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Blunders in the organization of monetary policy

Separation of debt management from monetary control undermines policy credibility

Government wants to separate debt management from monetary policy

Every now and again British officialdom does something silly. One illustration was the decision to scrap broad money targets in 1985. This led - predictably - to rapid monetary expansion and the boom-bust cycle of the late 1980s and early 1990s. The latest example of official folly in monetary strategy comes in the 1999/2000 *Debt Management Report*. It says that the formation of a Debt Management Office distinct from both the Treasury and the Bank of England "will complete the separation of debt and cash management from monetary policy operations". Indeed, the official intention seems to be take monetary objectives out of debt management altogether. In oral evidence to the Treasury Sub-Committee of the House of Commons on 16th February Dr. Noel Mills, head of research at the DMO, said that, "whether the Government funds itself all in Treasury bills or all in 30-year bonds does not have that huge an impact now on the money supply".

Debt Management Office is wrong to believe that instrument composition of the debt does not affect the money stock

Apparently the DMO needs to be told about the structure of market demands for government paper. Because of their contrasting risk preferences and yield requirements, banks and non-banks have very different attitudes towards government debt. Banks cannot tolerate the price volatility of 30-year bonds and therefore almost never hold them. On the other hand, insurance companies, pension funds and other long-term investment institutions have only a very limited interest in Treasury bills, because of their low yield. It follows that - if the budget deficit (plus any maturing debt) is covered by Treasury bills - the result is likely to be an increase in the money stock. Conversely, if the deficit is covered by 30-year bonds, the money stock ought to be unchanged.

Decisions on interest rates and debt management ought to be part of a consistent monetary policy

The authorities have no choice in the matter. They have to take a decision about the proportion of newly-issued debt in the form of Treasury bills, shorts, longs and so on. That decision affects the non-bank as opposed to the bank take-up of the debt and so the quantity of money. One way of avoiding the subject might appear be the "full funding rule" introduced in 1985, which specified that net sales of public sector debt to non-banks were to be equal to the public sector borrowing requirement and so meant that the public sector's finances did not affect the quantity of money. But in the boom of the late 1980s the application of this rule had disastrous results. Buoyant tax revenues led to a budget surplus. The surplus by itself would have taken money out of taxpayers' bank accounts and reduced the money stock, but the full fund rule led to buy-backs of debt from non-banks (via "reverse gilt auctions"). Such buy-backs increased the money stock in an over-heating economy, which was entirely inappropriate and misguided. (See p. 13 below.) Mistakes on this scale must not be repeated. The Treasury, the Bank and the DMO need to work together to ensure that future decisions on interest rates and debt management are part of a consistent monetary policy.

Professor Tim Congdon

29th February, 2000

Summary of paper on

“On the basic principles of debt management”

Purpose of the paper

The Government’s intention, according to the 1999/2000 *Debt Management Report*, is that the creation of the Debt Management Office in 1998 “will complete the separation of debt and cash management from monetary policy operations”. The research paper asks whether this recent development in monetary policy is either feasible or desirable.

Main points

- * **In a modern economy the expansion of the money stock (i.e., some measure of notes and bank deposits) is determined by the extension of bank credit. The implied “credit counterpart identities” have been used in the UK for over 30 years to identify pressure points in monetary policy. (See pp. 3 – 6.)**
- * **The deployment of debt management as an instrument of monetary policy was traditional practice in the UK until the mid-1980s and has been advocated by many leading economists, including Keynes and Friedman. (See pp. 10 – 13 and p. 17.)**
- * **In 1985 – in its first effort to divorce debt management from monetary policy – the Treasury persuaded government ministers to adopt the “full funding rule”. The purpose of the rule was that the Government’s financial operations would have no effect on the quantity of money. (See p. 12.)**
- * **In the boom of the late 1980s a budget surplus was recorded. The full fund rule required the Government to use the surplus to buy back debt from non-banks, through so-called “reverse gilt auctions”. Perversely, these increased the quantity of money in a boom. Short-term interest rates had to be higher for longer than would otherwise have been necessary.**
- * **The correct approach to debt management policy is to over-fund the PSBR/PSNCR during booms, withdrawing money from the economy, and to under-fund it during recession. The proposed separation of debt management from monetary policy is wholly misguided, even if it were technically feasible.**

This paper was written by Professor Tim Congdon. A slightly different version was submitted to the Treasury Committee of the House of Commons, as part of its current enquiry into debt and cash management.

On the basic principles of debt management

Governments should *not* buy back debt from non-banks in booms

Introduction:

Money and the economy

The role of debt management in monetary policy cannot be explained without a prior understanding of the role of money in the economy. Unfortunately, the role of money in the economy is controversial, with widely divergent views between different economists. One view is that public policy should try to ensure that the price level is kept stable by maintaining a balance between the quantity of money and the quantity of goods and services. The "monetarist school" associated with Professor Milton Friedman of Chicago University proposed that, in a growing economy, this objective can be achieved by using monetary policy to ensure that the quantity of money increases at roughly the same rate as the quantity of goods and services. This proposal is currently unfashionable in the policy-making circles of the English-speaking countries, although it allegedly helps to guide the interest rate decisions of the European Central Bank just as it did those of the Bundesbank before the introduction of the single European currency. Despite the differences of view, a fair summary of majority opinion among economists is that

1. in the long run changes in the quantity of money cannot change real economic variables, but that
2. in the short run significant mismatches between the quantity of money and the quantity of goods and services may cause macroeconomic turbulence and, in that sense, have important "real" effects.

Despite controversy, economists agree money stock should not be deliberately increased in booms

The implied policy conclusions are that

1. in the long run inflation can be prevented by keeping the quantity of money growing at the appropriate rate relative to the quantity of goods and services (1), and
2. in the short run large fluctuations in money growth are to be avoided.

More loosely, high and accelerating money growth is likely to be accompanied by buoyant economic activity and - sooner or later - high inflation, while low and decelerating money growth normally coincides with depressed economic conditions and leads to low inflation or even falling prices. Some obvious policy prescriptions follow. In boom conditions policy-makers ought to take measures which restrict money growth. At the very least, they ought not to take measures which increase money growth

Defining money, credit and the place of the banking system in a modern economy

Historically the dominant forms of money were precious metals which had both intrinsic value as commodities and value in exchange as money. Nowadays the money stock consists almost entirely of the paper liabilities of the banking system, including notes issued by the central bank and deposits which are liabilities of the commercial banks. (Coin is a minor exception, which represents a tiny fraction of the money stock.) A crucial point follows. Whereas in the past the quantity of money could increase only through extra physical production of the precious metals, in a modern economy the quantity of money increases by the extension of bank credit.

When a bank grants a loan, it adds a sum to the borrower's deposit and an identical sum to a newly-created loan account. The borrower (A) then writes a cheque - or makes some other payment instruction - against the deposit, in order to purchase goods or assets from another agent (B); the sum is transferred to B's deposit; B at some later date writes out another

cheque to make another payment to C; and so on. The extra deposit is money and can circulate as such into the indefinite future. (Note that the bank is not creating money “out of thin air”, because it cannot make something for nothing. The deposit is its liability and the loan is its asset, but they cancel out. This may seem a waste of time, but - of course - it is worthwhile from the bank’s point of view as long as the interest paid on the loan exceeds the interest paid on the deposit.)

