Chapter IV

MANAGING THE QUANTITY OF MONEY.

The Problem of Excess Reserves.

The Policy of Open Market Sales and Excess Reserves.

The ~~pikey~~ policy of absorbing the excess reserves of banks by means of open market sales has got certain limitations. As for example, the central bank can absorb the cash reserves of banks only to the extent of the volume of interest-bearing assets that it possesses at a given time. In actual practice, the capacity of the central bank to absorb reserves by means of open market sales is less than this.* For, ordinarily, when the central bank sells securities it loses its earning assets for cash. In order that the central bank may be able to cover its operational expenses, it cannot allow its earning assets to fall below a particular ~~bank~~ level. This means that the capacity of the central bank to operate in the open market is restricted to the volume of assets that it can afford to lose. If, therefore, the excess reserves are larger than this amount, open market operations cannot reduce them to the desired level. Thus, as an illustration, in the U.S., the total volume of securities held by the Reserve Banks amounted to nearly one third of the excess reserves of member banks especially in the second half of 1940.[1] In this circumstance, even if the Reserve Banks had sold off almost all of their earning assets, they could have reduced by only $\frac{1}{3}$ of the excess reserves.

It may be argued that the Treasury can issue new securities to the extent necessary ~~absorbing~~ absorbing excess reserves. But such a policy is not advisable under normal circumstances when the government does not want funds for any productive use. It

1. F.R.B., Dec.1940, p.1283.

would involve an unnecessary burden of interest payments for the Treasury. It is true that open market operations became possible on a large scale only when government securities were created in abundance to meet the government needs for war- finance during the World War I. But, the creation of government securities simply for the sake of absorbing excess reserves is an impractical policy. The policy of issuing bonds especially for absorbing excess reserves was called in question by Chairman, Mr.M.S.Eccles, of the Board of Governors of the Federal Reserve System when an inflationary situation was threatened by high reserves of member banks in 1946. It was a question, according to the Chairman, whether the government should provide 2½% investments at a time when government was not in need of money.[1]

Changes in Cash Reserves Requirements of Banks as an Instrument of Credit Control.

Open market operations cannot prove an effective instrument of credit control when the cash reserves of banks are excessively high. It should be noted that both the policies of bank-rate and open market operations aim at controlling the volume of bank-credit by influencing the bank reserves. What is relevant for credit control is not a fall or rise in the bank-rate or purchase or sale of securities but the changes introduced by these devices in the volume of cash reserves of banks. If that is so, practically the same results can be obtained if the bank-reserves are changed directly by a decree from a competent authority such as a central bank. Changes in cash reserves of banks, by whatever method they are brought about, would influence at once the capacity of banks to creat credit. Changes in the reserve requirements of banks can, therefore, serve as an effective instrument of credit control. The

1. F.R.B.,November 1946,p.1232.

limitation of open market operations arising out of the insufficiency of 'ammunition' (i.e., the amount of securities that the central bank can conveniently sell for absorbing excess reserves) is no longer present in the case of this device of credit control. It is from this point of view that Keynes, in his Treatise on Money, recommends the use of variable reserve requirements as an effective instrument of credit control.[1]

The variable cash reserve ratio came to be recognized as a potent instrument of credit control only recently. This is because the problem of excess bank reserves involving huge inflationary potential which could not be tackled by the ordinary methods of credit control, also cropped up recently. But of greater significance than this, is the fact that bank reserves were originally intends not to serve as an instrument of credit control but to provide liquidity to banks. As a banker's business rests on the confidence that he inspires in his depositors, he must be able to pay his creditors on demand whenever they wanted their deposits back. In order to meet this demand at any time, the banker should maintain liquid balances with him.

But the liquidity of a bank cannot be assured by maintaining a certain amount of cash reserves only. It would largely depend upon the wisdom and caution that the banker uses in integrating his investment policy both in terms of maturity and quality of his assets. Liquidity of a bank now-a-days depends upon the shiftability of its assets. It has become also the concern of the central bank especially in times of emergency. For, in critical times, if the central bank relaxes its eligibility rules and is ready to lend against any bank asset, the liquidity of the bank can be hundred per cent. assured even without any cash reserves.

