

FEDERAL RESERVE BANK OPERATIONS

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To
Central Banking Seminar
Federal Reserve Bank of Dallas
Dallas, Texas
March 12, 1973

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 the major operations of the Reserve Banks -- collecting and transferring funds, distributing currency, maintaining member banks reserve accounts, and performing fiscal agency functions -- I will relate some aspects of each to the chief function of the System -- that is, the conduct of monetary policy. Certain other activities -- such as safekeeping of securities for member banks, bank protection, and personnel administration -- require little explanation and have little bearing on monetary policy. I will omit these.

Collecting and Transferring Funds

The largest operation of a Reserve Bank, in terms of number of employees, is collecting and transferring funds. In dollar value, over 95 percent of all transactions are conducted by transferring commercial bank demand deposits through checks or other means.

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 in furnishing a mechanism through which commercial banks settle for the funds cleared and collected.

The basic check-clearing process is simple. Suppose a manufacturer in Dallas sells \$50,000 worth 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 deducts the amount from the account of the dealer who wrote the check, and has the amount deducted from its own reserve account at the St. Louis Federal Reserve Bank. The St. Louis "Fed" remits the amount to

the Dallas "Fed" through the Interdistrict Settlement Fund. At the same time, the Dallas Fed credits the reserve account of the commercial bank in its District. Of course, at times the procedure may be shortened and simplified by the Dallas commercial bank sending the check directly to the St. Louis Federal Reserve Bank 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; last year, 8.5 billion checks were cleared through the System. In dollar amount, the upward trend has been even more pronounced -- from \$280 billion in 1940 to about \$4 trillion in 1972.

Over the years this increasing volume of checks has necessitated continuous improvements in check-clearing procedures. Use of the high-speed computer has been an important step in this direction. Today, virtually all checks cleared through the Federal Reserve Banks are processed by this means.

Despite the improvements, check clearing remains a labor intensive operation. Given the rate at which check volume continues to grow, even computer-assisted collection will eventually be inadequate. Consequently, still more efficient means of funds transfer are being investigated and developed. The goal of such

efforts is an "Electronic Funds Transfer System" -- EFTS for short -- in which electronic signals will replace checks as the principal medium of payment.

Although complete evolution to such a system will take a number of years, a substantial amount of funds are already transferred by electronic means through the Federal Reserve's computerized Communications Network. The dollar volume of these wire transfers is growing faster than the dollar volume of checks processed, spurred in part by the removal of service charges for member banks on transfers of \$1,000 or more. For example, in 1972 the dollar volume of checks at the St. Louis Federal Reserve Bank and its branches was 10 percent greater than in 1971, while the volume of funds transferred by wire rose 14 percent. The St. Louis Reserve Bank transferred \$397 billion by wire in 1972, compared with \$171 billion worth of checks processed. Still greater use of wire transfers is anticipated, as commercial banks install terminals with direct access to the Federal Reserve Network, thereby eliminating the need for time consuming phone calls to the Fed's wire transfer department.

Even more dramatic experiments in Electronic Funds Transfer are taking place across the country. Perhaps the best known of these are the SCOPE project in California and the COPE project in Atlanta. The Federal Reserve Banks of San Francisco and

Atlanta are working with commercial bankers in their respective areas to develop systems in which "paperless entries" will replace checks for certain types of transactions. Developments like these are almost certain to continue. Most of the proposed checkless-cashless payments systems envision an organization much like the present one, with banks providing the interface between individuals and businesses, and Federal Reserve Banks interfacing between commercial banks.

At this point I would like to digress for a moment. The movement towards a more highly automated payments mechanism has significant implications for monetary policy as well as for the competitiveness and profitability of commercial banks. Yet, these are areas in which our knowledge is very limited. It seems likely that these developments will influence the public's desired average cash balances and, therefore, the income velocity of the money supply. Furthermore, the multiplier relating the money supply to a measure of bank reserves will no doubt change as the public's desired relative holdings of currency, demand deposits, and time deposits change. These are areas in which I believe substantial research effort can profitably be devoted in years to come.

During the period of transition to the Electronic Funds Transfer System, the Federal Reserve has instituted a program designed to eliminate unnecessary handling of checks and accelerate check collection. Regional Check Processing Centers, or RCPCs,

have been established at strategic locations around the country to provide expanded zones for overnight clearing services. More than 30 such centers began operation in 1972. The increase in check-clearing speed for banks in these outlying areas was not costless, however. Additional personnel and new transportation arrangements were required by the RCPC operation. RCPC operation costs are borne entirely by the Reserve Banks and thus, ultimately, by the taxpayer.

