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FEDERAL RESERVE BANK of CLEVELAND

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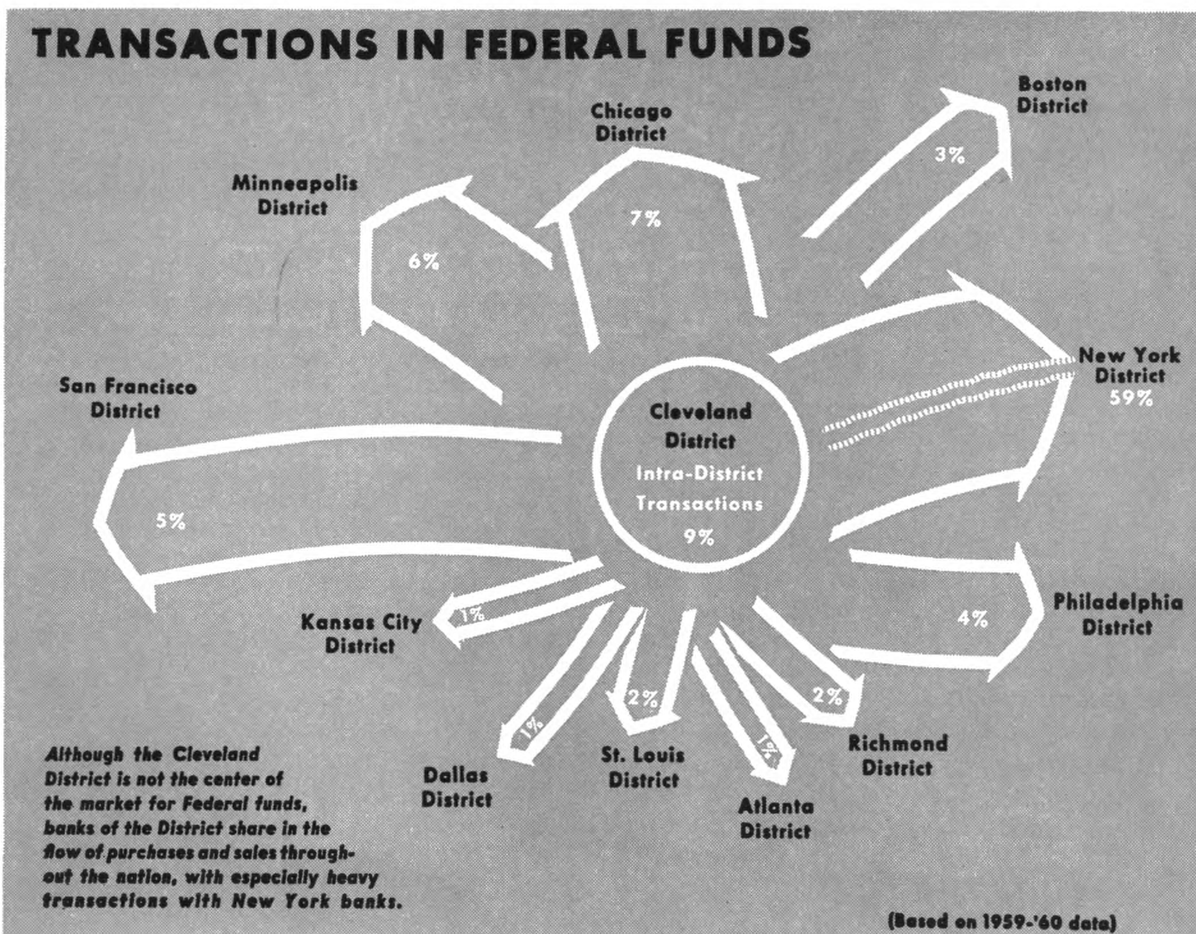


Trading In Bank Reserves

(A Year of Federal Funds Transactions in the Fourth District)

IN THE twelve-month period from September 1, 1959, through August 31, 1960, a group of banks in the Fourth Federal Reserve District bought and sold Federal funds, a special kind of "money", at the rate of $140 million a day. Such transactions involve the lending and borrowing of member bank reserve accounts at Federal Reserve banks. They amounted to more than $33 billion for Fourth District banks during the period under review.

It is well known that banks deal in money, but knowledge of this particular kind of money — Federal funds — is less widespread. Such transactions represent an additional use of bank reserves, rather than the creation of new sources of credit. The funds are made available from the excess reserves of member banks held on deposit with the Federal Reserve banks in accordance with the regulations of the Federal Reserve System. Any check drawn on a deposit or balance held with a Federal Reserve bank is payable *immediately,* in contrast to checks drawn on individuals, banks, or businesses which are payable through a clearing house on the following business day at the earliest. It is the funds which are available immediately in this way that are known as Federal funds. Thus when a member bank shifts its reserve balances at the Federal Reserve bank to another bank, it is transferring Federal funds.

