The Banking System—Its Behavior in the Short Run

By PAUL MEEK and JACK W. COX*

The Federal Reserve System is concerned both with assuring that the country's monetary machinery functions smoothly from day to day and week to week and with helping to achieve the nation's economic goals over a longer horizon that stretches out into months and years. Monetary policy makers are naturally concerned primarily with the latter objective. But sorting out longer run trends in monetary data from the short-lived swings characteristic of a flexible banking system is a recurring analytical problem. In order to make judgments on whether monetary developments over a succession of weeks are adding up to the desired long-run result, it is necessary to understand in some detail how the banking system responds to short-run variations in demands for bank credit and deposits.

The present article examines two interrelated aspects of this problem. The first is the mechanism by which the banking system, in conjunction with Federal Reserve open market operations, responds to short-run changes in demands for funds by the economy as a whole. The second aspect is the mechanism by which short-run shifts in demands for bank credit and deposits impinge on particular groups of banks, with concomitant shifts in the distribution of reserves, deposits, and credit among these different groups of banks and associated changes in money market pressures. An understanding of these mechanisms is necessary for prompt assessment of whether developments over a period of weeks reflect normal responses to regularly recurring credit demands or more fundamental shifts in the financial atmosphere that may reflect new currents in the economy at large.

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MEETING THE ECONOMY'S SHORT-RUN CASH NEEDS

THE MECHANISM. The banking system functions on a day-to-day basis to provide currency and demand deposits on tap in order to meet the transactions and other money needs of the economy. As a result of weekly and monthly concentrations of payroll disbursements, quarterly corporate dividend and tax dates, holidays and vacations, and Treasury and private financings, the demand for cash balances is highly variable in the short run. It is not at all unusual for the economy's cash holdings to rise by $5 billion, or about 3 per cent, within two or three weeks and then to fall back about as far in the next few weeks. Moreover, the ebb and flow of payments within the banking system often result in large geographic shifts of commercial bank deposits and reserves within an even shorter period. Despite their magnitude, these special demands on the financial system are usually handled without real difficulty and without major disturbing effects on money market interest rates. Thus, the daily affairs of economic life proceed routinely in the confidence that liquid assets can be exchanged for demand deposits, that demand deposits can be turned into currency, and that payments can be made with currency, check, or wire as required. The uncertainties, risks, and costs associated with the payments mechanism are minimal.

The responsiveness of the banking system to the economy's changing need for cash stems both from operational policies of the Federal Reserve System and from the relative ease with which individual commercial banks are able to adjust their reserve positions in the face of shifting demands for cash balances and credit. In recent years the Federal Open Market Committee (FOMC) has generally instructed the Federal Reserve Bank of New York to conduct open market operations over

a given ensuing period in such a way as to maintain specified conditions in the money market while accommodating an expansion in aggregate bank reserves. Such an approach, revised as to details when conditions warrant, recognizes the extent to which the economy's cash demands at each season vary from one year to the next. It also recognizes that the variation within the year is large in relation to the growth in cash balances that takes place over the year as a whole. Except when policy is in the process of change, the Federal Reserve acts to maintain steady conditions in the money market by providing reserves promptly in the short run as required by the demands for cash that emerge from each period's particular constellation of economic forces and by the variation in other factors affecting reserves (float, for example). Subsequently, when cash needs recede, the System seeks to absorb redundant reserves—all in the context of specified money market rates, average levels of member bank borrowings from the Federal Reserve Banks, and free reserves. Once above a frictional minimum, member bank borrowings from the Reserve Banks tend to rise, or decline, as the Federal Reserve's actions fall short of, or exceed, the banking system's marginal reserve needs.

While the FOMC can instruct the Federal Reserve Bank of New York to accommodate week-to-week changes in reserves within a general framework of over-all pressure of ease or restraint on bank reserve positions, the Committee itself must necessarily be concerned with developments over a longer time span than just a few weeks. The Committee must weigh the actual behavior of the money supply, bank credit, and interest rates that emerges from week-to-week changes. As its policy judgments of the appropriate relation between monetary conditions and past and prospective economic developments change, the Committee alters its specification of the terms on which reserves are to be made available to the banking system. Thereby it seeks to influence credit terms and availability, and aggregate spending, in the interest of promoting national economic goals. In the very short run, the Federal Reserve's open market operations are mainly a response to shifting demands for cash balances rather than the instigator of the change in those balances. Over the longer run, however, monetary policy exerts the important influence that is generally attributed to it.

