

FEDERAL RESERVE BANK OPERATIONS

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The Federal Reserve System, in addition to conducting monetary policy and supervising banks, performs a variety of regular services for member banks, the U. S. Government, and the public. My assignment is to discuss some of the principal service functions -- called operations -- of the Federal Reserve Banks.

In addition to reviewing a few of the major operations of the Reserve Banks -- collecting and transferring funds, distributing currency, handling member bank reserves, and fiscal agency functions -- I will relate some aspects of each to the major functions of the System -- that is, monetary policy. I note that open market operations and the discounting function are covered in other parts of your program, and therefore will not comment on them. Certain other activities, such as safekeeping of securities for member banks, protection, and personnel administration, need little explanation and have little bearing on monetary policy. I will omit these also.

Collecting and Transferring Funds

The largest operation of a Reserve Bank, measured by number of employees, is collecting and transferring funds.

Most large financial transactions and many small purchases are conducted by transferring bank deposits. By value, over 95 per cent of all transactions are conducted by checks drawn on, or by other transfers of, demand deposits in commercial banks.

The use of checking accounts by individuals and businesses is facilitated by the service of the Federal Reserve Banks in clearing and collecting checks, in providing wire transfer services, and by furnishing a mechanism through which commercial banks settle for the funds cleared and collected.

The procedure is simple. Suppose a manufacturer in Dallas sells \$30,000 of equipment to a dealer in St. Louis and receives in payment a check drawn on a St. Louis bank. The manufacturer deposits the check in his Dallas bank. The Dallas commercial bank sends the check to the Federal Reserve Bank of Dallas for credit in its reserve account. The Dallas Reserve Bank forwards the check to the Federal Reserve Bank of St. Louis, which in turn sends it to the St. Louis commercial bank. The St. Louis commercial bank charges the check to the account of the dealer who wrote it and has the amount charged to its own reserve account at the St. Louis Federal Reserve. The St. Louis "Fed" remits the amount to the Dallas "Fed" through the Interdistrict Settlement Fund. Of course, at times the procedure is shortened and simplified by the Dallas commercial

bank sending the check directly to the St. Louis Federal Reserve for collection, but the above description outlines the basic check collection procedure.

The volume of checks handled by the Federal Reserve Banks has grown rapidly over the years. In 1940, the System handled 1.2 billion checks and last year, 6.5 billion. In dollar amount, the upward trend has been more pronounced, from \$280 billion in 1940 to almost \$3 trillion in 1969.

Over the years the process of clearing and collecting checks has been greatly shortened and simplified by innovations such as the conversion to electronic equipment for the processing of checks. At the St. Louis Federal Reserve Bank we are currently processing about 97 per cent of our checks on high-speed computers.

There is much talk about electronic impulses replacing checks. Some expect this "checkless society" to appear at some dramatic moment eight or ten years from now, when it becomes economically feasible, and the burden of check handling becomes unbearable. Actually, the process of electronic take-over is quite far advanced. There has been a growing emphasis on telegraphic transfer of funds -- another service which the System provides to banks in order to speed the movement of funds around the country. In 1969 the dollar volume of checks at the

St. Louis bank was 3.4 per cent greater than in 1968, while the wire transfer of funds rose 45 per cent. In 1969 the St. Louis Bank transferred \$245 billion by wire, or 70 per cent more than the \$140 billion of checks processed. The shift to automation is proceeding at an accelerated pace.

Reserve Banks do not give immediate credit for all checks deposited with them for collection. Credit is deferred for one or two business days within the continental U. S. to allow time for out-of-town checks to reach the banks on which they are drawn. After that, the member bank's reserve account is automatically credited. In our illustration, the Dallas commercial bank would be given credit for the check drawn in St. Louis after one day.

Since the time actually taken to collect checks is often longer than that allowed in the schedule, a type of Federal Reserve credit - called float - comes into existence, adding directly to member bank reserves just as do gold inflows and System purchases of Government securities. The average level of float, \$2.5 billion in 1969, is no problem for monetary management the System merely holds fewer securities than it would if float were less or did not exist.