Member banks are required to hold a certain percentage of their deposits as reserves. But on any given day, because of short-run deposit fluctuations, the reserves on deposit at the Federal Reserve bank may be more or less than the required volume. As a result, during the day some banks may have reserves in excess of what is legally required, while other banks may be correspondingly deficient. Membership in the Federal Reserve System carries with it the privilege of writing checks against excess reserve balances; however, the member banks do not receive interest on the excess reserves. Because of the latter feature, member banks have usually preferred to hold excess reserves at a minimum, or have tried to find other uses for the non-earning balances. One alternative lies in the Federal funds market, where excess reserves are bought and sold by banks (especially by the larger banks) on a somewhat informal basis.

Background

The dollar volume of Federal funds bought and sold throughout the nation has more than doubled in the last five years, and has increased twenty-fold since 1921, the first year in which such transactions took place. Banks in the Fourth District did not actively enter into the Federal funds market until after World War II, although one bank in the District bought and sold funds in the 1930's. Following its genesis in New York in 1921, trading in Federal funds spread quickly to the large money centers in the nation. The growth of the Federal funds market in the 1920's was stimulated by the participation of

Government securities dealers and by the investment frenzy of the era. Then, after the stock market crash of 1929, came a long period of low interest rates and substantial amounts of unused potential bank credit, so that trading in Federal funds was depressed until the postwar years when bank reserves became relatively scarce again.

During the postwar period, Federal funds activity has been stepped up appreciably, so that currently the average daily volume of Federal funds transactions in the nation ranges between $1 billion and $2 billion. A flow of funds as substantial as this obviously performs an important function in everyday banking operations. The review below covers a full year of Federal funds activity in the Fourth Federal Reserve District as part of a special study of such transactions over a two-year period.

Sales Greater Than Purchases

Of the total volume of all Federal funds transactions in the Fourth District in the year ended August 31, 1960, three-fifths of the transactions represented *sales* of funds by banks of the District while two-fifths consisted of *purchases* by such banks. Sales of funds exceeded purchases in nine of the twelve months in the period under review, indicating that the District banks trading in Federal funds on balance had excess reserves.

The net sales balance for the Fourth District is not unusual. A general tendency of sales of Federal funds by Fourth District banks to exceed purchases is largely explainable by two major factors: first, several of the very large District banks active in the market have apparently preferred to keep a supply of excess reserves as a precaution for unexpected deposit shifts; and second, a substantial number of the participating Fourth District banks have been banks with total assets less than $100 million. Since the smaller banks generally maintain sizeable excess reserve balances, more Federal funds have been made available in this District than have been sought. On the other hand, the banks which have purchased Federal funds have

Table I

NUMBER OF BANKS TRADING IN FEDERAL FUNDS AS OF MARCH 1, 1960

Fourth Federal Reserve District

Asset Size of Banks	Number of Years of Activity				
	More Than 10 Years	5-10 Years	2-5 Years	Less Than 2 Years	Total
$500 million or more...	3	2			5
$200-499 million....		6	3		9
$100-199 million....		3	7		10
$50-99 million....		2	4	3	9
Less Than $50 million			4	4	8
TOTAL.....	3	13	18	7	41

been making up deficiencies in their reserve positions; the reserves maintained at the Federal Reserve bank did not quite match required reserves, and the banks borrowed temporarily to close the gap.

