

Chancellor of the Exchequer

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MONETARY BASE

*- Practical
unhelpful -*

1. I attach a paper for the Prime Minister's seminar on 18 July. The paper is by Treasury economists in the financial sector, and it considers the economic rather than the institutional implications of monetary base schemes.

2. The present system of control seems to be existing increasingly unhappily alongside a tight monetary target regime. The SSD scheme in particular is approaching the end of its useful life. The more importance the Government places on achieving its major objectives through control of the money supply, the more important it is to be sure that at the end of the day the targeted growth can be delivered if it is so desired. Monetary base control offers the prospect of a simplification and an improvement of the existing system. Therefore we must take it seriously. This means directing the discussion to a small number out of the multitude of potential schemes and exploring them in detail to test exhaustively their practical implications. We cannot, given the difficult task ahead, risk losing control by setting loose forces which we can neither understand nor control.

3. The paper assumes that the main use of the monetary base would be as a means of achieving a given £M3 target after fiscal policy had been determined within the context of a monetary target. This might be the right way to proceed in the first instance if a MBC scheme proves viable. So the Government still have to make the same strategic decisions about the PSBR and intervention in the foreign exchange markets when deciding on its monetary target. In particular:

a. Monetary base is not a substitute for an appropriate balance between monetary and fiscal instruments. If the PSBR is too high, if its composition is unhelpful and if the inflation rate is high in relation to the target growth of the money stock, interest rates will be high.

b. Monetary base is not a substitute for the appropriate policy in the foreign exchange markets. Unexpected heavy intervention will still be similar to an increase in the PSBR. It will have an expansionary effect on monetary conditions and make monetary management difficult. Interest rates have to adjust if these inflows are to be accommodated within a given monetary target.

c. Monetary base is not a way of controlling interest rates, it is a way of freeing them. If the Government finds the implications for interest rates of sticking to a particular target unacceptable, it will still have to consider fiscal action. In between fiscal changes, the interest rate changes which are the essence of monetary base control still need to take place.

Monetary base offers the prospect of a more efficient control - not a painless one.

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PP P E MIDDLETON
13 July 1979

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MONETARY BASE CONTROL

1. This paper considers the arguments for moving towards a monetary base method of controlling the money supply. A number of commentators - both academics and in the City - have urged the authorities to move to such a system*. The Bank economists have published a paper in the June Quarterly Bulletin.
2. Three points should be noted at the outset. First, no-one has suggested that monetary base control (MBC) can soften the initial painful effects of restraining the growth of the money supply. Rather, it might enable the authorities to control the money stock more surely and minimise unnecessary fluctuations in monetary quantities and interest rates. The essence of the scheme is that interest rates must be free to adjust; it cannot work if they are not. Second, MBC has only been considered as a means of monetary control. Prudential regulation would have to be dealt with separately. Third, most proposals have not suggested that control can be achieved precisely on a day to day basis. The Bank economists' paper has shown clearly why a rigid version of MBC which attempted to do this would be unworkable. This paper therefore focuses on the question of whether MBC would give improved control over the money supply over a reasonable time horizon.
3. The paper is in two main parts: part one looks at the present system of controls and considers some of the main criticisms of it. Much of the impetus towards MBC derives from the apparent difficulties of the existing controls. Part two considers the advantages which might follow from MBC together with possible disadvantages of the versions that have been put forward recently. (Details of the main proposals are given in the Appendix). The conclusion is that there is a case for pressing ahead with a study in depth; this would involve setting out how a limited number of MBC schemes would be applied in practice, including their implications for different

*Amongst academic economists Professor Brian Griffiths and Geoffrey Wood of the City University are both about to publish papers advocating monetary base control while N W Duck and D K Sheppard proposed a similar system in the Economic Journal last year. In the City, Gordon Pepper of Greenwells has been prominent in pressing for monetary base control and he appears to have considerable support from other City commentators.

institutions and discussing their merits with those concerned in the financial markets - and more widely. It has been assumed throughout that £M3 is the monetary aggregate to be controlled, both much the same considerations would apply if a different aggregate became of primary concern.

