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How Monetarism Failed

Monetarism is not only weak as a theory. Applied as a policy in the 1980s, it caused Britain's economy to perform far worse than in 1929–32, and America's to suffer chaotic volatility.

The great revival of "monetarism" in the 1970s, culminating in the adoption of the strict prescriptions of the monetarist creed by a number of Western governments at the turn of the decade—particularly by President Reagan's administration in the United States and Mrs. Thatcher's in Great Britain—will, I am sure, go down as one of the most curious episodes in history, comparable only to the periodic outbreaks of mass hysteria (such as the witch hunts) of the Middle Ages. Indeed, I know of no other instance where an utterly false doctrine concerning the causation of economic events had such a sweeping success in a matter of a few years without any attempt to place it in the framework of accepted theory concerning the manner of operation of economic forces in a market economy.

The central assertion of monetarism—assiduously propagated for a number of years by a single American economist, Professor Milton Friedman of Chicago—is that an excessive increase in the supply of money, caused by the decisions of the note-issuing authority, the central bank, is the main, if not the sole, cause of inflation; that the cyclical fluctuations of the economy reflect the irregularities and aberrations with which the money supply is increased by the monetary authority, which is responsible also for distortions in the structure of production caused by imperfect anticipation of the delayed effects of increases in the money supply on prices. Since on account of unstable and highly variable "time lags" it is hopeless to expect that the monetary authorities can prevent such instabilities by well-timed measures (or compensate for them by well-timed countermeasures), the only safe rule to follow is to secure a modest and stable rate of increase in the rate of growth of the money stock, which by itself will serve to stabilize the value of money and gradually eliminate cyclical instabilities.

The development of money and banking

The basic error, which was widespread long before Friedman and the new monetarism, lies in the assumption that regards the money supply as the *source* of the demand for goods and services. Money was invented

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at a fairly early stage of human development—it was an essential by-product of the development of a social economy, which meant specialization of individual ''agents'' and the division of labor, with its concomitant, the emergence of markets that provided for regular exchanges of goods produced by one person as against goods produced by others. The use of an intermediary ''medium of exchange'' made it very much easier to exchange things between participants, especially in circumstances where the number of different kinds of goods and services which the typical market participant bought to satisfy his own needs was far higher than the number of things which he produced and offered for sale; and where there were numerous buyers and sellers of each commodity competing with one another. The advantages of ''indirect exchange'' through a universally accepted medium of exchange must have become obvious at a very primitive stage of evolution, with the qualities needed in such a medium—that it be in general demand and stable in exchange value, durable, and, for the sake of comfort, also of a high value in relation to bulk (this was the main advantage of precious metals as against oxen and animal skins, each of which are known to have been used as money)—marking out the commodities suitable for use. There was also the advantage of using only one or at most a few commodities for the purpose, which made market transactions much less complicated. The use of a commodity as money meant that there was an extra demand for it, since some of it was always held for purposes of exchange, apart from its other uses.

The demand for money, from the very beginning, was a *reflection* of the demand for commodities, and not the source of that demand. And the value of the money commodity depended, in the longer run at least, on its costs of production, in the same way as the demand for other commodities. With the expansion of the general level of production, the value of monetary transactions through the purchases and sales of goods and services expanded *pari passu*, which made it profitable to expand the production of the money commodity in line with commodities in general. From the very beginning, therefore, the increase in the supply of money in circulation was a response to increased demand and not an autonomous event, though occasionally the supply of the money commodity ran ahead of the increase in the supply of other commodities, as with the gold and silver discovered in the new Spanish colonies of the sixteenth century; at such times, money could be said to have exerted an autonomous influence on the demand for goods and services. It did so because those who first came into the possession of the new gold or silver were thereby personally enriched, and thus became the source of additional demand for goods and services. But the converse of this proposition was equally true: where the increase in the supply of the money commodity lagged behind, this placed obstacles on economic expansion that historically were gradually overcome with the successive introduction of money substitutes.