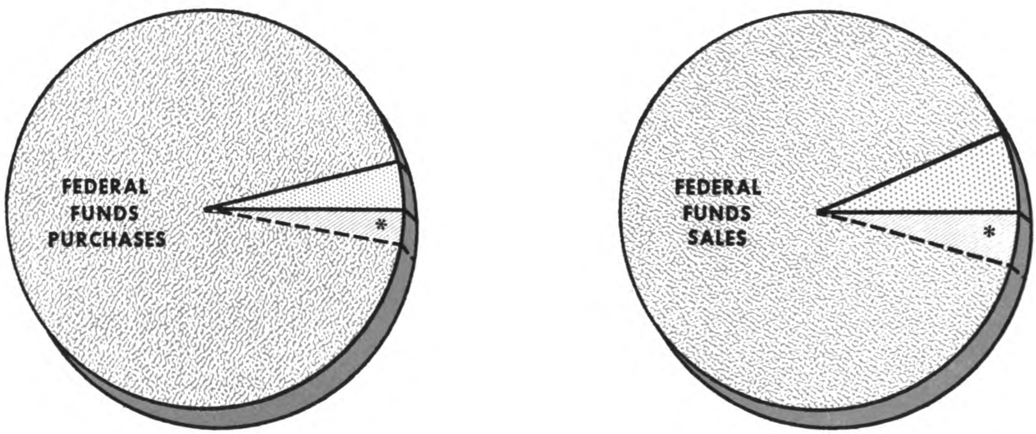
Forty-one banks in the Fourth District (out of a current total of 566 member banks) have been known to buy or sell Federal funds at one time or another.[1] The total assets of the participating banks range from over $2 billion down to less than $50 million; most of the banks are located in the larger cities of the District. Table I shows the number of Fourth District banks that have entered the market, with the banks arranged by size and by the number of years of their activity.

The years of greatest growth in the number of participating banks were 1951, 1957, and 1958, with most of the newer entrants being relatively smaller banks. The growing participation of smaller banks probably has been due to the relative scarcity of excess reserves at various times, e.g., in 1957, as well as to an

(1) Of the total group, eighteen banks are currently reporting all Federal funds transactions directly to the Federal Reserve Bank of Cleveland in order to make a national study possible. The reporting banks account for more than 95 percent of the Federal funds volume in the Fourth District.

FOURTH DISTRICT SHARE OF TOTAL FEDERAL FUNDS TRANSACTIONS

(Dollar Volume, Sept. 1959 - Aug. 1960)



U.S. = 100%, Fourth District = 4%

U.S. = 100%, Fourth District = 6.5%

*Additional percentage share of the Fourth District if New York City transactions are excluded.

increasing awareness of the inherent convenience for these banks in using Federal funds. In most cases, a telephone call is the only step necessary to arrange a transaction.

Sales of Federal funds by Fourth District banks during the year under review accounted for nearly 7 percent of the dollar volume of total sales reported in the nation. At the same time, Fourth District purchases made up 4 percent of total national purchases. Because as much as half of the transactions in a normal day originate in New York City, the Fourth District's share relative to all the transactions outside New York was more important than the figures just indicated. (See chart.) The year from September 1959 through August 1960 may be considered a good year for study of the Federal funds market, since market activity in general reflected alternate periods of relative tightness as well as relative ease, thus covering a rather broad range of market experience.

Types of Transactions

Four different types of Federal funds transactions were used by the reporting banks in the Fourth District in the survey year, with substantial differences in the relative importance of each type. The most popular type of transaction, by far, was the "straight" transaction, which amounted to 82 percent of the dollar volume of total purchases and sales in the Fourth District. In such a transaction, the selling bank sells Federal funds on one day and is repaid on the following day. No physical transfer occurs; the exchange is made merely by (1) debiting the seller's reserve balance at the Federal Reserve bank and (2) crediting the buyer's balance. On the following day, the bookkeeping is reversed, with the buying bank paying the interest in a separate transfer. The sale of Federal funds in this way has been ruled to be a one-day unsecured loan, and thus cannot exceed 10 percent of the amount of the selling bank's capital and surplus, if made to a single borrower.

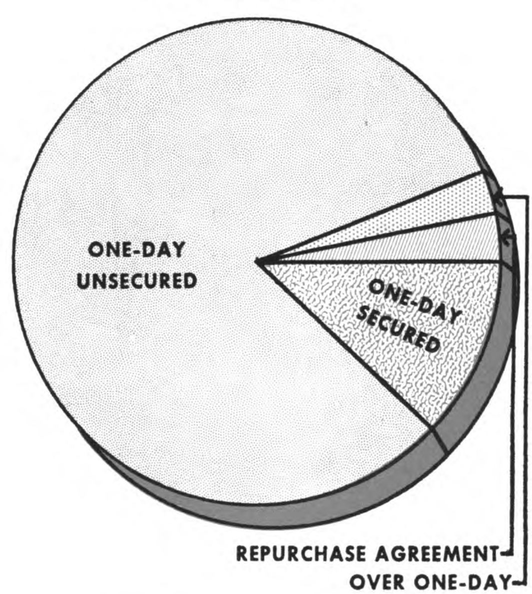
Second in dollar importance in Federal funds trading in the Fourth District were the one-day secured transactions that were not repurchase agreements. (Repurchase agreements will be identified below.) Such transactions accounted for 12 percent of the dollar volume of total purchases and sales. This actually represented a substantial growth in usage, since the type of transaction was made possible by a ruling of the Comptroller of the Currency only as recently as April 1958. At that time, the Comptroller ruled that the limitations on loans to single borrowers would be removed if the loan were secured by Government securities maturing within eighteen months. In a transaction of this type, a bank purchasing Federal funds places Government securities in a custody account for the seller for the one day until the funds are repaid. This type of sales was favored by the smaller banks of the Fourth District which were active in the Federal funds market in the period under review, not only because they could sell ten times the amount of funds to a single borrower as compared with a "straight" sale, but also because there was neither the cost nor the inconvenience of transferring securities and titles between the buyer and the seller.

