

QUANTITATIVE MANAGEMENT IN GENERAL.The Importance of Open Market Operations in the Post-War Period.

All the three instruments of quantitative management of money act through bank reserves. If any one of them, at any time, is capable enough to affect bank reserves, the results will be the same. However, the old technique of manipulating bank reserves by changes in the discount rate can now no longer be relied upon. Despite this, the recent policy in several countries to raise Bank rates leads one to believe that the old technique of Bank rate comes into its own again. The recent dear money policy, though accompanied by the raising of Bank rates in a number of countries, is achieved by an active open market policy on the part of Central banks, though the nature of this policy slightly differs from that in ordinary times. In ordinary times the potential power of banks for credit expansion is controlled by the central bank by exchanging interest-bearing securities for cash with commercial banks. In the post-war period, the commercial banks did not have sufficient cash as such with them. But a very large volume of Government securities guaranteed against any depreciation in their value was as good as cash for the purpose of lending to non-government borrowers. When the central bank would give up supporting governments at a particular level of yields, the banks lose all incentive to convert governments into cash and loan the proceeds to private borrowers. Ultimately, therefore, in both cases the choice for the banks is between government securities and commercial loans and the restrictive policy becomes effective by ~~inducing~~ inducing banks to prefer former to the latter. Thus, in the U.S., restrictive policy was effected by raising the yield rates on short-term securities by selling short-terms ^{and}, thereby, inducing commercial banks to hold short-term governments. When thus, the yield on short-terms was raised,

it was anomalous to keep the discount rate lower, for, then the banks would be encouraged to borrow through the discount window.¹ The raising of discount rate was only of secondary importance. Even in case of U.K. where the Bank rate changes are expected to have symbolic effects, the restrictive credit policy was significantly marked by the abandonment of $\frac{1}{2}\%$ market rate for Treasury Bills. It was not the hardening of Bank rate but a policy of flexibility in the yield on Treasury Bills that was important. It is self-evident that so long as the banks are holding liquid assets in the form of government short-term and also long term securities, it is only through the manipulation of the yield rates on government securities that a restrictive credit policy can be made effective. In U.K. the Treasury Bill rate rose as high as 2.42 per cent. by June, 1952.

This manipulation of the yields on government securities can be made by means of open market operations. In the peculiar post-war period, open market operations have become the chief tool for monetary management. This is due to two special reasons.

Firstly, the existence of a very large volume of public debt automatically makes the money market highly sensitive to the changes in the yields on government securities. In this respect the answer given by Chairman Maccabe of the Board of Governors of the Federal Reserve system to the Douglas Committee is worth noting. The Chairman stated: "The whole credit structure is closely related to the government bond market and very sensitive to that market. So, if there is a rise in government bonds, there is a stiffening of rates throughout the credit structure."² This is because, when the yield rates on governments rise, the

1. Fed. Res. Bull. Aug., 1948 p. 910.

2. Quoted by David R. Alhadeff, 'Monetary Policy and Treasury Bill Market' Am. Eco. Rev., June 1952. p. 327.

bankers or the investors have to make a choice between government securities and private loans and the rate of the latter has to rise much more in order to compensate for the element of ~~private~~ risk. Thus, the rise or fall in the ^{in private loans.} private-loans yield rates on governments bring about corresponding rise and fall in the market rates. To bring about rise or fall in this yield rate to the degree desired, open market operations on the part of a central bank are indispensable.

Secondly, the widespread ownership of public debt and a very large portion held by non-bank holders impart to open market policy a superiority over the other two tools of quantitative management, namely, the discount rate and reserve requirements. During the war in several countries under the pressure of physical controls, the public (that is to say all non-bank and non-official institutions, business houses and individuals etc. which live on their own resources) held their savings in the form of government securities. If the non-bank holders of government securities, like the banks, also find new assets more attractive than their present holdings, they would try to convert their present assets into new ones. They can be discouraged from doing so by raising the yield rate on governments so as to make them relatively attractive for the non-bank investors. The conversion of government securities into bank loans by commercial banks can be controlled even by a direct control of bank loans e.g., by prescribing special reserve requirements against assets, rationing of loans etc. But these expedients cannot be used to influence the behaviour of non-bank holders of government securities.

The Problem of Non-bank Holders of Government Securities.