This latter development was closely associated with the development of banking. Originally, goldsmiths (who possessed strong rooms for holding gold and other valuables) developed the facility of accepting gold for safekeeping, and issued deposit certificates to the owners. The latter found it convenient to make payments by means of these certificates, thereby saving the time and trouble of taking gold coins out of the strong room only to have them re-deposited by the recipient of the payment, who was likely to have much the same incentive of keeping valuables deposited for safekeeping. The next step in the evolution toward a credit-money system was when the goldsmiths found it convenient to lend money as well as to accept it on deposit for safekeeping. For the purpose of lending they had to issue their own promissory notes to pay cash to the *bearer* (as distinct from a named depositor) on demand; with this latter development the goldsmiths became bankers, i.e., financial intermediaries between lenders and borrowers. Since real money (gold) was only required on specific occasions (when payments had to be made abroad or when the contract specifically provided for payment in cash), the banks found that the amount of such notes issued to borrowers came to exceed by many times the amount of gold deposited in their vaults by the lenders—though the total amount they owed to the lenders was always larger than the total amount lent to the borrowers. The apparent contradiction between the formal solvency of the banks when the volume of credits granted to borrowers was compared with their total obligation to their depositors, and their palpable insolvency when the value of the promissory notes issued was compared with the amount of gold held for their encashment, was not properly understood for a surprisingly long period. It gave rise to prolonged controversies between those (like Edwin Cannan) who firmly believed in ''cloak-

room banking'' and those who believed that, by issuing pieces of paper that came to serve as a circulating medium, the banks were ''creating credit,'' which meant an effective enlargement of the money supply.

Yet the essential function of banks in the creation of ''finance'' (or credit) was well understood by Adam Smith, who, in his long chapter on ''Money'' in Book 2 of the *Wealth of Nations*, regarded branch-banking as a most important invention for the enrichment of society. He described how, as a result of the finance banks were able to place at the disposal of producers, the real income of Scotland doubled or trebled in a remarkably short time. Expressed in Keynesian terms, the ''finance'' provided by banks made it possible to increase investments ahead of income or savings, and to provide the savings counterpart of the investment out of the additional income generated through a multiplier process by the additional spending.

Since the notes issued by some banks were found more acceptable than those of others, giving rise to periodic payments crises and uncertainty, it was sooner or later everywhere found necessary to concentrate the right of issuing bank notes in the hands of a single institution, such rights being circumscribed by reserve requirements of some form, etc. These bank notes, in the course of this century, became the *ultimate form* of money, since gold convertibility was abandoned in most countries either as a result of the First World War or of the economic crisis after 1929. However, just as gold coins gave way to bank notes, the latter gave way to current accounts with the clearing banks, which proved a safer and more convenient way of holding money than cash in the form of bank notes, and to the transfer of money between persons through the agency of checks. And for much the same reason that led to the creation of money through credits granted by the banks in the form of the banks' promissory notes, the granting of bank credit led to the creation of money in the form of checking deposits, which came to exceed manifold the amount of bank notes in the vaults of the banks (or, what amounts to the same thing, of credits with the central bank). This ''credit money'' exists in the form of either non-interest bearing checking accounts or interest-bearing deposits that are not directly available as a medium of payment, but which could hardly be left out of account in measuring the quantity of ''money'' in circulation (if only because of the ease with which deposits of one kind can be converted into deposits of the other kind). Moreover, deposits of the clearing banks have close substitutes in other, easily transferable and capital-certain forms of holding wealth, such as deposits with building societies, Treasury bills or short-term notes (bonds with near-dates of maturity), travelers' checks, and, most of all, deposits in the Eurocurrency markets (the total value of which has been estimated, in an *International Herald Tribune* ''Special Supplement on Euromarkets'' in November 1981, to have risen from $39 billion to $1.35 trillion, or by 3,353 percent, between 1965 and November 1981). The latest ''money substitutes'' consist of credit cards, which came into use after World War II and which are now estimated to account for 90 percent of payments in the more expensive hotels and restaurants.