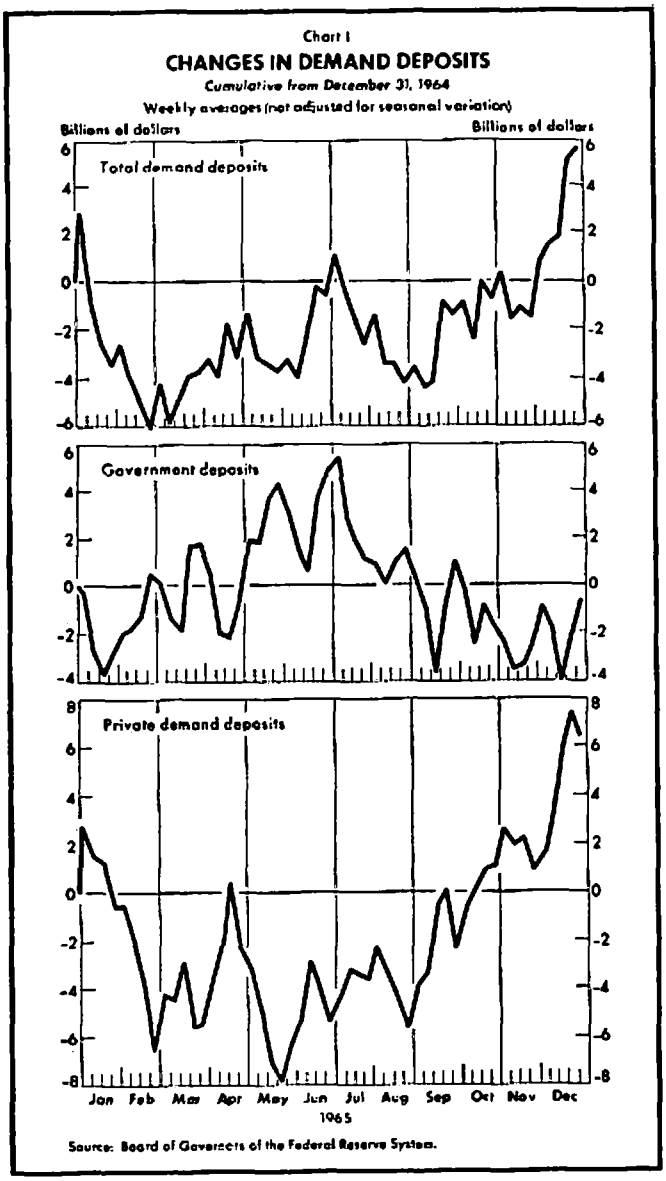
The banking system's short-run responsiveness to changing demands for credit and deposits is also due to the manner in which commercial banks conduct their daily operations. In a system of over 6,000 member banks, the individual bank has to be able to adjust quickly to the changes in its vault cash and its balance at the Federal Reserve Bank that result from the transactions of the bank or its customers. For day-to-day adjustments many banks rely on balances they keep with correspondent banks and on their ability to borrow (buy) or to lend (sell) Federal funds—balances Federal Reserve member banks keep on deposit with their Reserve Bank.[1] Member banks also have the privilege of borrowing directly from the Reserve Banks under the conditions stated in Regulation A.

The larger banks especially depend on the Federal funds market in keeping their reserve positions in line with their reserve requirements. Usually they step up their bids for Federal funds whenever they lose reserves from acquiring securities or from deposit outflows. They reduce their net demands on the Federal funds market, or become sellers of Federal funds, whenever their reserve positions improve temporarily. Changes in secondary reserves or in the volume of negotiable time certificates of deposit outstanding are, of course, likely to be set in motion by any protracted change in reserve positions. Nevertheless, the Federal funds market remains the most important short-run avenue of adjustment.

