MONETARY POLICY AND MONEY SUPPLY POLICY, THE IMPLICATIONS OF «MONETARISM»*

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1. The role of money – Does it matter?

Growing recognition of the importance of money and other monetary aggregates in the determination of spending, output, and prices has been fostered by the apparent failure of stabilization policy to curb the inflation in recent years. Thus, the central issue of the debate to which this failure has given rise has been the doctrine of «monetarism», that is, the belief that the primary determinant of the aggregate demand – and thus of unemployment and inflation – is money, and more specifically, its various rates of change[1].

In the debate the opposing theories have revolved around three sentences that Professor James Tobin wrote on the blackboard at an American Banking Association meeting some years ago when he was reviewing Friedman and Schwartz's book, *A Monetary History of the United States*[2]: «Money doesn't matter», «Money matters», and «Money alone matters».

Professor Paul Samuelson[3], later used the same spectrum, slightly more subtly redefined: «Money doesn't matter» gives way in his version to «Money matters», «Money matters much», «Money matters most», and finally, «Money alone matters». He defined «monetarism» as being at the «right» of this spectrum.

In the past the debate was characterised by the extremes to which the opposing theorists were prepared to go, but these days intermediate positions are far more common – though these intermediate positions tend to be biased, to use a familiar econometric expression, towards the right of the spectrum. As Professor Samuelson put it:

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1. See P. Samuelson (1969).

2. See J. Tobin. (1965). Also Cramp (1970); Kaldor (1970); Friedman (1970 c); Schwartz A. (1969); and Brunner (1971 b).

3. See *Controlling Monetary Aggregates*, Proceedings of the Monetary Conference held on Nantucket Island June 8-10, 1969. Published by the F.R.B. of Boston (September 1969).

«There is nobody, I think, worth our notice on the American scene who is at the left end of that spectrum although there still do exist in England men whose minds were formed in 1932, and who haven't changed a thought since that time, and who do belong at the left of that spectrum and say money doesn't matter. They've embalmed their views in the Radcliffe Committee, one of the most sterile operations of all time[4]. And so monetarism, which is a correction to that extreme view – and, I think, an excess on the other side – is very much an item for export to the British Isles...[5]»

In short, there is general agreement that money is important in determining the course of economic events; there «is good evidence that money matters». The scope for disagreement lies in the fact that «we do not know what the exact connections are». In fact, ... «as I look over the evidence, I say, "money", yes; but monetarism, no...»[6].

This paper does not, therefore, deal with the question of whether money matters, which I take to be settled[7]. Rather it concentrates instead on «monetarism»; and specifically, on the question of whether, if «money does matter», is it true that «monetarism doesn't»? taking into account, at least, that, if nothing else, monetarists succeeded in dropping out of the spectrum the view that «money does not matter»?

«Monetarism», i.e. the revival of the ioportance of monetary policy[8] for stabilizing the economy, has earned the spectacular approval of theoretical economists in recent

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4. It has been argued that the Radcliffe analysis has not met with universal acceptance, nor has it been explicitly accepted by the U.K. autorities. Indeed, official action affecting interest rates has appeared to follow a variety of expedients. None the less as regards the banks, it has sought to regulate lending rather than deposits. This attitude was in line with the Radcliffe analysis which suggested that action affecting the banks should deal with them as «Key lenders in the system» and not as «creators of money». «It is the level of bank advances rather than the level of bank deposits that is the object of this special interest; the behaviour of bank deposits is of interest only because it has some bearing... on the behaviour of other lenders». (Quotations taken from the *Midland Bank Review*, Feb. (1969), p. 3).

5. See: *Controlling Monetary Aggregates*, op. cit., pp. 7-8.

6. See P. Samuelson (1969) p. 13.

7. «The vast accumulation of evidence over the past decade has shown that, contrary to the convictions of many Keynesians, money *does* matter». See A.A. Walters (ed) (1973), p. 19. «In any event, there is abundant evidence from a wide variety of times and places of a systematic relationship between the quantity of money and the level of money income». See D. Laidler (1973), p. 62.