Two fallacies: exogenous supply, stable demand

In the light of the above, the main contention—and indeed, the *sine qua non*—of monetarism, that the money supply of each ''economy'' is exogenously determined by the monetary authority of the ''economy'' concerned, may be questioned from the start. Monetarists, following Milton Friedman, assume that the monetary authority determines the so-called ''monetary base'' (or ''high-powered money,'' to use Friedman's expression), which is nothing else but the amount of bank notes issued which at any one time are partly in the hands of the public and partly in the hands of the banks, whether in the form of vault-cash or of deposits with the central bank; either legally enforceable rules or conventions determine an established ratio between this ''base money'' and all other forms of money. Hence the ''monetary authority'' ultimately determines the supply of money in all forms. It does so partly by active measures such as ''open-market operations,'' by which the central bank buys or sells government securities in exchange for its own notes, and partly by passive measures, the re-discounting of short-term paper consisting of public or private debt, in which it seeks to achieve its objective as regards the money supply by varying its own rate of re-discount. The further assumption that the (inverted) pyramid of bank money bears a stable relationship to the monetary base is supposed to be ensured by the banks' rationing credit so as to prevent their liabilities from becoming larger (or rising faster) than the legal or prudential reserve ratio permitted. It is admitted, however, that each ''economy'' characterized by the possession of a

separate currency must be wholly autonomous, which means that the central bank is not under any obligation to maintain its exchange rate at a predetermined relationship with other currencies (as was the case under the pre-1914 gold standard or the Bretton Woods system); rather, it allows its exchange rate to fluctuate freely so as to achieve a balance in the foreign-exchange market without central-bank intervention. (The possibility that payments, whether among the same nationals or between different nationals, are effected in other currencies or through transfers between extraterritorial bank accounts has not, to my knowledge, been explicitly considered.)

While the first and most important credo of monetarism is that the supply of money is always exogenous, the second and almost equally important credo is that the public's *demand* for money, as a proportion of income, is a stable one, not much influenced by changes of interest rates and other factors.

Given the fact that the demand for money represents a stable function of incomes (or expenditures), Friedman and his associates conclude that any increase in the supply of money, however brought about (for example, through open-market operations that lead to the substitution of cash for short-term government debt in the hands of discount houses or other financial institutions), will imply that the supply of money will *exceed* the demand at the prevailing level of incomes (people will ''find themselves'' with more money than they wish to hold). This defect, in their view, will be remedied, and can only be remedied, by an increase in expenditures that will raise incomes sufficiently to eliminate the excess of supply over the demand for money.

As a description of what happens in a modern economy, and as a piece of reasoning applied to situations where money consists of ''credit money'' brought about by the creation of public or private debt, this is a fallacious piece of reasoning. It is an illegitimate application of the original propositions of the quantity theory of money, which (by the theory's originators at any rate) were applied to situations in which money consisted of commodities, such as gold or silver, where the *total quantity in existence* could be regarded as exogenously given at any one time as a heritage of the past; and where sudden and unexpected increases in supply could occur (such as those following the Spanish conquest of Mexico), the absorption of which necessitated a fall in the value of the money commodity relative to other commodities. Until that happened, *someone* was always holding more gold (or silver) than he desired, and since all the gold (and silver) that is anywhere must be somewhere, the total quantity of precious metals to be held by *all* money-users was independent of the demand for it. The only way supply could be brought into conformity, and kept in conformity, with demand was through changes in the value of the commodity used as money.

However, the same reasoning cannot be applied to cases where money was not a commodity like gold or oxen, but a piece of paper (bank notes) or simply a bookkeeping entry in the accounts of banks. The rules relevant to the creation of credit money are not of the same kind as those relevant to the production of gold or silver. Credit money comes into existence, not as a result of mining but of the granting of bank credit to borrowers, who use it (in the majority of cases) to finance expenditures of a non-recurrent kind—such as those involved in the enlargement of stocks carried by manufacturers or traders, or their replacement at higher prices, or the purchase of plant and machinery. The new credit first appears as an addition to the balances held by the borrowers. As the money is spent on wages, the purchase of materials, etc., the same addition will appear in the balances of the recipients, except insofar as there are leakages into imports or taxation. We may suppose that some part of the additional receipts will be saved, which may be reflected as an increase in savings deposits. The same thing is repeated when the money is disposed of by the second and third recipients.

To the extent that the second and third recipients, and so on, find that they have more than enough money in hand, they will apply the difference to the repayment of bank loans, and thereby extinguish the ''excess supply'' of money.

