader aggregates was not known, and because it might have resulted in "frequent upward or downward spirals in interest rates." (Allen, 1983)

The failure of the "corset" was thus met with a move to greater flexibility of interest rates. But attempts to influence rates were not forsaken, and the Bank made it clear that it was always possible that they would revert to rate setting. The response was reform, not revolution.

Summary and Conclusions

This paper has two interrelated themes. One has been that whether monetary policy was directed towards the behavior of the stock of money, or an attempt to set noninflationary interest rates, it has always been constrained by the desire to stabilize interest rates which resulted from the pressure to market government debt.

The second theme has been how, until recently at any rate, monetary policy has largely been made by the Bank of England. This has been partly the result simply of the concentration of expertise on monetary policy in the Bank, and partly of the fact that the Bank has been the Government's point of contact with the financial markets. The Bank has been the primary channel of information, and the primary agency charged with the marketing of Government debt. Only in times of crisis or of a deliberate break with past policies, when claims to expertise based on experience can reasonably be set aside, has the Bank been overridden. In general the Bank has played a major part in determining the objectives of monetary policy, and the major part in deciding how policy is to be conducted so as to attain these objectives.

Some years ago, Richard Sayers (1970) described a particular event in the monetary policy of the 1930s as ". . . illuminating on the ways of the Bank: its determined exercise of all the power derived from its position in financial markets. . . ." It would be hard to better that as a short appraisal of the current monetary policymaking process in the United Kingdom.

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Discussion

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Introduction

I am happy to say that, with the exception of a few relatively minor details, there is no disagreement between Geoffrey Wood and myself on the factual background. The objective of his paper, however, is to probe behind the historical account of what happened to seek to explain why it happened, i.e., to examine the decision-making process. Geoffrey is an acute and critical observer of the monetary scene, but I have to say that my own impressions and interpretation of the decision-making process quite often differ from his, if only in emphasis.

I intend to review three main topics, all of which are discussed by Geoffrey. These are:

- (i) the constitutional position of the Bank, and in particular its relationship with the Treasury
- (ii) the choice of target aggregate
- (iii) the choice of control techniques.

The Constitutional Position of the Bank

Geoffrey sets out the constitutional and structural relationships between the Government, in this case primarily the Chancellor of the Exchequer, Her Majesty's Treasury (HMT) and the Bank. In my own view, he does not attach sufficient importance to the constitutional framework, wherein the power to take policy decisions in the United Kingdom resides firmly with the Government. This may be, in part, because he seeks, early in his paper, to define the ambit of monetary policy rather narrowly, to exclude the overlap between fiscal and monetary policy.

In those countries, unlike the United Kingdom, where the central banks retain a greater degree of formal independence, the central bank will often feel an acute sensitivity to seek to construct and to present monetary policy in such a way as not to conflict with the political domain of the government. This has some practical consequences. For example, it would be hard for an independent central bank to adopt specific nominal income objectives—as has been currently advocated in some quarters—since these might clash with the forecasts deriving from government sources. Similarly, it can be politically difficult for a central bank to take a decision to vary interest rates simply on the grounds that this would seem to be appropriate for the achievement of the ultimate objectives of policy, such as reasonably

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full employment and stable prices, since the pursuit of such objectives is, surely, a "political" decision.

It, therefore, becomes easier for a central bank, particularly if invested with formal independence, if it can undertake its market operations, and affect market prices, in the pursuit of a separate intermediate objective, which has been specifically allocated to it to control. In this respect, the attempt to maintain a pegged exchange rate, or to achieve a domestic monetary target, or some combination of these, provides a suitable framework for central bank operations. Moreover, it will obviously be the more helpful in such a case if the monetary aggregate chosen as the (main) target is susceptible to the market operations and instruments which the central bank can utilize, and is not more closely influenced by other policies, e.g., fiscal policy, under wider government control. Such considerations can, perhaps, play some role in leading central banks with more formal independence to prefer to target narrower monetary targets, where the interest elasticity has been greater, and the effects of public sector deficits and debt management on monetary growth less demonstrable.