A good illustration of the way the banking system meets the economy's changing need for cash balances is provided by the quarterly dates on which corporations pay their Federal income taxes. On these dates, businesses borrow directly from banks and also exchange maturing negotiable time certificates of deposit for demand deposits in order to pay the Treasury. At the same time, the nonbank dealers in Government securities look to the banks to refinance securities returning from maturing repurchase agreements with corporations, and sales finance companies borrow from banks to pay off maturing paper held by tax-paying corporations. The counterpart of this large increase in bank loans is, of course, an expansion in demand deposits that corporations immediately pay over to the Treasury, which leaves them in Treasury Tax and Loan Accounts at commercial banks for the time being. With the required reserves of the banking system increasing rapidly because of the rise in deposits, banks step up their collective demand for Federal funds to meet their requirements. The Manager of the System Open Market Account, armed with forecasts based on past experience, sees that reserve availability rises, but at a rate geared to the demands actually emerging in the Federal funds market. Subsequently, the Treasury draws down its enlarged balances in the normal

[1] See Dorothy M. Nichols, *Trading in Federal Funds* (Board of Governors of the Federal Reserve System, 1965).

course of paying the Government's bills. These payments by the Treasury flow to individuals and to corporations, which are at the same time also acquiring deposits from their sales of goods and services across the nation. Loans at banks tend to be repaid, as some corporations reduce their indebtedness and others rebuild their holdings of short-term earning assets out of corporate cash flow. Declining deposits bring reductions in required reserves, the supply-demand balance in the Federal funds market shifts, and the System withdraws reserves to prevent the undue easing in the money market that would otherwise result from the reduction in cash needs.



The main outlines of the economy's variable need for demand deposits within every year are reasonably clear, although the exact size and timing of the movements change considerably from year to year. (The broad movements can be seen in the 1965 behavior presented in Chart I.) Total demand deposits decline precipitously in the first two months of the year and then rise irregularly to a peak around Christmas time. The private demand for deposits is particularly strong during the pre-Christmas shopping season when spending is high. At other times within the year, Federal financial operations lead to a bulge in total deposits at certain periods. In March, June, and September corporate tax payment dates are accompanied, as already indicated, by a surge in total deposits as the banking system creates the bulk of the deposits that are paid to the Treasury. Large Treasury cash financings sometimes leave a similar trace, although the gain in Treasury balances tends to be short-lived when such financings coincide with large Treasury cash needs. Thus, in early October 1965 when the Treasury sold $4 billion of March and June 1966 tax anticipation bills for cash, allowing banks to pay by crediting Treasury Tax and Loan Accounts, bank credit and deposits rose as payment was made for the new issue. However, the Treasury soon drew heavily on these balances to make payments, so that data on weekly average Treasury balances show a lesser increase.

The interaction of private and Government deposits underscores the extent to which the present monetary system facilitates the economizing of cash balances by economic units. Corporations—and increasingly state and municipal governments as well—plan and administer their cash flow with a view to keeping their cash holdings at a minimum consistent with their need to make payments. In effect, the banking system, as we have seen, stands ready to supply cash on demand to depositors and creditworthy borrowers so that working balances can be held quite low in relation to the volume of transactions. The ability of the banking system to do this without substantial fluctuations in money market interest rates is made possible, in turn, by Federal Reserve responsiveness to short-term shifts in the banking system's need for reserves.

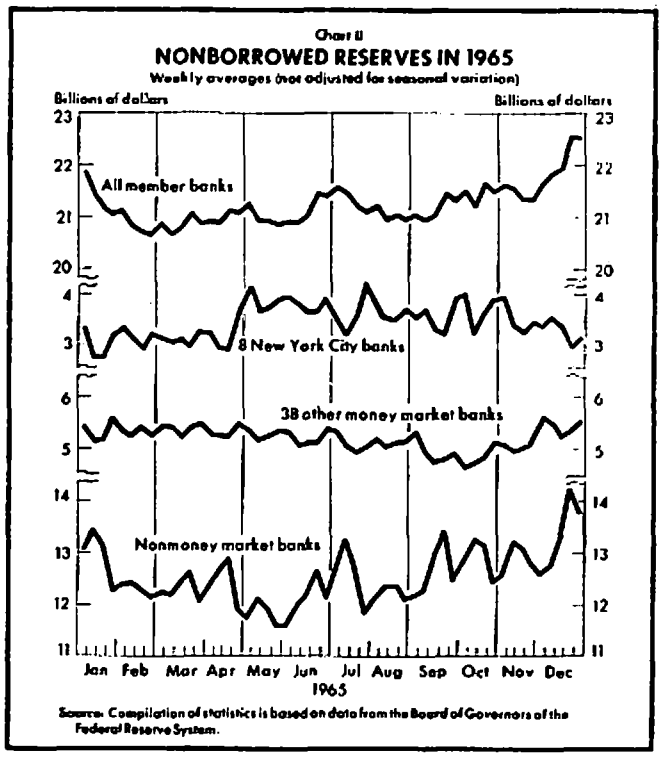
THE DISTRIBUTION OF MEMBER BANK RESERVES

The banking system not only expands and contracts to provide for the economy's changing need for cash balances, it also handles a large volume of cash transfers. These payments, which amount to billions of dollars daily, reflect the transactions of the banks' customers and the