However, wide fluctuations in float have been of concern to monetary managers. Movements in float are dependent upon any factor affecting the amount of checks handled and their

collection time, such as changes in the number of checks written, rail or airline strikes, weather conditions which affect airline schedules, and varying speeds of check handling. Float frequently changes as much as \$400 million a day, sometimes moving more than \$800 million within a brief period.

Because float is the biggest factor influencing bank reserves on many days, monetary managers have given it much attention, addressing themselves to such questions as "How can it be practically eliminated or its fluctuations reduced in amplitude?" or "How can its movements be predicted so that offsetting actions can be taken?"

Some who have been concerned about float have felt that the prime emphasis in monetary management should be to attain and maintain a given tone or pressure in the money market, as measured by Federal funds rates, other short-term interest rates, free reserves of member banks and feelings of major money market participants. Movements in float affect these variables greatly nearly every day and every week.

Another view of monetary management, and one which I prefer, is that the central bank should have only a secondary interest in day-to-day money market conditions. Although float affects total member bank reserves rather drastically in short periods of time, the subject has probably been given more emphasis than it deserves. Equating short-run fluctuations in

the demands and supplies of funds is the function of the commercial banks, especially the large correspondent banks, Government bond dealers, and other money market participants. The central bank should only enter this market so as to avoid serious knots which might cause disruption in economic activity and not merely to reduce fluctuations in short-term interest rates.

The prime function of monetary management, according to this second view, is to influence economic activity through controlling the growth of monetary aggregates, such as total member bank reserves, commercial bank credit, and the money supply. In this quantitative approach less emphasis is given to short-run control -- both because daily data are not available on most aggregates and because our theories of effect on economic activity are based on longer term trends. Injections or withdrawals of reserves because of float are nearly always temporary. Hence, even though float movements do affect monetary aggregates we tend to be less concerned about it because over a relevant period of monetary control, say three or four months, it is likely to have little influence on the rate of increase in the monetary aggregates.

Distributing Currency

A second major operation of a Reserve Bank is the

distribution of currency and coin. The ready availability of currency at Reserve Banks enables commercial banks to provide the amounts and kinds of currency that people in their communities desire.

When member banks need to replenish their currency supply, they order it from their Reserve Bank and have it charged to their reserve account. Conversely, if a bank has excess currency on hand, it may deposit currency in the Reserve Bank and receive credit in its reserve account. Last year the twelve Federal Reserve banks handled \$1.4 billion of coin and \$43 billion of currency.

Movements of currency into and out of the banking system have a two-fold monetary impact. First, movements of currency between the public and banks affect the volume of bank reserves, the base upon which monetary expansion is built. Second, currency in the hands of the public is part of the money supply, a crucial monetary variable.

The effect of currency on member bank reserves can easily be overemphasized. Currency movements, unlike those in float, may proceed in one direction for an extended period. For example, for several months every fall there is a pronounced flow of currency into circulation, reaching a peak just before Christmas. Also, an expanding economy will produce a trend flow of currency into circulation. These broad seasonal and trend

movements can be readily detected and their impact offset, and generally they do not cause the monetary managers much concern.

On the other hand, like float, there are many irregular movements of currency between banks and the public. Such movements raise great problems for those seeking to foster a given degree of money market restraint or ease from day-to-day or even week-to-week. To those of us focusing on growth rates of bank reserves, bank credit and money over several months, however, these movements are of relatively little importance since they are largely offsetting.

Currency -- as previously stated -- has a second implication for monetary management. Currency is part of the nation's money supply, and consequently some feel it is of particular importance to monetary authorities. Although we at St. Louis are strong believers in the monetary aggregate approach and follow money developments closely, we feel that currency has been overstressed in the literature on money and banking.

