Monthly Review

FEDERAL RESERVE BANK OF SAN FRANCISCO

TWELFTH FEDERAL RESERVE DISTRICT

June 1961

In This Issue

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Review of Business Conditions

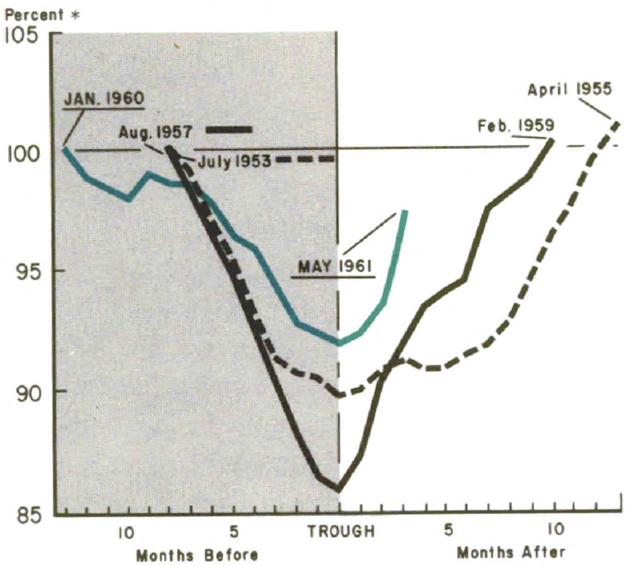
DATA becoming available during May and early June tended to confirm the presence of a more or less normal cyclical upturn in business activity. Although signs of weakness persisted in some of the data, including retail sales, construction contracts, and unemployment rates, the gains recorded by other economic indicators were more impressive, and the relevant question no longer seems to be "whether" but "how fast?"

Answers to the question reflect varying shades of opinion concerning the volume forthcoming of long-term investment, particularly in housing, but also in business fixed investment. To business cycle students who doubt that any significant change has occurred in the rates of return expected on investment, the economy's recent experience seems clearly to have been a recession induced by inventory adjustments. After the end of the steel strike in late 1959, production was buoyed not only by output for current consumption but also for inventory. As inventories rose to desired levels, current production had to decline more in line with final demands. This decline contributed to lower income and reduced final demand and, in consequence, produced ultimately a cutback in inventories. To the extent that movements in inventories have dominated the recession, then, the relatively sharp pickup in recent months in manufacturers' new business and production and the indications of a turnaround in inventory policies suggest that the short-run mismatch of inventories, sales, and production is being resolved, that a normally vigorous recovery is underway, and that in the fullness of time the economy will regain a satisfactory long-run trend path.

On the other hand, a number of economic analysts believe that the vigor resulting from the recovery in inventory investment will not be translated into long-term investment because of the present high levels of excess capacity in manufacturing, low levels of corporate profits, absence of strong population pressures in the housing market, and a relative shift away from hard goods buying in the consumer sector. This emphasis obviously ignores many of the complexities of economic growth, including the role of government, and the possibility and implications of independent changes in consumer spending patterns. It also ignores the possibility that even if the long-term investment climate were relatively weak, some upward revision of investment plans might be stimulated by a strong showing by the other cyclical forces at work. The present debate, then, revolves around the question of whether the cyclical recovery is occurring within the framework of a changed or unchanged climate of long-term investment opportunities. If we can expect less long-term investment, then even vigorous signs of recovery may signify merely a short-period adjustment associated with a turnaround in inventory policies, and such an upswing has limited potential. This is why, even as unfolding short-run developments are beginning to look more and more encouraging, it is necessary to withhold a judgment on the vigor of the upswing, pending clear signs that the long-term investment outlook has not been impaired.

Perhaps one of the most encouraging developments in May was the further 3 percent rise in industrial production to 108 percent of the 1957 average. Although gains were widespread in April and May, most of the impetus came from relatively sharp increases in output of materials and consumer goods, notably steel and autos. Auto assemblies rose sharply in April and increased further in May, with a moderate further rise reported in June. Steel mill operations continued to rise strongly in May, and some further in-

More prolonged but milder decline in industrial production in recent than in prior recessions



*Data based upon Federal Reserve index of industrial production. First plotted month in each series equals 100.
Note: Shaded area represents periods of decline from previous peaks.
Source: Board of Governors of the Federal Reserve System.

crease on a seasonally adjusted basis is in prospect for June. With the April-May gains in output, production of materials has risen 8 percent, and final products 4 percent, since the February low.

Underscoring the output gains and giving further indication of activity rises in the future, new orders received by durable goods manufacturers rose 5 percent in April, seasonally adjusted, the largest gain since the business recovery in 1958. The increase in new business was centered in steel, transportation, and electrical machinery industries, with particularly sharp gains occurring in defense-related activities. The gain for other manufacturing groups, although smaller, was fairly widespread. Although manufacturers' sales rose by over $600 million during the month, inventories showed their first gain since last autumn. Total durable goods stocks declined slightly further, with the actual gains confined primarily to the nondurables groups.

District employment and unemployment rose in April

Employment indicators alone do not as yet show a consistent enough pattern to help in assessing the strength of the economic recovery. This becomes particularly evident when a comparison of the Twelfth District with the United States as a whole is attempted. One of the more closely watched indicators is the rate of unemployment. In January, a sharp increase in total civilian employment, coupled with a reduced number of workers without jobs, lowered the rate of unemployment in the three Pacific Coast states from its December rate of 6.8 percent to 6.3 percent while the national average fell from 6.8 to 6.6 percent. By April, however, unemployment rates both on the Pacific Coast and in the nation as a whole had approached their December levels of 6.8 percent each. In May, the national unemployment rate was maintained at just under 7 percent; however, preliminary data indicate that another rise to over 7 percent occurred in the Pacific Coast States. It appears that the decline in unemployment will probably lag the general improvement in economic activity by five or six months as it did in the 1958 recovery. Other employment indicators are more encouraging. Nationally, total civilian employment grew in each of the first three months of 1961 and at a sharper rate than on the Pacific Coast. On the other hand, employment of nonfarm wage and salary workers (based on a different sampling technique) in the same period declined nationally but rose in the District. The average length of the factory workweek, considered a leading indicator of later changes in the general direction of business activity, began to rise in January both in the District and for the nation as a whole and continued to rise in every month through April except for a February decline in the District.

In April, the District employment situation was complicated by the incidence of two major labor disputes in California directly involving 17,000 workers in the machinery and fabricated metals industries, with probable indirect effects on many more workers in related industries. A slight decline in civilian employment to 7,764,000 workers in the Pacific Coast States, combined with a 0.1 percent increase in the size of the labor force, moved the rate of unemployment from 6.6 percent in March to 6.7 percent in April. In Washington, where employment was affected by adverse weather, the rate went from 7.2 to 7.8 while it remained close to 7 percent in Oregon.

Sluggishness in Twelfth District residential construction and a weakening of lumber markets undoubtedly account for the failure of insured unemployment to show its normal seasonal decline between April and May. The number of state unemployment insurance claims fell 13 percent to a weekly average of 364,700 from the first three weeks of April to the first three weeks of May, in contrast to the usual decrease of about 20 percent. The 15 percent decline in the same period for the nation as a whole was greater than the usual 9 percent drop although the accumulating number of benefit exhaustions may have been partly responsible.