lending and investment decisions of the banks themselves.[2] They produce large shifts of deposits and of bank reserves within the banking system. Understandably, the necessity of maintaining reserves at the required level makes member banks sensitive to shifts in the distribution of reserves that leave their reserves above or below required levels. These shifts may lead, in time, to variations in the availability of reserves in the Federal funds market and tend to put pressure on money market interest rates if compensating Federal Reserve action is not taken.

NONBORROWED RESERVES. A useful way to portray the distribution of reserves within the banking system is to calculate the reserve positions of major groups of member banks as they stand before recourse to the Federal funds market and the "discount window" of the Reserve Banks —in other words, the nonborrowed reserve positions of the banks in question.[3] This can be done directly for a group of eight New York City banks and of thirty-eight other money market banks outside New York City, for which data on Federal funds transactions are collected daily. For the remaining member banks, one can derive the nonborrowed reserve position because the net Federal funds purchases of the forty-six banks represent net sales by these "other" banks, henceforth to be called the "nonmoney market banks".[4]

A number of interesting points emerge from the resultant picture of reserve distribution. (See Chart II.) First, the nonborrowed reserve positions of the eight New York City banks and the nonmoney market banks are subject to larger variations than total nonborrowed reserves, reflecting large short-run shifts in reserve distribution that take place independently of the public's changing total demand for cash balances. Secondly, the eight New York City banks in the central money market bear the brunt of the short-run changes in reserve distribution that are spread over the reserve positions of the more than 6,000 nonmoney market banks. To be sure, the variations in the nonborrowed reserve positions of the nonmoney market banks are larger in absolute terms than those of the City banks, but they are smaller in relation to their reserve base. Faced with frequent reserve swings of 20 per cent or more, the New York City banks are the mainstay of the market for Federal funds, which greatly facilitates the management of their volatile reserve positions.



THE BASIC RESERVE POSITION. Individual banks are not concerned with their nonborrowed reserve position as such but with the extent to which nonborrowed reserves exceed or fall short of required reserves. It is the gap between reserves on hand and reserve requirements that indicates the volume of excess reserves to be disposed of,

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[2] In 1965 the volume of currency, checks, and wire transfers cleared through member bank reserve accounts at the twelve Reserve Banks and their twenty-four branches was about $25 billion daily. Debits to reserve accounts would be only about half this amount since this figure includes credits, as well as debits, to reserve accounts. Even with this adjustment, the turnover rate of member bank reserve deposits still averaged about 150 times per year or once every 1.5 business days. (Were it not for local clearing houses, the turnover rate would have been even higher since only the net effect or clearing house transactions are cleared through the reserve accounts.)

[3] Nonborrowed reserves equal total reserves minus net Federal funds purchases minus borrowings from Reserve Banks. Since the intergroup transfer of reserves through the Federal funds market washes out in the total, the sum of the nonborrowed reserve positions of the three bank groups utilized in this discussion is total nonborrowed reserves.

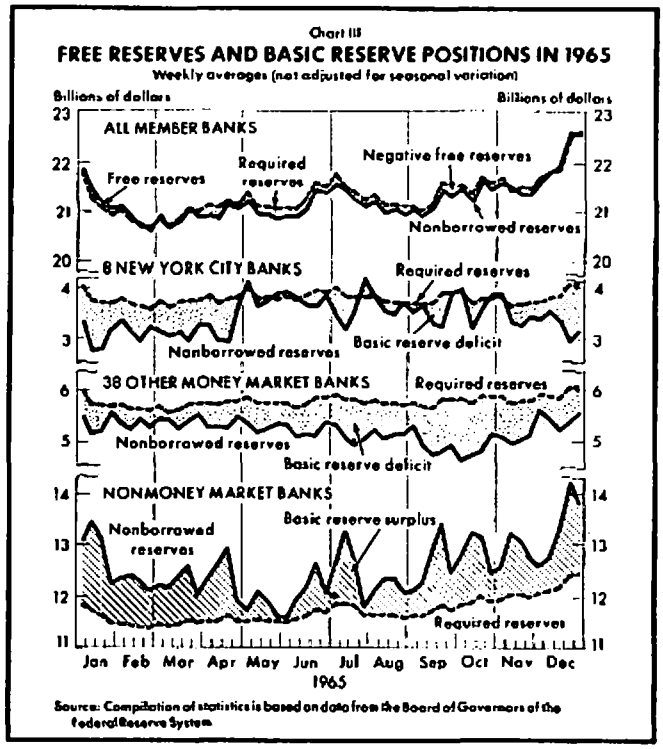
[4] The group of nonmoney market banks includes 159 reserve city banks and 6,000 "country" banks, which together account for about three fifths of member bank reserves. It should be noted that the Federal funds data used herein exclude net purchases of Federal funds from foreign agency banks, Government securities dealers, and a few others—purchases that are quite sizable for the New York City banks. In effect, this procedure treats such purchases as internal to the New York City banks—which appears to be approximately the case. It is believed that the resultant picture of reserve distribution between the eight, thirty-eight, and nonmoney market banks is a more meaningful one than if the agency banks and other sellers were included with the nonmoney market banks. Additional study is needed, however, before one can be sure that this choice is the best.