In some areas RCPCs ran into early operating difficulties. A large increase in items presented for clearance by banks not previously using Federal Reserve check clearing facilities, combined with seasonal increases in the number of checks, resulted in slowdowns in check clearing.

Such slowdowns can result in an increase in a form of Federal Reserve credit known as "hold-over float." Float, of any kind, results when a bank is given credit for a check before the Reserve Bank collects from the bank on which the check is drawn. Credit for checks is passed according to a schedule which is predicated on normal collection times. The time actually taken to collect the checks is often longer than that allowed in the schedule. The float which results from delayed collection is classified as hold-over float, remittance float, or transportation float, depending on the source of the delay. Float adds directly to member bank reserves, just as do gold inflows and System purchases of Government securi-

ties. The average level of float, \$3.3 billion in 1972, is no problem for monetary management - the System merely holds fewer securities than it would if float were less or did not exist.

However, large 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, and on occasion changes by more than \$800 million within a brief period.

Since float is the biggest single factor influencing bank reserves on some 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?"

At least two viewpoints exist as to the proper approach required to deal with this problem. Some who have been concerned about float have felt that the primary emphasis in monetary management should be to maintain a given "tone" or "posture" in the money market. This tone is generally measured by the Federal funds rate, other short-term interest rates, free reserves of member banks and the feelings of major money market participants. Fluctuations in

float affect these variables greatly nearly every day and every week. Consequently, those who hold this view of monetary management desire to keep float, or at least fluctuations in float, to a minimum.

As a body which generally has been concerned with float, the Board of Governors in 1972 took steps intended to reduce the average level of float. One such step involved the establishment of the RCPCs which I described earlier. Another step was the amendment to Regulation J, which was implemented last November. Before this change took place, banks outside overnight check-clearing zones were able to delay payment to the Reserve Bank for one or more days after being presented a check drawn on them. This gave rise to a fourth type of float called "time schedule float." All banks using the Federal Reserve check collection system must now remit for checks drawn against them in immediately available funds the same day the checks are presented for payment. The effect of this amendment was to eliminate "time schedule float." Before it was eliminated, this type of float accounted for about 65 percent of the total.

The reduction in float that was expected to result from these changes did not immediately materialize, however. In fact, the average level of float actually increased early this year, largely because of the previously mentioned initial difficulties associated with RCPC check clearing operations.

Although changes in float have a considerable effect on total member bank reserves over short periods of time, the subject probably has been given more emphasis than it deserves. The view of monetary management that I prefer is that these day-to-day money market conditions should be of only secondary interest to the central bank. Equating short-run fluctuations in the demands for 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 primary 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, the monetary base, 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 studies of the effects of monetary actions on economic activity are based on longer-term trends. Fluctuations in bank reserves because of float are always temporary. Hence, even though float movements do affect monetary aggregates on a daily or weekly basis, we tend to be less concerned about them. Over a relevant period of monetary control, say three or four months, float movements are 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 coin and currency. 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 desire to replenish their currency supply, they order it from their Reserve Bank and have it charged to their reserve account. Conversely, if a member 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 over nine billion coins and over four and one-half billion pieces 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 deposit expansion is built. Second, currency in the hands of the public is one component of the money supply, a crucial monetary variable.

The effect of currency movements on member bank reserves can easily be overemphasized. Currency fluctuations, unlike those in float, may proceed in one direction for an extended period. For example, in the fall of every year there is a pronounced increase

in currency in circulation, reaching a peak just before Christmas. Also, an expanding economy will produce a trend flow of currency in 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 problems for those seeking to foster a desired money market posture from day-to-day or even week-to-week. To those of us focusing on growth rates of bank reserves, the monetary base, and the money stock over several months, however, these movements are of relatively little importance since they are largely offsetting.

Member Bank Reserve Accounts

The third operation we might discuss is the maintenance of member bank reserve accounts. By law, member banks must keep a portion of their deposits in reserves, either in the form of vault cash or deposits in their Reserve Bank. Reserve requirements at the present time vary from 8 percent on the first \$2 million of net demand deposits, to 17-1/2 percent on net demand deposits over \$400 million. On time deposits up to \$5 million and on savings deposits the requirement is 3 percent; on time deposits over \$5 million the requirement is 5 percent.

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 they receive. 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 desired for circulation. Entries also arise as checks are cleared and collected, as wire transfers are made, as Treasury deposits are transferred from member banks to the Reserve Banks, or as member banks borrow from or make repayment to Reserve Banks.