In May, the San Francisco-Oakland labor market was reclassified from an area of substantial (6 to 8.9 percent) to one of moderate labor surplus (3 to 5.9 percent unemployment). Ten out of the 15 major labor market areas in the District continued in the substantial labor surplus category. Two small District labor markets were added to the list of those with 6 percent or more unemployed in May, however. The addition of Modesto, California and Yakima, Washington brings the total of these areas to a record 16, half of which are designated as "areas of substantial and persistent unemployment" in connection with Federal procurement and small business area assistance programs.

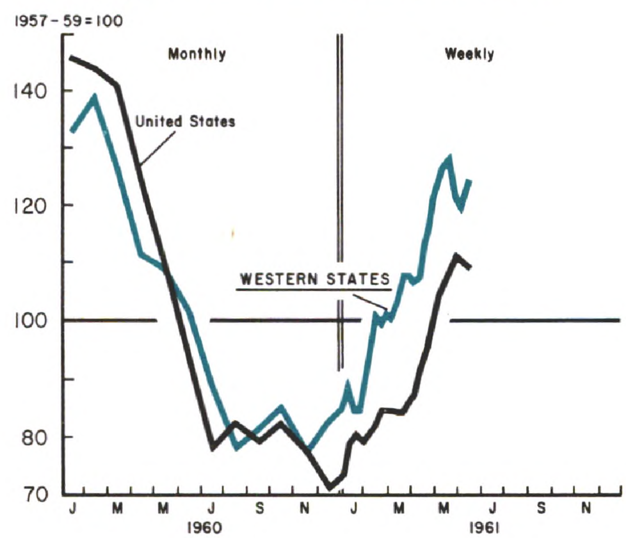
From mid-May to mid-July, according to the United States Department of Labor, employer hiring schedules reported to local public employment offices in the major labor market areas of the District point to a seasonal expansion of employment, including the construction industry. Larger than seasonal gains are expected in primary and fabricated metals, electrical machinery, ordnance, and shipbuilding, primarily in the Los Angeles-Long Beach, San Francisco-Oakland, and San Jose areas. Further sizable cutbacks are anticipated in the civilian and military aircraft industry of Los Angeles-Long Beach, but these are not expected to offset greater than seasonal gains in other industries.

Hesitation in metals

The index of Western[1] states steel production rose to a 1961 high of 127 (1957-59 = 100) in mid-May, leveled off in the following week, and receded to 121 for the last week. Reflecting more strongly the increas-

[1] Twelfth District States and Colorado.

Steel production has declined
recently, both in West and in nation



Source: American Iron and Steel Institute.

ing demand for steel from automobile assemblers, the national index rose throughout the month. The 1 cent increase in the price for refined copper made at the beginning of May was followed by a similar increase in the middle of the month. Despite record April brass mill shipments, highest in a year and a half, and a continued rise in new orders, the London price, futures prices, and scrap prices of copper dropped a bit toward the end of May.

Lumber demands ease, production increases

New orders for both Douglas fir and western pine, off somewhat in April, continued to slip in May. Apart from boom years, new orders normally level off in April and decline in May, and the movement of lumber demand in the last few months seems to have reflected no more than a spring seasonal upsurge and recession. The behavior of lumber prices, rising sharply during March and early April and then leveling off, has also reflected a seasonal fluctuation in demand and supply. Output increased in April from March and, continuing to run at a relatively high level into May, production of both Douglas fir and western pine was greater than the volume of incoming orders. The April improvement in plywood prices followed by declining prices in May also reflected primarily seasonal influences on demand and supply.

Public construction up; little improvement in housebuilding

The value of construction contracts reported in the Twelfth District by *Engineering News-Record* increased in April to 21 percent above the same month a year ago. On the other hand, Western contracts for residences reported by F. W. Dodge Corporation were almost unchanged from April last year. Building permits issued for new residences in major Pacific Coast cities remained at levels well below last year with no sign of a pickup in April. District FHA applications for the first three months of this year were 2 percent below the first quarter of last year, and, if the District follows the national pattern, there will be little improvement in April. There has been little change in general mortgage rates in recent weeks.

Retail sales lag

Retail sales this year appear to have been relatively stronger in the nation than in the Twelfth District. During the first quarter, sales of Group I retail outlets[1] were 6.9 percent below the year-ago volume in the District, compared with a 4.3 percent decline nationally. In the four weeks ending June 3, department store sales in the District were 3 percent above the comparable period of 1960 while the increase nationally was 6 percent. On a cumulative basis since the first of the year, however, the volume of department store sales was unchanged from a year ago in both the District and the nation. From March to April, California automobile registrations declined 5 percent, on a daily average basis, compared with a 3 percent rise in national sales.

Flow of farm income eases

The flow of receipts to District farmers during the first quarter of the year was slightly higher than a year earlier but substantially less than the rate of gain registered nationally. Moreover, District returns during the last month of the quarter were lower than a year earlier; increased returns from livestock marketings failed to offset lower crop returns. Receipts in March began to reflect the lower prices for some important District vegetables as compared with the unusually high prices received in the late spring of 1960. The effect of lower crop prices was particularly evident in Idaho where returns

[1] Stores of firms operating 1-10 stores at the time of the 1954 Census.

CHANGES IN SELECTED BALANCE SHEET ITEMS OF WEEKLY REPORTING MEMBER BANKS IN LEADING CITIES

(dollar amounts in millions)

	Twelfth District				United States			
	From April 26, 1961 to June 7, 1961		From June 8, 1960 to June 7, 1961		From April 26, 1961 to June 7, 1961		From June 8, 1960 to June 7, 1961	
	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent
ASSETS:								
Total loans and investments	+ 5	+ 0.02	+1,645	+ 7.26	+ 294	+0.26	+6,078	+ 5.69
Loans and investments adjusted[1]	+ 21	+ 0.09	+1,538	+ 6.84	+ 347	+0.31	+7,454	+ 7.17
Loans adjusted[1]	— 59	— 0.38	— 60	— 0.39	— 754	—1.08	+ 720	+ 1.05
Commercial and industrial loans	— 74	— 1.36	— 23	— 0.43	— 574	—1.81	— 31	— 0.10
Real estate loans	+ 17	+ 0.32	— 112	— 2.07	+ 60	+0.47	— 21	— 0.16
Agricultural loans	+ 51	+ 7.81	+ 93	+15.22	— 7	—0.61	+ 195	+20.44
Loans for purchasing and carrying securities	— 37	—17.62	+ 10	+ 6.13	— 175	—4.65	+ 674	+23.13
Loans to nonbank financial institutions	+ 4	+ 0.55	— 119	—14.05	+ 43	+0.88	— 933	—15.94
Loans to domestic commercial banks	— 16	— 4.92	+ 107	+52.97	— 53	—3.40	+ 90	+ 6.36
Loans to foreign banks	+ 1	+ 0.50	— 29	—12.50	+ 21	+3.91	— 198	—26.19
Other loans	— 20	— 0.62	+ 134	+ 4.40	— 111	—0.67	+1,131	+ 7.41
U. S. Government securities	+ 26	+ 0.41	+1,389	+27.58	+1,091	+3.60	+5,427	+20.87
Other securities	+ 54	+ 2.53	+ 209	+10.54	+ 10	+0.09	+1,307	+13.58
LIABILITIES:								
Demand deposits adjusted	— 26	— 0.23	+ 264	+ 2.36	—1,856	—2.90	+1,201	+ 1.99
Time deposits	+278	+ 2.23	+1,631	+14.71	+1,134	+2.97	+6,600	+20.19
Savings accounts	+125	+ 1.25	+ 706	+ 7.49	+ 579	+2.08	n.a.	n.a.