8. «Monetary economics», «monetary policy» and «monetarism» are generally presented in the literature as being the same things. In this paper I attempt, throught, to maintain a clear distinction between them: e.g. «the study of *monetary economics* is concerned with discovering how a variation of the money supply affects the real output, prices, interest rates, investment and saving» (A.A. Walters, (1973) p. 19). While the meaning of the «monetary policy» refers to short-term policy which argues (most proponents of that policy have been «classical» economists) that «money does matter», that it affects economic activity more significantly than any other exogenous variable and that monetary policy, which relies on the impact of the money supply, is the more effective instrument for stabilizing economic activity. (See Benishay, 1972). «Monetarism» however means that short term policy (monetary or fiscal) may destabilize rather than stabilize and therefore may be harmful. Monetarists contend that the short-term monetary and fiscal policies available today are clumsy fine-tuning instruments, beset by uncertainties of the lags between the initiation and results of policy: (1) the time it takes to recognise a need for action, (2) the time elasped from recognition to action and (3) the time action takes to exert its

years, and now seems to be rapidly gaining adherents amongst the designers of applied economic policies[9]. I believe these developments are due, mainly to two factors:

(a) total neglect of the potency of monetary policy in the past, together with

(b) over-estimation of, and excessive reliance on, fiscal policy.

In the long run, however, monetary policy cannot be thus ignored because fiscal policy has monetary effects.

It is worth re-emphasising this point – that monetary and fiscal policy are interdependent, and should always be viewed jointly – because despite its acknowledgement in most macroeconomic textbooks[10], it seems at times to have been forgotten[11]. Figure 1 below illustrates the problem:

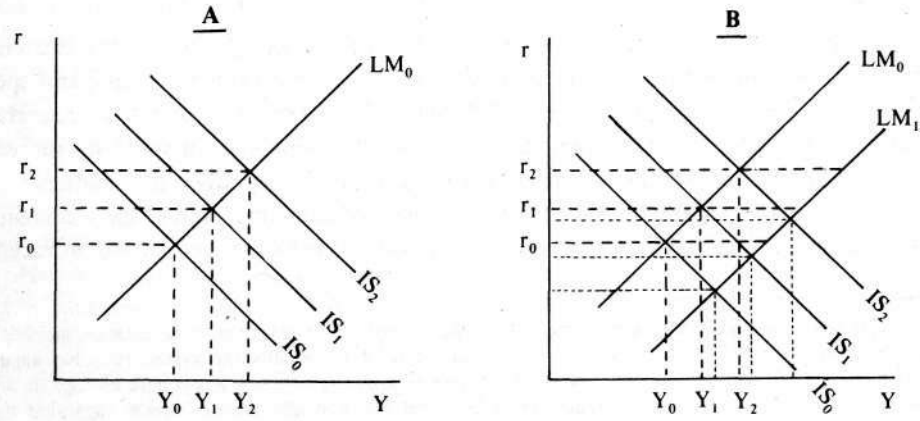

Figure 1

influence. The lags besetting the policy tools, in conjunction with lack of foresight and insufficient knowledge about the intricate workings of the economic system make it highly likely that short term policy may increase rather than decrease fluctuations in economic activity.

...«These results suggest that the best *monetary policy* (italics mine) which one can adopt is one where the money supply is expanded at more or less a constant rate per annum - Friedman's famous rule... No one would claim that such a rule would eliminate *all* short-term fluctuations in prices and output. It will not. But it will permit the inherent stabilization forces in the economy from being upset by the mistimed massive lurches of government discretionary monetary policy. It is simply that one can do best by not doing worse». (A.A. Walters, (1973) pp. 20-21). Accordingly «monetarism» is not synonymous with monetary policy but rather with money supply «policy».

We usually define *short-term* fiscal and monetary policy, to which we refer simply as «policy», as actions to counter cyclical fluctuations in the short run. However, the proposal to increase the money supply at a steady annual rate, regardless of the phase of the cycle, made by Friedman and the «monetarists», is defined in the context of this paper as a proposal not for short term policy, but rather as one for long term policy. In essence, (Monetarists) «policy prescriptions are designed to avoid excessive instability in the first place... and not to deal with such instability once alternative policy regimes have permitted or encouraged it to develop». (Laidler, (1971), p. 167).