Three common confusions

1. A sum of money is *not* the quantity of money

Debates of debt management become confused because of ambiguities in the English language and carelessness in the use of words. Three definitional points need to be highlighted at this point, to preempt later difficulties. First, a distinction needs to be drawn between “a sum of money” and “the quantity of money” or “the money stock”. Sums of money can move in and out of all sorts of accounts, and statements involving sums of money may refer to share transactions, credit facilities and so on. But the term, “the quantity of money”, is far more limited and precise. Most generally, it refers to all those instruments that can be used to complete transactions and settle debts. In a modern economy banks dominate the task of money transmission and debt clearance. Apart from coin, the quantity of money is satisfactorily defined as consisting only of the notes and deposits issued by the banking system.

2. Government deposits *not* part of the quantity of money

Secondly, in conventional definitions of the quantity of money deposits held by the government and other public sector bodies are excluded. The rationale is that the government has the power to issue money. Its spending - unlike that of private agents - is therefore not constrained by its money holdings. To repeat, the private sector’s deposits are included in the money stock, but the government’s deposits are not. (A further very important institutional *nuance* is that the government maintains its key accounts with the central bank, not the commercial banks. This complication is very important in practice, but its discussion is not pursued in the current paper.)

3. Money may be created by bank credit, but it is *not* bank credit

Thirdly, the statement “in a modern economy the growth of money results from the extension of bank credit” should not be confused with the statement “in a modern economy the growth of bank credit and money are so closely related that they are identical”. Credit and money are different. Credit is the expansion of banks’ assets as the banks increase their claims on one set of non-bank agents (i.e., people and companies); money consists of the notes and deposits which are the banks’ liabilities to another mostly different set of non-bank agents.

A common misunderstanding in this area is to believe that the phrase “the money supply” refers to new bank credit. When used properly, it does not. It refers to an aggregate of notes and deposits. To repeat, it comprises all those assets which - without any further ado - can make payments. Because the misuse of the phrase “the money supply” is so frequent in popular discussion, the phrases “the quantity of money” and “the money stock” will be adopted in the rest of this paper. The two phrases are interchangeable.

Credit and money:

Credit counterparts to the money stock

Banks’ assets and liabilities are equal. As their deposit liabilities constitute virtually all of the money stock in the UK (and other industrial societies) today, the money stock increases when banks extend new credit and grow their assets. Apart from banks, there are three other types of agent in any economy - the non-bank private sector, the government (taken to encompass the whole of the public sector) and the foreign sector. As it is not of immediate relevance to the key issues, the foreign sector will be ignored. It follows that

The total of bank assets = Loans to the non-bank private sector + Loans to the government,

and also that

The increase in bank assets = New loans to the non-bank private sector +
New loans to the government

As already noted, banks' deposit liabilities to the non-bank private sector (or "private sector", for short) are included in the money stock. But banks have other liabilities, notably to their shareholders. (It is the shareholders who benefit from the interest charged on the assets being higher than the interest paid on the deposits.) Such other liabilities may be termed "non-deposit liabilities". So

The total of bank liabilities = Note and deposit liabilities to the private sector +
Note and deposit liabilities to the government + Non-deposit liabilities

and further

The increase in bank liabilities = The increase in note and deposit liabilities to the private sector + The increase in note and deposit liabilities to the government + The increase in non-deposit liabilities.

Now "the increase in note and deposit liabilities to the private sector" is one and the same thing as the increase in the quantity of money. As the increases in assets and liabilities must be identical, it follows that

The increase in the quantity of money = The increase in loans to the non-bank private sector + The increase in loans to the government - The increase in the note and deposit liabilities to the government + The increase in non-deposit liabilities. (*Identity in form A*)

Statement of this kind are often termed "credit counterparts identities". They can relate to different monetary aggregates, while the totals of banking system assets can be categorized in several ways. Such identities are a standard analytical tool in monetary economics, being - for example - used ubiquitously by the International Monetary Fund to assess macroeconomic prospects in its member countries. (Its core publication, *International Financial Statistics*, sets out the data in a credit counterparts identity for all countries. It has done so for several decades.)

The traditional UK presentation of the "credit counterparts",

The method of stating a credit counterparts identity in the previous section is nevertheless a little unusual, because of the inclusion of a term for "The increase in the note and deposit liabilities of the government". A more familiar presentation consolidates the financial operations of the public sector, giving the net effect of "The increase in loans to the government" and "The increase in the note and deposit liabilities to the government" as "The increase in net lending to the government". In the UK a further line of detail has traditionally been added. If the foreign sector continues to be put to one side by assumption, it is evident that the government's net borrowing from the banking system must be equal to its budget deficit minus its borrowing from non-banks.

which was used by the IMF in its UK visits

Admittedly, the phrase "the budget deficit" is ambiguous, because it could refer to the increase in debt net or gross of the government's financial assets, to the government's need to borrow in cash (after adjusting for tax accruals and such like) and, indeed, to a variety of other financial ideas. From the mid-1960s until 1997 the most favoured concept was that measure of the public sector's deficit which had to be covered by cash borrowing from the banks or non-banks, known as "the public sector borrowing requirement" or PSBR. One of its key virtues was that it could be integrated into the credit counterparts framework and so related to the money supply arithmetic. This was particularly important to the IMF which

made loans to the UK in 1968 and 1976, and imposed conditions on UK macroeconomic policy to ensure that the loans were repaid.

If the external influences are reintroduced, the implied presentation of the credit counterparts identity is,

$$\text{The increase in the quantity of money} = \text{New bank lending to the private sector} + \text{PSBR} - \text{Sales of public sector debt to the non-bank public} - \text{External influences} - \text{Increase in banks' non-deposit liabilities. (Identity in form B)}$$

Changes in target aggregate for monetary policy do not invalidate credit counterparts analysis

Over the last 25 years dozens of official documents and textbooks on monetary policy have been published with a statement of the credit counterparts identity on these lines. The "quantity of money" on the left-hand side of the identity would usually be a broad money measure, covering notes and the great majority of banks' deposit liabilities. In the early 1970s the favoured money measure was M3, which included foreign currency deposits held by UK residents; in the late 1970s and 1980s it was sterling M3 and referred only to notes and sterling deposits held by UK residents; in the 1990s it was M4, which was somewhat wider than either M3 or sterling M3 because building societies came to be regarded as part of "the monetary sector" and their liabilities, as well as the banks, were deemed relevant. But these adjustments were largely technical in nature. They should not be allowed to hide the underlying continuity of the monetary policy framework. Throughout the three decades to 1997 the signals given by the credit counterparts identity were crucial to decision-taking. (At the time of writing it is not clear that this will continue, but it probably will.)