or the reserve deficiency that must be covered by borrowing in the Federal funds market, at the Federal Reserve Banks or elsewhere, and/or by asset adjustments. The term "basic reserve position" is used to designate this gap, either for an individual bank or for a group of banks. Equivalently, the basic reserve position may be defined as excess reserves less net Federal funds purchases less borrowings from the Federal Reserve Banks.[5] The shaded areas of Chart III indicate the basic reserve positions of the eight New York City banks, the thirty-eight other money market banks outside New York City, and the nonmoney market banks week by week in 1965. For the banking system as a whole the difference between nonborrowed and required reserves is the familiar measure, net free reserves, which can be either positive or negative.

Several important features of the banking system and the manner in which it functions emerge in Chart III. In the first place, it is apparent that System open market operations are quite successful, on the whole, in keeping nonborrowed reserves for the entire banking system moving in step with the large week-to-week changes in required reserves, which reflect primarily variations in demand deposits.[6] Over the year 1965, there were a number of changes in the instructions of the FOMC to the Manager of the System Account. Thus, the System exerted an increasing degree of pressure on member bank reserve positions early in the year, maintained about the same pressure until the rise in the Federal Reserve discount rate in December, and then allowed a more rapid growth of nonborrowed reserves in the wake of that move. Free reserves were gradually reduced and then became negative in the first part of the year, while member bank borrowings from the Reserve Banks rose to a $500 million to $600 million range that prevailed until December.

Differences in the roles of the three groups of banks are also apparent in Chart III. The eight New York City banks typically operated in 1965 with a sizable basic reserve deficiency, one that over the year averaged 10 per cent of required reserves. These banks are able to keep their earning assets higher than would be the case if they could not count on buying Federal funds in volume directly from their extensive network of correspondents as well as on garnering a sizable share of the supply of funds available through brokers in Federal funds. The large New York City banks are a major source of loans to business borrowers, accounting for one third of business loans at weekly reporting member banks at the end of 1965. It is probably significant that the periods of maximum pressure on these banks in 1965 were those in which business loans and bank credit nationally were growing at an accelerated pace. The New York City banks are also active as residual lenders to Government securities dealers—an activity that at times increases their demand for Federal funds.

Similarly the thirty-eight money market banks outside New York City are normally in a basic reserve deficit position—one which also averaged 10 per cent of their reserve requirements in 1965, a higher proportion than in earlier years. Much of the increase in pressure on member bank reserve positions in 1965 fell on these banks—in part, because they were less aggressive than the New York