9. As Gramlich, M.E. (1971), has remarked: «Possibly there is some lesson in the fact that monetary influences are stronger, the harder the model-builders seem to have looked for them»! p. 513.

10. Detailed discussion can be found in R. Musgrave, (1958), Ch. 22.

11. An attemp to restore this emphasis is found in C. Christ (1967 and 1968). Also F.R.B. of St.

Suppose the government increases its purchase of goods and services, shifting the IS curve to the right (Panel A) Fig 1. Conventional analysis stops here, concluding that increased government spending leads to higher levels of NNP (Y) and interest rates (r). The question of how the government obtains its funds is ignored. If it is assumed that debt is sold and the proceeds are spent, the money stock, and therefore LM, is unchanged. However, the public then holds additional debt, which will probably have effects on private spending (shifting IS from IS_1 to IS_2). The result of the fiscal action is an increase in both income and the interest rate. If, however, the Central Bank undertakes to finance the increased expenditures by creating high-powered money, the IS curve will shift, as before, but, in addition, the LM curve will shift (from LM_0 to LM_1 in Panel B). As a result there is a larger increase in income than in the previous case, and the effect on the interest rate is ambiguous[12].

The analysis could be carried further by considering the effects of increased NNP on tax revenues, dept retirement, and changes in the asset holdings of the public. The essential point is that monetary and expenditure effects operate simultaneously, and the new equilibrium levels of interest rate and NNP depend on the relative shifts of the schedules[13].

This is where the monetarist view differs from prevailing views, which consider aggresive policy actions necessary to promote stability. Monetarists generally hold that fiscal actions, in the absence of accomodative monetary actions, exert little net influence on total spending and therefore have little influence on output and the price level. Government spending unaccompanied by accomodative monetary expansion, that is, financed by taxes of borrowing from the public, results in a «crowding-out» of private expenditures with little, if any, net increase in total spending[14]. A change in the money stock, on the other hand, exerts a strong independent influence on total spending. Monetarists conclude that actions of monetary authorities which result in changes in the money stock should be the main tool of economic stabilization. Since the economy is considered to be basically stable[15], and since most major buisiness cycle movements in the past have resulted from inappropriate movements in the money stock, control of the rate of monetary expansion is the means by which economic instability can be minimized.

In recent years some efforts have been made, specially in econometric models re-

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Review (1968) onwards, and F.R.B. of St. Louis Working Paper No. 4 (1969) by K. Carlson and D.S. Karnosky (for a quantitative analysis).

12. Clearly the illustration here is one of short-run equilibrium. Long-run equilibrium requires a balance in the government's budget, because income tends to change via the asset effect or as long as assets are changing. For a discussion of these conditions, see D.J. Ott and A. Ott. (1968).

13. See Carlson, K. and Karnosky (1969) op. cit.

14. See *F.R.B. of St. Louis Review* (October 1970).

15. Recently, even post-Keynesians seem to agree that «the economy is not inherently unstable». See L.R. Klein (1973) p. 11.

lating to the effectiveness of the fiscal policy, to cope with the problem of the simultaneity of fiscal and monetary policy.

The usual assumption in these models is «no change in monetary policy». In fact, this assumption is unable to exclude monetary policy effects. «No change in monetary policy» means, indeed, a policy.

For example, by saying that the Central Bank will not change its policy we mean that there is no change in the discount rate, in reserve requirements, or in open-market operations. This means «holding high-powered money (the monetary base) constant». But since the monetary base is held by the non-bank public and the commercial banks as reserves and excess reserves, then, given an expansionary fiscal policy, interest rates will rise and excess reserves will be progressively used up by banks as they increase their loans. It is possible, too, that the non-bank public will deposit currency in the banks as interest rates rise, and this will supply additional reserves. So if we say that «no monetary policy change» means holding constant the monetary base, there is still some monetary flexibility; the LM curve will shift to the right[16] as the pace of economic activity increases.

As an alternative means of trying to «insulate» fiscal policy, we may prefer the aim to be: «keep interest rates constant». If one uses this as a definition of «no change in monetary policy», one in fact opens the door to unlimited money creation of the kind that could (and, indeed, might have to) take place as the economy is expanded by fiscal policy.