New fiscal policy rules also do not alter links between government finances and money

In 1997 the new Labour Government decided to change both the form and substance of fiscal policy. The PSBR was renamed the "public sector net cash requirement" (or PSNCR). Meanwhile the focus moved to other deficit concepts made relevant by the introduction of two new fiscal principles, the "golden rule" and the "sustainable investment rule". These changes may have reflected a wish to disguise - or, at any rate, to downplay - the interconnectedness of fiscal and monetary policy. This interconnectedness had been emphasized in the early years of the previous Conservative Government, when it provided the rationale for the Medium-Term Financial Strategy and the associated reductions in the PSBR. Mr. Gordon Brown and his advisers may believe that by proposing a new terminology they can alter the underlying reality of fiscal and monetary operations. This is not so. It remains true at the start of the new millennium - just as it was in Napoleonic France, the Weimar Republic in Germany and Britain in the mid-1970s - that government borrowing from the banking system increases the quantity of money.

Debt management in theory:

Are there any advantages in stating the credit counterparts identity in form A, as in the previous section, with a reference to the government's deposit as well as to its borrowing? Does this serve any purpose not served by the traditional textbook credit counterparts identity in form B? The answer is that form A helps to describe - simply and understandably - the power of debt management operations. A great deal of rather complex institutional material has been suppressed in the following section, with the purpose of bringing out the heart of the matter more clearly.

A. Its role in monetary policy

The power of debt management operations demonstrated starkly by Keynes

In his *Treatise on Money* Keynes discussed the merits of aggressive debt management operations to stimulate the economy. (The *Treatise on Money* was published in 1930.) The kernel of his proposal was that the British Government should purchase large quantities of its long-dated debt from non-banks in order to increase the quantity of money, an approach he dubbed "monetary policy à outrance".(2) When similar ideas are advanced nowadays an objection is sometimes made that such operations would be unavailing because the Government "has to get the money from somewhere". This is a complete misunderstanding which stems

from the terminological difficulties in the subject. It is here, in particular, that two slips - the confusion between a sum of money and the quantity of money, and the failure to remember that the government's own deposits are excluded from the money stock - cause most damage.

Appropriate conduct of debt management in a depressed economy

Imagine a highly depressed economy, where the private sector does not want to borrow from the banks. Suppose that the government wants to stimulate the economy, but that it also has a large public debt which discourages it from expanding its budget deficit. It therefore decides to adopt Keynes' remedy of expansionary debt management. The first step is that it goes to the banking system and arranges an enormous borrowing facility. The banks are happy to oblige, because the government's credit-worthiness is the best available.

So a very large sum of money is added to the government's deposit and an equal sum is added to the banking system's lending to the government. Note two vital points. First, this initial stage of the operation can occur without the government running a deficit. The increases in its bank deposit and bank borrowing (i.e., in its assets and liabilities) are identical. Secondly, the addition of a very large sum of money to the government's deposit does not by itself have any implications for the money stock, because - to repeat - the money stock excludes the government's deposit.

The next stage is also straightforward. The government uses its deposit to purchase its outstanding debt (i.e., government securities) from non-banks. Again, this has no implication for its deficit or its net debt, because the sum of money transferred from its deposit is equal to the value of the government securities purchased from non-banks. However, the second stage of the operation is different from the first, in that it does have an effect on the money stock. The sum of money taken from the government's deposit is credited to the deposits of the non-banks who have sold their government securities. As explained in the previous section, such deposits - unlike the government's - are part of the money stock.

Government expands money stock by borrowing on large scale from banks and buying government debt from non-banks

In short, the government of any country can expand the money stock almost at will by borrowing on a large scale from the banking system and purchasing assets from non-banks. The proceeds of the non-banks' asset sales boost their deposits and so the quantity of money. The debt management operation leaves the government's net debt unaffected, but the ownership of the debt has changed. Before the operation its debt was held by non-banks, whereas afterwards it is held by the banking system. Similarly, non-banks' net wealth is unaffected, but the composition of their wealth has altered. Before the operation part of their wealth was in the form of government securities; afterwards the securities have been replaced by money.

Consequent changes in the money stock have all the usual macroeconomic results

Plainly, debt management operations enable the government to change the quantity of money. All the usual macroeconomic consequences from such changes then ensue, possibly with profound effects on economic activity and the price levels. The criticism that "the government has to get the money from somewhere" is a confusion which stems from a failure to remember that the government's own deposit is not part of the money stock.⁽³⁾ The ability of debt management operations to alter the quantity of money may appear magical and bewildering. Some economists even appear puzzled that behaviour can be affected when the government's net debt and the private non-banks' net wealth are unaltered.⁽⁴⁾ But - in a modern economy where money assets are liabilities of the banking system - all changes in the quantity of money reflect identical increases or decreases in banks' assets and liabilities, and - in themselves - contain no message for non-banks' net wealth.

What happens if non-banks hold no government securities? Could the government carry out stimulatory operations in the same way? The answer is "yes, but it would have to buy other assets". Assume - again - a highly depressed economy, but a government which had

**“Debt management”
feasible, even in the
absence of a national
debt**

incurred no debt in the past because it believed in the virtues of balanced budgets. Once more it would arrange a big borrowing facility with the banks, and the banks would add identical sums to its deposit and its loan account. The government could then buy any asset from non-banks, including perhaps land, equities or foreign exchange, in order to boost non-banks’ deposits (i.e., the money stock). (In fact, operations of this kind have been found in Hong Kong in the last few years. When the economy is weak, the Hong Kong government suspends land sales, as these withdraw money from non-bank accounts. On the other hand, when the economy is buoyant, it increases land sales. Variations in the pace of land sales are, in effect, an instrument of monetary policy.)

**An extreme example of
“monetary policy à
outrance”**

In principle a government could purchase any asset in order to stimulate the economy. For example, in the UK today the Government could announce that it intended to borrow about £55,000m. from the banks and with the proceeds it would pay everyone £1,000 for their scruffiest pair of shoes. This would be an extreme example of Keynes’ “monetary policy à outrance”.(5) The result would undoubtedly be an increase in the money stock, as people handed over their old shoes and credited the £1,000 cheques to their bank accounts. Of course, as the shoes acquired by the government would not be worth £55,000m., the Government would in due course have to write off most of the shoe stockpile.

Arguably, the eventual outcome of loss-making open market operations would not be much different from the monetary financing of a budget deficit. Nevertheless, monetary creation due to debt management operations is analytically distinct from monetary creation due to deficit financing. In the real world debt management operations are typically conducted by purchases and sales of Treasury bills and government securities at prices not too far from those prevailing in the market. From time to time losses may arise, but - as the government acts on behalf of the citizens - such losses are not incurred by society as a whole.(6)

**Appropriate conduct of
debt management
operations in an over-
heated economy**

The previous section discussed the use of debt management to stimulate a depressed economy. In essence, the government has to borrow from the banking system and use the loan to purchase assets from non-banks (i.e., people, companies and financial institutions). Their proceeds from the asset sales are credited to persons’ and companies’ bank deposits, boosting the money stock. In principle the government could purchase any assets, but the most familiar approach is for it to buy in its own debt. The same sort of argument applies in an over-heated economy facing inflationary pressures, except that the debt management operations have to be reversed. Instead of borrowing from the banks to buy existing public debt from non-banks, the government has to sell newly-issued public debt to non-banks. The non-banks pay for their new government securities by drawing on their deposits, so reducing the money stock. The government can use the proceeds either to repay bank borrowing or to expand its bank deposit.