I The Present Controls

4. The principal objective of the monetary authorities is to control £M3. They do this by operating on both the supply and demand for money. Fiscal policy, reflected in the size and composition of the PSBR, has to be consistent with the monetary target. But in between changes in fiscal policy, the authorities rely on monetary instruments to keep monetary growth within the target range. Under the present system the authorities try to achieve this objective mainly by acting upon the determinants of the demand for £M3. This technique has been reinforced at times by employing the Supplementary Special Deposit Scheme (SSDS) which is a supply side control.
5. In contrast either to reserve asset base methods or the SSD scheme, demand side control has evolved over a considerable time rather than being developed specifically to control a target aggregate. The procedure can be illustrated by reference to the following accounting identity.

$$\begin{array}{rclcl} \text{Change in } \text{£M3} = & \text{Public Sector} & & \text{Change in} & & \text{Sales of} \\ & \text{Borrowing} & + & \text{Bank Lending} & - & \text{Government} \\ & \text{Requirement} & & \text{to the} & & \text{Debt to the} \\ & & & \text{Private} & & \text{Non Banks} \\ & & & \text{Sector} & & \\ & + \text{External} & - & \text{Change in Banks'} & & \\ & \text{Adjustments} & & \text{Non-Deposit Liabilities} & & \end{array}$$

6. Taking the public sector borrowing requirement as approximately given in the short run - say over a three to six month period - and similarly non-deposit liabilities, the authorities' problem becomes to control bank lending, sales of government debt to the non-banks and external influences on the money supply. Provided that official intervention in the foreign exchange market is limited, this last item should be moderately small so that the real problems facing the authorities are the control of bank lending and sales of government debt.

7. Under demand side control, the main weapon at the authorities disposal is interest rates, which they may change - particularly at the short end of the maturity spectrum - by administrative means, or by open market operations in government debt. A rise in interest rates, for example, will tend to increase the quantity of government debt demanded by the non-bank private sector while at the same time there will be a reduction in the private sector's demand for bank advances. Thus the effects on the money supply will be for a fall on both counts. Similarly a fall in interest rates would tend to have an expansive effect on the money supply.

8. There are a number of problems with this system of control:

a. The PSBR itself is neither entirely under the control of the authorities nor predictable in the short run. Indeed, the authorities' influence on the local authorities' and public corporations' borrowing requirements is tenuous at best and their knowledge of the contribution made by these components is usually belated. There can therefore be unpredicted shocks to the money supply from this source.

b. While there is some evidence of a tolerably stable relationship between interest rates and bank advances in the long run, the effect of interest rate changes in the short term appears, empirically, to be fairly weak. If, therefore, monetary control is threatened by a burst of bank lending, the authorities have little to combat this immediately on the demand side other than by putting moral suasion on the banks to restrain their activities. While the power of such suasion should not be underestimated, there is an element of arbitrariness involved in such moves which makes it undesirable.

c. The change in demand for public sector debt which will result from a given change in interest rates is very difficult to forecast. It will depend critically on the state of the market's expectations with regard to future interest rate changes and such expectations are notoriously difficult to predict, especially given their complex interaction with inflationary expectations. It is therefore difficult for the authorities to judge the amount and timing of interest rate changes necessary to achieve the monetary target.

d. There are problems involved in controlling debt purchase by the non-banks even in the most favourable circumstances. While the authorities know immediately how much public sector debt they have issued in total, they do not know until some time after the relevant open market operations how much debt they have succeeded in selling to the non-banks. Moreover, there may be direct transactions between the banks and non-banks which have the effect of prejudicing monetary control.