Management of the quantity of money requires that the monetary authority should influence not only the balance sheets

of banks but also those of a large number of individuals. This need to control the preferences of individual holders of money and other assets has become imperative in the post-war period due to the diffusion of the ownership of public debt. The money supply is not restricted to the amount of cash and liquid assets in the hands of banks alone. For ascertaining the total potential money supply, liquid assets in the hands of individuals also should be taken into consideration. Banking, therefore, is a pervasive phenomenon and cannot be properly dealt with by regulations directed merely to what we call banks. The behaviour of individual holders of liquid assets influences the quantity of money just as the behaviour of banks does. It is not possible to influence the hoardings and dishoardings by the people by means of central banking control devices which are employed to influence bank reserves. In addition to individual holders of public debt there are other non-bank institutional holders of public debt such as insurance companies, ~~many~~ savings banks, investment trusts etc. So long as these non-bank holders of public debt are ready to hold government securities if the yield on them is slightly raised, they can be induced to do so by allowing the yield on public debt to rise. Fine changes in the yield structure can be made by open market operations. Open Market operations as a tool for monetary management touch a very wide range of agencies which are responsible for the supply of loanable funds and which are not within the competence of other tools.

This rising importance of non-bank holders of various assets particularly dilutes the potency of the technique of managing the quantity of money through the manipulation of only bank reserves. In the post-war period the behaviour of non-bank holders of government securities has created a problem for monetary management. The technique of monetary management which does not

bring within its compass these varied agencies which are all the while thinking as to in what form they should hold their money cannot have desired quantitative effects on the volume of money; or such effects, if at all it is able to exert, will be short-lived. It can be said, to the credit of late Lord Keynes, that the relative changes in the various rates would be indispensable if the preferences of these individual 'bankers' are to be effectively influenced. It is in this field and in this sense that the rate of interest will have peculiar significance. This necessity of making central banking devices capable of touching several strategic points and not only the bank reserves was present even in the pre-war days. As one writer has rightly pointed out, every individual in the community is, on a small scale, a bank. Monetary theory, therefore, becomes a sort of generalization of banking^{theory}.

The ultimate choice as to in what form they should keep their savings rests with individuals. They may prefer the kind of assets to the other or they may choose to spend rather than to save. No central bank can influence such preferences of the public by central banking devices. If the individuals choose to purchase consumers' goods by selling off their government securities, the raising of yields on public debt cannot stop them from liquidating the securities. But so long as the choice of individuals is between one form of interest bearing securities and the other based on the relative yields and elements of risk involved, the central bank can induce even individuals to prefer government securities to other ones by making the yield rates on the former relatively attractive by open market operations.

Open Market Operations Vs. Changes in Reserve Requirements in the Post-War Period.

When there is an extra-ordinary pressure of demand for bank loans, the banks in the beginning will loan out whatever

1. J.B. Hicks 'A suggestion for simplifying the Theory of money' *Economics* Feb. 1935 p.12.

amount of excess cash that would be with them. Thereafter, they would liquidate their marginal investments. The earnings of banks on their new investments would have the element of rent in them to the extent of the excess of the yields on their new investments over those on the assets which the banks liquidate. In the post-war period, thanks to the policy of stabilising the prices of government bonds, a large volume of bank assets constituted a sort of marginal investments and, therefore, the prospects of earning rent on new investments in the post-war period increased considerably. The large element of rent in bank earnings is undesirable from social point of view for, the purchases of new assets from the proceeds of the sales of older ones such as the government securities proves inflationary as it happened in the post-war period. The central bank can check this sort of inflationary expansion of bank loans by selling government securities with higher yields to the banks. Though this sort of open market sales by the central bank will check undue expansion of bank loans, they will cause capital losses to the central bank and will give undue premiums to the banks on government securities which are the least risky assets in bank investments. In order that the central bank may not have to suffer capital losses and also that the banks may not earn undue premium which has got the nature of rent, changes in reserve requirements provide a better alternative as an instrument of credit control in the circumstances described above. The plea that for small changes the instrument of variable reserve ratio will prove inflexible is not an important one as examined before.¹ Suitable changes in the