A third type of Federal funds transaction used in the period under review was the one-day repurchase agreement. In the year ended August 31, 1960, repurchase agreements accounted for about 3 percent of the total purchases and sales of Federal funds in the Fourth District. In this case, the bank selling Federal funds does so by buying Government securities (actually taking title to the securities) from the borrowing bank for immediate cash delivery. The next day the borrower repurchases the securities at the same price plus a pre-determined rate of interest. Repurchase agreements were especially popular among the smaller Fourth District banks prior to April 1958 because they are not controlled by the 10 percent loan limitation. Repurchase agreements, however, continue to be used subsequent to the modification of the loan limitation, especially by Government securities dealers active in the Federal funds market.

During the current special study, the Fourth District banks are reporting separately all Federal funds transactions which are outstanding for more than one day. This type amounted to only 3 percent of total purchases and sales in the Fourth District in the year under review, with most of the transactions being secured. It is clear from the foregoing data on the various types of transactions that Federal funds are most important to reporting banks in the Fourth District as the means for making short-term (one-day) adjustments in their reserve positions.

A comparison of Fourth District experience with that of the nation as a whole indicates that the reporting banks in the District preferred to use "straight" (unsecured)

TYPES OF TRANSACTIONS IN FEDERAL FUNDS
Fourth District

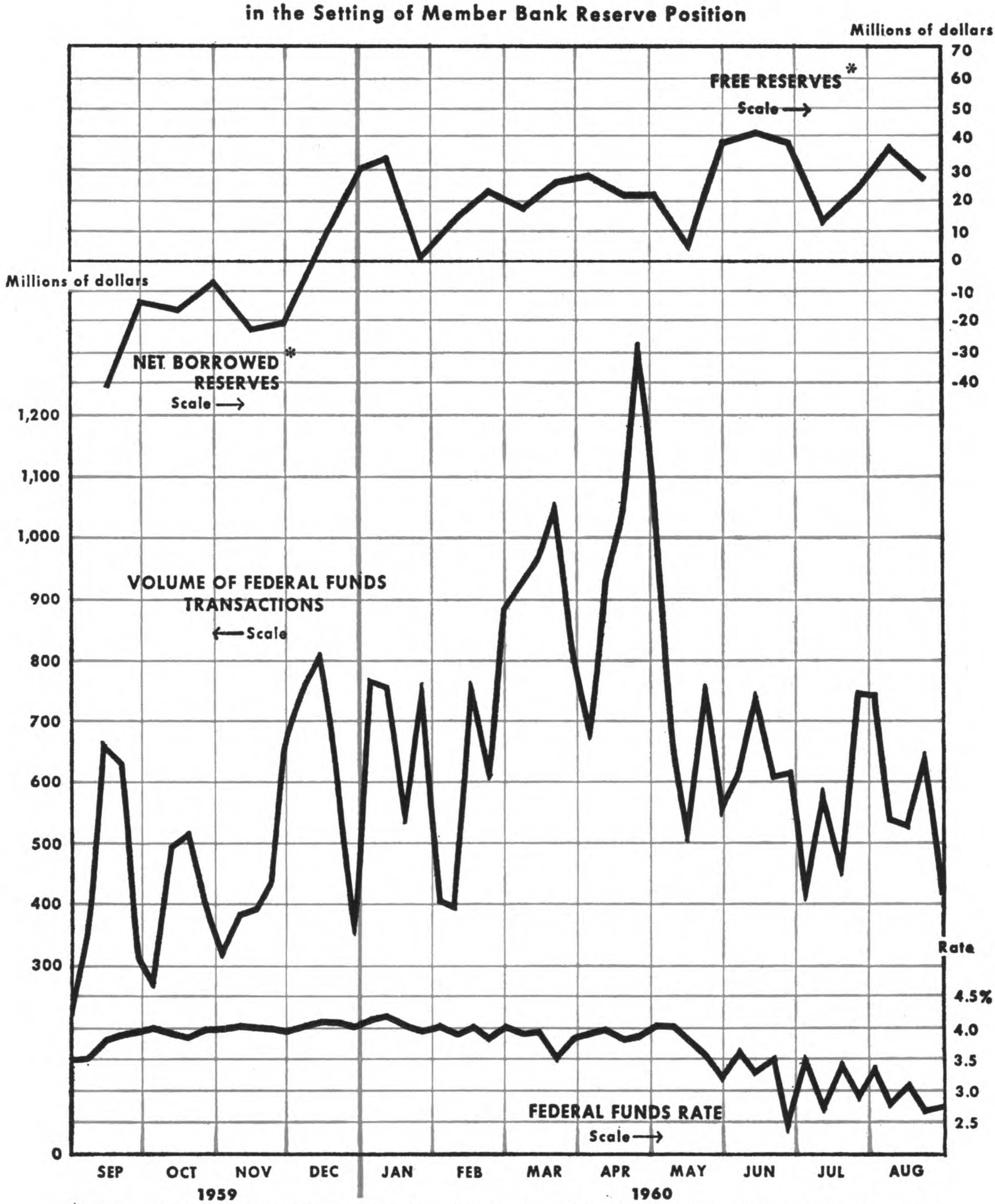


Total Dollar Volume
Sept. 1959 - Aug. 1960 = 100%

FEDERAL FUNDS TRANSACTIONS

(Fourth District)

in the Setting of Member Bank Reserve Position



*held by all Fourth District member banks, biweekly standings; volumes shown in line below are weekly totals

Federal funds transactions to a greater extent, relatively, than did the banks in other districts. The Fourth District used this type of transaction for 82 percent of the total dollar volume, whereas the share for the nation was 76 percent. On the other hand, the Fourth District's use of one-day repurchase agreements was relatively less than in the nation, with 3 percent and 9 percent of the corresponding total dollar volumes, respectively. The relative importance of the other types of transactions was just about even in the Fourth District with their importance in the nation.

Uses of Federal Funds