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1. Treatise Vol.II, p.260.

To quote the opinion of the Macmillan Committee, "In a modern banking system where member banks are in a position to hold earning assets which can be quickly turned into cash at the central institution, the amount of reserves which they require strictly for their own safety and convenience may be extremely small".[1] The purpose of bank liquidity can be served by other ways, and fractional reserves are not indispensable for it. Though the fractional reserves may be considered useful from the liquidity point of view, they can be used also to serve one additional and more important purpose of monetary management. The fundamental purpose of reserves is to limit and control the rate of credit expansion and hence, the determination of their appropriate amount cannot be left to the individual self-interest of banks but must be governed by the proper requirements of the whole system. Changes in legal reserves have been recognized now as an important instrument of credit control. They have been used as such by the Federal Reserve Board of the U.S., several times in recent years. Even in India, where the statutory reserves of banks are not used as a weapon of credit control, it has been accepted in theory by the Reserve Bank that the primary function of such reserves is to enable the monetary authority to exercise control over the credit situation in the country.[2]

Working Examined.

The main criticism against this new device of quantitative management is that a uniform rise or fall in reserve requirements does not hit all banks equally. The banks may be considerably differing in their excess reserves position and a uniform percentage rise in reserve requirements will hit harder the weaker banks than it would hit those with a larger margin of excess reserves.

1. Report of the Committee on Finance and Industry. His Majesty's Stationery Office, London 1931, p. 158.
2. Reserve Bank of India, 'Functions and working of the R.B. of India, 1941, p.40.

Given the inequality of cash reserves with different banks, a uniform rise in reserve requirements will compel weaker banks to sell off some of their assets. This would affect their earnings. If the banks dispose of their investments in order to meet the deficit in the newly required reserves, the prices of their investments may fall causing some capital losses to the banks. Such consequences for the banks, however, are not inevitable concomitants of the changes in reserve requirements; neither are they intended by the central bank. For, the purpose of changing legal reserves of banks is to skim off excess reserves in such a way that practically all banks may be able to meet the new reserve requirements. Inspite of this, there may be individual banks with ~~whom~~ which there may be still some excess reserves. These excess can be brought down by means of open market operations in the next instance. This role of the manipulation of legal reserves is well illustrated by the experience in the U.S. When on March, 1st 1937, the Federal Reserve Board increased member bank reserve requirements by 16 2/3 % , the policy was to remove from the credit base a large volume of unnecessary reserves arising entirely from the inflow of gold from abroad and constituting a basis of a possible injurious credit expansion. So long as the member banks had a volume of reserves far in excess of legal requirements , the customary instruments of credit policy- open market operations and discount rate, were wholly ineffective. Through the elimination of excess reserves by a direct change in legal reserve requirements, the Federal Reserve Authorities were brought into closer contact with the money market and were placed in a position to tighten or ease credit conditions by means of a more flexible instrument of open market operations.[1] Thus, changes in legal reserves constitute a necessary supplement to the policy of

1. F.R.B., May 1937, p.377.

open market operations or discount rate especially for tackling the problem of unduly large reserves. As such, their utility and efficacy are unquestionable. Just as the discount policy was to be helped by open market operations when the large cash reserves of banks made the former ineffective, the changes in legal reserves are needed to aid the other two instruments of credit control when the bank reserves have grown enormously large.