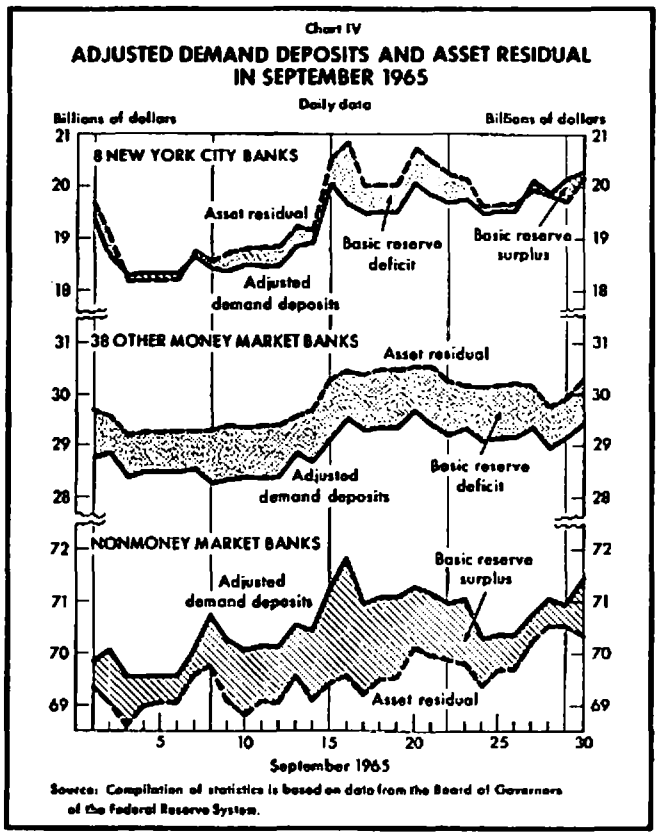
[5] Basic reserve position = nonborrowed reserves minus required reserves.
= (total reserves minus required reserves) minus net Federal funds purchases minus borrowings from Reserve Banks.
= excess reserves minus net Federal funds purchases minus borrowings from Reserve Banks.

[6] Of course, a generally steady gap between required and nonborrowed reserves—that is, a generally steady level of free or net borrowed reserves—does not imply that the rate of growth in bank credit or the money supply will necessarily remain steady. See "The Significance and Limitations of Free Reserves", this *Review* (November 1958), pages 162-67, for an early statement of this point within the Federal Reserve System.

City banks in competing for negotiable time certificates of deposit. Like the New York City banks, however, these thirty-eight money market banks outside New York have cultivated their correspondent banks as a source of Federal funds and are active in the Federal funds market; some of them also regularly finance Government securities dealers.

In contrast, the nonmoney market banks as a group have been consistent net suppliers of Federal funds to the money market banks. Presumably, a large proportion of the banks in this group prefer to operate with a basic reserve surplus position and sell off varying amounts of Federal funds as they gain or lose reserves from week to week. Their average basic reserve surplus in 1965 was equivalent to 7 per cent of required reserves.

The shifts in the distribution of reserves between the money market banks and those banks outside the money centers are of direct concern in the day-to-day conduct of open market policy. These shifts alone tend to change the balance of supply and demand in the Federal funds market. When reserves swing to the nonmoney market banks, for example, upward pressure is very likely to be exerted on the Federal funds rate since the reserves are widely dispersed among a large number of banks, some of whom do not even participate in the Federal funds market. Thus the money market banks cannot fully recapture the reserves lost as their basic reserve positions deteriorate. With the supply of Federal funds falling short of the enlarged demands of the money market banks, upward pressures on rates will develop and member bank borrowings from the Reserve Banks will rise—unless the System supplies new reserves through open market purchases. Conversely, a shift of reserves to the money center banks tends to concentrate reserves in those banks and reduce their net demand for Federal funds more than the supply from other banks falls. The Federal funds rate will tend to decline, and member bank borrowings from the Reserve Banks to fall, unless the System absorbs reserves.



FACTORS AFFECTING RESERVE DISTRIBUTION

The changing basic reserve positions of the three bank groups give a reasonably good picture of shifts in reserve distribution, but they tell very little of the dynamics of the banking system. To understand how the system functions, one must find out how the deposits and loans of the three groups of banks actually behave as the economy's total demands for cash balances and bank credit vary. Unfortunately, the balance-sheet data for all banks that are needed to provide such an analysis are not readily available. Nevertheless, it is possible to construct an approximate picture of the deposit and of the asset changes for the three bank groups on the basis of data on required reserves. The object is to isolate the movements in each bank group's basic reserve position stemming from changes in deposits, on the one hand, and from changes in assets, on the other.

First, assuming that large short-run changes in required reserves solely reflect demand deposit movements, one can inflate required reserve data for each of the three groups by a demand deposit multiplier to obtain a demand deposit equivalent.[7] If one subtracts from this deposit equivalent the associated change in required reserves, the result is a measure that reflects changes in the basic reserve position which stem from the deposit side of the

[7] Reserve requirements for the eight New York City banks and the thirty-eight other money market banks were taken as one sixth of demand deposits; requirements were taken as one seventh of demand deposits for the combination of reserve city and country banks included in the group of nonmoney market banks. These are approximately correct.

balance sheet. This measure is denoted "adjusted demand deposits". Secondly, as can be easily shown, a corresponding approximation of the loans and investments of each bank group can be derived by subtracting their basic reserve position from the adjusted demand deposits just described. The result (adjusted demand deposits less the basic reserve position) is called the "asset residual" and reflects changes in the basic reserve position that stem from the assets side of the balance sheet.

