

MONTHLY



# Review

**FEDERAL RESERVE BANK  
OF ST. LOUIS • P. O. BOX 442 • ST. LOUIS 66, MO.**

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# The Federal Funds Market

THE FEDERAL FUNDS MARKET consists of the borrowing and lending, primarily by member banks, and usually for a single day, of deposit balances at the Federal Reserve Banks. (Bankers and other participants in the market through custom refer to such transactions as buying and selling.) Activity in Federal funds takes place within the broader framework of the money market which consists of the supply and demand for "money" and close substitutes used by banks to maintain their liquidity positions. Banks use the Federal funds market to obtain an immediate credit with their balances held at the Federal Reserve. Operations in Federal funds represents one alternative for banks in adjusting to temporary changes in their reserve position.<sup>1</sup>

## *Functioning of the Federal Funds Market*

The market in Federal funds is primarily an inter-bank market with about 90 per cent of the activity conducted by commercial banks throughout the country. This market is truly national in scope with banks in any financial center dealing with banks in any other center. The apex of the market is in the large New York City banks. The largest flows of funds are among New York City banks and between the New York City banks and banks in other centers. The activities of Government security dealers are also centered in New York City.

The growth in the Federal funds market has had the effect of drawing together various financial institutions, and enabling individual banks to adjust more easily to random fluctuations in pressures on their reserve positions. The Federal funds market enables the banking system to utilize a larger share of total reserves by minimizing the need for excess reserves.

## *Alternative Methods of Adjusting Reserve Positions*

Banks have several alternatives for adjusting to short-run changes in their reserve positions. Banks wishing to add to their reserves at the Federal Reserve may draw on other cash balances, borrow from Reserve Banks, sell short-run Government securities, or borrow Federal funds. Banks which find themselves with a temporary excess of reserves may repay

indebtedness, buy short-term securities, or lend in the Federal funds market.

Trading in the Federal funds market has several advantages over the other methods of adjusting to temporary changes in reserve positions. For the lending bank, the only feasible alternative frequently is to allow excess reserves to remain with the Federal Reserve and thereby forego any return on that money. Since banks are profit-maximizing institutions attempts will generally be made to put this money to work. For the borrowing bank the Federal funds rate may be below the discount rate and thus offer a cost advantage. Even if there is no cost advantage, borrowing in the Federal funds market is a good alternative to borrowing from the Federal Reserve because of a desire to maintain contacts in the money market and to remain free of indebtedness to the Reserve Bank. Also, many bankers would rather borrow from another commercial bank that has excess reserves, giving the interest payment to this bank.

There are several factors which preclude a great many banks from trading in the Federal funds market. Since it is not economical to deal in small amounts, the normal unit of trading is \$1 million. For most banks then, excesses and deficiencies of reserves are generally too small to be traded. The legal restrictions on member bank lending and borrowing pertain to Federal funds transactions and therefore present an additional impediment to small banks operating in this market.<sup>2</sup>

The advantages in using the discount privilege are that an exact sum can be borrowed and there is no legal limit as to the amount of the transaction. Furthermore, for member banks that borrow only occasionally the amounts are readily and easily available. Most banks which are active in the funds market resort at times to the discount window particularly when the supply of Federal funds does not match the demand, or if the morning estimates of their reserve positions prove to be incorrect.<sup>3</sup> Borrowing

<sup>2</sup> Unsecured lending of Federal funds to any one borrower may not exceed 10 per cent of the lending bank's capital and surplus. The amount borrowed may not exceed the borrowing bank's capital stock. The use of the Federal funds market is, therefore, confined to larger banks.

<sup>3</sup> The amount of reserves needed to meet the requirements at the close of the day are based on the day's deposits at the opening of business. Hence, required reserves are generally known in the morning and banks have rough estimates of what their reserve balance will be for the day by late morning. Banks borrow and lend on the basis of these early estimates. Since these estimates are not always correct, the anomaly has existed of a bank both borrowing and lending Federal funds or lending Federal funds and discounting at the Federal Reserve the same day.

<sup>1</sup> For a more extensive study of this subject see, Board of Governors of the Federal Reserve System, *The Federal Funds Market—A Study by a Federal Reserve System Committee*, Washington, D. C., May 1959.