e. These problems of selling the necessary amount of gilts to the non-banks are made more severe when the authorities are committed in advance to a tight monetary target. This effect is greatest at those times when monetary growth appears to be exceeding the stated target, precisely those times when the authorities need most urgently to be able to exercise firm control. If it becomes clear to the market that the authorities will need shortly to organise large debt sales to the non-banks in order to restore control, it will also be apparent that an appreciable rise in interest rates will be imminent. Under these circumstances, the prospects for debt sales before the rise are limited.

f. Finally, external influences on the money supply are particularly difficult to control under this system. In principle, the authorities may be able to offset the monetary effects of an external flow by countervailing action on domestic credit expansion. In practice, they have great difficulty in carrying out this sterilisation because they do not know for some time what the monetary effects of a particular flow have been. Moreover, sterilisation requires discretionary action on the part of the authorities: there is no automatic mechanism in the system which might help them. These problems become greater if it is necessary to intervene to maintain a particular exchange rate.

9. Co-existing with the demand side control there are two existing supply-side systems of regulation. The first of these is based on the reserve asset requirements placed on the banks which were reformulated as part of Competition and Credit Control. A selection of assets, specifically bankers' balances, Treasury bills, tax

reserve certificates, money at call, British Government securities less than one year to maturity, eligible local authority bills and, up to 2% of eligible liabilities, eligible commercial bills, are demarcated as reserve assets. Banks are required to hold such assets to the extent of at least 12½% of their eligible liabilities. Originally, the scheme was intended to work by the authorities' creating reserve asset pressure. Because the authorities control the supply of most of the demarcated assets, they are able to push the banks towards the 12½% ratio. Since the banks are required to maintain this ratio, they were expected to react by reducing their eligible liabilities and hence the money stock.

10. In recent years, the scheme has not worked in this way though it has proved useful as a tool for influencing short term interest rates. It has not been used as a means of controlling the money supply. And the authorities have not generally attempted to control the total supply of reserve assets to the banks. To some extent the banks can manufacture reserve assets through their operations with the Discount Market. But, more importantly, the effect of reserve asset pressure in the short run can be to increase the money supply rather than to reduce it as desired.

11. For example, a single bank faced with a shortage of reserve assets may issue a Certificate of Deposit (CD) to obtain extra deposits and use the proceeds to purchase reserve assets from another source. Provided that such assets are available, the effect will be to expand the money supply. Individual banks may always do this and the banking system as a whole may also do it provided there are outside sources of such assets. In the process the rate of interest the banks have to pay to obtain the CD's rises and that they receive on the reserve assets falls. This represents an unprofitable situation for the banks and they will doubtless eventually react by reducing their earning assets - thus securing the desired fall in the money supply. But in the short run the effect on the money supply is perverse.

12. Since the end of 1973, the SSD scheme has been available to supplement demand side control. The scheme has not been applied continuously and there have been some differences of detail on the occasions that it has been applied. In general, however, banks

are called upon to confine the increase in their interest bearing eligible liabilities (IBELs) to below a specified rise from some particular base level. To the extent that banks are unable or unwilling to meet this constraint, they are required to place supplementary special deposits with the Bank of England on a proportion of the excess IBELs at zero rate of return. As the excess increases, so does the proportion and the effective marginal cost to the banks of finance rises sharply. Hence, in practice banks are only likely to trespass marginally into the forbidden zone.

13. Conceptually, the scheme has the merit of simplicity and, in combination with other measures, has had significant impact on monetary growth when it has been applied. On the other hand, it was not designed as a general scheme of monetary control but rather to counteract the "round-tripping" which occurred at the end of 1973 which artificially inflated the money supply at that time. As a general control on the money stock, it has a number of definite defects:

a. The control variable is IBELs which differs in a number of ways from any of the accepted definitions of money. In particular, as compared with £M3 , non-interest bearing deposits and cash are excluded while non-residents' sterling deposits are included in IBELs but not in £M3 .