Could we then suppose that the additional credit of £100 brings about an ''excess supply'' of money in an analogous manner to that created by the discovery of new gold? If the original borrower did not need £100 he would have borrowed less—say, £80—and left the remainder as an unutilized borrowing facility. If the subsequent recipients find that they have more money in hand than they need, it is they who will repay some of their bank loans. Again, the ''excess money'' is extinguished through loan repayment. If the second recipient is a net creditor to the bank, his bank balance will be enlarged; and if he finds that it is now too large,

he will transfer some of it to interest-bearing savings deposits or apply it to the purchase of financial assets of some other kind. This means that in *the sense required* by monetarist theory, an excess in the supply of money cannot come into existence; and if it did, it would automatically be extinguished through the repayment of bank indebtedness (or its equivalent), either by the original borrower or by others.

Commodity and credit money: missing the distinction

The vital difference in the *modus operandi* of the two kinds of money, commodity money and credit money, was not perceived (as far as I know) by any of the "schools" of economic theory. The inventors of the quantity theory of money in the eighteenth century, such as David Hume, were naturally thinking of the supply of gold as determining the amount of money in circulation, and the same remained true of the writers in the nineteenth century, such as Walras and Marshall, who wrote at a time when paper money was a far more important element in monetary circulation. They did not think, however, that this called for any fundamental revision of the traditional theories. (Walras was clearly troubled by the complication due to credit money and the use of the "clearing house" for offsetting claims and liabilities. In the end he sought refuge in the notion that while paper money makes the total quantity of money larger than it would be otherwise, it will always be in a fixed, proportionate relationship to "real money," and that once this is established the effective amount of money in circulation, while larger, will function in much the same way as if only "real money" existed.) None of them questioned the assumption that the quantity of money, however defined, is an exogenous variable. The same was true of Irving Fisher, who in 1911 presented the authoritative modern version of the quantity theory, together with the well-known equation $MV = PT$. He regarded the variations in the quantity of money as the main cause of fluctuations in prices. The same was true of Keynes, who advocated a "managed currency" in 1923 in preference to a return to the gold standard, mainly in order to secure a more stable money supply and thus avoid the effects of the vagaries of gold on the price level. The causal chain running from money to prices was never questioned, and the exogenous character of the money supply was something Keynes continued to believe in even when his new theory of effective demand gave a wholly new explanation of how the demand for goods and services is determined. Side by side with the multiplier equation $Y = (1/1 - k)I$, which gives the core of the new theory, he retained traces of his old beliefs in the liquidity preference equation, $M = L(Y,r)$, where the *demand* for money is assumed to vary with the rate of interest as well as with the level of money incomes, but the *supply* of money is treated as an exogenous constant in the same way as in the quantity theory. This formulation puts the whole burden of adjustment following upon changes in profit expectations, investment, etc. on the velocity of circulation, which was assumed (tacitly rather than explicitly) to vary to whatever extent was necessary to reconcile the change in demand brought about by Keynesian factors with the level of expenditure determined according to Fisher.

Milton Friedman first thought of testing the Keynesian hypothesis by comparing the movements in total money income (or expenditure) with the corresponding movements of the quantity of money. He took the *absence* of any correlation betwen M and Y as an empirical test of the Keynesian theory—which is only another way of saying that changes in V (the velocity of circulation) induced by changes in the rate of interest proved sufficient to validate changes in demand originating in changes in investment or in the propensity to consume.

Much to his (initial) surprise he found that, historically, the correlation was not between Y (or the GDP) and V, but between Y and M; changes in money income were strongly correlated with changes in the quantity of money in circulation, normally with a (highly variable) time lag. If our main proposition is correct, and the changes in the money supply arise in consequence of changes in the demand for goods and services, we would expect, in the course of the investment cycle, increases in the amount of money in circulation to precede increases in investment: the finance for a particular investment project has to be assembled before the actual expenditure is incurred.

The main conclusion of this analysis is that the behavior and the significance of changes in the money supply will be quite different depending on whether we consider a commodity-money economy or a credit-money economy. In the latter case, changes in the money supply are always consequences, not causes, of changes in the money value of daily transactions, or in

the national income, etc. This does not mean that what is commonly regarded as "monetary policy" is futile or ineffective; it means that the monetary instruments operate by a circuitous route—by changing the level of economic activity and thereby the *demand* for money. Any change in the money supply is consequential on the change in demand, and not the other way around.