In short, and at the cost of repetition, the appropriate course of debt management in a depressed economy is for the government to use the proceeds of bank borrowing to buy debt from the non-bank private sector, whereas in an over-heated economy the right policy is to arrange new issues of government securities, sell them to non-banks and use the proceeds to repay government debt previously held by the banks. If debt management is carried out in this way, it will expand the money stock in a depressed economy and reduce the money stock in an over-heated economy.

The notion of “funding”

So far the term “funding” has been avoided, although it has had wide currency in the British debates about debt management over the last 25 years. Its origins are to be sought in the history of Britain’s national debt. In the 19th century much of the national debt consisted of securities which the holder could not at any time present to the government for repayment. On the stock market these “undated” or “perpetual” securities were called “the

funds". At the other extreme was the so-called "floating debt", which the government had to repay (in notes or by crediting a bank balance) at a date in the fairly near future. The principal forms of floating debt were Treasury bills and "Ways and Means Advances from the Bank of England". Ways and Means Advances were - and still are - the Government's overdraft facility at the Bank of England.

The meaning of "funding" in the historical past

After major wars - in which the Government had been too reliant on inflationary increases in the floating debt - it would issue large amounts of "funded debt". The purpose was to reduce the money stock and check inflation. This type of debt management operation - the replacement of floating debt by funded debt - was therefore known as "funding". (At some periods the Treasury differentiated between "funded debt", "unfunded debt" and the "floating debt". The funded debt was undated; the unfunded debt consisted of government securities traded on the Stock Exchange with a repayment date that - at issue - might have been quite distant, i.e., ten, 20 or 30 years; and the floating debt.(7) This distinction - by which non-banks could hold large amounts of both funded and unfunded debt - has been forgotten. As it is a nuisance to the present discussion, it will not be pursued further.)

The meaning of "funding" in the recent past

From the late 1960s the credit counterparts identity became important to thinking about monetary policy. The word "funding" acquired a new and different meaning, although with a connotation similar to that which it had had in the old days of funded and floating debt. The impact of the public sector's financial operations on the change in the money stock could be measured by the difference between the PSBR and sales of public sector debt to non-banks. Sales of public sector debt to banks would have much the same impact as increased issuance of floating debt, whereas sales of public sector debt to non-banks would have a similar macroeconomic effect to increased issuance of funded debt. Quite logically, the term "funding" came to mean "sales of public sector debt to non-banks" in the credit counterparts identity. (Note that this usage of the word made sense only after the notion of the PSBR had been proposed in the early 1960s.)

and the associated meanings of "over" and "under-funding"

Three related concepts emerged over the next 15 or 20 years, as monetary policy evolved. The first was "over-funding", a situation in which sales of public sector debt to non-banks exceeded the PSBR; the second was "under-funding", a situation in which sales of public sector debt to non-banks were less than the PSBR; and "exact funding", a situation in which sales of public sector debt to non-banks equalled the PSBR. Over-funding implied that the government's financial activities would reduce the money stock, under-funding that that would increase the money stock and exact funding that they would have no effect at all. It is clear - from the discussion in earlier sections - that over-funding is likely to be the correct approach to debt management policy in an over-heated economy, whereas under-funding is appropriate in a depressed economy.

B. Conflicting objectives in debt management

The discussion so far has concentrated on the purpose and role of debt management operations in monetary policy. In practice, debt management has at least two other objectives, to minimize the cost of debt interest costs and to promote the liquidity of the market in government debt. Ideally these last two objectives can be achieved by the judicious selection of the appropriate debt instruments and maturity dates.

Trade-offs between the three objectives of debt management policy

The three objectives may sometimes be in conflict. As short-dated government securities usually pay a lower interest rate than long-dated, a policy of shortening the life of the debt may achieve savings in interest costs. On the other hand, short-dated government securities are more likely to be held by the banking system than long-dated and so carry a higher danger of monetization. Again, official attempts to increase the liquidity of government securities markets may reduce interest costs, but they undermine the flexibility of debt management to respond to

changing monetary circumstances. In the extreme case when the monetary authorities fix the price of government securities (and so make government securities virtually indistinguishable from "cash"), the extra liquidity is secured only by forfeiting the government's ability to influence the money stock by debt management operations.

Gains from reducing interest costs by skilful debt management unlikely to be large

The relative significance of the three objectives varies from time to time and depends on a wide variety of circumstances. However, reductions in debt interest costs by astuteness in debt management are unlikely to be large. With long-dated yields typically 2% a year higher than short-dated yields, and with the national debt at, say, 60% of gross domestic product, the maximum savings would amount to under 1 1/4% of annual GDP. But - in most real-world situations - the monetary repercussions of a root-and-branch replacement of all long-dated by short-dated debt would be so drastically inflationary as to be unacceptable. The realistic level of savings is under 1/2% of GDP. Since any such "savings" are in fact reduced transfers between citizens of the same country, efforts to reduce interest costs by subtle debt management tactics are evidently of little importance to the well-being of modern industrial societies.(8) Improvements in market liquidity may achieve some lowering in interest costs, but they are likely to be even more trivial than those which arise from changing the maturity profile of the debt.

Monetary policy objectives are much the most important

In general, the monetary consequences of debt management are by far the most important for public policy. This had traditionally been recognized and emphasized by specialists in monetary policy, including such leading economists as Keynes in the 1920s and 1930s, and Friedman and Tobin in the 1960s and 1970s.(9) It is also acknowledged by organizations such as the International Monetary Fund and the World Bank, which have large permanent staffs dealing with these matters in many countries. However, national finance ministries - including the UK's Treasury - have only small numbers of people devoted to the subject and the circulation of officials from one post to another is almost constant. (The Bank of England also suffers from this problem.) One result of the frequent changes in personnel is that UK officialdom has not built up a durable and well-established orthodoxy on debt management questions.

Debt management in practice

The time has come to review the application of ideas about debt management in practice. The following discussion relates mainly to the UK in the post-war period, but a reference is also made to the USA.

British situation after 1945

Immediately after the Second World War the national debt was more than twice the UK's national output, while a significant portion of it was held by the banking system. In these circumstances a constant risk was that longer-dated government securities held outside the banking system would become attractive to the banks as they moved closer to redemption. The result would be higher money growth and inflation. This risk became known in the 1950s as "the flooding problem". The flood of maturing debt would overwhelm domestic monetary control, unless efforts were made to replace existing debt near to redemption by new debt with redemption dates far in the future.