b. While the scheme places a (slightly woolly) upper limit on the control aggregate, there is no penalty attached to the banks undershooting the allowed increase. On the other hand, since in the foreseeable future the authorities' minds are unlikely to be much exercised with stimulating the money supply this deficiency may not be very important in practice.

c. If the scheme bites, then because the scheme applies to each bank individually, competition between the banks is inhibited. // An efficient bank which is pressed against its upper limit is prevented from increasing its interest bearing deposits even if it can find profitable earning opportunities for those funds. Similarly an inefficient bank is given artificial aid in retaining its deposits which, in the absence of the scheme would be bid away from it by the efficient bank. Thus there is implicit taxation of the efficient and subsidisation

of the inefficient involved, quite the reverse of what would be desirable.

d. In practice, the exact effects of the control are unpredictable. In part, this is a reflection of the qualifications and offsets which are allowed under the scheme, particularly with regard to banks transactions with the Discount Market which is not subject to the control. In consequence, banks are often able to reduce their IBELs with no effect on the money supply though they may have to lose reserve assets to do so.

e. Even in the absence of these loopholes it would not be clear how the banks would reduce their assets if the authorities successfully reduced £M3. There may be effects on public sector debt holding, or external capital flows or on bank lending to the private sector. In large part, the banks' reaction to an SSDS will depend upon the degree of reserve asset pressure to which they are subject and, indeed, the banks' recourse to Discount Market loopholes depends critically on this. The precise nature of the interaction of an SSDS and reserve asset pressure is therefore complex and probably highly non-linear if expressed in mathematical terms. In many situations it is difficult to foretell what the effects of the authorities' policies will be.

f. Since the scheme has applied only intermittently, the banks have become adept at anticipating its application and forestalling its main effects by prior management of their balance sheets in order to give them a favourable base position. Moreover, in the short run this may imply a perverse rise in the observed money stock, so that an anticipated SSDS may make its application inevitable.

g. Finally, because of these loopholes and opportunities for cosmetic adjustments, the operation of the SSDS is likely to result in severe distortions to the recorded monetary statistics.

14. To sum up this section, then, the present systems of control are less than ideal. On the one side, there is a demand system

of control which has not proved capable of adequate regulation over a reasonable period of time. On the other side, the two supply side systems of control are both subject to serious defects. Neither gives very predictable results and the interaction of the two is complex.

15. The problems raised by this situation - for both the authorities and the financial system - has led some commentators, notably Greenwells, to suggest that the authorities should change their technique in favour of a monetary base control.

2. Monetary Base Control

16. One of the chief advantages of MBC is that, at least in theory, it is very simple. The classical version of MBC defines the monetary base as the monetary liabilities of the central bank which, in the United Kingdom, would be notes and coin plus bankers' balances at the Bank of England. Each bank is required to hold a certain proportion of its liabilities in the form of these assets. Since, in principle, the government has control over these assets, the government also controls the maximum level of the money stock. A leakage from the system is likely to occur insofar as the non-banks hold notes and coin. Faced with a shortage of base assets, the banks could attempt to attract notes and coin from the public to relieve the shortage without having to reduce their deposits. But those who propose this system usually assert that the possibilities of the banks' making use of this loophole are small and, moreover, that the implied flexibility in control is itself desirable.

17. Some of the recent proponents of MBC have suggested schemes which vary in detail from the classical scheme outlined above. For example, while, Wood and Griffiths propose a base with the traditional definition, Pepper would allow only bankers' balances with the central bank to qualify. Nevertheless, the various schemes have sufficient in common to allow discussion of their apparent strengths and weaknesses together. Details of the various proposals are given in the Appendix.