1. See infra Chap. IV, p. 131

reserve ratio can be prescribed for each bank or type of banks and for each small period. It is true, that frequent changes in reserve requirements would put the banks to unnecessary troubles and would cause frequent readjustments of the assets of banks which would be ultimately detrimental to the money market. But such readjustments would take place even otherwise as the banks would begin changing existing assets for new ones. However, the basic requirements for reserves fixed originally upto a particular level, should not be touched. To this extent the significance of reserve requirements will be for ensuring the liquidity of banks rather than as a special instrument of credit control. But above this level, small and frequent changes in the requirements of reserves can be made for the purpose of quantitative management of money. Such a use of changes in reserve requirements in preference to open market operations will stop banks getting rent as shown above, and would also protect the central bank against occasional capital losses. It is worthwhile to note that small and frequent changes in reserve requirements as prescribed in the case of each ~~individual~~ individual bank are used by the Commonwealth Bank of Australia as a very powerful instrument of quantitative management. The trading banks have to transfer such and such amount of funds as may be prescribed by the Commonwealth Bank from time to time to a 'Special Account'. This sort of deposits are raised or lowered by the Commonwealth Bank at its own instance and the trading banks have no power to draw upon these deposits at their option. However, in the case of this device of Special Accounts in Australia, the Commonwealth Bank pays interest at a very nominal rate. Despite this, the rental element in bank earnings is considerably reduced.

Such a use of the reserve ratio will be possible only

under certain conditions. First condition is that there should be no other objective with the Central bank, such as supporting the prices of government securities, than the one of effecting desired changes in the quantity of money. For, otherwise, the banks will be able to replenish their reserves by selling off government securities with them.

Secondly, the central bank's action must be convincing to the individual bank to which it is applied that the step is not discriminating against it. This means that the central bank must be well-informed about the position of the bank or banks subject to the action vis-a-vis other banks which are not. Otherwise, the action would be highly invidious and indiscriminate. A clear knowledge about the ~~relative~~ individual position of all banks is possible only when there is not an abnormally large number of banks as in the U.S. In the U.S., therefore, it is difficult to make a discriminate use of the Australian device.

SECONDARY RESERVE REQUIREMENTS.

The element of rent in the earning of banks emerges especially when they purchase new assets for old ones, with ~~an~~ a higher yield. If at all, therefore, the banks voluntarily do not effect this ~~shuffling~~ shuffling or they are by law required to hold a particular amount of assets of a certain description, they will not be able to earn this sort of rental income. This leads to the requirements of secondary reserves constituted by law of certain assets which must be compulsory^{-ily} held by banks at a certain percentage.

The new reserves, if they are constituted of government securities, will relieve the pressure on central banks for maintaining the prices of government securities.¹ But more than

1. This measure by itself cannot provide an effective control of the quantity of money for, in the present context, such control is impossible unless the policy of supporting the prices of government securities is discontinued.

this, in normal times, the device will prove a weapon not only for quantitative control but also a sort of qualitative control of credit.

The Rationale of Monetary Management based on Fractional Reserves.

Quantitatively, the volume of money created by banks on the basis of fractional reserves undergoes greater oscillations of expansion and contraction, the smaller is the fraction of required reserves. Though, short of 100% reserves, the fluctuations in the volume of money (which do not take place in a definite proportion to cash reserves) cannot be eliminated, they can be however, considerably reduced if the cash reserve ratio is higher. But the primary reserve ratio composed of cash cannot be increased beyond a particular level without adversely affecting the ~~elasticity~~ elasticity of money supply of our financial system.

So long as decisions to save and decisions to invest are not taken by a single individual or a body of individuals but are the result of uncoordinated behaviour of a very large number of individuals and institutions, complete equilibrium between savings and investments in short intervals can never be realized. Again, savings are not available for investment as soon as they are effected. There is a time lag which can be conveniently filled in by bank money. The greatest advantage of the banking system based on fractional reserves is that it imparts elasticity to money supply by providing liquidity to those who need it. But under the pretext of elasticity the banks cannot be allowed an indiscriminate credit expansion just as a central bank cannot resort to boundless currency expansion.

It sounds paradoxical that a great hue and cry was raised in England against the system of note-issue by private banks before

1844. The Bank Act of 1844 in England abolished this system and the note-issuing authority was centralized in a single bank in close co-operation with the Government. But with the rise of new system of making payments through the banking system, the spirit of the Bank Act is lost. The private banks are manufacturing money today no less than they were before 1844. Private bankers cannot issue 'currency' but they can 'create' deposits and between 'currency' and 'deposit' money there is absolutely no difference for practical purposes. In spite of this, the deposit money eludes the regulation which legislatures so industriously enforce upon other constituents of money. Beyond the requirement of minimum reserves of cash to be maintained by the banks, law has not touched the subject in any country up till now. This 'deposit' money, it is worthwhile to note, is the outcome of nothing substantial behind it but only the promise of the banker. By means of this deposit, ^{money,} the banker is able to purchase assets on which he is getting a good interest income. So far as the purchases of these assets are made by means of money which the banker is enabled to create by the willingness of society to accept banker's promises as money, the control of the banker's power to purchase these assets is necessary for social purposes.