Note: Revised series; see p. 127 for description of revision. n.a.—Not available.
[1]Exclusive of loans to domestic commercial banks and after deduction of valuation reserves; individual loan items are shown gross.
Source: Board of Governors of the Federal Reserve System and Federal Reserve Bank of San Francisco.

from crop marketings were down by more than a third from March 1960.

Participation in the emergency feed grain program by the nation's farmers has been greater than expected. With the passage of the final date for the signup under the program, advance payments that can be made this spring to participants were in excess of $340 million. Such advance payments, however, will yield District farmers only a token amount of funds which they could apply to preharvest expenses, since District participants in the program are eligible to receive approximately 1 percent of the national total.

Spring demand for bank loans fails to materialize

The demand for bank credit in the District during May reflected the comparatively slow rise in District business activity. At District weekly reporting member banks, loans outstanding (excluding loans to domestic commercial banks) at the end of May were above the April level, owing largely to an increase in borrowings by brokers and dealers, but substantial declines in both security and commercial and industrial loans in the first week of June reversed the moderate gains during May. Banks continued to invest their funds in short-term securities in order to be prepared to meet credit needs as they may develop in the business upswing. Commercial and industrial loans dropped $74 million below their April level, with nearly all of the decline occurring during late May and early June. About half of the Twelfth District cities for which reports are available for all banking offices showed declines in business loans during May, and where gains occurred they were relatively small, $6 million or under.

Commercial and industrial loans are used extensively to finance business inventories, and the failure of such loans to rise largely reflects the fact that inventories have not yet shown any significant increase. Real estate loans at weekly reporting banks registered small week-to-week increases, but the total rise was not enough to indicate clearly a basic change in real estate activity. If mid-month repayments on loans (secured by instalment contracts) to a national retailer are netted out of the "other loan" category, consumer loans outstanding at District banks showed a slight increase during May.

Loans to domestic banks fluctuated widely during May and early June as District banks were alternately in a tight and then easier reserve position. For the period as a whole, District banks were net purchasers of Federal funds, and the rate at times rose to 3 percent. Some of the tightness felt in the third week of May arose as banks had to make payment for securities bought in the Treasury financing earlier in the month.

District weekly reporting member banks made heavy reductions in Treasury bill holdings and some reduction in securities of over 5 years maturity as they picked up about $175 million in certificates of indebtedness and $70 million in two-year notes in the Treasury offering in early May. Purchases of Treasury bills and other short-term Governments picked up during the first week of June, and, as of June 7, these banks showed a $26 million increase in total holdings of United States Government securities from the level at the end of April. During this period District weekly reporting banks added over $50 million to their portfolios of other types of securities.

Demand deposits adjusted at weekly reporting banks dropped sharply in the period from April 26 to May 31 as deposits of individuals, partnerships, and corporations were reduced. Deposits of states and political subdivisions, which were at high levels from March and April tax receipts, were also drawn down as funds were diverted into Government securities and other investments. Time deposits continued to move up, with savings deposits accounting for more than half the gain.

The Role of Twelfth District Banks in the Federal Funds Market:

A RISING FACTOR IN A DYNAMIC MARKET

THE Federal funds market is an indigenous American money market institution inasmuch as Federal funds are an intrinsic feature of the central banking system of the United States and have become a unique instrument in the American money market. Commercial banks which are members of the Federal Reserve System are required to hold specified minimum percentages of their demand and time deposits in vault cash or as reserve balances with the Federal Reserve Banks. In shorthand, such balances are also known as Federal funds and trading in them creates the market which is the subject of this article.

Subscribers to new issues of Treasury securities—whether banks, Government security dealers, or others—are generally required to make payment for their allotments in Federal funds. Similarly, the open market operations of the Federal Reserve System, by means of which the System maintains the desired degree of day-to-day ease or pressure on the money and credit markets, are conducted through the purchase or sale of Government securities by the Trading Desk in the Federal Reserve Bank of New York. These transactions are conducted with Government securities dealers in New York and, to a much lesser extent, in Chicago, and payment is made or received exclusively in Federal funds.[1]

[1]The Federal Reserve Bank of New York also executes a large dollar volume of transactions in Treasury securities for the accounts of foreign central banks and governments, performs a variety of security transactions for the various Government trust funds and investment accounts administered by the United States Treasury, and also stands ready to execute orders from member banks of the Federal Reserve System which are remote from the market or too small to be serviced regularly by dealers. These various types of transactions are executed through the dealer market and are coordinated with transactions for the System Account.

In addition, it has become increasingly the market practice during the past decade to require payment in other types of transactions in Government securities, particularly short-term issues, in Federal funds rather than by check, which was formerly the customary medium of cash payment in Government security transactions. Government securities dealers, therefore, also receive and pay out Federal funds, usually through banks as intermediaries, in the course of their securities transactions with banks, corporations, state and municipal treasurers, foreign agencies, and others. This market practice arises from the fact that payment in Federal funds is effected by use of the Federal Reserve wire transfer system, and hence funds are immediately available. Checks, on the other hand, must be processed through a clearing house, and funds are not available to the recipient until the following day. Thus the delay associated with clearing house funds means the possible loss of a day's interest, and this opportunity cost became higher as money market rates rose in the 1950's.

Time deposits or savings shares are commonly recognized as being one step removed from "money" since they must be converted into currency or a check prior to being used as a means of payment. Even checks, however, must be run through a clearing house with a delay of at least one day. Federal funds, in contrast, represent *immediately* available funds. In fact, some Federal funds transactions involve the simultaneous exchange of a check for Federal funds; the clearing of the check the next day repays the Federal funds loan.

Regional trade and payments understandably result in temporary imbalances which are typically settled in New York, the nation's financial center. The heart of any money market is its banks, and it could not be expected that the money market banks could successfully meet the large and unpredictable drains upon their reserves occasioned by a variety of factors without being able to draw upon secondary liquidity reserves, which in the United States have come to be primarily United States Treasury bills, or without access to borrowing from the central bank.

Aside from Federal funds, Treasury bills have become the chief instrument of the American money market. Dealers stand ready to buy or sell Treasury bills and other Government securities in reasonable amount, with a reasonable spread between bid and offer prices, at any time. Hence, when a money market bank suffers a sharp drain upon reserves, the Government security dealers stand as "buffer of last resort" to the bank, which must otherwise turn to the "lender of last resort," that is, the Reserve Bank, in order to meet its legal reserve requirements.

While the Government security dealers perform a valuable service to the banking system by standing ready to buy Treasury bills and other Government securities from banks to cover reserve deficiencies (or for other reasons), the banks may incur a loss in the process due to price fluctuation or to the spread between bid and offer prices. Borrowing from the Reserve Bank allows a deficit bank to cover its reserve requirement without loss from liquidation of securities and, moreover, provides the bank with time in which to ascertain whether the deficit is temporary or one requiring adjustment of the bank's position through portfolio changes; in the latter case, the time gained enables the bank to reduce loans and/or liquidate securities from its portfolio in a more orderly fashion.