So long as the increase in reserve requirements is so devised that all banks may be able to meet the increase without disposing of their assets, there cannot be any difficulty. But such a possibility presupposes an even distribution of excess reserves among member banks. If this is not the case and if there are abnormal inequalities in the distribution of excess reserves, only a small increase in reserve requirements would be possible. Such a measure would leave untouched a large proportion of excess reserves with a small number of banks. If the increase is large enough so as to skim off a large part of excess reserves , it will force many banks to sell off their earning assets to meet the deficit. Therefore, in order to determine an approximate degree of increase in the legal reserves, the central bank shall have to ascertain that the excess reserves are evenly distributed amongst banks and that most of the banks would be able to meet the increase without being obliged to liquidate their earning assets. Thus, the Federal Reserve Board, before announcing the increase in reserve requirements from March 1,1937, surveyed the position of the distribution of excess reserves among member banks . It was ascertained that out of 6337 member banks only 197 banks lacked sufficient funds.[1] Similarly before giving effect to an increase in reserve requirements in November, 1941, it was ascertained that in all only 19 banks were not able to meet fully the amount of newly

1. F.R.B.,February, 1937, p.98.

prescribed reserves.[1] If, similarly, only a small number of banks is not able to meet the increase in reserves, they can sell off some of their assets to the Reserve Banks and can meet the increase. As the sale of securities would be only to the extent of the deficit in reserves, the purchases of the securities by the central bank would not involve any possibility of reprenshing member bank reserves which it was the purpose of the increase in reserve requirements to reduce.

In actual practice, no assurance can be given that the banks will sell off securities only to the extent of what is necessary to readjust their reserve position. Every thing will depend upon the reaction of the banks to the regulating action of the monetary authorities. At the time of the increase in legal reserves, the banks may be holding sufficient amount of reserves according to the calculations of the monetary authorities. But some of the banks may be simply waiting with ready cash to purchase profitable assets or they may be expecting the availability of more profitable assets in the future than those they may be holding at the given time. Due to considerations such as these, it is likely that the banks may offer more securities to the central bank than what are actually required to readjust their reserve position. In that case, the policy of central bank to purchase securities from the banks in order to enable them to meet their new reserve requirements would dilute much the effects of increase in reserve requirements.

The above observations are well illustrated by the experience in the U.S. when the Federal Reserve Board announced on January 31st, 1937 its decision to increase legal reserves of banks by $33\frac{1}{3}$ % in two instalments. The announcement was followed in February and March by substantial volume of sales of government

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F.R.B., September 1948, p. 836.

obligations both by banks and other holders. There was recorded a heavy fall in the bank holdings of United State Government Securities. In the first three weeks of March, 1937, that is , after the first instalment of 16 2/3% increase in reserves came into effect, the decline in the government securities held by reporting member banks was $ 370 millions.[1] The total amount required for the purpose of meeting the deficit after even the full increase of 33 1/3% was given effect to from May 1st, 1937, was only $ 122.8 millions for all member banks.[2] It can be seen from this that a complementary use of open market operations either to enable the banks to meet deficit or to maintain an 'orderly conditions in the money market' would counteract the very purpose for which increase in reserve requirements might have been enforced.[3]

Clumsiness & Inflexibility.

Changes in reserve requirements are made in large strides and, therefore, they are clumsy for, they bring about turnover in reserves in large amounts. Even if the change is by 2%, the increase or decrease in reserves will involve several millions. Again, the changes, being general and uniform, they do not take into consideration local conditions and the position of individual banks. It is, therefore, said that this instrument of credit control lacks the flexibility characteristic of open market policy. Against this, it can be argued that when millions of dollar reserves are to be absorbed large strides of increase are necessary. Such a large increase will not prove catastrophic when the intention is only to sterlize superfluous reserves before any superstructure of credit is raised upon them. Again, reserve requirements can be raised by as small a fraction of basic reserves as may be convenient. Until it is satisfactorily demonstrated that changes in reserve requirement

1. F.R.B., April 1937 p.284. 2. F.R.B. February 1937 p.98.
3. For the psychological reactions caused to the other holders of securities and consequent large volume of sales - see supra p. 141

cannot be effected by small degrees, the reputed clumsiness of this method of credit control must be ascribed largely to the manner of its application.[1]