Correction of Footnote 2, Page 2, re: "Federal Funds Market"

Such legal restrictions are fixed by the statutes of the authority chartering the bank. A national bank may not lend an amount greater than 10 per cent of its combined capital and surplus to any one borrower. Neither may it become obligated for borrowed money in an amount greater than 100 per cent of its capital plus 50 per cent of its surplus. Both rules are subject to exceptions not generally relevant to Federal funds transactions. Practically all state statutes impose some similar "one borrower" limitation upon state banks, but not all place a restriction upon the amount of money a state bank may borrow.

from the Federal Reserve is the ultimate source of credit for member banks.

For very short-term adjustments dealing in the securities market is usually an undesirable alternative for two reasons: 1) fluctuations in the price of securities may result in losses, and 2) the transaction cost involved in buying and selling securities is higher than for Federal funds. For these reasons banks do not generally resort to the securities market to offset temporary changes in their reserve position. In addition, during extended periods of monetary restraint, the stock of short-term securities may become depleted at some banks.

### Determinants of the Federal Funds Rate

Since borrowing from the Reserve Bank is an alternative to borrowing in the Federal funds market, the discount rate usually sets the upper limit of the Federal funds rate. There is presumably no lower limit on the Federal funds rate, but at very low rates the supply of funds dries up since banks will not invest in this market if returns are not sufficient to justify the time in negotiating a transaction. Between these limits the rate will fluctuate depending upon the distribution of excess reserves, Federal Reserve open market activity, Treasury activity in the securities market, and other money market forces.

The impact of the current Treasury bill rate on the Federal funds rate is less direct. In the very short run the bill rate may have little relationship to the funds rate because transactions in bills are not usually a suitable alternative for daily reserve adjustments. If, however, a wide discrepancy in the rates exists over a prolonged period, the substitution of the one for the other tends to bring the rates closer together.

The Federal funds rate indicates the supply and demand condition for one-day funds. However, there are certain limitations on using this rate as an indication of conditions in the money market. During periods of tight credit, when there is appreciable borrowing from the Federal Reserve, the Federal funds rate is apt to remain at the discount rate. In times of credit ease the Federal funds rate will fluctuate below the discount rate and will reflect more

accurately changes in the daily reserve position of money banks.

### Development of the Federal Funds Market

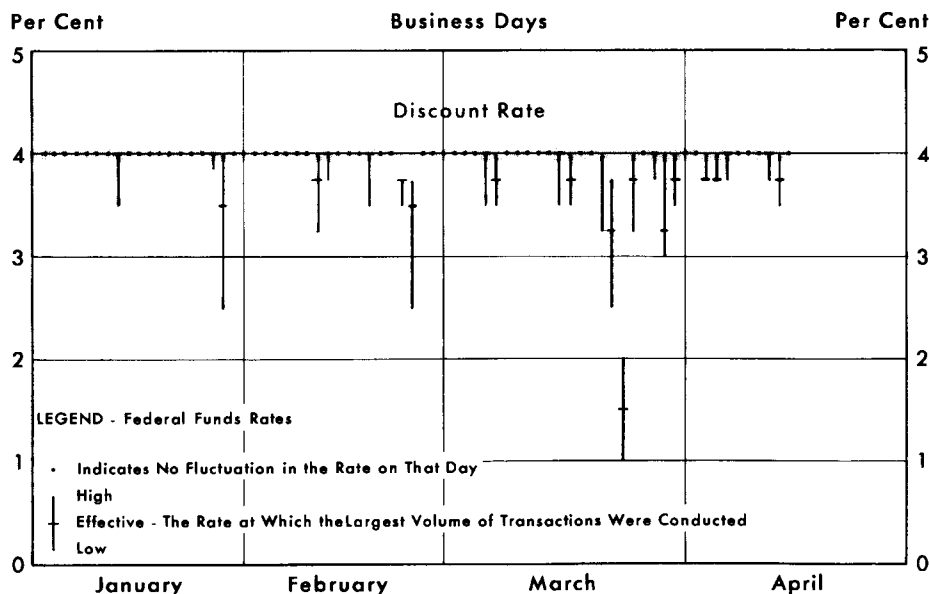
A banking system composed of a large number of independent banks contributed to the development of the Federal funds market. An excess or deficiency in a member bank's reserve account, represents a cost, either in the form of non-earning asset or a penalty imposed by the Federal Reserve. If banks had branches throughout the country, a large part of these imbalances would be adjusted internally.