Nevertheless, this still leaves the problem of achieving consistency between the two main arms of fiscal and monetary policies. Even if the (intermediate) objectives of such policies are so defined as to prevent any overt clash, and to retain formal independence, one still finds it commonplace in many countries for central bankers to be complaining about the defects of fiscal policy and for finance ministers to be complaining about the conduct of monetary policy. Although that syndrome is not entirely unknown in the United Kingdom, the constitutional position of the government as responsible for all macroeconomic policy does mean that discussions about the mix and consistencies of policy are more internalized in the United Kingdom. Moreover, specific discussion of the balance of policies has been consciously aided in the United Kingdom by the adoption of a broad monetary target, £M3, whose counterparts reflect developments in the various arms of policy, as Geoffrey recognizes. Thus, one can construct an accounting identity, as follows:

Δ£M3 = Public sector borrowing requirement (PSBR) - debt sales to nonbank public + bank lending to the private sector + external flows.

Obviously, the PSBR reflects fiscal policies, public sector debt sales reflect debt management, bank lending is influenced by interest rates and credit policies, and external flows are affected, inter alia, by intervention. The choice of such a broad monetary target and its analysis in terms of the monetary counterparts help to encourage ex ante consistency of policies and to lead to coordination between HMT and the Bank.

It is a common, and quite entertaining, spectator sport to try to elicit differences and rivalries between HMT and the Bank, to suggest that one institution dominates the other in some respects. Geoffrey has enjoyed

playing this game. Although his view, that the Bank has generally had the upper hand in the debates in the area of monetary policy, might be expected to please a central banker, I have to say that I recognize neither such a battleground, nor the depiction of "winners" and "losers," in this way.

In particular, his account exaggerates the extent of rivalry by understating the distinct differences of function and roles between the two institutions, which differences make them more easily complements than potential substitutes and rivals. The Treasury is a very small, but elite, body which specializes in general analysis and broad policy advice. To suggest that its "basis for contributing to economic policy is a model of the economy" is to misrepresent and to undervalue the wealth of analytic ability in HMT; their intellectual abilities are formidable, and their contribution is not limited to the operation of a formal (though continuously evolving) model, far from it. While it is generally—though not invariably—the case that the manpower that they can devote to specifically monetary issues, and their experience of financial operations, is less than in the Bank, they have the countervailing advantage of covering the full range of macroeconomic subjects, of being the focal point for consideration of such policy issues with other governmental departments, and of a close and continuous direct access to the Chancellor.

Geoffrey is on rather firmer ground—probably the result of personal observation from the period when he worked in the Bank—when he notes that the strength of the Bank has lain in its operational expertise in financial markets. Although the Bank also has an economic model and analytical capacities, it has always emphasized that it is a working bank, though indeed a rather special one, undertaking the crucial market operations for the authorities as a whole in the gilts market, the money market, and the foreign exchange market. In this respect the Bank plays a much larger market role than do certain other central banks where some of these markets are less developed than in the United Kingdom, and/or some of these market functions are undertaken by the Finance Ministry/Treasury itself. It is, indeed, the case that the intimate concern of the Bank with these crucial markets is central to its position, and this position does give it experience and influence, though the extent of such influence, and the manner in which it is deployed, depends, of course, on the key senior personalities, in the Bank and at HMT and No. 10 Downing Street, involved.

But Geoffrey goes on to argue that "With a central bank in such a position, and a Treasury (unlike the U.S. Treasury) with no relationship with any markets, it is not implausible to suggest that monetary policy is usually made by the Bank rather than the Treasury or Government." Apart

¹ With the overall threads of strategic policymaking concentrated in the government in the United Kingdom, there is effectively only room for one main model as the basis for policymaking and forecasting—and by law governmental forecasts for the main features of the U.K. economy have to be published twice a year. Inevitably, the Treasury model provides the basis for this. In these circumstances the role of the Bank economic model is somewhat circumscribed.

from the fact that the claim of "no relationship" would be misleading if it suggested that the Government and HMT never sought to inform themselves of the working of these markets and of market opinion save secondhand through Bank advice, it does not follow that the overall strategic direction of monetary policy has been determined by technical market considerations. The crucial policy steps taken while I have been at the Bank (e.g., the application to the IMF and the tightening of policies in 1968/69; the go-for-growth in 1972/73; the abandonment of the pegged exchange rate in 1972; the reliance on incomes policies and the disinclination to adopt quantitative monetary targets, 1974/76; the second application to the IMF and the adoption of quantitative monetary targets in 1976; the abolition of exchange control in 1979; the adoption of the Medium Term Financial Strategy in 1980, etc, etc), have all been essentially major political decisions, in which more technical market considerations have played a generally rather minor role. Among the major policy issues, only in the case of the debates on money control techniques, discussed further below, have technical market considerations played a major role.