Large national debt demanded almost constant "funding", as term then understood

Evidently, the monetary implications of debt management were a vital consideration to policy-makers. (10) By contrast, in the 1960s the Bank of England was concerned at times that aggressive sales of government securities to non-banks might hurt the market, leading to large price falls and increasing bond yields. It therefore pursued a policy of "leaning into the wind", with the Government's agent in the gilt-edged market ("the Government broker") prepared to buy back stock from the market at a price not too far from the current market price. This improved the liquidity of the gilt-edged market, but undermined the Bank of England's ability to control the quantity of money. (11) A particularly blatant example of "leaning into the wind" in 1968 led to high money growth, despite the fiscal austerity imposed by the IMF. It was much criticized by leading monetary economists.

What the Bank of England believed about debt management in 1966

The Radcliffe Committee of 1959 recommended that the Bank of England should make “a more determined effort in its Annual Report, or at more frequent intervals, to illuminate the problems of monetary management which confront the authorities”. Perhaps as part of its response, the Bank published in its June 1966 *Bulletin* an article on “Official transactions in the gilt-edged market”. Its opening paragraph read,

The management of the national debt is a central part of monetary management and at the same time a branch of Exchequer financing...The reconciliation of the diverse and often conflicting aims involved, and the methods and tactics adopted in pursuing them, are as much issues of monetary policy as of good house-keeping for the Government, though clearly they are not the whole of either.

The main text of the article was signposted by side-headings. The first side-heading was entitled ‘Debt management as an instrument of policy’. The associated paragraph read as follows,

First, management of the gilt-edged market and Bank rate are together the principal means of executing interest rate policy. Almost all fixed rates for government borrowing and lending, such as the rates nor national savings certifications, national development bonds, tax reserve certificates, and Exchequer loans to the nationalised industries, are fixed from time to time by reference to the current yields on gilt-edged stocks. The structure of these yields therefore has a strong influence on the structure of prime rates generally; and the authorities can pursue their aims for interest rates throughout the economy by seeking to influence the behaviour of prices and yields in the gilt-edged market. Secondly, management of the gilt-edged market, and the outcome in terms both of prices and the net amounts of stock sold or bought in official dealings, have a considerable bearing on credit policy and the liquidity of the banks and others, creating conditions that may help or hinder policy in this field. Neither interest rate policy nor credit policy, however, is the dominant long-term consideration in debt management; this is rather to ensure so far as possible that suitable finance for the Exchequer is available, and will continue to be available in the future, so that there need be no excessive recourse to short-term borrowing from the banks on Treasury bills and accompanying increase in the money supply.

Plainly, in 1966 debt management was part of monetary policy.

In mid-1970s also official concern to finance deficit outside banking system

The expansionary fiscal policy under the Heath Government of 1970 to 1973 was followed by a deep recession in 1975. Extremely large budget deficits emerged, with the PSBR above 10% of GDP for a few quarters. Since the Labour Government of 1974 to 1979 accepted that control over money growth was needed to reduce inflation, the aim of debt management was to finance the PSBR as far as possible outside the banking system. Many statements to this effect appeared in government documents. Meanwhile officials at the Bank of England and Treasury, and analysts in City stockbroking firms, made use of the credit counterparts identity to calculate the quantity of gilt-edged sales required to reach a particular money supply target. (They could do this, if they made certain assumptions about bank lending to the private sector and the PSBR.) Debt management was therefore a vital ingredient in monetary control. This approach to monetary policy received particular impetus from the IMF visit in 1976, with the sale of large quantities of government debt outside the banking system being implicit in the limit it imposed on "Domestic Credit Expansion". (Domestic credit consisted of new bank credit to both the public and private sectors. Of course, the sale of its debt outside the banking system enabled the Government to avoid borrowing from the banks.)

Emergence of "over-funding" in the early 1980s

In the early 1980s the gilt-edged market had become accustomed to absorbing large issues of new long-dated stock, often exceeding 3% of GDP. At the same time the growth of bank lending to the private sector was unusually rapid, as the Conservative Government under Mrs. (later Lady) Thatcher removed restrictions on bank credit. By itself this credit boom would have caused unacceptably high money growth. One of the monetary authorities' key responses was to sell government securities (mostly gilts) to non-banks in excess of the PSBR. This "over-funding" allowed the Government to neutralize the monetary consequences of buoyant bank credit and was strongly defended in official statements.⁽¹²⁾ However, over-funding was practiced on such a large scale that it stripped the banks of virtually all their public sector debt. The Government used the excess proceeds from the gilt sales to boost its deposit balance at the Bank of England. The sharp increase in the Government's deposit was matched on the other side of the Bank's balance sheet by very large holdings of commercial bills, an accumulation which became known as the "bill mountain".

Resulting "bill mountain", and other re-assessments, led to "full funding policy"

These developments were widely regarded as "distortions". It was felt that some limit on the bill mountain – and, by implication, on the Government's balance at the Bank of England – was sensible. The monetary authorities decided that one way of preventing further increases in the bill mountain would be to equate sales of public sector debt to non-banks with the PSBR. In late 1985 a new rule of so-called "full funding" was therefore announced. In future sales of public sector debt were not to vary with the requirements of the money stock target, but instead were to be kept close to the PSBR on an annual basis. The consequent abandonment of over-funding made it difficult for the Bank and Treasury to achieve their target for money growth, particularly in view of a continued extremely high growth rate of bank lending to the private sector.

and end of money supply targets

The target for money growth was therefore also dropped. Debt management was no longer subordinate to monetary targetting and, indeed, it had no obvious role in monetary policy at all, while policy-makers stopped paying much attention to the rate of money growth. The decisions taken in late 1985 were the prelude to a sharp acceleration in money growth and so to the Lawson boom of the late 1980s, which was followed by inflation of over 10% in 1991. In retrospect, policy-makers' priorities deserve to be heavily criticized for their general conduct of macroeconomic policy in this period.⁽¹³⁾ In particular, the upheaval in official attitudes towards debt management and the control of the money stock in 1985 was – and remains – difficult to understand. Although the size of the bill mountain was a legitimate object of official concern, it was a secondary matter compared with the need for monetary control.

What the Treasury and the Bank of England believed about debt management in 1980

In March 1980, when the annual increase in the retail price index was 19.8% and accelerating, the Government published a Green Paper on *Monetary Control*. It was a joint production of the Treasury and the Bank of England, although the split of authorship has never been publicised. In this period “debt management” was usually described as “gilt-edged funding” or something of the sort. Relevant quotations are as follows,

1.1. There are a number of policy instruments available to the authorities in influencing monetary conditions. Of these the main ones are fiscal policy, debt management, administered changes in short-term interest rates, direct controls on the financial system and operations in the foreign exchange markets.

Note that in 1980 - as in 1966 - debt management is explicitly viewed as a “policy instrument”.