Most of the transactions in Federal funds that were made by the reporting banks in the Fourth District in the year ended August 31, 1960, were made with other banks. In fact, 90 percent of the total dollar volume of both purchases and sales arising in the Fourth District was with other banks throughout the United States. (In comparison, the national share of transactions made with banks during the same period was slightly larger, amounting to 93 percent.) Although there are Federal funds brokers in New York City, most of the Fourth District banks, working from lists of their approved borrowers, preferred to deal directly with their own buyers and sellers. Trading in Federal funds also depended to a certain extent on correspondent banking relations. Several large Fourth District banks, irrespective of their own reserve positions, bought and sold funds from smaller banks as a correspondent service.

A small share of total Federal funds transactions in the Fourth District during the survey year was made with securities dealers. In many cases, the dealers bought Federal funds to help carry their inventories of securities. In other cases, the dealers had acquired Federal funds by selling United States Government securities, and later sold the Federal funds to banks. Almost 10 percent of the Fourth District transactions were made with securities dealers, mainly in New York City, with the transactions often in the form of repurchase agreements.

Only three transactions during the survey period were made with "other" parties, which could mean corporations, savings banks, foreign banks, etc.; all three were purchases of Federal funds by Fourth District banks. Although some large corporations have been known to invest their short-term funds in the Federal funds market, they evidently do not enter the Fourth District market, but rather concentrate their activity in New York City.

Since New York City is the money center of the nation, it is not surprising that a majority of the Fourth District transactions in the year ended August 31 were directed there. Nearly 60 percent of the total dollar volume of Federal funds traded in the Fourth District flowed to New York City, illustrating the use of Federal funds to redistribute bank reserves to locations where they were needed. The mobility of existing reserves was increased, thus conserving the use of Federal Reserve bank credit by decreasing the amount of borrowed reserves which banks would otherwise have pulled into the market.

Second in size in the distribution flow during the period under study was the group of transactions known as "intradistricts." Such purchases and sales, which amounted to 9 percent of the total dollar volume, were made among banks located only in the Fourth District. That this group of transactions grew substantially is shown in the fact that earlier, according to a survey in November 1956, less than one percent of the total Federal funds volume in the Fourth District was confined to intradistrict trading. The growth of this type of transaction has probably been due to the increasing participation of smaller banks in the Federal funds market as well as to strong correspondent bank relations in the Fourth District.