The Choice of Target Aggregate

Geoffrey discusses the choice of £M3 as the main monetary target over the period 1976–82. Although he notes, in his reference to Bell and Berman, the long-standing tradition in the United Kingdom of looking primarily at a broad monetary definition, encompassing all bank deposits held by UK residents, Geoffrey mainly refers to subsequent documentation, e.g., the Green Paper on Monetary Control (1980), for the official reasons for the choice of that aggregate.

In fact, £M3 had already been used, internally, as the main quantitative monetary focus for attention for some years before then. It is, perhaps, worth recounting some of the reasons for that choice, which was effectively made prior to 1976. When the authorities first began to concern themselves with quantitative developments in the monetary aggregates, during the course of the late 1960s and early 1970s, early econometric studies, including those in the Bank of England, suggested that there was not much difference between the characteristics of the demand-for-money functions of narrow (M1) and broad (M3) money. Both relationships appeared quite well-fitting and stable. Admittedly, the interest elasticity of M1 was generally somewhat higher, but the difference was not enormous and the significance of the interest rate term was not noticeably higher. Moreover, the actual M1 series was more erratic, reacting more sharply to periodic cash flows relating to tax payments, wage and salary payments, and more sensitive to, somewhat arbitrary, adjustments for items in transit (float). So the purely statistical quality of the M3 series was superior.

In any case, initial official involvement with quantitative monetary analysis was occasioned by the application to the IMF in 1968, and by their requirement that the United Kingdom adopt domestic credit expansion

(DCE) ceilings. In the U.K. context this meant defining, measuring and analyzing DCE in terms of the credit counterparts, already mentioned: so the first context, in which quantitative monetary analysis was used, predisposed the authorities to pay most attention to broad monetary aggregates, and, as Geoffrey noted, this reflected an even longer tradition. In addition, the value of this approach in constraining fiscal and monetary policies—especially perhaps the former—into ex ante consistency was soon noted and appreciated. The need to restrain the PSBR to a level which could be financed in a nonmonetary manner provided the Treasury with another argument against spending ministries.

So, from the outset in the late 1960s, a broad definition of money was regarded, internally at least, as the main focus of interest among the various monetary aggregates. Then in 1972-73, the demand function for broad money "broke down"—the previous significant interest elasticity, and the stability and reasonable values of the other coefficients, disappeared. As Geoffrey notes, we no longer could vary interest rates in order to bring about adjustments in M3 via the demand for money function. Why did we not then abandon M3, or £M3, and shift to M1 as the target variable, where the demand function, and interest elasticity within it, seemed to retain its previous econometric stability? First, the experience of the mid-1970s, with an upsurge in M3 in 1972/73 neatly preceding an upsurge in inflation in 1974/75, persuaded many observers that M3 was, indeed, the crucial monetary variable. After the collapse of the Heath government, it allowed his political opponents to blame the inflation of the mid-1970s on Heath's prior monetary mismanagement. Moreover, quite a number—though not all—of econometric exercises linking monetary growth with subsequent changes in nominal incomes and prices, undertaken both within the Bank and by academics—including some by Geoffrey and his colleagues—found a closer (but not very close) link for broad money, than for the narrower aggregates.2

Second, the argument about the value of targeting broad money in order to retain ex ante consistency among policies through the counterpart analysis remained; and, as Geoffrey notes rather elliptically, the same analysis gave the authorities an indication of how they might hope to control £M3 via fiscal policy and debt management, as well as by varying interest rates.

Third, the case for shifting to M1 rested rather heavily on the superior performance of its econometrically fitted demand function. After the collapse of the M3 demand function—and indeed a number of other key

² Geoffrey is critical of the absence of published official studies examining the relationship of monetary aggregates to future inflation. As he knows, such studies have been carried out in both the Bank and HMT; and they have been made available in research papers (T. C. Mills). But not only is the methodology subject to some doubt, and the results not strikingly clear-cut, but, more important, for the reasons discussed above the authorities have been loathe to place that much weight on purely econometric findings. Once, indeed often, bitten—twice shy.

functional relationships in other fields—in the early 1970s, the authorities regarded reliance on econometric findings with more than a little skepticism.