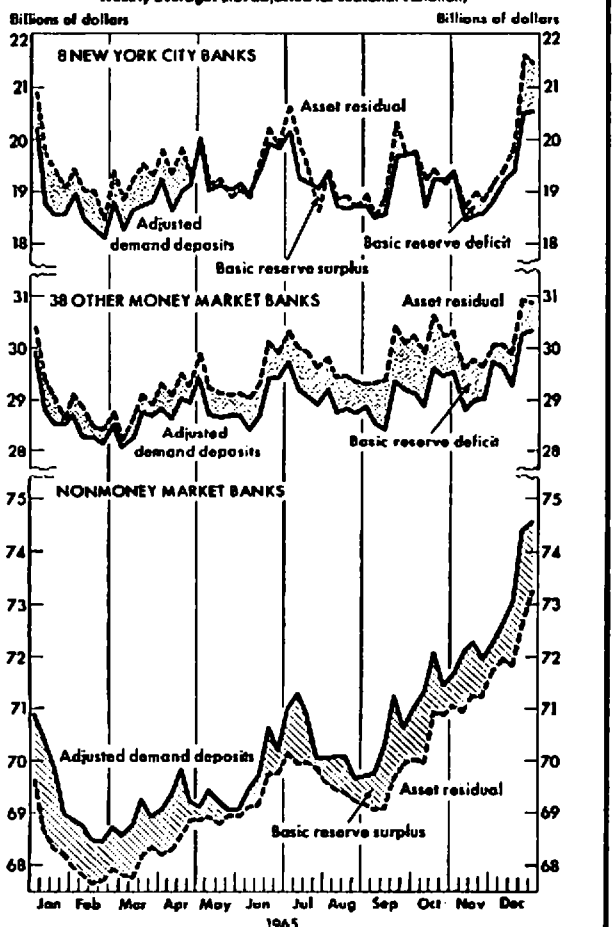
Using this procedure, one can present graphically the nature of the response of the banking system to the special demands of the corporate tax date that have already been discussed. Chart IV shows for each of the three major bank groups their adjusted demand deposits and asset residuals in September 1965, with the differences representing their basic reserve positions. The chart makes clear the source of the deterioration in the basic reserve position of the New York City banks that occurred on September 15, 1965, a quarterly corporate tax date. As economic units liquidated short-term assets and borrowed directly from the City banks on the tax date, assets of these banks rose more sharply than their deposits. The pressure on reserve positions generated in this way was sustained throughout the following week, as assets and deposits moved closely together near the higher levels to which they had jumped on the tax payment date. A similar, though less dramatic, increase in deposits and assets took place at the thirty-eight money market banks outside New York City. As described earlier, the money market banks then increased their net demands for Federal funds to cover their enlarged deficiencies, the supply-demand balance in that market shifted, and the Federal Reserve provided for the additional reserves needed to underwrite the expansion in deposits. The nonmoney market banks, on the other hand, experienced very little change in assets on September 15. The deposits of these banks, however, increased very sharply, reflecting shifts from the money market banks. The reserves thus gained enlarged the basic reserve surplus of the nonmoney market banks and permitted them to supply an expanded volume of Federal funds to that market.

Applying the same procedure to weekly average data on required reserves, one obtains in Chart V a broad picture of the week-to-week asset and deposit movements of the three groups of banks that underly the shifts in basic reserve positions previously shown in Chart III.[8] The sources of several of the major shifts in reserve distribution that took place during the year can be isolated

Chart V

ADJUSTED DEMAND DEPOSITS AND ASSET RESIDUAL IN 1965

Weekly averages (not adjusted for seasonal variation)



Source: Compilation of statistics is based on data from the Board of Governors of the Federal Reserve System.