The Federal funds market developed spontaneously, having its origin in New York City during the early 1920's. Markets developed in other financial centers during this period, but were of less significance than the New York market. Only a limited amount of trading in Federal funds occurred between banks in different financial centers.

The Federal funds market dried up during the 1930's for two reasons: 1) most transactions were large overnight, unsecured loans, and bank solvency became a real problem during this period; 2) a large majority of banks found themselves with excess reserves with the result that the demand for Federal funds fell, and the rate declined to ¼-to-½ of one per cent. At this rate many banks felt that revenues involved in such activities did not justify dealing in this market.

During World War II, and until the Federal Reserve-Treasury "accord" of 1951, banks made most of their reserve adjustments in the Treasury bill market rather than in the Federal funds market. The Federal Reserve stood ready to purchase or sell all Treas-

**Daily Rates on Federal Funds and Discount Rate  
January 4 through April 14, 1960**



ury bills at a relatively "fixed" discount rate. With the accord, the Federal Reserve discontinued its policy of pegging the bill rate, resulting in higher yields and wider fluctuations. The generally higher level of interest rates, which has prevailed since the accord, encouraged banks to operate with less excess reserves. This caused banks to make more frequent adjustments in their reserve positions and made trading in Federal funds more profitable. Activity in the Federal funds market since the accord has increased significantly both in volume of transactions and in the number of participants.

Growth in the market for Federal funds has been the result of many other factors; one was the rise of new financial centers. Although the New York City "money" banks remained the largest dealers in Federal funds, banks in other financial centers became active and important participants in the market. Growth in the size of banks increased the number of participants in the market for Federal funds. A few of the larger banks in the financial centers instituted the procedure of accommodating correspondent banks by standing ready to buy or sell Federal funds at the market rate and often in units of less than \$1 million. This has aided in making a daily market for Federal funds and has brought smaller banks into the picture. (See Table I, Transactions in Federal Funds, Selected Periods.)

The increased importance of short-term Government securities in the money market brought dealers in these securities into the market for Federal funds.<sup>4</sup> Transactions in Government securities had for a long time been conducted to some extent in Federal funds, but as the market for Federal funds expanded this became a condition of sale. Since nonbanking institutions use short-term Government securities as an

<sup>4</sup> Dealer activity in Federal funds is centered in one commercial bank in New York City. This bank makes or receives payment for transactions settled in Federal funds for its dealer customers in the form of debits or credits to its reserve account at the Federal Reserve Bank of New York. The bank keeps a record on each dealer's account and if the debits and credits do not balance out the dealer settles its account with the bank at regular intervals.

The larger and more active dealers try to come out as nearly even as possible with the clearing bank each day by buying and selling Federal funds on the market. Dealers have extensive contacts with banks and nonfinancial business corporations throughout the country, and generally only a small debit or credit is carried over by the clearing bank. The smaller dealers rely to a much greater extent on the clearing bank, and at times this bank will, if necessary, borrow from the Federal Reserve Bank in order to meet dealer needs for Federal funds.

Dealers attempt to borrow Federal funds outside New York City as bank loans to dealers by New York City banks are generally made in clearing house funds. The rate charged by the New York City banks is also higher than the cost of financing in other cities. The New York City banks stand ready to make such loans at all times, and, therefore, are an important source of dealer credit during periods of tight money.

Table I

TRANSACTIONS IN FEDERAL FUNDS, SELECTED PERIODS

Period	Average daily volume of transactions (In millions of dollars)	Number of participants	
		Banks <sup>1</sup>	Dealers in acceptances and Gov't. securities
1925-32 . . . .	100 - 250	30 - 40	10
1950-53 . . . .	350 - 450	75 - 100	14
1955-57 . . . .	800 - 1,100	125 - 200	18
First Quarter 1960 <sup>E</sup> . . .	1,150 - 1,750	250 - 350	18

<sup>1</sup> Includes foreign agencies.

<sup>E</sup>—Estimated by Federal Reserve Bank of St. Louis, based on daily activity of reporting money market banks, and Wednesday borrowings (other than from Federal Reserve Banks) of the weekly reporting banks.

Source: Board of Governors of the Federal Reserve System, *The Federal Funds Market — A study by a Federal Reserve System Committee*, Washington, D. C., May 1959.

alternative to holding cash, these firms at times enter the Federal funds market.