The rationale of fractional reserves, therefore, rests on the needs of the community to provide balance between savings and investments during a particular period and the credit created on the basis of fractional reserves should not be the result of the interest of the banker alone but also that of the community. The ~~bank~~ banker's capacity to create credit, given the demand for it, does not depend upon the amount of cash reserves alone. This is true even in the case of individuals. The individual's power of spending does not depend upon the

amount of cash balances that he or she may be holding. The amount of liquid assets which are near-money should also be taken into consideration, when assessing the overall resources of the banker or the individual to create new credit or to spend. This importance of other balance sheet items was emphasised by Henry Thornton as early as 1802.¹ But, for the purpose of monetary management, these liquid items of a bank balance-sheet have received little attention, as the quantity of cash reserve ^{was} have done, so far as their regulation by law is concerned.

Generally, a banker does maintain a certain balance of liquid assets but this liquidity ratio is fluctuating and it cannot be relied upon for the purpose of monetary management. Thus, in U.K. the usual liquidity ratio is 30% of the deposits. During the wartime it rose to about 60% in 1945 and at present it is near 40%.² Prior to the first raising of the Bank rate on 7-11-1951, the banks had this percentage of liquidity ratio and the banks could have increased their advances without difficulty but they scrupulously maintained this liquidity ratio and thus in England there was no problem as regards the security prices as it was in the U.S. In the U.S. the experience was different. The banks began to unload government securities to meet the demand of rapidly expanding private economy in the post-war period. The security holdings of banks fell from 90 billion in 1945 to 65 billion in 1948. This shows that a voluntary maintenance of a certain percentage of liquid assets cannot be taken as a guide for monetary policy.

In order that the monetary authority may be able to make precise calculations as to the potential power of banks to expand credit on the basis of their cash resources, the banks should not

1. H. Thornton Paper Credit in Great Britain. London 1829 pp 91-96

2. H.G. Johnson. 'Some Implications of Monetary & Secular Changes in Bank Assets and liabilities in Great Britain'. E.J. Sept. 1951 p. 546.

be allowed to convert a certain amount of their liquid assets into cash. That is to say that they must be required by law to hold a certain amount of secondary reserves constituted by certain assets the nature of which may be prescribed by the monetary authority. A fixed ratio of assets to deposits will reduce the margin of expansion above primary reserves and will impart a greater degree of exactness to the proportional changes in the volume of money consequent upon changes in primary reserves. This is because the banks would be prevented from drawing upon the liquid assets which constitute the secondary reserves and, therefore, cease to be liquid. If the primary reserves are fixed at 20% of deposits the margin for expansion is 80%. But if again the secondary reserves constitute 40% of the total ~~bank~~ deposit liabilities, the operational margin for the bank will be ~~only~~ only 40%. The greater the percentage of reserves, the smaller the amount of the multiple expansion of credit.

A legal requirement of secondary reserves above that of primary reserves would be favoured even by the banks. For, if the primary reserves are raised to a very high level in order to curtail drastically the capacity of banks to expand credit, the banks will suffer a loss of interest income on a very large portion of their liquid resources. The assets constituting secondary reserves, on the contrary, are income yielding. Perhaps this may be an important reason of the opposition of bankers to the use of variable cash reserve ratio as an instrument of credit control.

The stability in bank assets provided by legal secondary reserves will impart stability to the corresponding bank-deposits and, therefore, to the total supply of money. This result has a great significance from the point of view of a contra-cyclical

policy. During the period of a slump, the rapid fall in bank advances, which are the most volatile of a bank's short term assets, brings about a corresponding fall in the effective volume of money. This gives an impetus to falling prices which might be originally the result of some other causes. A stable ratio of secondary reserves will provide a system in which creditors would be unable to bring pressure upon enterprises to quickly repay their debts by rapid and impossible liquidations¹ of liquid assets. During the period of boom also, the banks' power to multiply credit will be restricted due to steady elements in their assets.