The reserve deficiencies of some banks are likely to coincide with excess reserves of other banks, however, and if the banks with excess reserve balances can match and lend these Federal funds to cover the reserve requirements of the deficit banks, the transaction will be advantageous to both sides. Since Federal funds transactions between banks are typically made for only one day, the lending bank will have use of its Federal funds as reserves the following day when they may be expected to be needed again, as the reserve position of a large bank often alternates from excess to deficit within brief periods; moreover, the lending bank will have earned interest on its funds which otherwise would have had to have been foregone since it may not be profitable to invest in Treasury bills or other short-term paper for less than a minimum of a few days. On the other hand, the borrowing bank has covered its reserve deficit; has avoided borrowing at all, or at least in as large an amount, from the Reserve Bank; has acquired the Federal funds at or below the discount rate; and has avoided possible losses from the sudden, forced liquidation of securities.

Banks do most of the trading in Federal funds

It is the lending of surplus balances above reserve requirements in order to adjust an excess or deficiency in the reserve position of individual member banks which constitutes the major share of Federal funds transactions. Because of the benefit they derive from a broad Federal funds market, the large banks have utilized their contacts with each other and with correspondents to become increasingly aggressive in acting as brokers in Federal funds and, to a limited extent, in taking positions as dealers in Federal funds.

For their part, the Government security dealers have not remained passive with respect to the problem of meeting their portfolio financing needs. If the dealer cannot obtain sufficient funds locally to pay for his purchases and carry his position at reasonable rates, he will turn to his contacts with large corporations, state treasurers, out-of-town banks, and others in an endeavor to obtain the needed funds with securities as collateral.

Instrumental in creating a nationwide market in Federal funds are the large New York banks and a few other New York institutions, particularly one stock market firm, which act as brokers in Federal funds. They receive "buy and sell" offers by telephone from all over the country during most of the day and attempt to match these offers as quickly as possible. The New York banks and the broker early establish opening rates for the day subject to change during the course of trading, and their rates are widely quoted in the market. There is no formal Federal funds rate at any given moment, but the rates of out-of-town banks are largely influenced by the going rate or rates being quoted by the New York broker and by the New York banks and dealers.

The rate at which Federal funds are traded seldom rises above the discount rate because at that point banks, which account for the major share of Federal funds transactions, may choose to borrow from the Reserve Bank to meet their reserve requirements rather than pay a higher rate of interest. Although the Federal funds rate is closely related to the discount rate, its relationship to the Treasury bill rate significantly affects the decision of a bank between lending its surplus funds as Federal funds or investing them in Treasury bills whenever the surplus is expected to persist long enough to allow the latter choice.[1]

The importance of Federal funds in the money market and the significance of the Federal funds rate may be summed up by two observations: First, the money market now deals in two kinds of money—clearing house funds and Federal funds. Secondly, despite limitations on its sensitivity under marked credit stringency, the Federal funds rate, determined in continuous trading, has come to be regarded as one of the most sensitive of all short-term rates as an indicator of the prevailing state of the money market.

[1]For further discussion of this point, see "The Auction of Treasury Bills in the Twelfth District," *Monthly Review*, Federal Reserve Bank of San Francisco, January 1961.

Origin and growth of the Federal funds market

Although the Federal funds market has only recently come to flower, it originated in the 1920's in New York.[1] The depression in the early 1920's left the large New York banks with a wide disparity in reserve positions, and these banks arranged to lend and borrow their surplus reserves among themselves in order to adjust a temporary excess or deficiency of reserves. Later the New York acceptance houses came into the market, charging a small commission for matching supply and demand in Federal funds. In the 1920's, however, Federal funds transactions constituted only a narrow segment of the money market, and New York dominated the Federal funds market both from the standpoint of volume of transactions and number of participants although lesser markets in Federal funds developed in other financial centers such as Chicago, Boston, Philadelphia, and San Francisco.

The Federal funds market waned during the 1930's, first because of doubt about the soundness of borrowing banks during the banking difficulties of the early thirties and then because of the large volume of excess bank reserves which were characteristic of the later thirties. During the war and early postwar years, there was little demand for Federal funds because banks owned large amounts of Treasury securities which could be readily sold to or bought from the Reserve banks at pegged prices.

[1]For a description of the growth and structure of the Federal funds market, see *The Federal Funds Market, A Study by a Federal Reserve System Committee*, Board of Governors of the Federal Reserve System, Washington, D. C., 1959.

The Treasury-Federal Reserve "accord" of 1951 ended the pegging of Government security prices. Since this meant that Government securities were now subject to price fluctuation, particularly in a downward direction when offered for sale, the same date marked the rebirth and rapid growth of the Federal funds market. The large volume of outstanding Treasury bills, which had served as a means of war finance, continued as a permanent addition to money market instruments; however, Treasury bills are not as suitable a medium for the adjustments which may be necessary to maintain the reserve position of a large bank at close to the legal minimum on a daily basis. Moreover, the rise in money market rates following the "accord" of 1951 made it profitable to lend Federal funds.

Improvement in the Federal Reserve wire transfer facilities directly contributed to the postwar growth of the Federal funds market. In addition, however, the shortening of the deferred availability schedule for check collection in 1951 to a maximum of two days yielded a larger volume of temporary excess reserves. This resulted because credit was given for all checks within two days, and many of them took far longer to collect under normal circumstances. Abnormal circumstances, such as weather affecting airline schedules, further add to the higher average level of excess reserves created by the gap at any given time between the amounts of checks "credited" and "collected."

Of more fundamental importance to the postwar growth of the Federal funds market was an institutional change in the New York money market. The New York call loan market formerly was instrumental in maintaining continuous contact within the national money market because the New York call loan operated as a medium for the placement of correspondent bank balances, drawn from all over the country, at very short term and at a specified rate of interest. The demise of the call money market was related to the provisions of the Banking Acts of 1933 and 1935, which eliminated payment of interest on demand deposits and prohibited member banks from acting as a medium for the placement of security loans for nonbank lenders, and to the provisions of the Securities Exchange Act of 1934, which established margin requirements on loans to finance the purchase or carrying of securities. Thus these provisions had the effect of both reducing the capacity of the New York money market banks to attract surplus bank balances from the rest of the country and of considerably narrowing the terms under which such funds could be invested. The monetary and credit ease of the later 1930's also contributed to the demise of the call money market.

The newly created gap in American money market media came to be filled by Federal funds, which possess the characteristics of the old call loans in that they are lent at very short term at a specified rate, and secondly, by Treasury bills, which are highly liquid short-term instruments subject to fluctuating prices in trading.

Collection of Federal funds data

The postwar growth in the volume and number of participants in the Federal funds market is indicated by Table 1.

The importance of the postwar role of Federal funds led the Federal Reserve System to an initial collection of data on Federal funds transactions from a nationwide sample of the most active banks and Government security dealers in the market in order to learn more about the structure and practices of the market. Data were obtained for the month of November 1956.

The survey revealed that, as in the 1920's, the large money market banks still form the core of the market, accounting for 80 to 90 percent of the total volume of transactions. The proportion of Federal funds transactions

TABLE 1

TRANSACTIONS IN FEDERAL FUNDS, SELECTED PERIODS

Period	Average daily volume of transactions (in millions of dollars)	Number of participants	
		Banks[1]	Dealers in acceptances and Government securities
1925 - 32	100 - 250	30 - 40	10
1950 - 53	350 - 450	75 - 100	14
1955 - 57	800 - 1,100	125 - 200	18

[1] Includes foreign agencies.
Source: *The Federal Funds Market, A Study by A Federal Reserve System Committee,* Board of Governors of the Federal Reserve System, Washington, D. C., 1959, Table 2, p. 33.

accounted for by Government security dealers during the survey month was well below 10 percent. "Other" participants in the market—primarily savings banks, agencies of foreign banks, and corporations—were relatively unimportant in terms of the percentage of total bank purchases and sales of funds for which they accounted.