In periods of declining interest rates, dealer activity in Federal funds has an added stimulus. With falling yields on securities, Government security dealers are more anxious to take a position and hence are more active in the Federal funds market. During periods of ease the rate on Federal funds is more likely to be below the discount rate, tending to stimulate demand for such funds.

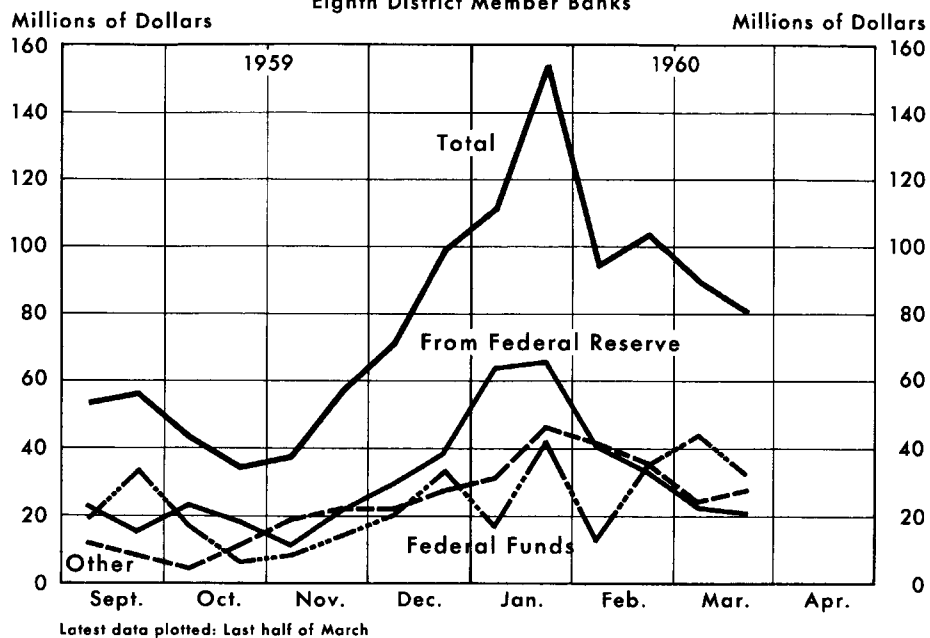
The wire transfer facility of the Federal Reserve System makes possible a more rapid transfer of funds. Also, in 1950 an "interbank wire" was set up by commercial banks and now links more than 200 banks in 60 principal cities. These developments have aided bank use of the Federal funds market by facilitating transactions and by enabling a more rapid dissemination of information as to the state of the market at any given time.

*Participation in Federal Funds by Eighth District Member Banks*

Within the Eighth Federal Reserve District about 25 District member banks have from time to time lent or borrowed in the Federal funds market, and about 10 enter the funds market on a fairly regular basis. The six largest, which account for the bulk of the activity, are considered "money banks" and report their daily transactions in Federal funds to the Federal Reserve. From December 1959 through February 1960 the six reporting banks accounted for 2 per cent of the total borrowing and 3 per cent of total lending by all reporting banks in the System. The average share of the bank market in Federal funds accounted for by Eighth District money banks was 2.5 per cent. In contrast, the New York City reporting banks share of the market during this two-month period averaged 39 per cent.

## Daily Average Borrowings

Eighth District Member Banks



The relative importance of Eighth District banks in the Federal funds market should be viewed with the following points in mind: 1) the total assets of Eighth District member banks account for only 3.5 per cent of all member bank assets, and 2) there is a relatively large share of District banking assets in non-financial centers.

Analysis of District data indicates the national scope of the Federal funds market. From December 1959 through February 1960 the six reporting banks traded Federal funds with banks in all other districts and with security dealers and other institutions. The largest proportion of the interdistrict trading was conducted with banks in New York City, although a substantial amount of Federal funds was traded with banks in the San Francisco and Chicago Districts. Intradistrict transactions amounted to about 18 per cent of the total volume of trading by reporting banks in the Eighth District.

Although Eighth District member banks account for a relatively small share of the total trading in Federal funds, the funds market constitutes an important source of member bank borrowing. From September 1959 through March 1960 average daily member bank borrowing was estimated to be \$77.7 million. Of this, 30 per cent was borrowed in the Federal funds market by the six reporting money market banks. During an interval of several weeks, borrowing in the Federal funds market accounted for over one half of

total District member bank borrowing. Of the other sources of bank borrowing during this six-month period, 39 per cent was from the Federal Reserve. The remaining 31 per cent represented borrowing from correspondents, Federal funds by nonreporting banks, and borrowing from other sources.