The problem of local and specific conditions of banks can be met by changing reserves only for particular banks with excess reserves leaving others totally or partially untouched. Thus, in U.S. A., an amendment of 1942 enables the Federal Reserve Board to change reserve requirements for banks either in reserve cities or in central reserve cities taken separately. No doubt such a power can render the instrument flexible but the policy of changing reserves for one class of banks, leaving untouched the other two classes as in the U.S., is calculated sometime to give rise to many adverse psychological reactions on the part of bankers.[2] The monetary authorities, therefore, desist from adopting such a policy. As for example in 1942, the Federal Reserve Authorities wanted to reduce reserve requirements for central Reserve City banks alone in order to serve the needs of war finance. But the authorities could reduce requirements for these banks only to a limited extent i.e. just to the level of requirements for Reserve City banks which stood at 20% of deposits. In Reserve Cities, there was a plethora of idle funds and reduction in reserve requirements for these banks would have further enhanced the over-liquid state of these banks. The Federal Reserve Authorities did not think it wise to lower requirements for the Central Reserve Cities below those for Reserve Cities. Open market operations in Treasury bills were resorted to

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1. C.R.Whittelsey, 'Reserve Requirements and Integration of Credit Policies'. Q.J. of E. Aug.,1944 p.560.
2. In the U.S. there are three classes of member banks: (i) Central Reserve City Banks, (ii) Reserve City Banks and (iii) Country Banks. There is a fourth category also namely Non-member banks. These are not the members of the Reserve System.

instead of further reduction of requirements, to provide larger reserves for the banks in New York and Chicago. Thus, the psychological obstacles to lowering reserve requirements for one class of banks ~~mmm~~ below those for the next lower class admittedly renders the device inflexible.

Some basic limitations.

It can be argued that, so far as the law is concerned, necessary changes can be made in it. There is no sanctity in a particular relationship among different categories of banks as regards reserve requirements and there is no technical difficulty in lowering the reserve requirements for Central Reserve Cities below those for Reserve Cities.[1] However, there is one structural limitation to the policy suggested above. Central Reserve Cities are the centres of high trade and business activities and, therefore, opportunities for short-term investment are far greater there than elsewhere in the country. As for example, in New York, there are special outlets for short-term funds in the form of stock market with its financial tributary, the call loan market. Despite higher reserve requirements, Central Reserve City banks supply as much as 50% of total deposits.[2] The Central Reserve City banks exercise a predominating influence on the total volume of loans and investments also. The total loans and investments of New York City banks alone are sometimes as large as those of all the country banks taken together.[3] It can be understood from these fact that reserve requirements cannot be lowered for Central Reserve Cities below those for Reserve Cities. If the requirements are lower for Central Reserve Cities, they would be able to attract huge funds from the

1. C.R.Whittlesey. Op.Cit.,p.564.
2. L.E.Clark. Central Banking Under the Federal Reserve System. Macmillan 1935 p.364.
3. F.R.B.,December 1938,p.1062.

country banks either directly in the form of banker's balances or by diverting the depositers towards them by offering a slightly higher rate of interest on deposits. A vast superstructure of credit can be easily raised by these banks by granting loans at concessional rates. In an inflationary situation such as that inspired by war, the Central Reserve City Banks can obtain funds in abundance in this way so as to meet not only the government demands for funds but also those from private borrowers. The Central Reserve Cities are the strategic centres of financial operations and that is why the Federal Reserve Authorities seem to have prescribed higher reserves requirements for these banks than for others.

Apart from this structural draw-back, there are certain basic limitations which may prevent the anticipated and precisely proportional changes in the volume of money from materializing as a sequence to the changes in required reserves. Unlike the two instruments of bank-rate and open market operations, the change in reserve requirements leaves no initiative with the member banks. A change in reserve requirements brings about altogether a new situation at the operating level of the banking system for which the system may not be prepared. This is why a change in legal reserves is sometimes called catastrophic. In the case of alternative weapons, the member banks may or may not allow changes to take place at the operating level. If they like, they may approach the central bank for rediscounting their assets or they may purchase from or sell securities to the central bank. But a change in reserve requirements may come as a bolt from the blue. Relying on their excess reserves the member banks might have already expanded loans and if in the meantime an increase in reserve requirements is imposed, the banks would be impelled to call back their loans with serious repercussions in the money market. This shocking

suddenness of the device forms a fundamental ground of opposition of the bankers to it. In order that the bankers may be able to readjust their reserve positions smoothly, Keynes suggested that the reserves should be varied 'with due notice and in small degrees'. Despite this, there are certain drawbacks.