[8] A number of biases are implicit in the framework. While the movements in the two series approximate reality in the short run, which is normally dominated by demand deposit movements, the cumulative growth in bank deposits and assets falls considerably short of actual growth because of the cumulative importance of time deposits. The asset residual, too, is really an asset-liability residual. A rise in the asset residual could just as well reflect a drop in certificates of deposit outstanding as a rise in assets, and indeed does account for a part of the rise in the asset residual in the weeks encompassing the quarterly corporate tax date. However, a comparison with actual Wednesday data on loans and investments of New York City weekly reporting banks suggests that the direction of the week-to-week movements in actual data is closely approximated by the framework—because of the short-run dominance of demand deposits movements. Finally, a technical inaccuracy in the weekly series stems from the fact that average required reserves relate to the deposits for the week ended each Tuesday rather than for the statement week ended on Wednesday. For present purposes, the distortion involved is not believed to be serious.

with the aid of Chart V. Thus, during late April and early May, deposits at the New York City banks rose very sharply as the Treasury redeposited with money center banks the proceeds of individual income tax payments on April 15 drawn from banks all over the country. The deposit inflow brought a marked improvement in the basic reserve positions of the City banks and a concomitant decline in the basic reserve surplus of the nonmoney market banks. The distribution of reserves shifted again in late June, however, as the money market banks accounted for the bulk of the credit and deposit expansion associated with the June corporate dividend and tax payment dates. With assets rising more rapidly than deposits at the New York City banks, these banks experienced a deterioration in their basic reserve position while the position of the nonmoney market banks improved as their deposits rose more rapidly than their assets. Subsequently, in July and August, there was a marked decline in total deposits as Government deposits fell back very sharply from an exceptionally high level in early July (Chart I). The fall in deposits at the nonmoney market banks was quite large. Since these banks as a group reduced their assets more slowly and with some time lag, their basic reserve surplus again declined. The onset of the September dividend and tax dates again brought a deterioration in the basic reserve positions of the New York City banks, as already described. In December, the New York City banks entered the dividend and tax period with a substantial basic reserve deficit. The deficit became very large indeed in late December as those banks encountered very heavy credit demands which led to a sharper rise in assets than in deposits.

INTRAMONTHLY MOVEMENTS. The flow of deposits, credit, and reserves that is evident during special periods of heavy demands for cash balances, apparently also occurs on a smaller scale within each month, reflecting primarily the settlement of accounts between economic units. Monthly payroll and trade-credit payments, although occurring throughout the month, are typically concentrated in the first part of each month. The intramonthly demand for cash rises between the end of the month and the tenth of the next month, and falls thereafter.[9] The money market banks apparently provide the bulk of the deposits. Large corporations meet their cash requirements directly by borrowing at the money market banks and/or by liquidating earning assets which, in turn, places additional loan demands on these banks from sales finance companies, Government securities dealers, and other money market institutions. The related increase in deposits, however, is widely dispersed throughout the economy with the settlement of accounts. Thus, the gain in assets at the money market banks exceeds their deposit additions, and reserves in the first part of each month flow from these banks to the nonmoney market banks. Reserves later return to the money market banks, as corporations repay loans or prepare for their next monthly payments by building up their earning assets and thus reducing the need of the money market institutions for bank loans.[10]

CONCLUDING COMMENT

It is clear that there are substantial short-run shifts in the demands placed by the economy on the banks for credit and deposits, as well as substantial short-run changes in the distribution within the banking system of these demands. Indeed, since increases in these demands appear to impinge primarily on the money market banks, such increases also set in motion shifts in the distribution of reserves, credit, and deposits within the banking system. Were it not for the ability of the Federal Reserve to supply additional reserves when needed through open market operations and the existence of a well-developed Federal funds market to redistribute reserves to the points of greatest stress, these shifting money market pressures might well lead to considerable instability in short-term interest rates. As it is, the rate pressures created by short-run shifts in demands are moderated. A knowledge of the possible sources, timing, and effects of these short-run and seasonal shifts in demands is necessary, not only for the Manager of the System Open Market Account as he acts on the basis of unfolding developments, but also for the Federal Open Market Committee and other analysts who try to sort out the effects of purely temporary and probably reversible phenomena from developments of more fundamental significance.

[9] This pattern is evident in the weekly seasonal factors for the demand deposit component of the Federal Reserve Board's money supply series. See "Revision of the Money Supply Series", *Federal Reserve Bulletin* (July 1965), page 943. The bulge in deposits in the first week in each month is also evident in Chart I.

[10] The intramonthly pattern of reserve distribution is also apparently augmented by the intramonthly swings in Federal Reserve float, together with Federal Reserve operations undertaken to offset the effect of float movements on the member bank reserve base. See "New Series on Federal Funds", *Federal Reserve Bulletin* (August 1964), page 948.