The Federal funds rate may fluctuate from day to day and at various times during the same day. Because the Federal funds market is national in scope, Eighth District member banks are not usually placed at a disadvantage by being far removed from New York City, which has been the center of activity for Federal funds. Most Eighth District transactions in Federal

funds during any one day have taken place at the effective rate in the national market, i.e., the rate at which the largest volume of transactions was conducted.

### Conclusion

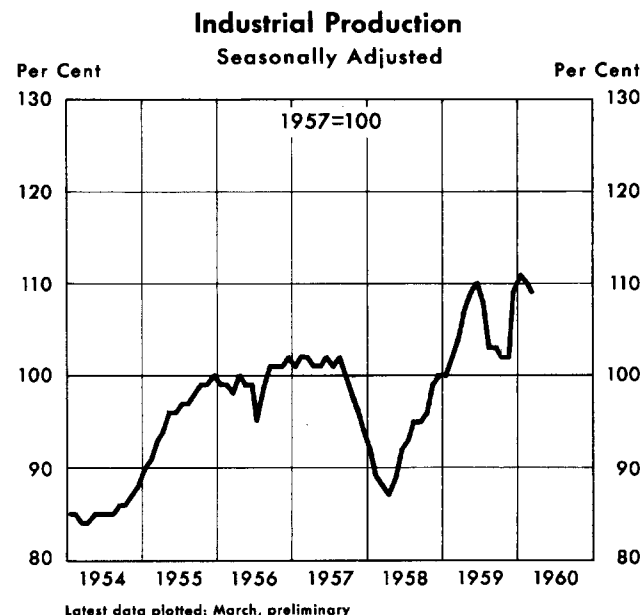
Increased activity in the Federal funds market has taken place since 1950 primarily because of a rise in interest rates. The development of the interbank wire and the increased importance of financial centers outside New York City have contributed to the growth of this market. The development of the Federal funds market has provided larger banks with an additional alternative in adjusting to short-run changes in their reserve position. The rate for Federal funds is determined by the supply and demand conditions in the money market with the discount rate generally, but not necessarily, setting the maximum rate on such transactions.

Relative to their size, Eighth District banks are active in the Federal funds market. These banks account for only a small portion of the total trading in Federal funds, but such trading represents an important source of short-term borrowing. The pattern of trading by Eighth District member banks with banks in other parts of the country clearly points out the national character of the Federal funds market.

# Business and Financial Developments

**E**CONOMIC activity declined from recent high levels during March and early April. Industrial production contracted slightly, largely because of a slackening of schedules at steel and auto plants. Expenditures for public and private construction were reduced from the February level with residential building accounting for most of the decline. Insured unemployment in March increased, and was 10 per cent higher than a year earlier, in part because of the bad weather that interfered with outdoor work and even closed factories in some places. Retail sales have picked up since late March, however, with a marked improvement in automobile and department store sales. Prices of farm products and foods have risen from the seasonal low reached in December, but started to level off again in the first half of April. Industrial prices have remained stable throughout March and early April.

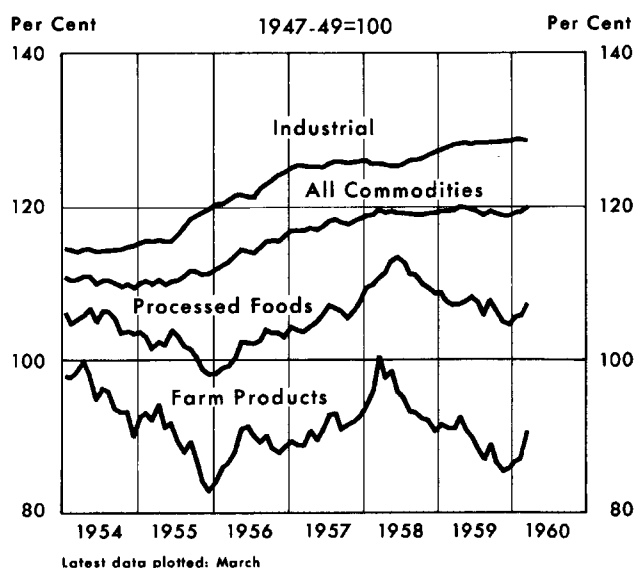
Interest rates on marketable securities dropped sharply during most of March but recovered somewhat by April 19. From above 4 per cent at the beginning of March, the rate for three-month Treasury bills plummeted to 2.58 per cent during the fourth week in March, and then rose to 3.03 per cent by the end of the month. During early April the rate continued to rise, reaching 3.30 per cent on April 19. Other short-term rates, as well as rates on