Before giving effect to a change in reserve requirements, the Federal Reserve Authorities have not only to ascertain whether there is roughly an even distribution of excess reserves among member banks but have also to declare a future date, at least a month ahead, from which the new level of reserves would come into effect. This was what the Federal Reserve Board exactly did before effecting an increase in reserve requirements from March 1st. 1937 and next from May 1st. 1937. The Board's action to fix the amount of the increase in reserves was based on the data prevailing in January, 1937 and the probable effects of the action were also calculated on the position of excess reserves and deposits then prevailing. Now, during the period intervening between the date of the survey of reserve position by the central bank and that from which the change was to take effect, there was all the likelihood that the total amount of excess reserves, the pattern of their distribution among member banks and also the volume of deposits on which required reserves were based, might change. As a result, anticipated effects of the action of the monetary authority might not materialize. To what extent the anticipations of the monetary authority would be realized would depend upon ~~the whole~~ a number of influences ~~including~~ including the reactions of the bankers.

There are some other factors which make it impossible to calculate precisely as to what amount of deposits can be supported on a given volume of reserves. These factors are especially specific to the banking structure of the U.S.

Firstly, the requirements of reserves against demand deposits

are generally higher than those against time deposits. This sort of difference between reserves against the two kinds of deposits exists in other banking systems also. This sort of distinction between the time and demand deposits for the purpose of reserve requirements is quite arbitrary for, it is difficult to ascertain what exact amount of time and demand deposits can be supported on a given volume of reserves. Shifts from one class of deposits to the other are continuously taking place. To take a simple example, suppose that a Central Reserve city bank gains in time deposits at the cost of its demand deposits to the extent of ₹ 2000. There would be a consequent change in the total amount of reserves to be maintained against the total volume of deposits. On the basis of reserve requirements in the U.S. prevailing on May 1st, 1937 there would be a fall of ₹ 520 in the total legal reserves kept against demand deposits at the rate of 26%, while there would be a rise of ₹ 120 in the total legal reserves against time deposits maintained at the rate of 6%. In fact the bank will gain ₹ 400 extra reserves for operational purposes without any reduction in its deposit liabilities. Taking into consideration the banking system as a whole, such shifts between the two classes of deposits decrease or increase the total volume of legal reserves and bring about unintended changes in the operational capacity of the banking system.

This difference in legal reserves against the two types of deposits seems to be the relic of the old notion about the function of legal reserves as safeguards for bank liquidity. As time deposits are relatively stable and give time for making cautious adjustment in the bank's portfolio for meeting its liabilities, they do not need much reserves. The demand deposits, on the other hand, do not give any scope for such cautious adjustment. In order that the withdrawals of demand deposits may not be disturbing, a larger volume of cash reserves against them is deemed

necessary. So far as this old conception goes, the present system is not objectionable. But in the U.S., as observed before, this old view as regards the function of reserves is long since discarded and the new role of reserves as an instrument of credit control is emphasised.[1] If this is so, the difference in legal reserves as against time deposits and demand deposits ~~against~~ effect of credit control, for, such an arrangement brings about changes in the operational capacity of banks which the authorities would not have at all intended. Secondly, the lack of uniformity in the requirements for different classes of member banks renders the instrument of variable reserve ratio imprecise. Shifting of deposits from one class of banks to the other classes brings about arbitrary fluctuations in the volume of reserves. Three different percentages are prescribed for the three classes of member banks viz., Central Reserve City banks, City banks and country banks. This sort of classification of banks has complicated the situation. On the basis of the changes introduced on March 1st. 1937, if the depositor shifts his deposit from a country bank to a bank in New York, the required reserves against the same amount of deposits would increase by about 100% . As a result the anticipated quantitative effects of the change will lose their precision. Thirdly, the practice of allowing country banks to keep balances with city banks caused arbitrary fluctuations in excess reserves again due to the different reserve ratios prescribed for the ~~diffent~~ classes of banks.[2] When a country bank withdraws its balances from