18. The MBC schemes which have been proposed have some or all of the following advantages as compared with the present system:

- a. because it is entirely a supply-side control the observed money stock could be controlled without any knowledge of the

demand for money function*, which empirically has proved very difficult to identify. Given the correct monetary target, this is an important advantage. Some knowledge of the demand for money is however still required to set the monetary target;

- b. It is claimed that the authorities would not need to regulate quantities over which they have only imperfect control. This would not be true, however, in schemes where the monetary base included items such as cash or assets generated by the government's residual borrowing from the banking system. (See the next paragraph);
- c. Banks would have much less opportunity for manufacturing base assets, a process which obstructs control in the existing reserve asset system;
- d. All banks would compete on an equal footing in their bids to attract deposits so that the barriers to competition of the SSDS are avoided;
- e. The system would be simpler than the existing controls so that both the authorities and the banks would be better aware of the direction of government policy.

19. Offsetting these potential advantages, there are also a number of potential difficulties:

- a. The public's holding of currency has not shown great stability or predictability either secularly or in the short term. Those schemes, such as Wood's, which include cash in the base would imply monetary control was hostage to these unpredictable swings in the non-banks holdings. Because the proposed base/deposit ratios are usually fairly low, about 10%, banks would be forced to make multiple deposit contractions or be enabled to make multiple expansions in response to these swings independently of the authorities' wishes.

*The authorities do not control the money stock for its own sake but in order to create a stable monetary environment in which the real parts of the economy may function efficiently. The demand for money function provides the link between monetary growth and inflation and real output. It is thus important in deciding upon the target range for the growth of the money stock.

b. Other schemes, particularly those which see MBC as a self-imposed discipline on government expenditure and borrowing, as well as a pure money stock control, include assets in the base generated by the government's recourse to the banking sector as the residual source of finance. In practice the the authorities find it difficult to control at all accurately their need to this recourse over periods of much less than a few quarters. On the one hand, the PSBR is itself notoriously unpredictable; forecasts, even a day or two ahead are subject to an error of a few hundred million pounds. On the other hand, the government's ability to finance its deficit externally or by borrowing from the non-bank private sector is also unpredictable. Unless such disturbances were accommodated they would lead to multiple contractions and expansions of the money supply in the short run which would probably be of sufficient magnitude to make the scheme unacceptable.

c. Specifically, official intervention in the foreign exchange markets would be reflected in the monetary base and allow multiple contractions or expansions of the money stock. It would be difficult to sterilise the changes at all accurately by domestic instruments and the MBC as often proposed would rule out any significant official intervention for just this reason.

d. A rigidly enforced MBC would be inflexible probably leading to very sharp changes in interest rates in the short run. The Bank of England, rightly in our view, criticised this sort of scheme in the current Bank of England Quarterly Bulletin. MBC can however be made more flexible if desired. For example, the authorities could specify a permitted range for the base/deposit ratio with deviations subject to increasingly severe penalties. Alternatively, the authorities themselves could intervene as necessary to relieve excessive base asset pressure. So MBC does not have to be inherently inflexible.

e. Some schemes, that of Duck and Sheppard for example, involve far reaching changes in the day to day operation of the banking system. Not only would these schemes be

complicated to operate, they would also probably be institutionally unworkable.

20. To sum up this section, then, MBC does seem to offer a number of advantages as compared with the present controls. But there are also a number of pitfalls which would have to be avoided if MBC were to become the main instrument of monetary control.

3. The Negotiable Base Asset Scheme

21. It might be possible to devise a system which would retain the desirable features of MBC but remove some of the potential disadvantages. The skeleton of one such system is sketched out here.

22. As in the conventional MBC, banks would be required to maintain a specified base/deposit ratio. The base asset, however, would take the form of a specially designated Treasury bill which would be negotiable (and known as, say, an NBA). Not all Treasury bills issued each week would be designated NBAs so that the authorities would control the stock of NBAs in existence independently of their need to borrow from the banks.

23. When the authorities wished to restrain the money stock they would create less NBAs than would be needed to support existing deposits. NBAs would then trade at a premium as compared with other Treasury bills so that the marginal cost of deposits to banks would rise. Individual profit-maximizing banks will normally accept deposits just to the extent that the cost of obtaining their last deposit equals the return they can make in investing or on-lending that deposit. When NBAs are in short supply the cost of holding deposits increases and the banks will each be induced to cut back their least profitable investments and their deposit liabilities accordingly.