I would, however, particularly emphasize here the first of these reasons, that informed commentators, among academics, in the City, in Parliament, in the Press, overwhelmingly claimed during the mid-1970s that M3 (or later £M3) was the most important monetary variable. The authorities can try to influence the climate of opinion, but equally their own actions have to take account of that climate. Geoffrey and some of his colleagues at the City University are among those who have been most vociferous in arguing that the authorities should be controlling £M3. Perhaps he does not realize that when he quotes the comments of the authorities about £M3 suiting "the present circumstances of the United Kingdom" and being "well understood in the market," that his own efforts helped to create the climate that caused this to be so.

The Choice of Control Techniques

(i) The gilt market and debt management

Monetary economists in general, and monetarists in particular, have found it difficult to comprehend the rationale for the form or nature of the authorities' operations in the gilts market; indeed it is something of a red rag to the monetarist bull, and Geoffrey duly charges to the attack in the beginning and again towards the end of his paper. He recognizes that the earlier enormous weight of the existing national debt, though diminishing steadily in proportion to national incomes until the mid-1970s, and the very high fiscal deficits in nominal terms since that date—together with the continuing struggle to achieve restrictive monetary targets when other counterparts to monetary growth were so expansionary—have led the Bank to feel that it was almost always³ in a difficult, defensive position, being forced—and seen to be so—to fund vast sums in often difficult market conditions. What he does not also note here is that the apparent failure of the growth of bank lending to the private sector to respond quickly or reliably to interest rate changes (direct controls having been abandoned) together with the lags, and other problems, involved in adjusting fiscal policy (which he does mention), throws virtually all the weight of short-

³ There have been just a few occasional periods in recent years when monetary growth was below the upper limit, and the forecasts indicated a low PSBR in the coming month(s), when it was decided consciously to reduce funding in the interests, for example, of bringing down long-term interest rates, lowering the costs of funding and reviving the corporate debenture market. Only too often the PSBR forecast has then turned out far too optimistic, and the intentional funding pause then led to revived monetary resurgence. The market operators in the Bank sometimes feel that the authorities as a whole have not sufficiently appreciated that one should try to set and operate targets so as normally to be towards the *lower* end of the target range.

term monetary control onto debt management. Public sector debt and debt management extend, of course, beyond the gilts market. A large proportion of both the stock and the flow of such debt has been represented by national savings and by local authority debt. Until recently the former was characterized by sticky interest rates, while the latter has not been directly controllable by the Bank, so that these other forms of public sector debt were not generally managed effectively to control monetary growth. This put even greater pressure on debt management operations in the gilts markets.

In fact, such gilt-market operations have been undertaken with considerable, indeed remarkable, success to offset fluctuations in the other counterparts to monetary growth. Indeed the flexibility of debt management has brought about an even more successful record than would have been achieved by a preordained series of regular monthly sales if set at the beginning of each year on the basis of the then forecasts. I am sorry that monetary commentators do not recognize just how good the record of debt management has been.

Nevertheless, monetary growth has remained erratic and for most of the period in excess of targets. Apart from the unpredictable vagaries of short-term fluctuations in the various other counterparts, which it is generally accepted will lead to short-term monetary disturbances, many monetary economists and most monetarists cannot see why the Bank does not simply sell whatever volume of gilts is required to achieve a stable monetary growth by accepting the price that the market requires to buy the necessary volume of debt. Since the demand curve is not observable, such commentators, including Geoffrey, advocate auction tenders.

They then go on to argue that the authorities' reluctance to go far down this road reflects an (excessive) concern for interest rate stability. Indeed, there is a desire to maintain stable markets, but the Bank's approach, as set out most clearly in the Bank of England Quarterly Bulletin article of June 1979, also reflects a crucial assessment that the extra control over debt sales, and monetary aggregates, from moving to an auction system, or consciously trying to vary gilt prices more aggressively, would be nugatory and very possibly perverse. An attempt by the Bank aggressively to lower gilts prices would simply cause the market generally to fall in line without stimulating more demand, while the greater volatility of yields would serve to deter investors. Moreover, U.K. experience of free tenders (i.e., those without arranged minimum prices or outside underwriting as effectively occurs in the United States and Canada) in those cases where such tenders seemed appropriate (e.g., for the first issues of indexed gilts, since the existing market was barely existent, and so estimation of a reasonable striking price level hard to make) has not been such as to lead to a belief that such free tenders could be much more widely used as the staple

⁴ This claim is documented in Chapter 4, "Bank Lending and Monetary Control," in *Monetary Theory and Practice: The U.K. Experience*, Macmillan, to be published in late 1983.

method of raising funds for Her Majesty's Government (HMG) in the gilts market.