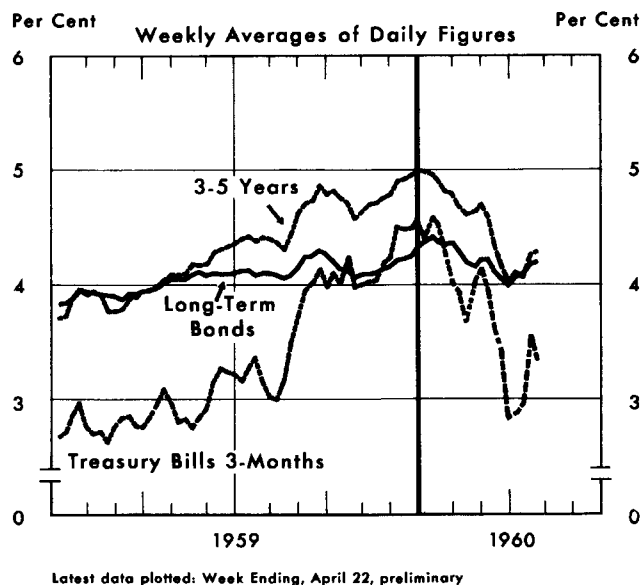
longer term issues, also declined during most of March but recovered some of the decline late in the month and in early April.

Daily average total reserves of member banks in March were down \$165 million from February on a seasonally adjusted basis. Federal Reserve open market operations added \$40 million to total reserves, when adjusted for seasonal fluctuations. However, this was more than offset by other factors, chiefly by

### Wholesale Prices



### Yields on U. S. Government Securities

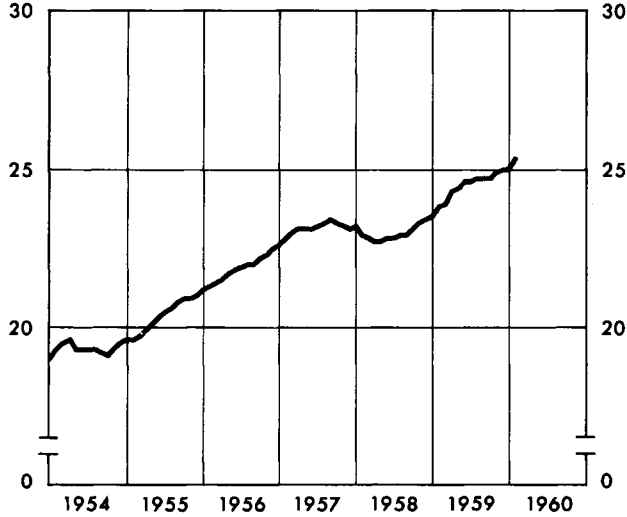


a \$180 million net decline in member bank borrowing, as banks apparently sold securities in order to reduce their indebtedness to the Federal Reserve.

The nation's money supply (seasonally adjusted) at the end of March appears to have been higher than at the end of February, despite the decline in total member bank reserves. Commercial bank credit declined, however, in the month as net bank sales of securities were only partially offset by strength in loans. From last July through February the money supply (adjusted for seasonal influences) contracted 1.5 per cent. According to latest data available, the turnover of money has continued to increase supporting a larger volume of spending.