1.4 In recent years the PSBR has been large, but substantial sales of gilts and other public sector debt have enabled a high proportion of it to be financed outside the banking system. But sales of gilt-edged stock have also been irregular, and there have been occasions on which the irregularities have accentuated fluctuations in the growth of the money supply. If the money supply starts to grow faster than the target range, investors will expect interest rates to rise and so hold back from buying gilts; this further accelerates the growth of the money supply. On the other hand, there have been other occasions when the authorities have been able to take advantage of the effect of expectations – for example about the PSBR – on the gilts market, to bring about sales which have brought the money supply back under control far more quickly than would have been possible with other instruments.

A later paragraph reached an apparently optimistic conclusion.

1.9 Using the basic weapons of fiscal policy, gilt-edged funding and short-term interest rates, the monetary authorities can achieve the first requisite of control over the money supply - control, say, over a year or more.

Again, note that “gilt-edged funding” is described - explicitly - as “a basic weapon” of money supply control.

In the late 1980s application of the “full funding” rule expands money stock in overheated economy

At the end of the 1980s the application of the full funding rule led to a particularly misguided episode in monetary policy. The boom of the three years from mid-1986 to mid-1989 strengthened tax revenues and led to a significant budget surplus in 1989 and 1990. In the twelve months to March 1990 the public sector borrowing requirement was negative by £8.0b. By itself, a surplus of this kind would reduce the quantity of money, as people and companies in the non-bank private sector would be making more payments to the government than they were receiving. (This would of course reduce their bank deposits.) In the circumstances the contractionary monetary effect would be desirable because it would offset expansionary forces on aggregate demand. Indeed, the tendencies for budget surpluses to emerge in booms and for such surpluses to lower the money stock are two key “automatic stabilizers” which dampen fluctuations in economic activity.

“Reverse gilt auctions” increase financial sector liquidity and boost asset prices

However, the Government had not only adopted the full funding rule in 1985, but had also been persuaded that the rule should be pursued at all points in the business cycle. It therefore organized debt management operations to neutralize entirely the contractionary effect of the budget surplus on the money stock. It embarked on a series of “reverse gilt auctions”, whereby the sums of money generated by the surplus were used to buy back medium- and long-dated gilt-edged securities from non-banks, principally financial institutions such as life insurance companies. The effect of the reverse gilt auctions was of course to increase these institutions’ bank deposits and the money stock. As a result, they had excess liquidity and were keen to buy assets, supporting share prices and commercial property values.

So short-term interest rates had to be higher than otherwise necessary, with devastating effects on home-owners and small business

This was totally inappropriate for the British economy in 1989 and 1990. Excess demand in the domestic economy coincided with rising commodity prices due to a fairly strong world economy. The overriding need was for a tightening, not an easing, of monetary policy. The Government’s one remaining instrument for curbing inflation was the short-term interest rate, an approach compared at the time to playing a game of golf with a single club. Because debt management operations were acting to boost the money supply and so to perpetuate the boom, the one club of short-term interest rates had to do too much work. Clearing bank base rates soared from 7½% in May 1988 to 12% in late August 1988 and 15% in September 1989. They stayed there for over a year and remained above 10% until September 1992. This period of high interest rates was devastating for the home-owners who had borrowed so heavily in 1987 and early 1988, and also for many newly-formed small businesses dependent on bank credit. It is very striking that the 15% interest rates which prevailed in the worst phase were not much different from the 17% interest rates in the previous recession of 1980, but inflation expectations were very much lower in 1990 than they had been ten years earlier. Short-term interest rates had to be particularly fierce in real terms, because their deflationary impact was being negated by the money injections from the reverse gilt auctions.

Reverse gilt auctions partly to blame for negative housing equity

In other words, two branches of monetary policy - debt management operations and variations in short-term interest rates – were in conflict. As a result, the financial adjustment inflicted on hundreds of thousands of people and companies by high interest rates in the recession of 1990 and 1991 was made needlessly severe. Negative housing equity and the massacre of small companies were partly due to the reverse gilt auctions. True enough, some pain was unavoidable after the extremes of the preceding boom, but the adjustment did not have to so harsh in its concentration on one particular group (i.e., those who had over-borrowed in the previous five years, notably young home-owners and enterprising but over-leveraged businesses). Earlier it was remarked that – despite the many controversies in this field – nearly all economists agree that policy-makers ought not in boom conditions “to take measures which increase money growth”. But the reverse gilt auctions of 1989 and 1990 did exactly that. They added to non-banks’ deposits while inflation was on a rising trend, prolonging and intensifying over-heating.

Perversity of the full funding rule

More generally, the application of the full funding rule increased money growth in a booming economy, while its application in a depressed economy would reduce money growth. The full funding rule was therefore perverse in its impact on the business cycle. By contrast, a policy of over-funding in a boom reduces money growth and restrains demand, and of under-funding in a recession increases money growth and stimulates demand. The full funding rule was concocted by a handful of civil servants in the Treasury in the mid-1980s; it had appeared in no earlier recognized manual of public finance and had no historical precedent in British debt management praxis. The disasters of 1989 and 1990 show that debt management operations and short-term interest rates must work in harmony. They should be seen as two partners in the conduct of a well-organized and cohesive monetary policy. Institutions need to be designed which ensure that in future this integration occurs as a matter of course.

Subsequent developments:

The US authorities today are repeating the UK's mistakes in the late 1980s

A reasonable generalization is that – both historically and at present - official thinking on debt management in the USA has not been articulated more effectively than in the UK. Nevertheless, academic interest in monetary issues is much stronger in the USA than in the UK and serious policy misjudgements ought to occur less often. Unhappily, the USA today is repeating the mistakes made by the UK at the end of the 1980s. After a long boom which has greatly increased tax revenues, the American government has a large fiscal surplus. It could allow this surplus to reduce its borrowings from the banking system, which would shrink bank assets and help to curb an uncomfortably high rate of money growth. (The M3 measure of money has risen by over 8% in the last year.) Instead the US government has announced that it will use the surplus to reduce the amount of long-dated debt. In part this will be achieved by cutting back on new issues of long-dated bonds, but a certain amount of buying-in of long-dated bonds is also envisaged. According to a statement from Reuters on 2nd February, “The [US] government will start buying back debt within two months, focusing on maturities of over 10 years and in initial chunks of about \$1b.”

Bond buy-backs will raise money growth and intensify over-heating

As with the reverse gilt auctions in the UK, the result is that those selling their bonds to the government will have increased bank deposits. The quantity of money will rise more rapidly than would otherwise be the case. A leader in the *Financial Times* of 7th February correctly remarked, “Since holders of long-term debt will mainly be non-banks such as pension funds and insurers, moves to buy back government IOUs will tend to offset the contractionary impact of the budget surplus. That is unhelpful when the Fed fears the economy is expanding at an unsustainable rate.” Like the reverse gilt auctions in the UK in the late 1980s, the US Treasury’s bond buy-backs will aggravate the cyclical imbalance in the economy. They are altogether misguided and inappropriate; they will also require the Federal Reserve to push up short-term interest rates to unnecessarily high levels.