Following the analysis of the data collected from the November 1956 survey of banks and Government security dealers, it was decided, with the cooperation of member banks, to conduct a longer term survey of the Federal funds transactions of banks actively participating in the market, beginning in September 1959. This article presents an analysis of the data collected from Twelfth District banks included in the survey over a 15-month period, September 1959 through November 1960. While there are some questions as to the preciseness of the reported data, owing to some banks interpreting Federal funds transactions somewhat differently than others and also to lack of complete coverage, the general pattern of transactions exhibited would not be materially affected by these shortcomings.

In the November 1956 survey, the daily volume of purchases of Federal funds of the reporting banks in the nation ranged from $600 million to $1.1 billion; in November 1960, the daily volume of Federal funds purchases of reporting banks ranged from $600 million to $2.0 billion and averaged $1.5 billion on a daily basis.

As the financial center of the nation, New York City is also the center of the Federal funds market and in November 1960 accounted for 45 percent of the total volume of all purchases and sales of Federal funds by banks included in the survey. In the same month, the Chicago Federal Reserve District accounted for 9 percent of reported Federal funds transactions, while the San Francisco District accounted for 16 percent of the reported volume. Thus the city of New York, plus the Chicago and San Francisco Federal Reserve Districts, accounted for over two-thirds of total dollar volume of transactions reported by the survey banks.

THE NATIONAL PICTURE

It has been noted that the Federal funds market is predominantly a bank market in terms of dollar volume of transactions and that banks primarily use the Federal funds market for the adjustment of their reserve positions. Although the Comptroller of the Currency has ruled that either a borrowing or a lending bank must treat its Federal funds transactions as loans, Federal funds transactions are commonly referred to in financial markets as purchases or sales, and the latter terms will therefore be used in this analysis. Purchases and sales of Federal funds, as the terms are used, do not refer to borrowings from Reserve Banks.

Before proceeding to analyze the transactions of the Twelfth District in detail, let us consider the net flow of funds in the nationwide Federal funds market as a whole, the role of the various Federal Reserve Districts within that market, and the structure of transactions. Tables 2 and 3 present data by Federal Reserve District on Federal funds transactions of the reporting banks in the survey beginning September 1959 for business days in the period November 3-30, 1960. This period was chosen to permit a seasonal comparison with the November 1956 survey, and a detailed analysis of the data for November 1959 was made for the same reason. In addition, November 1959 was a relatively "tight" month, and November 1960, a relatively "easy" one; they represent, therefore, contrasting periods in terms of the reserve position of banks and of the level of the Federal funds rate.

Federal funds transactions presented in this survey are shown for business days only, whereas in practice such transactions are on the basis of a seven-day week. Friday transactions carry over Saturday and Sunday and hence are three-day transactions with interest paid for three days; transactions made on the day preceding a holiday carry over the holiday. These unadjusted data thus understate the total volume of credit but indicate the pattern of Federal funds transactions.

Because of the importance of New York City in the Federal funds market, the transactions of the New York District are also shown broken down between the transactions of banks in New York City alone and those of banks elsewhere in the New York District.

It may be noted from the preceding tables that the total dollar volume of purchases is greater than the total dollar volume of sales shown for the period considered. This is characteristic of Federal funds survey data because banks which come into the Federal funds market only infrequently or in small volume and, therefore, are not included in the survey are typically sellers of funds to the active participants in the market; hence, such funds are included in the purchases reported by survey banks, while the corresponding sales are not reported.

Most common transaction: one-day, unsecured

Tables 2 and 3 illustrate the fact that the typical Federal funds purchase or sale is a one-day transaction with another bank. In the business days of the period considered, 97 percent of all purchases and 96 percent of all sales reported were made for one day, while 93 percent of all purchases and 90 percent of all sales were with other banks. In Twelfth District transactions, the percentage of one-day transactions with banks was even higher.

Legal reserve requirements of member banks classified as reserve city banks are averaged over a weekly period ending on a Wednesday, while the reserve requirements of those classified as country banks are averaged over a biweekly period ending on a Wednesday. In practice, however, many large banks adjust their reserve position on a daily basis through use of the Federal funds market. This practice increases supply and demand for one-day Federal funds.

The most popular type of transaction is the one-day unsecured transaction, a category which accounted for 58 percent of purchases and 64 percent of sales in the November 1960 period. One-day unsecured transactions have the advantage of simplicity since they involve a minimum of bookkeeping and no handling of securities.

Secured transactions serve useful purpose

Federal funds transactions other than overnight, unsecured transactions involve the pledge or transfer of securities, which are usually short-term Government issues, typically Treasury bills. In the November period, banks in five Districts made more than one-half of their total dollar volume of sales as one-day secured sales; data indicate that this category typically accounts for a sizable proportion (one-third to over one-half) of total sales made by some Federal Reserve Districts, including the Dallas, Kansas City, Atlanta, Richmond, and Cleveland Districts. However, one-day secured purchases are made principally by the New York, Chicago, and San Francisco Districts, and in the November 1960 period, the purchases of these Districts accounted for 97 percent of the total dollar volume of one-day secured purchases. In this period, the percentage of one-day secured purchases to total volume of purchases was 28 percent for the Chicago District, 49 percent for the San Francisco District, and 56 percent for the New York District.

There is less risk attached to secured sales of Federal funds, of course, but rulings by the Comptroller of the Currency regarding maximum loans to a single customer in secured and unsecured Federal funds are an important factor in secured transactions. Since the Comptroller has ruled that all bank transactions in Federal funds must be legally regarded as loans, unsecured sales of Federal funds by a bank to a single customer cannot exceed 10 percent of the selling bank's capital and surplus. However, a 1958 ruling by the Comptroller removed the limitation on loans to a single borrower when the funds are secured by direct United States Government obligations maturing within eighteen months.

Therefore, by pledging eligible United States Government securities as collateral, a bank or a Government securities dealer that wants to buy a large volume of Federal funds can avoid a possible legal limitation on the amount of funds it can obtain from a supply-

TABLE 2

PURCHASES OF FEDERAL FUNDS, BY FEDERAL RESERVE DISTRICT, NOVEMBER 3-30, 1960.[1]

(amounts in millions of dollars)

Purchases:		Percentage distribution					
		Type of Transaction:			Purchased from:		
Location of Purchaser	Total Amount	1-day unsecured	Other 1-day	Over 1-day	Bank	Government Security Dealers	Other
All Districts	**26,983.0**	**57.5**	**39.8**	**2.7**	**92.5**	**4.3**	**3.1**
Boston	896.5	99.3	0.6	—	99.6	0.4	—
New York	13,797.8	42.0	55.9	2.1	86.5	8.4	5.1
New York City	*13,407.0*	*40.3*	*57.5*	*2.1*	*86.1*	*8.7*	*5.2*
Outside N.Y.C.	*390.8*	*100.0*	—	—	*100.0*	—	—
Philadelphia	1,018.6	96.4	—	3.6	100.0	—	—
Cleveland	1,260.4	80.6	9.2	10.2	100.0	—	—
Richmond	597.5	96.3	0.8	2.8	100.0	—	—
Atlanta	434.9	95.0	—	5.0	100.0	—	—
Chicago	2,843.1	72.2	27.5	0.2	97.4	—	2.6
St. Louis	270.0	76.9	1.9	21.3	99.1	—	0.9
Minneapolis	340.3	96.2	—	3.8	100.0	—	—
Kansas City	629.8	79.3	9.2	11.5	100.0	—	—
Dallas	891.5	81.0	12.6	6.4	100.0	—	—
San Francisco	3,912.6	50.3	48.7	0.9	98.5	—	1.5