24. All banks will do this until deposits in total are reduced to the number supportable by the stock of NBAs. Since all banks face the same cost of obtaining an extra NBA, efficient banks who find profitable earnings opportunities will be able to maintain higher deposits than inefficient banks faced with only marginally profitable investment opportunities. These latter will be forced to cut back severely on both deposits and assets since the scheme

makes a large amount of their business unprofitable.

25. While being formally a monetary base control, this scheme has affinities with both the existing reserve asset controls and the SSDS. The worst problems of the former are removed in this system since only the authorities are able to supply the reserve asset. On the other hand, it might also be regarded as a modified SSDS, in that the authorities effectively fix the maximum growth in bank deposits, but in this case, leave it to the banks themselves to determine the allocation of those deposits by the normal competitive process.

26. This scheme would have the effect of transferring the onus of sterilizing external flows from the authorities to the banks themselves. If the banks as a whole were constrained in their total deposits, then an inflow could not increase deposits. Individual banks faced with the prospect of unprofitable inflows would lower their deposit rate to avoid them. In consequence, either existing bank deposits would be attracted into public sector debt or the lower domestic deposit rates would lead to capital outflows. In either case, the authorities would not have to take discretionary action. In this way, the scheme could help to minimize the disruptive impact of external flows on the money supply.

27. A scheme on these lines would seem sufficiently interesting to merit further consideration alongside those discussed in Section 2.

4. Conclusion

28. The various schemes for monetary base so far put forward all have defects. But they cannot be ruled out on this account. As the paper has shown, if perfection is to be the ideal, the existing system fails on many counts.

29. We have been living with monetary targets now since 1976. The present system of monetary control grew up in a very different environment. Possibly the main problem we have experienced has been in making timely adjustments to the money stock during the course of the year when - for a period at least - fiscal policy can be regarded as given and bank lending is difficult to influence. At times it has seemed that we do not have adequate instruments to deal with divergences, and the effect of the instruments we do

have is uncertain. And it is here that an overt supply side control like the monetary base offers the prospect of improvement.

30. One cannot say on the basis of this sort of paper that MBC would be an improvement - still less make a firm recommendation that we should go ahead and introduce it. The existing system has one great advantage - we think we understand it, know its blemishes, and can work it - even if the process is at times a messy one. The last thing we want is to make hasty changes to the system whose ramifications we do not understand, and which might result in a loss of control over the money supply at a time when monetary policy is at the forefront of the Government's economic strategy.

31. Several important questions have not even been considered in this paper. First, it is not clear how much disruption to the financial system particular schemes would cause, and what the implications for City institutions would be. We can however say with certainty that these might be considerable, especially for the Discount Market. Second, we need to consider carefully how monetary base control can be related to the various monetary aggregates which we at present use to monitor monetary conditions. Third, we need to be quite clear about how MBC would operate under different exchange rate regimes.

32. There is only one way to resolve these questions. A small number of schemes - perhaps those discussed in this paper - should be studied by the authorities in detail; there is as yet no complete analysis of any single scheme for the UK. Provided there were no market objections the next stage might therefore be the preparation of a paper detailing these schemes as a basis of further discussion, particularly with those affected in the all important area of practical banking.

33. This is not a proposal for delay. Not only are such discussions vital in their own right if MBC is thought worth pursuing, they would fit in with what might be an appropriate time for introducing changes in the system. This would ideally be when the government had made progress in its objective of reducing the inflation rate and achieving a better balance between fiscal policy and interest rates within the declining £M3 target.