The difference between the two situations could best be shown by two simple diagrams, the one relating to

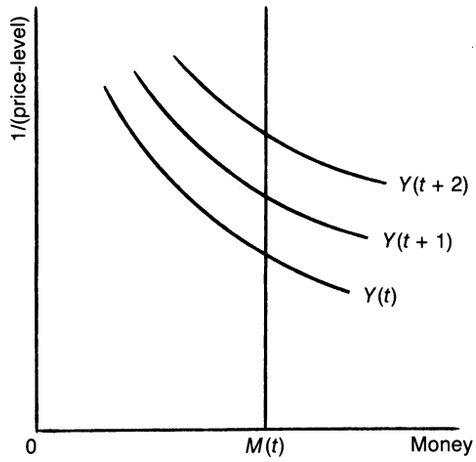

Figure 1

the classical situation of a pure commodity-money economy and the other to the modern situation of a credit-money economy. In Figure 1 the value of money (the inverse of the price level) is shown on the vertical axis, while the quantity of money is shown on a horizontal axis at a given time as an exogenous constant. In Figure 2 the demand for money is shown in the same way, but the supply of money is not an exogenous constant—at a *given* rate of interest, it is capable of being expanded or contracted indefinitely.

In Figure 1, Y(t), Y(t + 1), etc. represent the public's demand curves for holding money; on strict quantity-theory grounds, these curves should be rectangular hyperbolae, indicating that prices will vary in inverse proportion to the quantity of money, so that the amount of money held in terms of real purchasing power is invariant to prices. In the case of Figure 2, the forward-falling demand curve represents increasing amounts of real purchasing power held in the form of money with lower rates of interest on account of liquidity preference. The advantage of holding wealth in the form of money is liquidity—the ability to apply purchasing power in any direction—and the cost of liquidity is the sacrifice of income which the same purchasing power might have earned if invested in less liquid forms. (At one stage, "liquidity preference" was regarded as the essential factor that distinguished Keynesian theory from pre-Keynesian theories, since it loosened the tie between the level of effective demand and the level of expenditure as determined by monetary factors. All this, however, depended on the assumption of the quantity of money being determined irrespective of all the other factors that determined the demand for goods and services. If we regard money as an endogenous factor, liquidity preference and the assumption of interest-elasticity of the demand for money cease to be of any importance.)

By varying the rate of interest, the monetary authority can undoubtedly exert an influence on economic activity, and an even bigger influence on the foreign-exchange markets, through speculative inflows and outflows. But there is no evidence to show that these are important objectives of economic policy that couldn't be equally well attained (and with far better prognostication of its effects) by fiscal policy. The announcement of a target rate of increase for the "money supply," whether attained or not, does not make any difference to the future movement of either

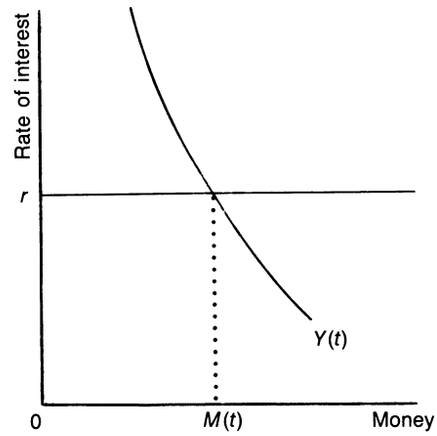

Figure 2

output or inflation, except insofar as it is taken as a guideline in wage negotiations.

However, the burden of contention of the monetarists was the very opposite. It is the rate of increase in the money supply (in one or another of the many definitions of "money") that alone causes an excessive

increase in the demand for goods and services (excessive *relative to* the potential availabilities); therefore, a stabilization policy ought not to be based on the Keynesian techniques of forecasting the rise in demand "under the existing policies" (from the forecast changes in investment or the budgetary deficit, the balance of payments, savings propensities, etc.) and comparing it with an optimal path based on the forecast improvement in productivity, private investment, external demand, etc. In Friedman's view, all this is unnecessary (and, taken in isolation, ineffective) because (a) the economy is fully self-adjusting and tends to produce the optimal output on its own, unless it is prevented from doing so by government interference; and (b) the actual course of the economy will follow the optimal path so long as the "money supply," which is fully under the control of the central bank, is made to increase at the optimal rate. (Friedman and the monetarists do not recognize that inflation could prevail without excessive demand, owing to the excessive rise in costs [mainly wages] that arises on account of the struggle between different classes to secure a larger share of the cake.)