[1] Data presented are for business days only.
Source: Board of Governors of the Federal Reserve System.

ing bank. In part this explains the fact that secured purchases of Federal funds are largely concentrated in the New York, Chicago, and San Francisco Districts, where many of the large money market banks are located, whereas secured sales of Federal funds are prominent in several other Districts. However, the New York and Chicago Districts are typically net buyers of funds, and this circumstance would tend to make them buyers, rather than sellers, in secured Federal funds transactions.

The repurchase agreement is a type of secured Federal funds purchase frequently used by Government security dealers and also used by banks. In a repurchase agreement, the lender of funds buys the securities, usually short-term Government issues, and the seller agrees to repurchase them within an agreed time at a stated price and a stated rate of interest over the life of the agreement. The characteristic which distinguishes the repurchase agreement from ordinary purchases and sales of securities is that the risk of price change is eliminated.

In the period considered, 93 percent of the total dollar volume of purchases reported and 90 percent of the total dollar volume of sales reported were made with banks. Transactions with dealers accounted for 4 percent of purchases and 10 percent of sales; transactions with "others" accounted for 3 percent of purchases and less than 1 percent of sales.

Adjusting versus accommodating banks

Some banks buy or sell Federal funds only in order to adjust their own position; these may be called "adjusting" banks. Other banks will buy or sell Federal funds even when the transaction runs against their own reserve position in order to "make a market" in Federal funds or to accommodate a correspondent; these banks may be called "accom-

TABLE 3

SALES OF FEDERAL FUNDS, BY FEDERAL RESERVE DISTRICT, NOVEMBER 3-30, 1960[1]

(amounts in millions of dollars)

Sales:		Percentage distribution					
		Type of Transaction:			Sold to:		
Location of Seller	Total Amount	1-day unsecured	Other 1-day	Over 1-day	Bank	Government Security Dealers	Other
All districts	**23,467.3**	**63.7**	**32.2**	**4.0**	**89.8**	**9.8**	**0.4**
Boston	830.1	60.4	38.8	0.8	83.2	16.8	—
New York	9,486.9	81.3	18.4	0.4	93.2	6.8	—
New York City	*7,860.6*	*94.3*	*5.5*	*0.2*	*93.7*	*6.3*	—
Outside N.Y.C.	*1,626.3*	*18.3*	*80.7*	*1.0*	*90.5*	*9.5*	—
Philadelphia	1,084.3	44.3	44.3	11.4	60.2	39.8	—
Cleveland	853.2	47.0	35.7	17.2	88.5	11.5	0.4
Richmond	1,094.4	31.1	51.0	17.9	92.6	7.0	—
Atlanta	533.6	27.5	64.7	7.8	93.0	7.0	—
Chicago	1,567.2	48.3	50.4	1.2	78.1	17.4	4.5
St. Louis	429.1	93.1	3.6	3.3	97.6	2.4	—
Minneapolis	193.9	31.4	34.6	34.0	96.4	3.6	—
Kansas City	713.7	22.0	69.1	8.9	80.9	19.1	—
Dallas	1,815.0	19.5	73.7	6.7	92.9	7.1	—
San Francisco	4,865.9	74.7	23.0	2.3	93.4	6.4	0.2

[1] Data presented are for business days only.
Source: Board of Governors of the Federal Reserve System.

modating" banks. The two categories are not mutually exclusive since an adjusting bank may sometimes buy or sell Federal funds, contrary to its own reserve needs, in order to accommodate a correspondent bank.

Adjusting banks vary in type. Some alternate from buying to selling, reflecting a change in reserve position, while others may be continuous buyers over a long period because of a persistent deficit reserve position. Many adjusting banks maintain a cushion of excess reserves and enter the market from time to time as sellers of funds. As a group, banks classified as country banks, which would include the smaller banks, typically hold excess reserves, even at times when reserve city banks as a group are in a deficit position. However, smaller banks may have difficulty participating in the Federal funds market because Federal funds are usually traded in units of $1 million or more, whereas the surplus funds which a smaller bank wishes to sell may be well under $1 million. Federal funds are sometimes traded in smaller units, especially when funds are scarce relative to demand.

In the four reserve weeks of November 3-30, 1960, a period of relative ease in the money market, the size distribution of Twelfth District Federal funds transactions was as follows:

Size of transaction	Percent of number of transactions	Percent of dollar amount
Under $1 million	**5.9**	**0.5**
$1 - $10 million	**86.4**	**70.5**
Over $10 million	**7.7**	**29.0**
	100.0	**100.0**

Total number of transactions: 832
Total dollar amount: $3,913 million.

Volume of transactions varies greatly among Reserve Districts

Tables 2 and 3 illustrate the wide divergence in the importance of the various Reserve Districts in the Federal funds market from the standpoint of dollar volume of transactions. In the November 1960 period, the purchases of reporting banks ranged from $270 million in the St. Louis District to $13,-798 million in the New York District, while reported sales ranged from $194 million in the Minneapolis District to $9,487 million in the New York District. Sales to Government security dealers varied by District from 2 percent to 40 percent of the total volume, but purchases from Government security dealers were made principally by reporting banks in New York. Transactions with "others" formed only a small percentage of total purchases or sales in any District, and several Districts reported no transactions in this category; however, it may be noted that "others" served as a net source of funds to reporting banks.

There is a sizable volume of intradistrict purchases and sales of Federal funds in the Chicago, San Francisco, and New York Districts; average percentages of intradistrict transactions over three periods (calendar month of November 1956, four reserve weeks in November 1959, and four reserve weeks in November 1960), are shown in Table 4.[1]

Other intradistrict markets are smaller and over the three periods accounted for an average of less than 10 percent of total District purchases or sales, with one exception: In the St. Louis District, an average of 25 percent of total purchases were made within the District.

TABLE 4

	Purchases	Sales
Chicago	25	28
San Francisco	47	34
New York	36	41

For Districts other than New York, interdistrict trading tends to be primarily with New York City and secondarily with other

[1]The figures for the three periods cited are less comparable for the New York District than for the Chicago and San Francisco Districts because the November 1956 survey included transactions of Government security dealers, which are concentrated in New York, whereas the current survey covers transactions of banks only. The percentages of intradistrict transactions for the New York District in the three periods were, in chonological order:

Purchases:	48, 36, 22.
Sales:	56, 38, 29.

Federal Reserve Districts. During the business days of the November 3-30, 1960 period, seven Districts (Boston, Philadelphia, Cleveland, Richmond, Atlanta, St. Louis, and Kansas City) made over one-half of their total purchases in New York City. During this period, the Chicago, Minneapolis, and Dallas Districts made from 31 percent to 42 percent of their purchases in New York City. Reporting banks in San Francisco, which buy nearly one-half of their funds within the District, bought a smaller percentage (22 percent) of their total purchases in New York City than any other District.