Our studies indicate the varying growth rates of currency have reflected primarily changes in the demand for a hand-to-hand medium of exchange. When sales which typically utilize currency have risen, currency in circulation has usually increased. When such sales have declined, currency has declined. Actions of the Federal Reserve in supplying reserves to the banking system have

had little direct influence on the volume of currency outstanding.

On the other hand, the rates of change in demand deposits are related to changes in member bank reserves available for demand deposits. The desire by the public for demand deposits under any given conditions either to hold or to spend has probably had only a slight impact on the total volume of demand deposits.

Since 1950, changes in the rate of growth in currency have tended to coincide with, or lag slightly behind, movements in spending. Over the same period, changes in the growth rates of demand deposits have usually preceded changes in economic activity.

The amount of currency holdings -- like most other assets -- is determined by the holder on the basis of his income, interest rates, prices of other goods, tastes, and other conditions. He is in equilibrium until one or more of these factors change.

The aggregate volume of demand deposits, however, does not respond automatically to changes in the public's desire for them. Movements in these deposits initially reflect changes in reserves available to banks. Hence, the public may temporarily hold more or less of its wealth in these balances than it prefers, given existing incomes, interest rates and so forth. The resulting disequilibrium position may be a factor in stimulating or dampening economic activity as individuals increase or decrease

their spending or investing in an effort to adjust their deposit balances to desired levels. Thus, demand deposits may be a key monetary variable in our economic system, distinct in nature from currency and other assets.

We have generally accepted movements in money, as generally defined to include demand deposits plus currency, as a measure of the thrust of monetary action. This is because money generally moves at about the same rate as the demand deposit component, and money is used by a wider group of analysts. However, if movements of currency deviate so greatly that money and demand deposits move in significantly different ways, our evidence would indicate a preference for relying more heavily on the demand deposit component and largely disregarding movements in currency.

Member Bank Reserve Accounts

The third operation we might discuss is member bank reserve accounts. A substantial part of the daily work of a Reserve Bank relates to member bank reserve accounts. Member banks use their reserve accounts -- that is, their deposits in Reserve Banks -- much as individuals use their checking accounts in day-to-day transactions. Banks draw on them for making payments and replenish them with funds that are received. For example, entries are made in these accounts as member banks obtain currency to pay out to their customers or as they redeposit currency in excess of the amount needed

for circulation, and as checks are collected and cleared. Other entries arise as Treasury deposits are transferred from member banks to the Federal Reserve Banks, or as funds are transferred by telegraph from a bank in one Reserve district to another, or as a bank borrows from, or makes repayment to, a Reserve Bank.

By law, member banks must keep a portion of their deposits in reserves, either in the form of cash in vault or reserves (deposits) in their Reserve Bank. For reserve city banks, reserves at the present time must average at least 3 per cent of savings deposits and of the first \$5 million of time deposits and 6 per cent of the excess and 17 per cent of the first \$5 million of demand deposits and 17 1/2 per cent of the excess. For other member banks, reserves must also average 3 per cent of savings deposits and of the first \$5 million of time deposits and 6 per cent of the excess. These so-called country banks must hold 12 1/2 per cent of the first \$5 million of demand deposits and 13 per cent of the excess.

The System derives some benefits in the monetary policy area from handling member bank reserve accounts. Monetary actions -- whether open market operations, discounting, or changing reserve requirement percentages -- have their initial impact on demand for or supply of bank reserves. Bank reserves, in turn, set a maximum on, and determine to a

great extent, bank deposits, bank credit and the money supply. These proximate variables affect spending, employment, prices and other economic conditions.

Monetary policy, then, is largely a matter of proper control of the reserves of member banks. By processing the flows of funds through these reserve balances, the forces affecting reserves can be isolated, analyzed, and offset or supplemented as desired. Much of the effort in monetary management is devoted to controlling member bank reserves. Some have felt that great emphasis should be devoted to attaining a level and minimizing short-run movements in free reserves (that is, excess reserves less borrowings). We at St. Louis feel that such measures of "tone" and "pressure" are inadequate and frequently misleading, since most movements come from changing credit demands. As a result, growth of bank credit and money may proceed at almost any rate with a given free reserve level, depending on demands for credit.