### Turnover of Demand Deposits

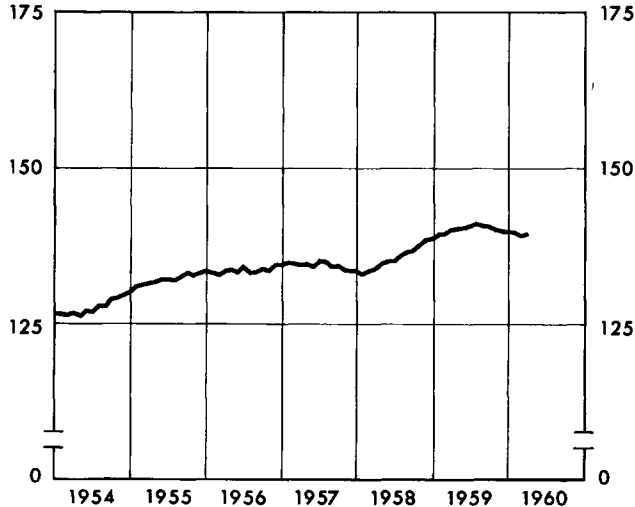
Reporting Centers (outside seven large financial cities)  
Annual Rate Annual Rate



Latest data plotted: January, which includes preliminary February data

### Money Supply

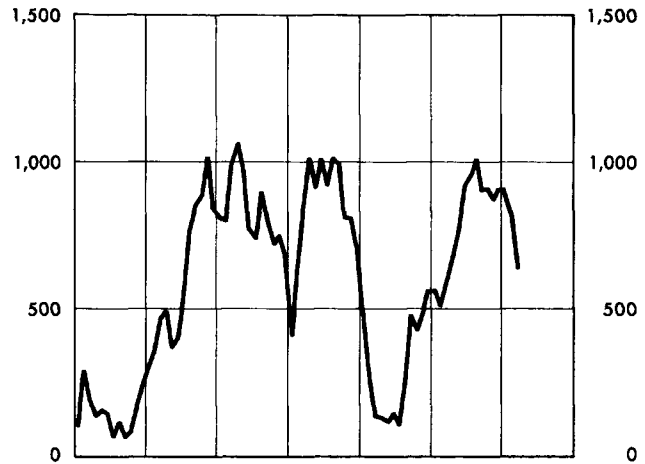
Billions of Dollars Billions of Dollars



Latest data plotted: March, preliminary

### Member Bank Borrowings from Reserve Banks

Monthly Averages of Daily Figures  
Millions of Dollars Millions of Dollars



Latest data plotted: March, preliminary

### BANK DEBITS<sup>1</sup>

	March 1960 (In millions)	March 1960 compared with	
		Feb. 1960	March 1959
<b>Six Largest Centers:</b>			
East St. Louis—National			
Stock Yards, Ill.....	\$ 152.8	+16%	+ 2%
Evansville, Ind.....	176.2	+ 7	- 4
Little Rock, Ark.....	256.1	+12	+ 2
Louisville, Ky.....	928.8	+ 4	- 2
Memphis, Tenn.....	901.2	+ 5	+ 6
St. Louis, Mo.....	2,983.2	+12	+ 7
<b>Total—Six Largest Centers.....</b>	<b>\$5,398.3</b>	<b>+ 9%</b>	<b>+ 4%</b>
<b>Other Reporting Centers:</b>			
Alton, Ill.....	\$ 50.1	+12%	+ 5%
Cape Girardeau, Mo.....	22.8	+12	+22
El Dorado, Ark.....	32.8	- 1	- 7
Fort Smith, Ark.....	60.4	+ 4	- 6
Greenville, Miss.....	33.2	+ 1	+ 8
Hannibal, Mo.....	12.9	-0-	+ 3
Helena, Ark.....	11.6	- 7	+10
Jackson, Tenn.....	31.2	- 1	- 4
Jefferson City, Mo.....	101.9	-12	+ 2
Owensboro, Ky.....	53.9	+ 4	+ 3
Paducah, Ky.....	37.7	+ 6	+ 9
Pine Bluff, Ark.....	49.0	+ 5	- 1
Quincy, Ill.....	49.2	+ 4	+ 1
Sedalia, Mo.....	17.1	- 4	- 1
Springfield, Mo.....	109.9	+ 2	- 2
Texarkana, Ark.....	25.0	+12	+ 6
<b>Total—Other Centers.....</b>	<b>\$ 698.7</b>	<b>+ 1%</b>	<b>+ 1%</b>
<b>Total—22 Centers.....</b>	<b>\$6,097.0</b>	<b>+ 8%</b>	<b>+ 4%</b>

### INDEX OF BANK DEBITS — 22 CENTERS

Seasonally Adjusted (1947-1949 = 100)

1960		1959
March	Feb.	March
191.9	202.2	184.5

<sup>1</sup> Debits to demand deposit accounts of individuals, partnerships and corporations and states and political subdivisions.