Recent US Treasury tactics unpopular in bond market, but this not the key point

The US Treasury’s debt operations have antagonised financial markets recently. Dealers in the government bond market had expected it to concentrate the bond buybacks in the shorter dates. Instead in early February, it spent the greater part of \$30b. in buying in long-dated debt, particularly in the 30-year area. Yields fell heavily at the long end, pushing them beneath yields on 10-year paper. Large speculative positions taken by Wall Street investment banks in the expectation of rising yields proved misjudged and lost money. But the US Treasury’s cack-handed conduct of the operations is a relatively minor matter compared with the larger strategic blunder. To repeat, it is foolish to expand the money supply when the economy is over-heating, but that is exactly what the US government is doing by its bond buy-backs. The US government’s motive is a reduction in the cost of servicing the government’s debt, but – as explained above – the gains from this source are an insignificant public benefit compared with the damage to the economy from pursuing an incorrect monetary policy.

Conclusions:

The need to restore the integration of debt management and monetary policy

Enough has been said to show that debt management is part of monetary policy. Its interdependence with the rest of monetary policy can be demonstrated conceptually by the credit counterparts identity. Moreover, the historical record confirms that debt operations have traditionally been organized with monetary ends in view. For most of the last 250 years UK official policy in this area has been conducted in full awareness of the linkages between, on the one hand, the maturity profile and instrument composition of the national debt and, on the other, the attractiveness of public debt to the banks and the rate of money growth. It is only in the last 15 years that debt management policy has gone haywire. The full funding rule, introduced in 1985, was intended to ensure that the public sector's financial transactions had no impact on the quantity of money. This was an innovation without any theoretical justification or historical precedent. It hindered the operation of one of the economy's most useful automatic stabilizers, namely the tendency for budget surpluses in booms (and deficits in slumps) to contract (and expand) the money stock. Disastrously, in 1989 and 1990 the full funding rule was applied in the form of reverse gilt auctions. These aggravated monetary over-heating and made it harder for high interest rates to restrain inflation. Interest rates had to be higher for longer than would otherwise have been necessary, with devastating effects on home-owners and over-borrowed small businesses.

Full funding rule dropped in early 1990s, with accompanying recognition of monetary policy role of debt management operations

The full funding rule was dropped in the early 1990s. In 1995 the Government published a review of debt management and restated its objectives as being, "to minimize over the long term the cost of meeting the Government's financing needs, taking account of risk, whilst ensuring that debt management policy is consistent with monetary policy". This was a step in the right direction, as it brought debt management back into monetary policy, but its emphasis was wrong. The implication of debt management for the burden of interest payments is a rather minor affair in the life of a great nation. While it is a valid policy desideratum, it should not have been given such prominence. In subsequent years the Treasury published a *Debt Management Report*, with a Remit explaining the kinds of debt it wanted to sell, the likely timing of the sales and related matters. Initially this Remit was – in effect – a guide to debt selling strategy from the Treasury to the Bank of England, with the tactics left to the Bank.

But the Bank's role in debt management operations was ended by Mr. Gordon Brown's decision in 1997 that a newly-independent Bank should not be responsible for debt management. Instead the Bank's role in debt and cash management would be transferred to the Treasury. A separate Debt Management Office was established as an executive agency of the Treasury in April 1998. It is very clear – from various official statements and the new institutional arrangements themselves – that this change is intended to divorce debt management from monetary policy. In the words of the 1999/2000 *Debt Management Report*, the formation of the DMO "will complete the separation of debt and cash management from monetary policy operations".

Debt management cannot be separated from monetary policy

The purpose of this paper has been to argue that – even were it possible - the separation of debt management from monetary policy would be wholly misguided. But, in fact, it is impossible. Whether the Treasury likes it or not, any mismatch between its revenues and expenditures has implications for the Government's indebtedness to other agents – that is, to banks, non-banks and the foreign sector. The relative size of bank and non-bank claims on the Government affects the quantity of money. Further, it affects the quantity of money necessarily and unavoidably. To deny this is as silly as saying that two and two do not make four. The credit counterparts identity is what it says it is, *an identity*.

The latest official orthodoxy on debt management and monetary policy

Given the greater efficiency in financial markets, whether the government funds itself all in Treasury bills or all in 30-year bonds does not have that huge an impact now on the money supply, given that there is no binding reserve restraint on the financial system, there are no capital controls on international capital flows, hence the liabilities of the government do not have a huge impact on how much credit the banking system can create. I would not deny that there could be some marginal impact on that but so long as the government finances its deficit through borrowing in sterling or foreign currency and brings it back into domestic currency, there will not be an enormous impact on money supply.

Statement by Dr. Noel Mills, Head of Research at the Debt Management Office, to Treasury Sub-Committee of the House of Commons in oral evidence on 16th February, 2000.

Two alternative views

Perhaps a complex offer by the central bank to buy and sell at stated prices gilt-edged bonds of all maturities, in place of the single bank rate for Treasury bills, is the most important practical improvement which can be made in the technique of monetary management.

Quotation from John Maynard Keynes, *The General Theory of Employment, Interest and Money* (1936), ch.15.

The quantity theory implies that the effect of government deficits or surpluses depends critically on how they are financed. If a deficit is financed by borrowing from the public without an increase in the quantity of money, the direct expansionary effect of the excess of government spending over receipts will be offset to some extent, and possibly to a very great extent, by the indirect contractionary effect of the transfer of funds to the government through borrowing.

Quotation from Milton Friedman, entry on 'Money: quantity theory' in *International Encyclopaedia of the Social Sciences* (Free Press, 1968)

Debt management must be seen as part of monetary policy

The Treasury made a bad mistake by introducing the full funding rule in 1985. The rule must carry a fair share of the blame for the macroeconomic catastrophes of the following seven years, which culminated in the UK's humiliating expulsion from the European exchange rate mechanism. Macroeconomic policy was better in the years after 1992, with improved co-ordination between the Treasury and the Bank, and the gradual de-politicisation of policy-making. But it now appears that the Treasury's rivalry with the Bank of England has resurfaced, with the creation of the DMO and the explicit rejection of a monetary policy role for debt management. It cannot be emphasized too strongly that,

1. debt management decisions *always* have monetary consequences and should therefore *always* be seen as part of monetary policy, and
2. monetary policy will better organized if the Bank of England and the DMO work together than if the Bank's interest rate decisions and the DMO's operations are at cross purposes.

Do either the UK or US Treasuries understand monetary policy?

The UK Treasury may draw some comfort from the US Treasury's decision last year to carry out bond buy-backs highly reminiscent of the reverse gilt auctions at the end of the Lawson boom. A fair comment is that – at the start of the new millenium - the finance ministries of the two leading English-speaking nations do not understand the basics of either debt management or monetary policy. In May 1997 Mr. Brown wisely gave the job of determining sterling interest rates to the Bank of England; he might ask himself why he thought the Treasury deserved to retain the job of debt management.

In the last 15 years the Treasury's attempt to sever debt management from monetary policy has – from time to time - led to serious policy mistakes. If similar mistakes are made in future, the Treasury and its ministers will deserve all the criticism they receive.