The major focus, in our view, should be on seeking a trend in the growth of total reserves over a period of several months, which will cause the growth rate of money to accelerate if economic expansion is desired and to decelerate if economic restraint is desired. In short, we feel monetary actions are more appropriately judged by rates of change in money rather than the feel of the market which may be largely influenced by feedback effects from the rest of the economy.

Changing reserve requirement percentages, as you know, is one of the major policy tools of the System, and since this tool was not listed on the agenda for discussion at this Seminar, I shall comment on it briefly. At one time, it was thought that reserve requirements were beneficial in that they assured a desirable minimum of commercial bank liquidity. However, funds that were legally impounded by requirements could not be utilized for meeting cash needs, and other more efficient methods provide bank liquidity, such as lending by the Reserve Banks.

Reserve requirements, however, limit the bank credit and money expansion from a given reserve base, and have been retained for this purpose. Questions might be raised whether or not a specific reserve requirement is actually needed or is most efficient, but most monetary theorists have felt that requirements are of some aid in managing the money stock.

In recent years, it appears that requirements have been changing their function again, and we at the St. Louis bank are not certain that the changes have been for the better. It seems that most changes have been in the direction of weakening the link between bank reserves and money, and of utilizing this mechanism for influencing the allocation of credit.

Weakening of the link between reserves and money has resulted from a proliferation of requirements, by type of bank, by type of deposit, and by size of deposit. Hence, as funds flow through the economy, the amount of money that can be supported

by a given volume of reserves changes. Then, too, reserve requirements have been changed from a percentage of deposits currently held to a percentage of deposits held two reserve periods earlier with a 2 per cent carry forward of excesses or deficiencies. This was presumably instituted to aid banks in keeping excess reserves to a minimum, but such a procedure complicates control of the money stock by the Federal Reserve System.

Recent examples of the use of reserve requirements for credit control purposes include the following. Placing a 10 per cent reserve requirement on increases in certain Euro-dollar borrowings. This was intended to moderate the flow of Euro-dollars to U. S. banks in light of heavy reliance of some U. S. banks on Euro-dollar borrowings to avoid credit stringency, and to curb the repercussions on foreign monetary reserves and financial markets. Another change involves including certain Federal funds acquisitions as deposits for reserve requirement purposes. In addition, the Board has proposed placing reserve requirements on certain types of bank related commercial paper and including more subordinated notes and debentures as deposits subject to reserve requirements. Also, I understand there is a proposal in Congress to provide some reduction in required reserves for those funds lent to finance housing.

We seriously question this trend toward using reserve

requirements as a selective credit control. Not only do they raise problems of enforcement, requiring more and more regulations to prevent ingenious market participants from avoiding their effect, but they also misallocate funds. In addition, they reduce the relationship between System actions and the movement of key monetary aggregates.

Fiscal Agency Functions

The last operation I plan to discuss is that of fiscal agency. The twelve Federal Reserve Banks carry the principal checking accounts of the U. S. Treasury, handle much of the work entailed in issuing and redeeming Government obligations, and perform numerous other important fiscal duties for the U. S. Government.

The Government is continuously receiving and spending funds in all parts of the United States. Its receipts come mainly from taxpayers and purchasers of Government securities and are deposited eventually in the Federal Reserve Banks to the credit of the Treasury. Its funds are disbursed mostly by check, and the checks are charged to Treasury accounts at the Reserve Banks.

When the Treasury offers a new issue of Government securities, the Reserve Banks send out subscription forms; receive applications from those who wish to buy; make allotments of securities in accordance with instructions from the Treasury;

deliver the securities to the purchasers; receive payment for them; credit the amounts received to Treasury accounts; make exchanges of denominations or kinds; pay interest coupons by charging the Treasury's account; and redeem securities as they mature.