The remaining volume of transactions in Federal funds in the Fourth District in the period under review was with banks or dealers spread throughout the rest of the nation. Over and above the large share of funds which flowed to New York City, as discussed above, relatively large transactions were made with banks and dealers in Chicago, Minneapolis, San Francisco and other West Coast cities, Philadelphia, and Boston. Transactions were made with banks in as many as fifty cities outside the major money centers of the nation. The pattern of distribution is subject to change, however, with future shifts in the supply of and demand for funds within each Federal Reserve District.

Examination of the first reported year of Federal funds activity in the Fourth District indicates, as would be expected, that the use of such funds depended more on supply and demand factors than on the relative cost of borrowing the funds. The accompanying chart compares the weekly volume of Federal funds purchased or sold in the year ended August 31, 1960, with the weekly average interest rate charged on such funds. There is no consistent relationship between the level of the Federal funds rate and the volume of funds traded. For example, although total transactions were the largest in the week ended April 29, the interest cost was relatively high at the time. Conversely, during the week ended July 1, the Federal funds rate was as low as 0.25 percent, but there was no sharp jump in trading volume in that week. As shown in the chart, however, there was a substantial volume of excess reserves at Fourth District banks at that time.

The supply of and demand for excess reserve balances is thus clearly an important determinant of the Federal funds rate. An important byproduct of this relationship is the fact that the Federal funds market is subject to general financial influences which affect the available supply of excess bank reserves; such influences include Treasury financing, gold flows, and Federal Reserve open market operations, among others.

Notwithstanding the significance of supply and demand factors, the rate on Federal funds is affected directly by the costs of alternative forms of bank borrowing, in particular the rate charged at the discount windows of Federal Reserve banks. In general, the rate charged for "straight" transactions of Federal funds will not exceed the discount rate because it then would become cheaper for the banks to borrow at the Federal Reserve bank. On the other hand, the rates charged for both secured transactions and transactions with securities dealers may be higher than the discount rate. In the information available on Fourth District Federal funds activity, the interest rates on unsecured purchases and sales with dealers at times were as much as one-half percent higher than the rates on similar purchases and sales with other banks.

Finally, because the Federal funds rate tends to be volatile, as the chart clearly shows, and because the going rate reflects the current supply and demand situation for an important form of "money" in the economy, the rate is a sensitive indicator of money market conditions in general.

Short-Term Borrowing By Business In 1960

SHORT-TERM borrowing by business has increased markedly so far in 1960, reaching a new all-time high of $44,655 million at the end of October.(1) At this level, short-term business borrowing was up $2,804 million from the 1959 year-end figure, and was $4,203 million above the year-ago level.

On balance, it is thus clear that in 1960 there has continued to be sustained strength in the use of various short-term credit sources by business borrowers. Insofar as various indicators of business activity during the past few months have been unclear as to general direction, and in some instances sharply at variance with each other, it may be of interest to consider the relative strength or weakness of short-term business borrowing during 1960. This year's record may be compared with periods in the past that, in some cases, possessed characteristics similar to 1960.

Business firms, as a group, are continuously borrowing funds from bank and nonbank financial sources to meet a number of short-term needs. For example, business firms borrow funds for short periods of time to make possible the carrying of inventories and accounts receivable; such firms also borrow to finance temporary cash needs resulting from seasonal and various unexpected developments. Because of the many factors affecting business borrowing, the magnitude and the change in direction of such borrowing may thus give some indication of current business sentiment, suggesting the way in which business borrowers are appraising the future course of general business activity.

The major portion of short-term business borrowing is done at commercial banks. In addition to short-term bank credit, however, many commercial, industrial, agricultural and financial borrowers have access to other-than-bank sources of funds, chiefly, commercial paper and bankers' acceptances, the use of which has increased significantly in recent years.