Monetarism takes hold

Improbable as it may sound, Friedman's extraordinary proposition was firmly believed in at the turn of the last decade in a number of important countries—by Mr. Volcker, the chairman of the Federal Reserve, by Mrs. Thatcher and her close personal advisers in England, and by leading figures in other countries. Its outward expressions were the setting of "targets" for the increase in money supply in a large number of countries and, at least for a time, regarding the realization of these targets (by open-market operations, changes in interest rates, and, in some countries, by quantitative controls of the increase in bank credit supported by budgetary measures on both the revenue and expenditure sides) as the first priority of policy. By these measures, "monetarist" governments and central bankers managed to reduce the effective demand for goods and services considerably below their potential, which in turn *may* have caused a slowdown in the increase of the amount of money people wished to hold.

However, experience soon demonstrated that the central bank has no *direct control* over the amount of its bank notes in circulation. The reason for this is that the bank cannot refuse payments to its own creditors by refusing to honor checks drawn on itself by the account-holders; nor, if it wishes to avoid major crises in the banking and financial system, can it close the "discount window," refusing to re-discount eligible bills on the ground that it is only willing to issue new money up to a certain daily maximum. Central banks are extremely sensitive to the danger of bank failures, which can easily escalate. To an extent rarely admitted in public, central banks regard the maintenance of the credit pyramid—the solvency of the banking system—as their most important function, taking precedence over economic objectives if these appear to be in conflict.

Traditionally, the core of central-banking policy consisted of protecting the reserves (in gold or reserve currencies) through the instrument of changes in the bank rate. Ostensibly, such changes served the purpose of keeping the balance of payments with foreign countries on an even keel—a loss of reserves was taken as evidence of an unfavorable balance, and vice versa. The policy worked in the sense that even moderate changes in short-term interest rates (relative to other financial centers) sufficed to reverse the trend in the movement in reserves. But until the new monetarism came into fashion, stabilizing the quantity of money in circulation, as distinct from stabilizing the volume of international reserves, was not regarded as a primary objective.

In the last five years or so, all this has changed. A number of countries adopted monetarist policies with the objective of stabilizing their economies (and, in the view of some, of increasing their operational efficiency) by regulating the amount of money in circulation. There is no space here to give even an outline of a comprehensive survey; two examples must suffice.

The U.K. and U.S. experiences

The first example is Britain, where monetarism was first adopted by Denis Healey, under a Labour government, sometime in 1967. However, since that government's methods and objectives have never been made explicit, it is best to begin with the monetarist policies of the present government, which came into office in May 1979. The first year of the policy was a disastrous failure. The money supply, as defined by "sterling M_3" (the broader definition of money, comprising both demand deposits and time deposits of the clearing

banks), which was planned to rise by 7-11 percent, had actually risen by 22 percent; both the money supply and the price level rose twice as fast under the new monetarist regime than they did under the five years of the previous Labour government. The cause of this was the new government's failure to recognize (in true monetarist fashion) that prices can rise on account of a rise in costs and not only the pressure of demand. Its first budget was deflationary in terms of the pressure of demand but strongly inflationary in its effects on prices, on account of the switch from direct to indirect taxation, the rise in mortgage rates, charges for school meals, etc.

The rise in the money supply and price level was attributed, with extreme naiveté, to the lack of confidence of the public in the government's "earnestness" in carrying out its policies. Hence in the second year the government adopted a "medium-term strategy," which provided that the annual change of the money stock, the public-sector borrowing requirement, and the rate of increase in the price level were to be gradually and steadily reduced over four years. It was never explained why public belief in the seriousness of the government's intentions should operate as a stabilizing instrument, and why a four-year plan should be taken so seriously. Anyhow, the performance in the second and third years was not much better than that in the first year—the money-supply targets had to be repeatedly "re-based" to start from a higher level. In the meantime the "supporting policies" of tax increases and expenditure cuts, and the fact that the pound was allowed to become extremely overvalued, meant that unemployment kept on growing, and industrial production shrinking, rapidly.