1. F.R.B. November 1938,'History of Reserve Requirements for Banks in the U.S.,p.953.
2. There are special reasons for the rise of correspondent banking in the U.S. As there is no branch banking in the U.S.country banks finding no profitable employment for their funds, have to seek outlets for them in the form of balances with city banks. Big cities like New York have been able to provide profitable outlets for bankers' balances and to pay attractive interest on them. The Federal Reserve Banks do not pay any interest on such bankers' balances. Again the country banks get better terms for borrowing from city banks than from Reserve Banks. They can borrow from their city correspondents on paper not eligible with Reserve Banks. The city banks on these grounds gather huge liquid cash.

a city bank or transfers them to the latter, artificial excesses or deficiencies in the total required reserves are created. A simple illustration will make this point clear. Suppose that a country bank withdraws ₹ 1,00,000 from its city correspondent. There would be a fall of ₹ 26,000 in the total volume of legal reserves on the basis of the legal reserve requirements for central reserve city banks as on May 1st.1937. This amount of ₹ 26,000, the city bank can obtain from the reserves already maintained by it under legal requirements. But by this, the bank will be able to meet the withdrawal only partially. For meeting the rest ₹ 74,000, the central reserve city bank shall have to liquidate its assets if it is already fully loaned up . Taking into consideration the multiple effects of this change, the money market will have to undergo unfavourable readjustments. Again excess reserves to the extent of ₹ 1,00,000 would be created. For, as this amount formed the part of the deposits of the country bank, against which it would have held reserves already, it would not be required to hold any further reserves against this.[1]

Such shifting of balances amongst the three classes of banks created artificial changes in the excess reserves. Exact calculations for prescribing the new reserve ratio become difficult and even impossible due to these factors. The calculations for the new ratio of reserves requirements which came into effect on March 1st.,1937 and the probable volume of excess reserves which would remain after the change was effected, were based on the broad assumptions that, for meeting the increase in the reserve ratio, only half of bankers' balances would be utilized. Such assumptions are, at best, a clear guesswork. They may not come true and may render the calculations based on them simply an exercise in arithmetic.

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1. Joseph E.Goddbar. Managing People's Money', 1935 pp.452-53.

The Post-War Prospects.

The quantitative management of money by means of direct manipulation of bank reserves has to face peculiar difficulties in the post-war period. The most important characteristic of this period, so far as monetary management is concerned, is the heritage of a large volume of public debt that was created during the time of II World War. A large part of this debt is held by commercial banks. During the war, the banks utilized the funds for the purchase of government securities partly because of the absence of alternate chanels of investment and partly because their resources increased considerably. Prima facie, when the excess reserves of banks are absorbed by government securities held by them, their position is rendered illiquid. But the policy of maintaining the prices of government securities rendered the bank-held public debt as liquid as money. As long as more profitable alternatives of investments were not available the banks willingly held the public debt. But in the post-war period, with the opening out of more profitable alternative to government securities, in the form of private loans, there followed the rapid process of monetization of public debt by banks.

In the U.S., so long as the Federal Reserve Authorities were ready to accept whatever amount of government securities was offered to them, there was no fear of capital losses to the banks. They could easily replenish their reserves by disposing of government securities. In such a condition, the success of quantitative credit control became impossible. The banking developements in the U.S. and several other countries that took place in the post-war period are simply illustrative of a new hurdle in the way of managing the quantity of money. Thus in the U.S., money supply was larger than output and the existing money supply was enough

to carry considerable additional inflation. The holders of 'government's' were attracted to dispose of them in order to invest the proceeds in other higher yielding bonds.