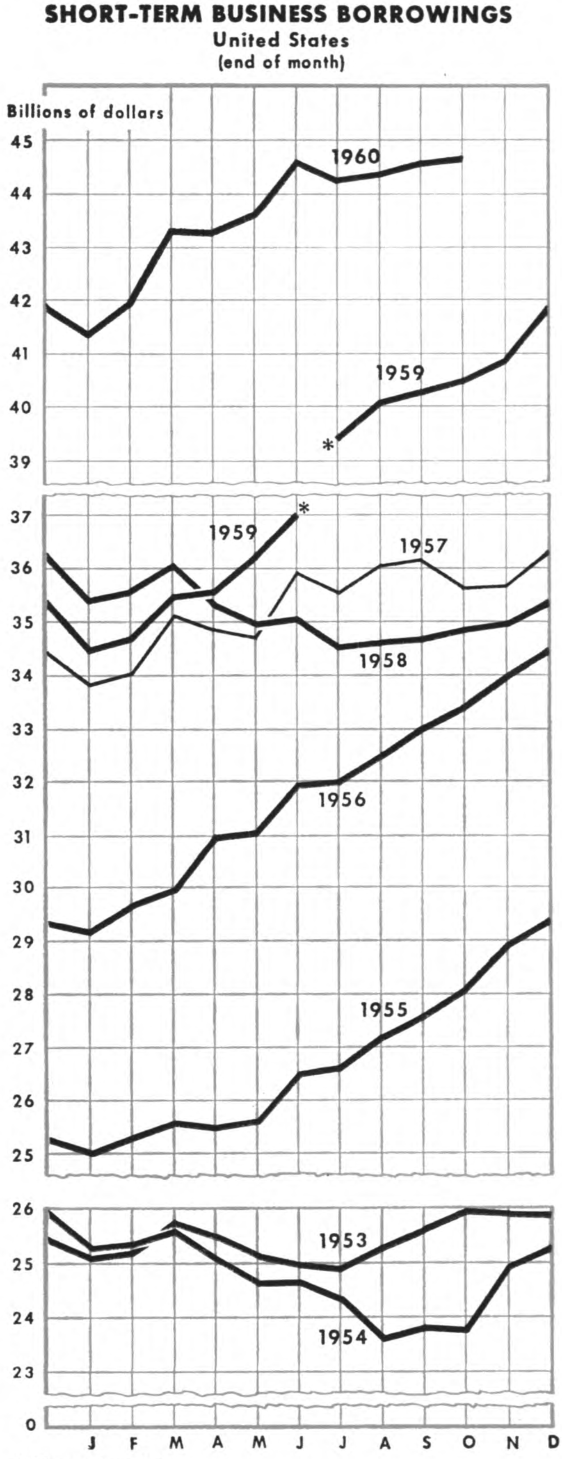
Bank business loans, as defined here, include the following categories reported by the weekly reporting member banks of the Federal Reserve System: (1) commercial and industrial loans, (2) agricultural loans, and (3) loans to nonbank financial institutions.(2) Short-term business borrowing, as defined here, includes the total of such bank loans plus the total of commercial paper and bankers' acceptances outstanding.(3) The increasing relative importance of the nonbank component of short-term credit is revealed in the fact that in 1960, through October, such credit has accounted for 13.6 percent of total short-term credit, as defined above; this compares, for example, with 10.7 percent of total short-term credit in 1957 and 9.4 percent in 1953.

(1) Short-term borrowing, as the term is used here, includes business loans at weekly reporting member banks plus commercial paper and bankers' acceptances outstanding. See also footnotes (2) and (3).

(2) The weekly reporting member banks hold at least 70 percent of such business loans held by all commercial banks.

(3) It is recognized that there may be a small amount of double counting involved in the use of this concept of short-term borrowing. For example, bank holdings of commercial paper and bankers' acceptances are, in some cases, reported as business loans. As a result, the total amount of commercial paper and bankers' acceptances outstanding includes a relatively small portion held by banks. There are grounds for believing that this statistical flaw does not impair the validity of the general conclusions which are drawn here.

In addition, previous surveys have shown that a portion of bank loans to business, although reported by the banks as "short-term," actually carry maturities of more than one year. It is not possible, however, to segregate such loans, and for purposes of comparison they are included here within a broad concept of "short-term."



* Change in series.

Borrowing in 1960

After attaining what at the time was a new high of $37,582 million at the end of 1959, bank business loans suffered a sharp seasonal decline during January. During the next five months, however, bank business loans increased rapidly, setting new highs in each month from March through June and establishing an all-time high of $38,789 million at the end of the second quarter. The increases in bank loans to business in February through June were somewhat greater than might have been seasonally expected.

The amount of such loans outstanding then declined substantially from the record figure during both July and August. An increase in loans in September, which was larger than usual, recouped part of the losses, so that the third quarter closed with bank business loans amounting to $38,374 million, about $400 million below the record level reached at the end of June. In turn, bank business loans declined contra-seasonally during October, so that at month-end such loans outstanding amounted to $37,846 million, or slightly less than $1.0 billion below midyear.

On the other hand, a somewhat different picture emerges when total short-term business borrowing, rather than bank business loans only, is considered. First, from an all-time high of $41,851 million reached at the end of 1959, short-term business borrowing, unlike bank business loans, declined less than seasonally during January. New highs were thereafter established in each subsequent month, with the exception of April, so that a new all-time high amounting to $44,628 million was reached in June. Short-term business borrowing then declined in July, but by a lesser amount than the decline in bank business loans. The increases posted in short-term borrowing in August and September, however, made up most of the July decline. As a result, at the end of the third quarter, short-term business borrowing was just slightly below (by $28 million) the June all-time high.