Each Federal Reserve Bank administers for the Treasury the "tax and loan" deposit accounts of the banks in its district. Tax and loan accounts are merely Treasury demand deposits in commercial banks. The main purpose of these deposits is to permit the withdrawal of funds from commercial banks by the Treasury to be timed closer to Treasury expenditures which inject funds into the System. Thus, some tax funds and receipts from security sales are left temporarily in tax and loan deposits in commercial banks. When the Treasury desires to increase its demand deposit account at the Federal Reserve Bank, they are "called" into the Reserve Banks. In this way the impact on the money market of Treasury receipts and expenditures that come at different times is reduced.

When Treasury funds are transferred from commercial banks into the Reserve Banks, member bank reserves are reduced. On the other hand, Treasury expenditures from funds in Reserve Banks add to member bank reserves. These activities have an impact on reserves similar to that of float movements and irregular fluctuations in currency. As with float and currency, those

monetary managers who desire a prescribed market tone, as a measure of monetary action, find these short-run fluctuations in the Treasury's balances at the Reserve Banks of extreme importance. But, as you probably realize by now, I feel monetary management should concern itself much more with trends in total reserves and other aggregative measures over a period of several months.

Because of the relationship between the Treasury and Federal Reserve and the need of the Treasury to borrow very large amounts of funds from time-to-time, a practice called "even keel" during periods of Treasury financing has developed. Even keel means not changing, or giving the impression of changing monetary policy during a period of Treasury financing. In practice, it means attempting to prevent significant changes in market interest rates and other market conditions for a period beginning just before a new issue is announced until it is distributed and a reasonable time has elapsed for "digestion." Even keel has the disadvantage of shifting to periods before or after such financings whatever changes in monetary action may be appropriate in the prevailing economic situation from the standpoint of the public interest.

There is no legal authority for even keel, but it has a long tradition both in this country and abroad. It is primarily based on a lack of faith in the ability of a free market to handle

efficiently large Government financings.

We at St. Louis feel the practice should be discontinued or at least moderated greatly. The Treasury is a frequent borrower, and when combined with other periods of constraint on action, it was found that 55 per cent of the time from early 1962 to the end of 1969 the Federal Reserve was "even keeling." Even keel is a serious impediment in the path of monetary action, and for those of us who feel that proper monetary action is desirable for the public good, the price of even keel is high.

Oddly enough, even keel, although it does constrain monetary policy, has not been effective as a market stabilizing device. Short-term interest rates have fluctuated nearly as much under even keel as in other periods. There does not appear to be any benefit to the Treasury from such operations in terms of obtaining funds at a lower average rate; the ultimate buyer of securities is not fooled by such activities.

In conclusion, I have reviewed briefly four of our major service functions -- collecting and transferring funds, currency and coin, member bank reserve accounts and fiscal agency. They all relate to the primary objective of the System -- that is, sound monetary actions.

Reference has been made to the two broad schools of monetary management. First, those who believe monetary

authorities should focus on market forces in the short-run, seeking firmer conditions when the economy is booming, and seeking easier conditions when the economy has slackened. These analysts are constantly examining movements in float, currency, Treasury deposits and the other forces affecting member banks reserves.

The other school places stress on controlling monetary aggregates over a period of several months, increasing the rates of growth if expansion is desired and reducing them if restraint is desired. Concentration on the market forces from day-to-day, according to this group, may be misleading since with any degree of pressure in the money market the aggregates may expand at any rate, depending on the strength of credit demands. Consequently, those in the second school place much less emphasis on the day-to-day movements in float, currency and Treasury deposits.

The difference between the two views is more than academic or semantic. From early 1967 to early 1969, the "pressure" school said monetary actions become more restrictive, as evidenced by the rise in interest rates and the tighter money market conditions. The "aggregate" group came to the exactly opposite interpretation, that is, monetary actions became more expansive, as evidenced by the rapid rate of growth in bank reserves, bank credit and money.

I contend that if more attention had been placed on monetary aggregates and less on the pressure of transient indicators, we could have avoided much of the current inflation.