Thus, in assuming «no change in monetary policy» we face a choice of two quite different options – which nevertheless both fail to insulate the system from monetary policy[17]. We may draw the conclusion that monetary policy, and thus the money supply, deserve very particular attention.

2. An Overview

The theory of money supply determination is now an active area of monetary research. Naturally, this research has been stimulated by the revived interest in the theoretical framework underlying the quantity theory of money[18], and the evidence

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16. See e.g. H.C. Wallich's discussion in Controlling Monetary Aggregates (1969) p. 128, F.R.B. of Boston.

17. «In particular, and contrary to Keynesian presumptions, it is a matter of considerable concern whether the borrowing requirements of the public sector are financed by selling long-dated gilts to the private (non-bank) sector or wherther they are financed by increasing the money supply...» See A.A. Walters (1973) ed., op. cit. p. 19.

18. Economists have attempted for generations to answer the question: what causes the increases and decreases – some-times by drastic proportions – in the price level of goods and services? For centuries, most economists belived that the quantity theory of money correctly explained the causes of movements in the price level. Today several eminent economists believe that the quantity theory is still the best approach to the problem. This theory dates back to the classical economists (particularly David Ricardo) of the early 1800's. The quantity theory in its simplest form is characterised as a relationship

suggesting that «money matters» and that changes in the rate of change in the stock of money lead to changes in economic activity[19].

In its modern form, the quantity theory of money[20] recognises the important influence that changes in the money stock can have on real magnitudes in the short run, while influencing only the price level in the long run. The modern quantity theory postulates that in the short run a change in the rate of growth in money is followed, with a moderate *lag,* by changes in total spending and output, while changes in prices follow with a somewhat longer lag. These changes in total spending, output, and prices are in the same direction as the change in the rate of monetary expansion.

The modern quantity theory still accepts the long-run postulates of its older version. A change in the rate of monetary expansion influences only nominal magnitudes in the long run; that is to say, in real terms total spending, output and employment, are unaffected. Following the short-run responses to a change in the rate of monetary growth, total spending and the price level grow at rates determined by the rate of increase in money, while output moves toward and resumes a long-run growth path. Such growth in output is little influenced by the rate of monetary expansion. Instead, it is determined by growth in the economy's productive potential, which depends on growth of natural resources, capital stock, labour force, and productivity.

In brief, the modern quantity theory argues that the stock of money is an important determinant of economic activity; and that, accordingly, individual non-bank holders of money cannot change its nominal quantity but they can, in aggregate, change the real value of their cash balances. Thus, holders of money may decide that they are holding excessive cash balances which they may attempt, individually, to reduce by an increase in their rate of spending. In the aggregate, however, they will fail, for the money disposed of by one holder will be acquired by another so that the nominal stock of money will remain unchanged.

When holders of money attempt to reduce their nominal cash balances, this increases the flow of expenditures, thus raising money income and prices. In the pro-

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between the stock of money and the price level. Classical economists concentrated on the long run aspects of the quantity theory in which change in the money stock result in changes only in nominal magnitudes, like the price level, but have no influence on real magnitudes like output and employment. The classic work on the quantity theory is that of Irving Fisher (1911). For an extensive review of the quantity theory literature, see Arthur W. Marget (1938), Vol. II. pp. 3-133. For an interesting summary discussion, see A.A. Walters (1973), op. cit., pp. 7-22.

19. For an extensive discussion and references, see G. Fisher and D. Sheppard (1972 a and b).

20. Important summary statements which recently have become available are taken to be representative of present day monetarist thought and they include articles by Leonall C. Andersen, (1971, 1973); Leonall C. Andersen and Keith M. Carlson (1970); Leonall C. Andersen and Jerry L. Jordan, (1968); Karl Brunner (1968, 1970, 1971 a & b, 1973); David I. Fand, (1969, 1970 a & b); Milton Friedman (1970 a & b, 1971 a & b); Also an interesting discussion can be found in D. Laidler (1971, 1973); For up to date discussion on the monetarist debate see *Journal of Political Economy* (Sept/Oct. 1972).

cess the holders reduce their real cash balances to the desired level. The converse reaction takes place when holders decide to increase their real cash balances. Thus, on this view we should expect to find that if the non-bank public's demand for money is constant, a decline in the rate of growth in the stock of money will tend to discourage aggregate spending. Conversely, a rise in rate of growth in the stock of money, given the demand by the non-bank public for real money, will tend to encourage additional spending.