The level of import prices was greatly moderated by the rise in the exchange value of the pound, whilst North Sea oil coming on stream brought with it a large surplus on current account. As a result of all this, by the end of the fourth year the government could claim to have succeeded in bringing down inflation from the 8.5 percent rate it inherited in May 1979 and the 22 percent attained in August 1980 (at the end of its first year in office) to 4 percent annually from mid-1983 to mid-1984. This latter result was largely due, however, to the rise in unemployment by 2 million (from l million to 3 million) and the consequential fall in the size of wage settlements, as well as to an accelerated rise in industrial productivity due to the closure and disappearance of the least efficient tail of industry. These factors, however, have by now exhausted their effects, and a renewal of the upward trend in the inflation rate is anticipated. Over the period as a whole, total real consumption increased by 5 percent. But there was a 9.5 percent fall in the total number of employees and a 13 percent fall in the output of manufacturing industries. Gross investment in the manufacturing industries fell by 42 percent; that in plant and machinery alone, by 33 percent. This is a far worse record than that of the Great Depression of 1929-32.

In all this it was the coincidence of the sudden large turnaround in the balance of payments due to oil with the deflationary policies of the government that had the most unfortunate consequences. In order to take full advantage of oil as an additional source of income (amounting to 6.7 percent of the GDP and 20 percent of imports), internal demand needed to be expanded sufficiently to allow the foreign importers of oil (mainly the countries of the EEC) to pay for oil by exports (mainly of manufactures) without such exports exerting an adverse effect on domestic output. But the actual policies followed were the very opposite, so that the benefit of oil, in terms of the GDP, was offset by the induced additional shrinkage of manufacturig output and employment.

The other example is that of the United States. Here the Federal Reserve traditionally followed much the same kind of policies as European central banks, operating mainly through short-term interest rates and engaging in open-market operations so as to ensure that actual rates conformed to the official re-discount rate. In addition, the Federal Reserve maintained tighter controls on its member banks through the institution of variable minimum reserve requirements. But there was no attempt to regulate the *quantity* of money other than through the instrument of interest rates and changes in minimum reserve requirements.

However, in the monetarists' view all this was the wrong policy for securing stability of prices. To stabilize the economy and to avoid inflation, they believe, what is needed first of all is to secure a *steady growth in the money supply*, not a steady rate of interest. Hence the "new" policy of the Federal Reserve, formally announced by Mr. Volcker on October 6, 1979, was to secure a slow and steady growth of the monetary aggregates M_1 and M_2 by varying the reserves available to the banking system through open-market operations, *irrespective* of the accompanying movements in the rates of interest. From that day on, dra-

matic changes started to happen that were quite different from those expected. The money supply failed to grow at a smooth and steady rate; its behavior exhibited a series of wriggles. The rate of interest and the rate of inflation, though both were very high at the start, soared to unprecedented heights in a very short time. By March 1980 the rate of interest rose to 18.6 percent and the rate of inflation to 15.2 percent (in annual terms), and a little later both were over 20 percent—something that had not occurred in the United States since the Civil War, whether in peacetime or in wartime. And there was a mushroom-like growth in new forms of making payments and new instruments for circumventing the Fed's policy—through the invention of money substitutes of all kinds, like ''NOW'' accounts and money-market funds, the transfer of business to non-member banks or to branches of foreign banks, and so on. The Fed's reply to all this was that the failures in its declared policies were all due to ''loopholes'' in the existing system, which must be closed. Congress obliged its friends in the Fed very quickly, passing the Monetary Control Act of 1980, supplemented by invoking the International Banking Act and the Credit Control Act. These extended minimum reserve requirements to all deposit-taking institutions, whether or not they were member banks of the Fed, as well as to U.S. branches of foreign banks. But none of this helped, as the British Radcliffe Committee foretold twenty-two years earlier when it said that the extension and multiplication of controls through a wider spread of regulated institutions would only lead to the appearance of new forms of financial intermediaries and of transactions, causing the situation continually ''to slip from under the grip'' of the authorities.