Member bank reserve accounts are also important for the conduct of monetary policy. Monetary actions -- whether open market operations, discounting, or changing reserve requirement percentages -- have their initial impact on the demand for or supply of bank reserves. Bank reserves, in turn, set a maximum on and determine, to a great extent, the amount of 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, although there is disagreement as to how this control should be exercised. In the past, some have felt that great emphasis should be devoted to attaining a level of, and

minimizing short-run movements in, so called "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.

The major focus, in our view, should be on seeking a target growth rate for a measure of reserve aggregates 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.

On occasion, it appears that the functions of reserve requirements have been changing, and we at the St. Louis Bank are not certain that such changes have been for the better. Some of the changes in recent years have been in the direction of utilizing this mechanism to influence the allocation of credit and thus weaken the link between bank reserves and money.

The link between reserves and money has been weakened by a proliferation of requirements on both type and 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 two percent carry-forward of excesses or deficiencies. This was presumably instituted to aid banks in reserve management, but such a procedure complicates short-run control of the money stock by the Federal Reserve System.

On the other hand, new reserve requirements which went into effect last November eliminated the old distinction between "reserve city banks" and "country banks" based on their location. Now all banks of equal deposit size, regardless of location, are subject to the same required reserve percentages. A given amount of reserves will no longer support more deposits in one bank than in another of the same deposit size. However, there is still a problem in that the money multiplier is influenced by shifts in deposits between large and small banks, and between member and nonmember banks.

Examples of the use of reserve requirements for credit control purposes include the following. A 20 percent reserve requirement has been placed on member bank balances above a specified base for 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. In addition, reserve requirements are imposed on commercial paper issued by subsidiaries of one-bank holding companies. From time to time there have also been proposals 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 distort the relationship between System actions and the movement of key monetary aggregates. Finally, they represent movements away from a free-market economy.

Fiscal Agency Functions

The last operation I plan to discuss is our role as fiscal agent. 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, which come mainly from taxpayers and purchasers of Government securities, are deposited eventually in the Federal Reserve Banks to the credit of the Treasury. Its funds are disbursed primarily 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 to, and receive applications from, those who wish to purchase. They make allotments of securities in accordance with instructions from the Treasury, then deliver the securities to the purchasers, crediting the amounts received to Treasury accounts. Funds are disbursed from the Treasury accounts when interest is paid on coupons and when securities are redeemed as they mature.

Each Federal Reserve Bank administers for the Treasury the "tax and loan" deposit accounts of the commercial 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 re-inject funds into the banking 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, these funds are "called" into the Reserve Banks. In this way the initial impact of Treasury transactions on the money market is minimized.

When Treasury funds are transferred from commercial banks to the Reserve Banks, member bank reserves are reduced. Conversely, Treasury expenditures of 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 I have indicated several times, 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 Treasury's practice of borrowing very large amounts of funds from time-to-time, the monetary managers feel an obligation to avoid changing, or at least not give the impression of changing, monetary policy during a period of Treasury financing. In practice, this means that the monetary authorities attempt to prevent significant changes in market interest rates and

other market conditions for a period beginning just before a new issue is announced and lasting until it is distributed and a reasonable time has elapsed for "digestion." One disadvantage of this practice is that the freedom to take monetary actions deemed appropriate for prevailing economic conditions is limited to periods either prior to or immediately following such financings.

There is no legal authority for this practice, but it has a long tradition both in this country and abroad. In my view, it is primarily based on a lack of faith in the ability of a free market to handle large Government financings efficiently. We at St. Louis feel the practice should be discontinued, or at least moderated greatly, since it has been, at times, a serious impediment in the path of appropriate monetary action, and for those of us who feel that proper monetary action is desirable for the public good, the price of "even keeling" Treasury financings is high.

Conclusion

In conclusion, I have reviewed briefly four of our major service functions -- collecting and transferring funds, distributing currency and coin, maintaining member bank reserve accounts, and serving as fiscal agent to the Government. 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 thought on monetary management. There are those who believe

monetary authorities should focus on market forces in the short run. These analysts are constantly examining short-run 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. During 1972, the "pressure" school said monetary actions became more restrictive, as evidenced by the rise in interest rates and the tighter money market conditions. The "aggregate" group came to the exact opposite interpretation; that is, monetary actions became more expansive, as evidenced by more rapid rates of growth in bank reserves, the monetary base, and the money stock. I contend that if more attention had been placed on monetary aggregates in the period since 1964, and less on the movements of transient indicators, we could have avoided much of the current inflation and experienced smaller fluctuations in production and employment.