In essence, the «key insight for the quantity-theory approach is that... a discrepancy (between the nominal quantity of money demanded and the nominal quantity supplied) will be manifested primarily in attempted spending, thence in the rate of change in nominal income»[21]. Since the demand for money is a stable function of a few key variables, the quantity demanded changes in response to changes in the determinants, it follows that «substantial changes in prices or nominal income are almost invariably the result of changes in the nominal supply of money»[22].

However, the findings that as the national income grows, the velocity of income circulation diminishes[23] (that is, there is a disproportionate increase in the quantity of money) demonstrates a divergence between the short-run and long-run paths of the demand for money.

The real quantity of money (and the circulation velocity) depends on demand factors: cash holders are not in a position to change the nominal quantity of money autonomously; but their expenditure decisions affect the real value of their cash holdings by way of the price and income movements such spending induces. Hence, real income determines the real demand for money. The disproportionate increase in the quantity of money in the long-term growth – with the consequence of diminishing circulation velocity – may be ascribed where the demand function is fundamentally stable to a change of the function variable. This means that, for the short-run, expenditure flows are based on a different conception from that for the long run[24]. In contrast, the nominal quantity of money is supply-determined.

The key question at this point is: when does the money stock change[25]*, and who changes it?* The general practice in monetary theory has been to treat the quantity of money as determined directly by the monetary authorities without reference to the links intervening between reserves provided by the Central Bank and the total of currency and bank deposits.

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21. M. Friedman, (1970 a) op. cit., p. 225.

22. Ibid p. 195, also Brunner and Meltzer in *J.P.E.* Sept/ Oct. 1972 p. 841.

23. See M. Friedman, (1964).

24. This argument justifies the use of «permanent income» as the basic deternainant of the demand for money. See T. Cocores (1974a).

25. As Professor A.A. Walters (1973), p. 18 indicates, «In most of the vast literature concerned with whether "money matters" or not, little has been said about how the money supply is actually produced».

Keynes, for instance, and most monetary theorists, simply assumed that the Central Bank has control of the money supply and worked out their theory in terms of a given quantity of money and the consequences of that quantity's being changed. More specifically, from our standpoint, Keynes' (and his successors') treatment of the money supply has three central features. First, the monetary authorities are assumed to be free to vary the amount of their liabilities held by the public. Second, the ratio of the change in the money supply to the change in Central Bank liabilities (the money multiplier) is taken to be a constant determined in the main by the inverse of the bank's cash to deposit ratio. This means, effectively, that the monetary authorities determine the level of the money supply through control of their currency liabilities[26]. Third, changes in the money supply are allowed to influence income (through the rate of interest), but the money supply itself is independent of the income generation proces. This justifies treatment of bank deposit creation as a process distinct from income determination[27].

This kind of analysis suggests that «traditionally» money creation has been seen in three ways: as exogenously determined; as created by the Central Bank by means of open market operations; or as created by the Treasury as a result of a budget deficit financed by printing money[28]. If the quantity of money is defined as the sum of currency and commercial bank deposits, then the total quantity of money is given by the liabilitty of various institutions. Coins are the liability of the Treasury, paper currency is the liability of the Central Bank, and commercial bank deposits are the liability of private profit-maximising institutions, backed by cash reserves and earning assets. The latter provide the profit. Note that the cash reserves consist of currency in the tills and vaults of the commercial banks, and deposits of commercial banks with the Central Bank. Currency and Central Bank deposits can be aggregated because of the Central Bank's willingness to provide currency in exchange for such deposits.

The fact that money supply includes commerical bank deposits indicates that the Central Bank does not have direct control over the money stock. What it does control is the quantity of reserve money («base money» or «high powered money») and this, through a «complex network», influences the total money supply. The «complex network» reflects, apart from the monetary authorities' behaviour, the behaviour of the public in determining the ratio of currency to deposits, and that of the commerical banks in determining their reserve ratios of base money to deposits. It reflects, al-

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26. This is the formulation of the money supply function on which the great bulk of macroeconomic theory has relied. For early misgivings with respect to this formulation see: J.E. Meade (1934); A Gambino (1955) & (1956); Ahrensdorf and Kenasathasan (1960); K. Brunner (1961); Meigs (1962). See also E. Schneider (1955); R.S. Sayers (1957); A. Meltzer (1959); Barrett and Sheppard (1965). However, see T. Cocores (1973).