In order to mop up the inflationary potential, reserve requirements were increased first in February, 1948 and then in June, 1948. But the increase in reserve requirements did not result in diminished availibility of bank credit but merely in a transfer of government securities from their holders to the Reserve Banks. It was impossible to tighten up credit so long as the Federal Reserve Authorities were pursuing the policy of maintaining the prices of government securities. For, the banks were able to obtain cash by selling off their government obligations as a result of this policy.

The situation in the post-war period was much different from its pre-war counterpart. For, in the pre-war period the volume of public debt held and offered for sale was much less than that in the post-war period. In 1937, the Federal Reserve could meet the situation by open market purchases just to enable the banks to adjust their reserve position under the new obligations and also to 'maintain orderly conditions in the bond market'. But in the post-war period the supplementary use of open market operations both in long-term and short-term government obligations did not prove as successful as it was thought. For, the pressure of the demand for private loans was so high that the banks offered an enormous volume of government securities for sale. The selling of securities to the Federal Reserve Banks has an advantage from the member bank's point of view over rediscounting a paper in that that the sale of securities does not result in indebtedness and consequently in pressure for liquidation. In such circumstances, effective credit control by reducing bank reserves was not possible.

There is a further difficulty which is created by the public debt held by non-bank investors. This is because raising of reserve requirements gives rise to adverse psychological reactions among the non-bank holders of government securities. Thus, when the Board of Governors raised legal reserve requirements in 1948, the non-bank holders of government debt feared that the new measure of credit restraint might endanger the support programme for Treasury bonds. As a result, ~~also~~ they also began to sell-off their holdings of bonds. The effects of this reaction did not stop here. The non-bank investors began to reinvest the proceeds in short-term government securities such as Treasury bills purchased either directly from the Treasury or from the banking system. The result was that the banking system found its share of total short-term assets much reduced; that is to say that its liquidity position was further adversely affected. The member banks, as a result, were compelled to sell off considerably larger amounts of long term government securities than they would have done in the absence of this phenomenon.[1]

Conclusion.

Managing the quantity of money by direct changes in bank reserves applied commonly to all banks is possible only under certain conditions. It is an instrument which can be utilized with advantage only when a large amount of excess reserves is existing and further that these excess reserves are roughly evenly distributed among member banks. Further, the banks must not be able to replenish their reserves by selling assets to the central bank. Even then, the effects of the change in reserve requirements cannot be precisely ascertained, due to the inevitable time-lag between the date of announcement of the change and that from which the change has to take effect. Despite a cautious use of this weapon of credit control, certain psychological reactions cannot

1. Monthly Review of the Federal Reserve Bank of New York, October 1948, pp. 101-102.

be avoided. This is because the change in reserve requirements affects the banks at their operating levels and the readjustments that are to be made by the banks at this level are more or less compulsory. This is not so in the case of the other two instruments of quantitative control of credit. Unless a very large change in reserve requirements is effected, the banks' powers to create credit will not be sufficiently restricted. But large and drastic changes in reserve requirements will have unfavourable and deranging repercussions on the credit system and on the bond market. In the peculiar post-war period this danger is predominant and as a result, even this latest instrument of quantitative credit control has lost much of its effectiveness. Though it has been used several times and attempts have been made especially in the U.S. to render the instrument sufficiently flexible and suitable for precise adjustment, opposition, misgivings and unwarranted reactions to the use of the device have not died out. Outside the U.S.A., the instrument has very little attracted the monetary authorities.

Inspite of these considerations, given favourable conditions, changes in reserve requirements supply a valuable reinforcement of the armoury of a central bank. In order to prevent injustice being done to individual banks which might have quite legitimately advanced credit before the change and which may not be able to meet the increase in reserve requirements without calling back a substantial portion of their loans, the Federal Reserve Authorities have thought it advisable to prescribe increased requirements for such banks against deposits received after a particular date only. Suggestions are also made to impart to the device a qualitative effect by prescribing reserves not against deposits but against assets or against both. At the present juncture, it is impossible to surmise the detailed implications of such an arrangement but, if the change in the method of prescribing reserve

requirements takes place, it is likely to face the same opposition which the present method faces in addition to the difficulties of administration and fine calculations.

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