Stability in the bank assets and deposits would have salutary effects on the other holders of liquid-assets, for, to the extent that banks are ready to hold certain assets, their value will not fall. The steady value of liquid^{assets} would prevent liquidity crisis which is one of the most important causal force in a trade cycle. It may be that no new assets would be absorbed by the public or the banks but a check to the liquidation of existing claims will go a long way in preventing money disappearing in private hoards. It is true that ^{the} phenomenon of liquidity crisis does not constitute in itself the mischief of the bankers for, during the period of prosperity they advance loans to persons whose credit-worthiness appears to them beyond doubt. But ~~and~~ during slump, the banks, naturally being over scrupulous about the security of the debts that they create, not only stop extending further loans but even call back those extended in the past. A steady element in the assets of the banks will curtail the scope for extending excessive amount of loans and advances which constitute the most volatile element in bank assets and, therefore, would reduce the cumulative effects of

1. H.C. Simons. 'Rules Vs. Authority in Monetary Management' .
Readings in Monetary Theory p. 354.

of contraction and ^{expansion} ~~expansion~~ during slumps and booms respectively. The loans and advances are essentially short-term lendings and therefore, it is possible for the banks to revise their commitments periodically and in sympathy with and conducive to swings in the business cycle.¹ If the secondary reserves constituted partially of long term credit the banks would not be able to liquidate these without suffering heavy capital losses and again, if such assets are government securities or securities guaranteed by Government, these would be more attractive to banks in period of depression as steady earning assets. Thus, in the U.S. the volume of commercial bank loans fell sharply from 35.7 billion dollars in June, 1929 to 16.3 billion in June 1933 while the commercial banks' holdings of U.S. government securities increased from 4.9 billion dollars to 7.5 billion. If it is that, in spite of this, some members of public begin to unload their ~~high~~ liquid claims, the central bank can increase the secondary reserve ratio of banks and thus can restore confidence of the public. In this respect, the post-war period has got a special advantage in that most of the liquid assets held by the public and other institutional investors being government securities, the banks can accept these from the public without any fear from the point of view of security and financial standing of the debtor.

The new reserve ratio will exert a qualitative influence on the banker in his selection of bank assets. As observed before, the banker does ~~not~~ maintain a certain percentage of liquid assets, but the bankers' assessment of liquidity and security of an asset is not uniform and many times it is not based on social utility. A speculative loan granted at a 50 to 60 per cent. margin on the face value of the ~~new~~ paper pledged by the borrower,

1. 'Memorandum on the Stability of demand ^{deposits} C.R. Whittlesey
A.E.R. Dec. 1949, p. 1193.

or a real estate loan advanced against the security of a house with 50% margin on its present estimate, or a loan advanced to a borrower the personal bonafides of whom are not at all questionable to the banker, or consumers' loans advanced against the security of the article purchased by the consumer and several other types of loans advanced against a very sound security and at a substantial margin may be secure and liquid in the consideration of the banker, but the proceeds of these loans may be used for speculative hoarding of commodities.¹ Such loans, however preferable they may be from the point of view of the banker, are not desirable from the point of view of society, for, in essence, they are inflationary.

When a banker, prompted by his personal considerations of liquidity and security, purchases assets the proceeds of which are to be used for anti-social purposes, he betrays the trust reposed in him by his depositors. Those who entrust their savings to the banker lose all control over the use of these resources placed at the disposal of the banker in exchange for a small interest income. They voluntarily abstain from consumption and save a part of their current income because they may not be penalised by way of forced savings. They entrust their savings ^{to the banker} because the banker, due to his expert knowledge and strategic position, can make these savings available to those who need for socially desirable ends. When the banker uses these resources in ways which reduce the real value of the savings of the depositors the social purpose of savings is marred.

It is, therefore, necessary that the assets that the banker chooses as liquid assets should have social significance. When the central bank has to prescribe the assets eligible for secondary reserves the liquidity and security of an asset will

1. R.S.Sayers . 'Modern Banking' 1949, p.229.

be based on the economic good of society. In such^a case, the 178
 depositors' confidence in the ultimate safety of their deposits
 will increase which would contribute, in its turn, to the soundness
 and stability of a banking corporation.

Quantitative management of money is guided by the inform-
 -ation supplied by totals wherein individual cases are not and
 cannot be given exclusive attention. It is just like an irrigation
 system which releases and withdraws waters for all fields growing
 different crops requiring ~~max~~ water at different times.
 Withdrawing the supply in order to prevent some plots being
 over-irrigated, makes other plots, which actually require water
 for better crops, suffer. Such a system that is to say lacks
 directional control. Water should reach when and where required.
 Proper canalizing of the money flow, which is essential for the
 health of the body economic, cannot be secured by such a system.
 For this, the central banking instruments should touch essentially
 strategic points. The regulation of consumers' credit, control
 of bank credit flowing to stock market and the directions given
 by the central banks to commercial banks as to their policy of
 loans and advances are important developments in the directional
 credit control. Nevertheless, monetary management essentially
 constitutes the regulation of ^{the} quantity of money so as to be
 appropriate to the needs of different times. For this, the
 manipulation of bank reserves will ever remain an effective weapon
 in the hands of monetary authority.

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