(ii) Monetary base control

In several respects the debate over monetary base control is an extension of the previous discussion over debt management, since many of the same arguments, pro and con, are introduced. In this instance, again, monetarists, such as Geoffrey, find it hard to understand why the authorities do not seek to achieve a closer control over the total of the monetary base, i.e., the liabilities of the central bank (or of some elements of the base, including banks' reserves but perhaps excluding currency in the hands of the public). They accept, I think, that this would lead, in the short run at least, to greater interest rate variability in the money market (though not necessarily in the bond market), but they regard this as a small price to pay in order to achieve greater control over monetary growth.

This case has been pressed upon the authorities, notably after the election of 1979 when several of the advisers of the in-coming government were monetarist. The issue was studied at some length by the Treasury and the Bank, and the conclusions reported in the Green Paper on Monetary Control (Cmnd 7858); the detailed discussion, and analysis, of the various alternative forms of monetary base control is to be found set out at length

in Appendix B of the Green Paper.

In so far as control over the monetary base is to be pursued only over a *medium* term, say six months, horizon, then short-term deviations from its desired target path provide an indication to the authorities of the need to tighten, or to relax, and in the process to change interest rates. In this respect targeting the monetary base over the medium, or longer, term is not significantly different in form from targeting any other monetary aggregate. The question that then arises is whether the monetary base, which in the United Kingdom consists primarily (90 percent) of currency in the hands of the public, would be more suitable for this purpose than other, broader, monetary aggregates, e.g., in terms of stable relationship with nominal incomes, controllability, etc. While some econometric studies of this, e.g., Lothian and Darby, have arrived at an affirmative answer, most other studies have continued to suggest that there is more information in the developments of the wider monetary aggregates.

The particular distinction of monetary base control is that it is possible, in theory, to control the base over a much shorter horizon: indeed it is even possible to conceive of a regime in which the base is increased by a constant amount every day. The shorter the horizon over which monetary aggregates are quantitatively regulated, however, the more the day-to-day fluctuations in financial conditions materialize in the form of interest rate disturbances rather than in accommodating monetary fluctuations. Given the large scale of short-term monetary shocks, e.g., arising from erratic and seasonal fluctuations in cash flows, and the extent of inertia, the lags, in

adjusting financial positions, the extent of variation in interest rates resulting from the attempt to control short-term growth in the monetary base could be extreme. Such extreme fluctuations in interest rates would then in turn affect future desired monetary dispositions, so the dynamic stability of the system would be questionable. Furthermore, any such increase in interest rate volatility would, over the longer term, induce major structural changes, since financial intermediaries and their clients would have to adjust and to adapt to the new system. Any such move towards closer short-term control over the monetary base would, therefore, lead to greater instability of interest rates immediately, and to consequential structural changes in the financial system in the longer term. Whether there would be any offsetting benefits in terms of greater control over the monetary aggregates or, more important, over the course of nominal incomes, to offset against these likely costs is debatable. It is certainly my own view that such tighter monetary base control would be inadvisable.

Conclusion

Geoffrey himself emphasizes two themes in his own summary and conclusions: first that the authorities' concern to control monetary growth has always been tempered by the desire to stabilize interest rates; second that monetary policy "has largely been made by the Bank of England." With respect to the first theme, it is the case that the authorities in general, and the Bank in particular, believe that in certain instances, relating mainly to gilt operations and monetary base control, the costs in the form of interest rate instability of the changes advocated by monetarists would outweigh any benefits, which we doubt exist, from greater control. That said, however, an international comparison—which I have undertaken elsewhere—of the response of short-term interest rates to divergences of monetary growth from target shows that the U.K. authorities have generally responded *more* sharply than other major central banks.⁵

As to the second theme, I have tried to emphasize that in the United Kingdom the overall threads of strategic macroeconomic policy, including monetary policy, are unusually centralized in the hands of the government. In some particular cases, e.g., in the discussion of structural changes to financial markets or institutions, the closer practical experience of the Bank will, naturally, carry a lot of weight. But most of the crucial policy steps, as outlined earlier, have been essentially major political decisions, in which such technical considerations have played a generally rather minor role.

⁵ In Appendix 1 to Chapter 4, Ibid.