In the same period, five Districts (Boston, Richmond, Atlanta, Minneapolis, and Kansas City) made over one-half of their sales to New York City; all of these Districts except Minneapolis also made more than one-half of their purchases in New York City. Four Districts (Cleveland, Chicago, St. Louis, and Dallas) made from 37 percent to 49 percent of their sales to New York City; 27 percent of the sales of the Philadelphia District were made in New York City. As in the case of purchases, the San Francisco District ranked lowest in percentage of sales made to New York City (25 percent).

As the financial center of the nation, New York City is also the hub of the Federal funds market, as the preceding figures indicate. However, the San Francisco District plays a significant role in interdistrict trading in Federal funds. During the period cited in November 1960, the percentage of purchases made by other Districts from the San Francisco District ranged from 9 percent by New York to 51 percent by Dallas. Although the San Francisco District figured less prominently as a buyer in interdistrict trading, sales made by other Districts to the San Francisco District ranged from 2 percent by Philadelphia to 40 percent by Dallas.

A Federal Reserve District may be typically either a net purchaser or a net seller (but even so, may be a net purchaser one month and a net seller the next). Therefore, an estimate of the relative shares of the individual Districts in the national Federal funds market must be based upon the sum of total purchases and sales reported by the various Districts.

TABLE 5

Federal Reserve District	Percentage of total volume of Federal funds transactions, selected periods
Atlanta	2
St. Louis	2
Minneapolis	2
Kansas City	3
Richmond	3
Boston	4
Philadelphia	4
Cleveland	4
Dallas	4
Chicago	9
San Francisco	15
New York	48
All Districts	100

Again based upon an average of three periods (the calendar month of November 1956, four reserve weeks in November 1959, and four reserve weeks in November 1960), these data indicated that the relative shares of the individual Federal Reserve Districts in the total national volume of Federal funds transactions were as shown in Table 5.

Out of the nationwide flow of Federal funds, New York City and the Chicago District emerge as net buyers, thus drawing funds from the rest of the country. On the other hand, the San Francisco District is characteristically a net seller of funds, and the other Federal Reserve Districts, on balance, are also net suppliers of funds.

THE DISTRICT PICTURE

The San Francisco District now ranks second to the New York District in dollar volume of Federal funds transactions, and, on the basis of data examined in November of 1956, 1959, and 1960, the San Francisco District accounts for about one-sixth of the total national volume of Federal funds transactions.

Contributing to the postwar stature of the San Francisco District in the Federal funds market have been two special factors: The time zone difference between the East Coast and the West Coast and the prevalence of branch banking in the Twelfth District. The three-hour difference in time between the East and West Coasts permits trading in Federal funds to move westward as the day progresses and gives the West Coast banks three hours in which to continue trading among themselves after the banks on the East Coast have closed.

It has been noted that large banks—in particular, the large money market banks—are the core of the Federal funds market. Large banks are more active in the Federal funds market than smaller banks because the large banks manage their money positions more closely and because the million-dollar trading unit of the Federal funds market is not a barrier in view of the magnitude of the short-term surpluses or deficits in their reserve positions. The daily contact of large banks with the money markets for other purposes also facilitates their trading in Federal funds.

Some characteristics of Twelfth District trading in Federal funds which are discussed in this article are illustrated by Charts A through F in the text and by Charts 1 through 10 at the end of the text.

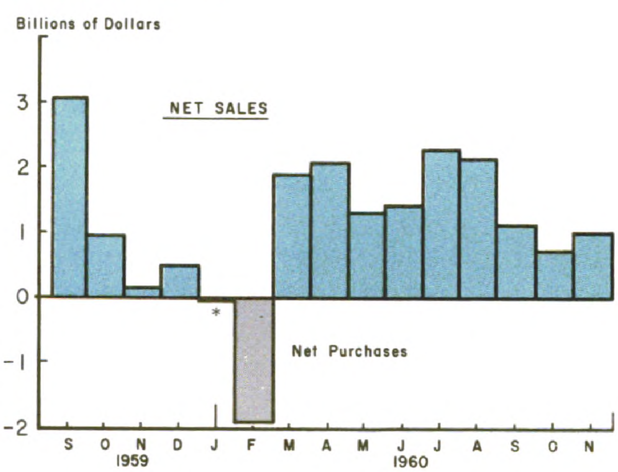
Branch banking has facilitated Federal funds trading in the West

The predominance of branch banking in the San Francisco District has facilitated Federal funds trading because it has resulted in fewer, but larger, banking systems. Instead of having numerous small unit member banks (each of which would be likely to maintain a cushion of excess reserves at the Reserve Bank), many individual banking offices are drawn into a single large banking system so that the money position of the system is managed centrally, and the reserve position is held close to the legal minimum. The importance of branch banking systems in the Twelfth District is illustrated by the fact that, as of December 31, 1960, less than 3 percent of all banks in the United States were located in the Twelfth District, but more than 12 percent of all banking *offices* in the United States were situated there. As of the same date, twelve of the fifty largest banks in the nation, ranked by size of deposits, were in the Twelfth District.

The correspondent banking system of the United States is a key factor in the nationwide structure of the Federal funds market, and the greatest concentration of correspondent balances is in New York City. Eight of the ten banks ranking highest by volume of correspondent balances held as of December 31, 1960 are located in New York City, and one (ranking ninth) is located in the San Francisco District; only three out of the highest fifty banks so ranked are in the San Francisco District. This also reflects the extent of branch banking which minimizes the number of po-

CHART A

Twelfth District a net seller of Federal funds

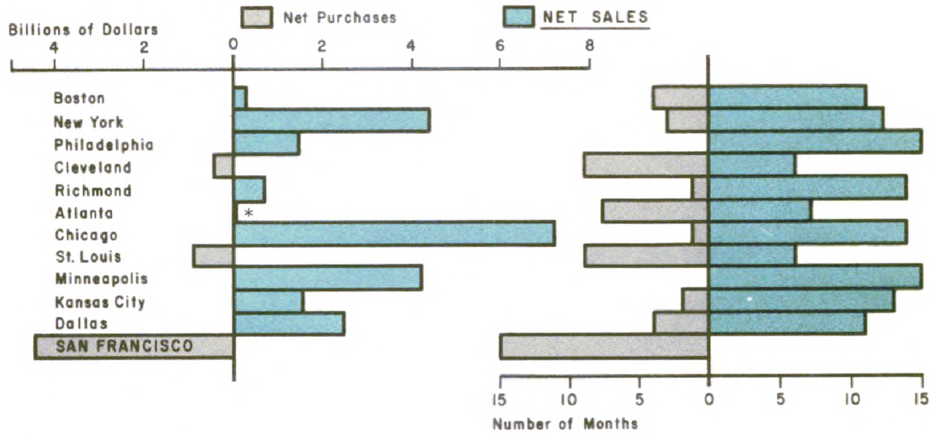


*Net purchases: $55 million.
Source: Federal Reserve Bank of San Francisco.

tential smaller correspondents, particularly when the branch banks cover large geographic areas. However, the correspondent relations which the San Francisco banks maintain with banks in major cities outside the District provide them with useful contacts in their nationwide Federal funds trading.

CHART B

Twelfth District pattern of trading in Federal funds with other Reserve Districts



*Net sales: $26 million.
Source: Federal Reserve Bank of San Francisco.