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APPENDIX

SOME SPECIFIC PROPOSALS FOR MONETARY BASE CONTROLS

1. Gordon Pepper: "A Monetary Base for the UK: A Practical Proposal" (in Supplement to W Greenwells Special Bulletin of 2 March 1979)

The monetary base would consist of bankers' balances at the Bank of England. All banks would be required to hold a fixed proportion of their deposits in the form of this asset, which would carry interest. The proportion would be the same for all controlled institutions but the level of interest paid might vary depending on the nature of the deposits concerned. Penalties would be applied to banks which failed to meet the required ratio depending upon the seriousness and frequency of the offence.

This system is close to a classical MBC except that the possibility of leakage through the non-banks' holding of notes and coin is eliminated. On the other hand, the monetary base would effectively be the government's residual source of finance. It would reflect any foreign exchange intervention, any day-to-day variation in the excess of government's expenditure over income or variations in sales of debt to the non-bank private sector.

2. G E Wood: "Cash Base Control and Institutional Change in the UK Financial System" (forthcoming in "The Banker")

The monetary base would consist of notes and coin plus bankers' balances at the Bank of England. There would not necessarily have to be a required minimum ratio since the banks would naturally hold a minimum amount of such assets for their own prudential and commercial reasons. However, it would aid the predictability of the system in the initial stages for a minimum ratio to be imposed. This scheme is the classical MBC. As such, it has all the potential advantages and disadvantages discussed in the main body of this note.

3. Professor Brian Griffiths: "Controlling the UK Money Supply" (forthcoming in the Lloyds Bank Review).

This scheme is identical to that of Wood except that Griffiths would not wish to impose a minimum base asset ratio, except, possibly for prudential reasons.

4. N W Duck, D K Sheppard: "A Proposal for the Control of the UK Money Supply" (in the Economic Journal, March 1978)

The authorities would create a new asset, the Reserve Deposit, which would be sold to banks only - initially in proportion to their individual holdings of balances at the Bank of England. Interest at the market rate would be paid on these assets which would in fact be deposits at the Bank of England. At the end of each day's clearing the Bank would allocate extra Reserve Deposits to banks whose ordinary bankers' balances showed they had gained net deposits and remove the appropriate amount from banks who had lost net deposits.

Banks would be required to hold a fixed Reserve Deposit/deposit ratio with an increasing scale of penalties for deviant banks. Restraint on the money supply would be exercised by the authorities unilaterally converting a certain proportion of Reserve Deposits held by the banks into ordinary bankers' balances which would not count as reserve assets. To avoid penalty the banking system as a whole would have to contract its deposits in these circumstances.

This scheme has the least affinity with the classical MBC of those considered. It thus avoids the potential drawbacks of MBC but retains some of the advantages. It would, however, be extremely complex to administer and probably unworkable. In particular, the Bank of England would not know whether the increase in a particular bank's ordinary balance reflected the drawing down of a deposit with another bank (ie no increase in the money supply) or the increase of an overdraft with another bank (ie a net addition to the money supply). It would not therefore know how to allocate the Reserve Deposits.

5. The Negotiable Base Asset Scheme (outlined in this note).

A proportion of all Treasury bills would be designated Negotiable Base Assets (NBAs) and sold at the weekly tender. Only banks would be allowed to buy these assets but they would otherwise be fully negotiable. Banks would be required to maintain a minimum MBA/deposit ratio with an increasing tariff of penalties for offenders. Except for having this reserve asset status, NBAs would otherwise be identical to existing Treasury bills.

When the authorities wished to restrict the money supply, they would create less NBAs than needed to support the existing deposits.

NBAs would then be in short supply and trade at a premium as compared with ordinary Treasury bills. Thus the marginal cost of finance to banks would rise and they would reduce their least profitable earnings assets together with their deposits. Efficient banks with profitable investments would not do this to the same extent as inefficient banks whose assets were invested in low return projects.

This scheme would avoid the obvious potential defects of the classical MBC but would retain most of its advantages. On the other hand, the full implications of the system have not been worked out.