The American monetarist experiment was a terrible failure, as was publicly admitted by Friedman and Meltzer in 1982—though they insisted that it was the fault of the authorities in not being able to run a monetarist policy properly, not of basic theory. Short of the old Chicago plan for 100 percent reserves, there was certainly no way in which the authorities could have stopped the banks inducing the public to exchange more of its currency notes for deposits, thereby enlarging the lending power of the banks. After a year and a half of continued failures and a chaotic volatility of everything—interest rates, exchange rates, inflation rates—the experiment was abandoned and the system returned, in effect, to the traditional policy of regulating interest rates, but with a more deflationary stance; partly, I presume, to offset the inflationary force of excessive federal deficits, and thereby causing the rest of the world to suffer (or benefit, as the case may be) from the consequences of an overvalued dollar.

The extraordinary rise in the U.S. dollar in the course of the last eighteen months in relation to all other currencies, at the very time when the dollar holdings of the outside world rose by more than a hundred billion owing to the United States' payments deficit (the United States is still in the privileged position of paying for all its imports of goods and services in its own currency) is unlikely to have been caused by speculation on a further rise in the dollar, since all indicators should have encouraged bear speculation rather than bull speculation; and in former years adverse movements on current account were normally followed by adverse changes in the exchange rate, and *vice versa*. It may have been an unexpected side effect of diminished confidence in the banks which caused holders of Eurodollar deposits (which, as shown above, have amounted to over a trillion dollars) to switch into ''safer'' forms of holding dollars, such as U.S. Treasury bills. (There is no direct evidence for this except for occasional reports of very large dealings in the inter-bank wholesale deposit market.)

In retrospect, none of this would have happened if the Fed had studied and understood the analysis and prescription of the Radcliffe Committee in 1958, according to which central banks should not really be concerned with the money supply as such. It is the regulation of interest rates, and not of the quantity of money, which, in the words of the committee's report, ''is the centre-piece of monetary action.''

The turn away from monetarism

In Britain, ''monetarism'' has not been formally abandoned (as it has recently been in Chile), but it is *vieux jeu*. Nobody watches the money-supply figures any longer with any interest; government ministers, though professing complete consistency in their policies, are increasingly forgetful about money and increasingly emphatic about the need to moderate the excessive rise in wages—something that is quite contrary to Milton Friedman's philosophy. The economy has been recovering slowly since the middle of 1982, though the foreign-trade position in manufactures continued to deteriorate. Britain, for the first time in cen-

turies, became a net importer of manufactured goods. Her share in world exports in manufactures, which, after the 1967 devaluation, was on a slowly rising trend up to 1979, declined by nearly 20 percent in 1980-84. Unemployment, at 13.5 percent of the labor force, is far higher than that of any other developed industrial country. There is nothing to set against these losses, in terms of greater mobility between industries or in the field of quality and product innovation, that would enable one to say that the monetarist experiment brought some improvements as well as imposing large losses of output relative to Britain's enlarged potential. In the United States, on the other hand, the continuation of a strict monetary policy, conducted through a policy of very high interest rates, was far more than offset by the expansionary effects of the very large deficit in the federal budget, so that real GNP rose by nearly 10 percent, and unemployment fell from 10.2 percent to 7.6 percent, between the first quarter of 1983 and the first half of 1984.

The U.S. and U.K. experiments in monetarism have thus left Friedman and the monetarists in an intellectually highly embarrassing position. Friedman has admitted that as far as the United Kingdom is concerned, the money supply is *not* exogenously determined by the monetary authorities, but he attributed this to the "gross incompetence" of the Bank of England. Later he implied the same about his own country. However, this puts an entirely new complexion on monetarism. It was nowhere stated in the writings of Friedman or any of his followers that the quantity theory of money *only* holds in countries where the monetary authorities are sufficiently "competent" to regulate the money supply. If the Bank of England is so incompetent that it cannot do so, how can we be sure that the Bank of Chile or of Argentina or Mexico—to take only the highly inflationary countries—is so competent, or rather so competently incompetent, as to make it possible to assert that the inflation of these countries was the *consequence* of their central banks' deliberate action in flooding them with money? How, indeed, can we be sure that any of the central banks—not excluding even the German Bundesbank or the Swiss National Bank—are sufficiently competent to be able to treat their money supplies as exogenously determined? And what happens if they are not? Surely we need a general theory of money and prices that is capable of embracing the cases of countries with "incompetent" central banks, such as Britain and the United States.