27. For an early attempt to integrate certain elements of banking theory and the Keynesian system, see Leif Johansen (1958).

28. H.G. Johnson, (1971), Ch. 18.

so, the combined behaviour of the non-bank public and the commercial banks in determining the allocations of deposits into demand and time deposits (i.e. the time deposit ratio).

This theory, which is, of course, a longstanding one, relates the total quantity of money to the amount of Central Bank money through a «money multiplier» involving two coefficients: the one being the ratio in which the public holds currency to deposits, the other being the reserve to deposit ratio held by the commercial banks. If one is content to take these two coefficients as being constant, obviously it is easy to draw inferences about the influence of money on economic activity, simply by assuming that the Central Bank's control of the reserves of the system is sufficient to control the total money supply[29]. However, neither of these ratios is a technically determined, legally fixed coefficient. Both are, instead, behaviour relationships[30].

The public's decision as to whether to carry currency or hold a bank deposit is influenced, at least in principle, by the rate of return available on bank deposits as compared with the zero rate of return on currency. Similarly, the reserve ratio held by the banks is determined not only by legal requirements but also by bankers' calculations of how much they want to hold in relation to their deposits. This excess holding of reserves will depend, in turn, on the banks expectations about future developments, their competition with other banks, and so forth, which will influence the probability of outflows of cash.

Consequently, the trend of research on money supply in recent years has been towards treating money supply, not as being mechanically determined by the relation of the monetary base and the multiplier, which is determined by the reserve ratio observed by the banking system and the ratio between currency and deposits held by the public, but as being determined by the behaviour of these ratios, which are not exogenous variables (constants) but reflect asset choices. As a result, one of the recent innovations in the theory of money supply is the analysis of bank response to change in reserves on terms of the adjustment of actual to desired reserves[31]. This way of stating the problem-adjustment of actual to desired stocks-associated, in turn, with the formulation of monetary theory in terms of asset choices, reflects a more general tendency towards the formulation of monetary dynamics[32].

These developments are, of course, mainly due to the «monetarists» who succeeded in re-formulating the quantity theory so that dynamic adjustments could be explained.

Thus, the monetarists' conception of what has been called the transmission mechanism is one of monetary disturbances which change interest rates and financial assets. Such changes induce a reallocation of asset portfolios which can include

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29. H.G. Johnson (1969); and E. Schneider (1970); also D.K. Sheppard (1970).

30. H.G. Johnson (1971) Ch. 18.

31. See H.G. Johnson (1969), part 1, ch. 1 and 2.

32. Ibid: p. 44. For a detailed analysis see T. Cocores (1974 a).

changes in demand for real assets. Finally, the portofolio adjustments and relative price changes can change the demand for consumer goods[33].

3. The Implications

In sum, monetarists have developed a theoretical approach that stresses the influence of monetary and financial variables on economic activity. This approach is a reformulation of the quantity theory which emphasizes the role of money as an asset. In the monetarist framework, the demand for money is treated as a part of capital or wealth theory, and the concern is with the composition of asset portfolios which provide utility or satisfaction to holders[34]. Monetarists define two markets where economic entities make choices, i.e., the market for goods and services and the market for financial assets; thus a Walrasian framework of supply and demand is used for each financial asset. Accordingly, prices of financial assets (market interest rates) and changes in the outstanding stocks of most financial assets are determined by the market process, along with prices and quantities of goods and services[35].

The main implication of the monetarists' analysis is that accelerations *or* decelerations of the rate of growth of the money supply should be avoided. This does not, of course, mean that monetary policy should replace fiscal policy as the main tool of economic stabilization. Monetarist analysis incorporates the view that the influence of fiscal actions depends mainly on the method of financing government spending. Financing by either taxation or borrowing from the public involves a transfer of command over resources from the public to the government, giving way to the «crowding out» effect on private expenditures. Thus the use of fiscal weapons as discreationary short-run stabilizers should be replaced by reliance on the built-in stability inherent in an economy in which the quantity of money has its behaviour governed by a rule. However, «the adoption of such a rule does not leave fiscal policy without a role to play. It enables it to concentrate upon the important tasks of influencing income distribution and resource allocation unencumbered by the constraint of also being responsible for macro-stability»[36].