# THE AGRICULTURAL SITUATION

**S**PRING CROP PLANTINGS in the nation of 337 million acres will be less than 1 per cent below 1959 levels, if planting intentions reported to the United States Department of Agriculture are realized. Plantings of corn and sorghums are expected to be about the same as last year, but oats and barley acreage may decline. Soybean acreage may increase more than 6 per cent, approaching the record of 1958. Cotton allotments have been increased to 17.5 million acres compared to 17.3 million acres last year as a result of more sign-ups under the B program.

## INDICATED 1960 PLANTING OF SELECTED CROPS IN THE UNITED STATES WITH COMPARISONS

Crop	(Millions of Acres)			1960 as Per Cent of 1959
	Average 1949-58	1959	Indicated 1960	
Corn.....	80.7	85.5	85.8	100.3
All Spring Wheat.....	17.8	13.4	12.8	95.4
Oats.....	43.5	36.1	34.3	94.8
Barley.....	13.2	17.0	16.4	96.4
Rice.....	1.9	1.6	1.6	100.2
Sorghums (All).....	18.3	19.9	19.8	99.6
Tobacco <sup>1</sup> .....	1.5	1.2	1.2	100.2
Soybeans.....	18.1	23.2	24.7	106.4
Cotton <sup>2</sup> .....	.....	17.3	17.5	101.0

<sup>1</sup> Acreage harvested.

<sup>2</sup> Total allotments.

Despite a possible decline in crop acreage, production could well exceed 1959 output. Yields rose at an annual rate of 3.32 per cent per year compounded for the nine years 1950-1958 inclusive. With acreage only one-third of one per cent below the 1959 level, a gain in yields equivalent to the average gain for the above period would mean a new record output of crops in 1960.

Planting prospects in the district states follow the national pattern with the exception of cotton. Cotton acreage in Arkansas, Mississippi, and Tennessee may be less than last year since all the net increase in allotments is in the West.

### Farm Commodity Prices

Average prices received by farmers for farm commodities rose 3 per cent during the month ending March 15, 1960, according to the United States Department of Agriculture. The mid-March average was still about 1.5 per cent below the March 1959 level.

However, it was the highest for any month since last July. Hogs, poultry and eggs, and potatoes led the advance. Hog prices rose 16 per cent. Egg prices rose 12 per cent, which was counter to the seasonal trend. Irish potatoes advanced sharply to \$2.65 per hundred or about 2.5 times the price a year earlier.

Early April data received from the United States Department of Labor indicate that farm prices have continued upward since mid-March, but at a somewhat slower rate.

Minimum support prices announced by the Department of Agriculture for major Eighth District commodities for 1960 are as follows:

	1960		1959	
	Support Price	Per Cent of Parity	Support Price	Per Cent of Parity
Upland Cotton (lb.)				
Choice "A".....	\$ .2897	75	\$ .3040	80
Choice "B".....	.2318	60	.2470	65
Cottonseed (ton).....	38.00	57	38.00	57
Corn (bu.).....	1.06	65	1.12	66
Oats (bu.).....	.50	60	.50	60
Barley (bu.).....	.77	60	.77	60
Rye (bu.).....	.90	60	.90	60
Grain Sorghums (cwt.)...	1.52	60	1.52	60
Wheat (bu.).....	1.77	75	1.81	77
Rice (cwt.).....	4.36	75	4.38	75
Soybeans (bu.).....	1.85	64	1.85	64
Milk for Manufacturing				
(cwt.).....	3.06	77	3.06	77
Butterfat.....	.566	77	.566	77

### Cash Receipts

Cash receipts from farm marketings in the nation for January 1960 were \$2.7 billion, 6 per cent below receipts in January 1959, according to preliminary estimates. Cash receipts from livestock products declined about 8 per cent, reflecting lower prices for hogs and eggs. Crop sales were down about 5 per cent, with reduced returns from wheat, tobacco, sorghum grain, and oranges.

Eighth District states did relatively better than the nation. Cash receipts of \$534 million in January this year equalled the January total of last year. Increased sales of cotton in Arkansas and Mississippi offset reduced tobacco sales in Kentucky and Tennessee, and greater crop sales in Indiana and Illinois offset smaller receipts from livestock products. In Missouri, however, where livestock products were relatively more important, total receipts were 5 per cent lower.