Notes

- (1) Note that the "appropriate" rate may not be exactly equal to the trend rate of output growth plus the target inflation rate (if there is a target inflation rate). Allowance should also be made for institutional changes in the financial system and underlying shifts in the attractiveness of money relative to other assets.
- (2) J. M. Keynes *A Treatise on Money: The Applied Theory of Money*, pp. 331 – 5, in Mrs. E. Johnson and D. Moggridge (eds.) *The Collected Writings of John Maynard Keynes* (London and Basingstoke: Macmillan Press for the Royal Economic Society, 1971), vol. VI. *A Treatise on Money* was originally published in 1930.
- (3) The claim that over-funding is pointless, because the money withdrawn from bank deposits "would simply have to be injected in the system elsewhere", was the heart of Mr. Nigel (later Lord) Lawson's Mansion House speech in 1989. The 1989 Mansion House speech was discussed critically in the November 1989 *Gerrard & National Monthly Economic Review*.
- (4) P. Minford *The Supply Side Revolution in Britain* (Aldershot: Edward Elgar, 1991), pp. 70 – 1. On p. 70 Professor Minford says, "There is literally an infinite number of asset-liability combinations in which the private sector can hold its savings; and each is as good as the other from its viewpoint." On p. 71 he asserts, "...should banks expand credit and deposits, nothing other than the balance sheet will have been affected." If these statements were correct, it would not matter to macroeconomic outcomes whether a government financed its budget deficit entirely from the banking system instead of from non-banks, or - indeed - whether the growth of the banking system (and so of the money stock) ran at 10% a year, 20% a year or 100% a year.

- (5) The Government could even pay for the shoes with newly-printed bank notes. The effect would then be rather like dropping notes from helicopters, as suggested by Friedman.
- (6) Keynes recognised in *A Treatise on Money* that a policy of aggressive open market purchases of assets, in order to boost the money stock and the economy, might lead to large losses if the assets subsequently fell in value. Later, in *The General Theory*, he mocked the accounting constraint by pointing out that the problem could readily be solved by printing huge quantities of notes and burying them in the ground. When they had been dug up and put into circulation, they would have all the usual impacts of higher money growth on economic activity. Of course, the shoe stockpile bought by the proposed open market operation would be worthless and would also involve huge losses, but governments in industrial societies have no difficulty buying tanks, rockets, missile launchers and such like, and – from a broader perspective – they are just as worthless as millions of old shoes.
- (7) Sir Herbert Brittain *The British Budgetary System* (London: Allen & Unwin, 1959), pp. 185 – 99. However, note that on p. 150 Brittain says that if the Bank of England “can sell a medium-term or long-term existing security in the market and at the same time buy up shorter-dated securities, it is achieving the very salutary result of postponing to that extent the date when the Treasury will have to pay out cash to the public. If the shorter-dated securities are Treasury bills it is performing the very useful function of ‘funding’ part of the Floating Debt in the hands of the public.” It is clearly implied here that “funding” occurs when a non-bank agent buys medium- and long-dated debt, even though – on Brittain’s definitions – these would be part of the “unfunded” debt.
- (8) This is *not* to say policy-makers should be indifferent to unsustainably rapid growth in debt interest. But – almost certainly in a society with reasonable financial stability – that can arise only because the *quantity* of public debt is increasing too fast. (The explanation would of course be an excessive budget deficit.) Explosive growth in debt interest cannot plausibly happen because of changes in the *composition* of public debt.
- (9) For Keynes’ views, see the passages in *A Treatise on Money* already mentioned and also several passages in *The General Theory*. (One example in the third part of chapter 15 is the sentence, “Perhaps a complex offer by the central bank to buy and sell at stated prices gilt-edged bonds of all maturities, in place of the single bank rate for short-term bills, is the most important practical improvement which can be made in the technique of monetary management.”) For Tobin’s views, see his paper ‘An essay on the principles of debt management’, pp. 378 – 455, in J. Tobin *Essays in Macroeconomics: vol. 1 Macroeconomics* (Amsterdam and Oxford: North-Holland Publishing, 1971). (A quotation from p. 386 may serve. The magnitude of the stimulatory effect of an increase in public debt “depends on the form that the increase in debt takes. The expansionary effect is strongest if the increment in debt is ‘monetized’, i.e., if it takes the form of demand debt. The effect is weaker for short debt and still weaker for long debt.”) For Friedman’s views, see the final paragraph of his well-known entry ‘Money: quantity theory’, pp. 432-7, in *International Encyclopedia of the Social Sciences* (Free Press, 1968), which includes the following sentences, “The quantity theory implies that the effect of government deficits or surpluses depends critically on how they are financed. If a deficit is financed by borrowing from the public without an increase in the quantity of money, the direct expansionary effect of the excess of government spending over receipts will be offset to some extent, and possibly to a very great extent, by the indirect contractionary effect of the transfer of funds to the government through borrowing.”

Literally hundreds of statements on these lines - identifying debt management policy as part of monetary policy - can be found in textbooks as well as the main works of leading economists. The view that debt management is not part of monetary policy (or that it should not be part of monetary policy) seems to be a recent development in some Anglo-American macroeconomics circles. By traditional standards, it is unorthodox and strange.

- (10) In his article on 'Monetary policy' in G. D. N. Worswick and P. H. Ady (eds.) *The British Economy in the Nineteen-Fifties* (Oxford: Clarendon Press, 1962), Kennedy described "funding" as having "two aspects", "the reduction in the Floating Debt and its replacement by government bonds", and "the lengthening of the maturity structure of the bonds outstanding".
- (11) A classic statement of the benefits of stable bond prices appeared in Professor Kaldor's 1958 evidence to the Radcliffe Committee. "If bond prices were liable to vast and rapid fluctuations, the speculative risks involved in long-term loans of any kind would be very much greater than they are now, and the average price investors would demand for parting with liquidity would be considerably higher." The quotation is from p. 217 of Kaldor 'Monetary policy, economic stability and growth', pp. 209 - 34 in A.A. Walters (ed.) *Money and Banking* (Hardmondsworth, Middlesex: Penguin, 1973).
- (12) In October 1984, in a lecture at the University of Kent, Mr. Robin Leigh-Pemberton (later Lord Kingsdown), as Governor of the Bank of England, said that, "the central banker is concerned...with the aggregate total of bank deposits...and worries about the overall effect on the economy, particularly on inflation" and insisted that "in this context over-funding is a clearly rational approach". However, in a speech at Durham Castle in early 1990 Leigh-Pemberton set out a quite different line, including a claim that "funding - or, rather, over-funding - has in any case become a less effective means of managing broad money". The changes in official attitudes towards this subject were discussed in the *Gerrard & National Monthly Economic Reviews* of August 1989 ('The case for a resumption of over-funding') and May 1990 ('The case for a resumption of over-funding, continued').
- (13) See pp. 117 - 94 in T. G. Congdon *Reflections on Monetarism* (Aldershot: Edward Elgar for the Institute of Economic Affairs, 1992), which reprints a number of contemporary articles and analyses that accurately forecast the macroeconomic consequences of the acceleration in broad money growth from late 1985.