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33. Karl Brunner (1968), characterizes a similar position as the «weak monetarist thesis».

34. M. Friedman (1968b) pp. 432-42.

35. L.A. Andersen and K.M. Carlson (1970). See also G. Fisher and D. Sheppard (1972b) op. cit.

36. See D. Laidler (1971), pp. 163-168. Professor Laidler proceeds by saying that (p. 167) «...there is nothing in monetarist doctrine that sugests a painless cure for inflation... A necessary and sufficient condition for reducing the rate of change of money incomes, and ultimately of prices, would be a reduction in the rate of change of the money supply, but there is no monetarist formula whereby the rate of inflation can be reduced without there simultaneously arising an employment problem». Here I think that Professor Laidler seems to accept «unconditionally» a «trade-off» between prices and unemployment. However, monetarists make the distinction of the short-run and long-run Phillips curve, and while accepting the short-run «trade off» between inflation and unemployment, admit no «trade-off» in thelong-run Phillips curve. See L.C. Andersen (1973). Monetarists interpret trade-offs as *temporary* phenomena

Furthermore, recent research into the effects of time lags on the efficiency of policy action, and on economic fluctuations generally, has cast doubt on the long-supported thesis that monetary policy is a suitable means of controlling the trade cycle and growth on account of its rapid and therefore easily predictable effect. The existence of time lags are of considerable significance for the timing of monetary measures of stabilization policy since only recognition and mastery of them permit an anticyclical drive. If the supply of money is to be used as a means of stabilizing the economy, therefore, time lags must be taken into account.

However, even if time lags could be measured (or eliminated) in assessing the effects of policy actions and implementing measures, any variation of the quantity of money orientated to measure growth rates would have to allow for the temporal dimensions of their effects. Such a policy would have a stabilizing effect only in the extreme case of growth completely free from fluctuations. In reality, the rates of real production grow continuously. The causal connection between the quantity of money and growth must therefore be limited to the case of a divergence between real and monetary economic development. Only then does the quantity of money have an indirect effect via the influence of prices on economic growth. The stabilizing role of a monetary policy consists therefore in the long-term control of the price level and employment, but not in the guidance of real production, which in the case of equilibrium has a path independent of that of the quantity of money.

As a consequence, it would be advisable for monetary policy-makers to refrain from short-term stabilization action where the lag duration cannot be shortened. Because of the pro-cyclical effects which can be expected to arise from the timing problem, consideration should be given to orientating monetary policy to the long-term, presumed average growth of the national product. It is true that this policy (rules versus authorities) would give no guarantee of absolute monetary stability, but it would be likely to permit reconciliation of price stability and growth. Or, in Friedman's own words:

«We are in danger of assigning to monetary policy a larger role than it can perform, in danger of asking it to accomplish tasks that it cannot achieve and, as a result, in danger of preventing it from making the contribution that it is capable of making»[37].

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associated with spurts of accelerations and decelerations in monetary (or fiscal) actions. See for example K. Brunner (1971 b) pp. 40-41. The distinction seems to be crucial for the monetarist analysis and the «inherent stability» thesis, which assumes that the real money stock and the real income are determined by the supply and demand mechanism which eventually will come to high employment equilibrium. Although «empirical evidence presented to date has proven to be inconclusive – there is support for both sides of the debate» (that is the «trade-off» and the «no trade off») (See L.C. Andersen (1973) p. 6), it is quite generally agreed that the crucial consideration involves the formation of price expectations (a variable generally neglected until recently in Post-Keynesian analysis). As L.C. Andersen suggests (op. cit.) no trade-off exists unless price expectations are formed in such a manner that in the long run expected price changes fully reflect actual price changes.

37. M. Friedman (1968a) pp. 95-110, quotation taken from page 99 and (1970b) p. 28.

«A steady rate of monetary growth at a moderate level can provide a framework under which a country can have little inflation and much growth. It will not produce perfect stability; it will not produce heaven on earth; but it can make an important contribution to a stable economic society»[38].