Short-term business borrowing increased $55 million during October, establishing another new all-time high, which amounted to $44,655 million. More important, however, such borrowing was above the midyear figure and contrasted sharply with the June-October developments in bank business loans only.

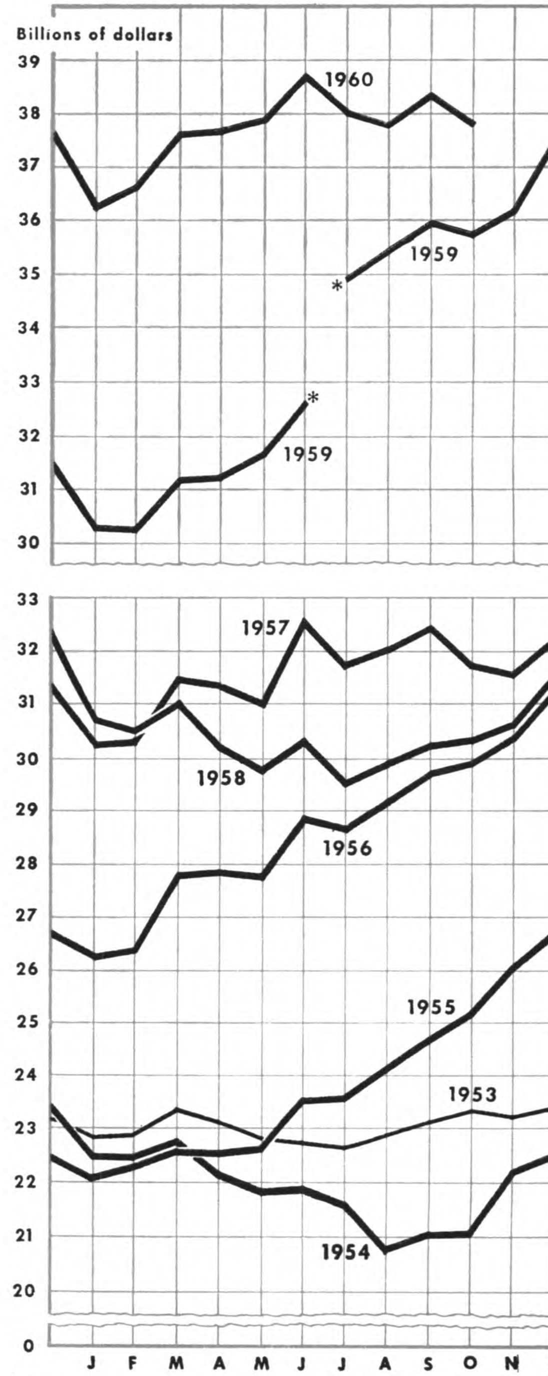
This Year and Earlier Years

Comparing the cumulative absolute increase in bank business loans only during the first ten months of 1960 with that for the same period in earlier years back to 1953, it is found that this year's increase is in excess of the corresponding increases in 1953, 1954, and 1958. On the other hand, making the same type of comparison using total short-term business borrowing, it is found that the cumulative absolute increase in the first ten months of 1960 is in excess of the corresponding increase in each year beginning with 1953, except 1956 and 1959.

With respect to percentage changes, by the end of October 1960, bank business loans were 0.70 percent above the 1959 year-end level. The rate of increase so far in 1960 was above the increases during the same period in 1953, 1954, and 1958. Over the same period and using the same benchmark, the data show that by the end of October, short-term business borrowing had increased 6.7 percent from the year-end figure. The rate of increase so far in 1960 was above the increases during the same period in 1953, 1954, 1957, and 1958.

On the basis of the foregoing data, and irrespective of the type of comparison made, it becomes clear that business demand for short-term funds has held up relatively well so far in 1960, a period of business uncertainty, and especially well when compared with the record of earlier years. But the data also suggest that the major responsibility for the sustained strength in short-term business borrowing rests with the nonbank component of short-term credit. In other words, the upswing in the use of nonbank sources of short-term funds has offset to a considerable degree some of the relative slackness in bank loans to business borrowers. The increased use of commercial paper debt instruments to raise short-term funds may in part be explained by the disparity between short-term borrowing costs inside and outside of the banks that has existed for some time this year.

BUSINESS LOANS BY BANKS
United States
(end of month)



* Change in series.

See footnote 3 on page 9.

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