Finally monetarists stress that though the direct effect of monetary policy lies in the control of nominal magnitudes, and real magnitudes are not susceptible to direct influence, there are nevertheless important connecting lines between monetary policy and the growth of real income[39]. Accordingly, one of the chief functions of monetary policy consists of preventative action against economic distrubances which have their source in disproportionalities between the monetary and the real sector. But the rather more important function of monetary policy is of a more active nature: by stabilizing the price level the necessary basis of confidence[40] must be created for seizing upon all growth changes. Such a policy leaves sufficient leeway for technological and market-conditioned shifts of scarcity relations.

4. Conclusions

The monetarist approach to demand management has raised many issues in the past few years which have significantly influenced the attitudes of professional economists on the question of how to pursue stabilization policy. Monetarist models have to date established a forecasting record which is credible when compared to the more entrenched income determination approach[41].

Recently, considerable work has been done to elaborate on the extensive thoretical framework which ostensibly underlies the policy prescriptions and the «reduced form» monetarist models of aggregate economic activity[42]. Today, it seems that much of the theoretical framework proposed by monetarists is shared by economists

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38. M. Friedman (1970b) p. 28. See also A.A. Walters (1973), pp. 20-21.

39. M. Friedman (1968a), op. cit., p. 11.

40. For example, as K. Brunner (1971 b) describes the process, in the case of persistent monetary growth, the information system is offered ample opportunities to adjust (by processing information) the pattern of resource utilization in accordance with the changing information. The process of adjustment obviously implies costs and also a «certain» speed of information distribution over the economic system. An acceleration in monetary growth disrupts this equilibrium; time elapses while the new market situation is communicated over the system and supply prices are appropriately revised. However, in the meantime, monetary accelerations operate to expand output and employment. Of course, expansion continues only in response to a maintained monetary acceleration. As soon as acceleration stops, output and employment will contract somewhat (this seems to be the result even without turning the monetary growth to deceleration). Accordingly, the output and employment effect of monetary acceleration depends substantially on the nature of the information production and adjustment cost of the economic communication system, op. cit. pp. 39-40. See also an interesting note by A.A. Walters (1972).

41. See G. Fisher and D.K. Sheppard (1972 b), especially Ch. 3.1 and Ch. 4.4.

42. For a throughout discussion see *J.P.E.* (Sept./Oct. 1972) Special Issue on Monetary Theory (Symposium on Friedman's Framework).

of non-monetarism persuasion. Professor J. Tobin, for example, has repeatedly proffered an explanation quite consistent with monetarist view of the transmission mechanism of monetary policy[43]. L.C. Andersen admits[44] that he would view his mechanism as «close to the Tobin view, except that it takes into consideration many more rates of return and market prices of goods and services». A similar view can be found in the writings of other non-monetarist economists. Thus the theoretical position referred to in the present paper which is known as «weak monetarism»[45] does not appear to be a monopoly of the monetarists. Indeed it seems there is broad agreement on the theoretical basis of the mechanism through which monetary policy actions affect the economy; though, existence of agreement on the transmission mechanism does not suggest that there are not a number of areas in which substantially different views exist[46, 47].

43. James Tobin, (1963 & 1969).

44. See L.C. Andersen, (1971), p. 3.

45. Both the «weak monetarist position» and the «strong monetarist position» have been stated very clearly by Karl Brunner (July 1968) esp. pp. 18-19. Also see G. Fisher and D.K. Sheppard (1972 b) for a «concise» summary of the «strong» monetarist position and also an elaborate appraisal of that position.

46. Milton Friedman, in «A Theoretical Framework...» for example, argues that a major unresolved issue in his analysis (as well as that of others) is the response of real output and prices individually to policy shocks. As R. Rasche, (1972), suggests, the problem involves the dynamics of price adjustments where research has not gone very far yet. As a result of this we are not able to resolve the important policy issues such as the relative strengths of fiscal and monetary actions under various conditions of the economy, and the speed at which policy actions affect aggregate demand, employment and prices. See also *J.P.E.* (Sept./Oct. 1972).

47. For the policy implications of such different views see T. Coceres (1974b).

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