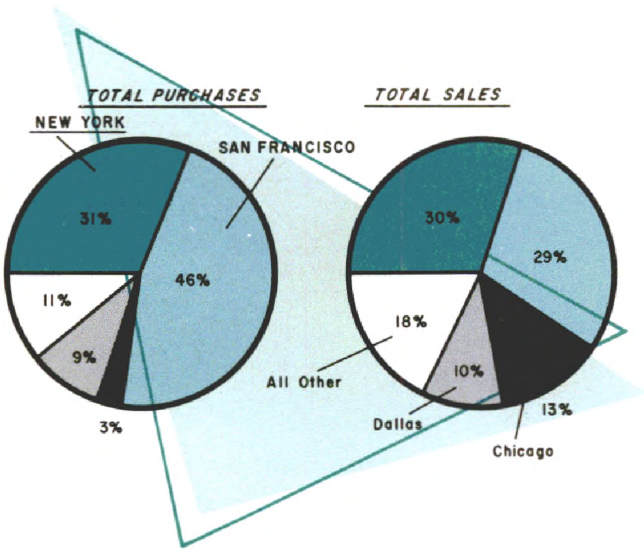
One of the chief characteristics of the San Francisco District in the Federal funds market, then, is its high volume of transactions. Another characteristic is its importance as a net seller of funds. Over the 15-month period from September 1959 to November 1960, the San Francisco District was a net seller of Federal funds in each reserve month except January and February 1960 (Chart A). In those two months, time deposits of individuals, partnerships, and corporations at weekly reporting member banks dropped sharply by a total of $396 million, while demand deposits adjusted fell $792 million. The abnormal drain on District bank deposits was occasioned to an appreciable extent by investment by individuals and others in the higher yielding new Treasury securities and by the attraction of funds to savings and loans associations, which raised their dividend rates at the beginning of that year. The bulk of savings withdrawals in the District occurred in California, thereby affecting the reserve position of the District banks which are the most active in the Federal funds market.

During the two months of January and February 1960, not only did the San Francisco District become a net buyer of Federal funds, but borrowings from the Reserve Bank by reserve city banks in the District also rose sharply. However, total net purchases of Federal funds by the San Francisco District in January and February 1960 amounted to only $1,937 million, compared with total net sales of $18,617 million in the other 13 months of the period September 1959 to November 1960.

The pattern of Twelfth District trading in the Federal funds market may be further described in terms of which other Federal Reserve Districts are net buyers from this District and of which are net sellers to this District. Chart B shows the net dollar volume of purchases or sales of Twelfth District reporting banks with each Federal Reserve District over the 15-month period, September 1959-November 1960; the chart also shows the number of months in which each District made net purchases from Twelfth District reporting banks and shows similar information for net sales. Over the entire period, the San Francisco District was a net seller of funds to every other Federal Reserve District except Cleveland and St. Louis. Moreover, net intradistrict purchases made by Twelfth District reporting banks were more than three times as great as combined net purchases from the Cleveland and St. Louis Districts.

CHART C

Percentage distribution of Twelfth District purchases and sales of Federal funds among Reserve Districts



Source: Federal Reserve Bank of San Francisco.

Net purchases of Federal funds from other Districts may often be occasioned less by Twelfth District bank reserve requirements for Federal funds which cannot be met within the District than by the active role of Twelfth District banks as brokers and, to a limited extent, dealers in the Federal funds market.

Turning now to the nine Districts which were net buyers from the San Francisco District over the September 1959 - November 1960 period, it is notable that the dollar volume of net sales was highly concentrated by region. The Chicago, New York, and Minneapolis Districts together accounted for $15.8 billion, or 70 percent, of the total net sales of $22.5 billion made by the San Francisco District, summed by individual Federal Reserve Districts for the fifteen months. In further comparison of the net sales position of the San Francisco District with the Chicago and New York Districts, it may be noted that the $4.4 billion in net sales to New York City was equal to over one-tenth of the total San Francisco District transactions with New York City, but that the $7.2 billion in net sales to the Chicago District equaled two-thirds of total transactions with that District.

The "westward" factor in Federal funds trading influences the volume of San Francisco transactions with the Dallas and Kansas City Districts as well as with the Minneapolis District. In the Dallas District, for example, banks are subject to sharp daily fluctuations in their reserve positions associated with oil industry payments. An excess or deficit in the reserve position of a Dallas bank can be corrected by means of a Federal funds transaction with San Francisco District banks after the eastern banks are closed.

Trading pattern of the San Francisco District

The Federal Reserve Districts may be grouped into three tiers according to volume of Federal funds transactions with the San Francisco District. Ranked in the first tier are the San Francisco District itself and the New York District as most Federal funds transactions of the San Francisco District are either intradistrict or with New York City. The Chicago and Dallas Districts form the second tier, and the remaining eight Districts, which are of lesser importance by volume of transactions with the San Francisco District, comprise the third tier. The trading pattern of the San Francisco District is illustrated in Chart C.

The percentages of total purchases and sales of Federal funds by the San Francisco District with the individual Federal Reserve Districts over the September 1959-November 1960 period are shown in Table 6.

This table illustrates the position of the San Francisco District as a net seller. The New York and San Francisco Districts accounted for about an equal percentage (nearly 30 percent) of sales, but purchases made by Twelfth District banks within the San Francisco District were half again as large as purchases made in New York City.

While the percentage of total sales made in New York City was nearly equal to the percentage of total purchases made in New York City, the percentage of sales in the Chicago District was nearly three times as great as the percentage of purchases made there. In the Dallas District the percentage of sales was slightly higher than the percentage of total purchases.

It may be noted that the total dollar volume of purchases reported by banks surveyed in the San Francisco District is smaller than the total dollar volume of sales reported by these banks. The fact that reported sales are higher than reported purchases in the San Francisco District appears to reflect the net seller position of actively trading banks situated here. The national figures, on the other hand, typically show an excess of purchases over sales since smallers banks, typically net sellers, are not included among the reporters.

Monetary and credit conditions shifted from tightness to ease

Monetary and credit conditions during the period September 1959 to November 1960 changed from relative tightness at the beginning of the period to ease during the latter

TABLE 6

Federal Reserve District	Percent of Total Purchases		Percent of Total Sales	
New York	30.5		29.5	
New York City only	30.3		29.4	
San Francisco	45.9		28.9	
		76.4		58.4
Chicago	3.3		12.6	
Dallas	9.2		10.5	
		12.5		23.1
Boston	0.8		1.1	
Philadelphia	0.2		2.3	
Cleveland	2.6		1.4	
Richmond	0.7		1.5	
Atlanta	2.1		1.8	
St. Louis	2.9		0.9	
Minneapolis	0.4		6.2	
Kansas City	1.4		3.3	
		11.1		18.5
Total percent	100.0		100.0	
Total dollar volume (in millions)	$54,931.9		$71,612.0	

part of the period. The discount rate fell from 4 percent in the early months of the period to 3 percent in the final months. During the first five months, the Federal funds rate reported as typical for the largest volume of transactions in the New York market was almost continuously at or very close to the discount rate, which serves as an upper limit for bank purchases of Federal funds; during these months, the market yield on 3-month Treasury bills and the rate on new issues of 3-month Treasury bills were usually above the discount rate, with the gap exceeding one half of 1 percent in December 1959 and January 1960 (Chart 1).

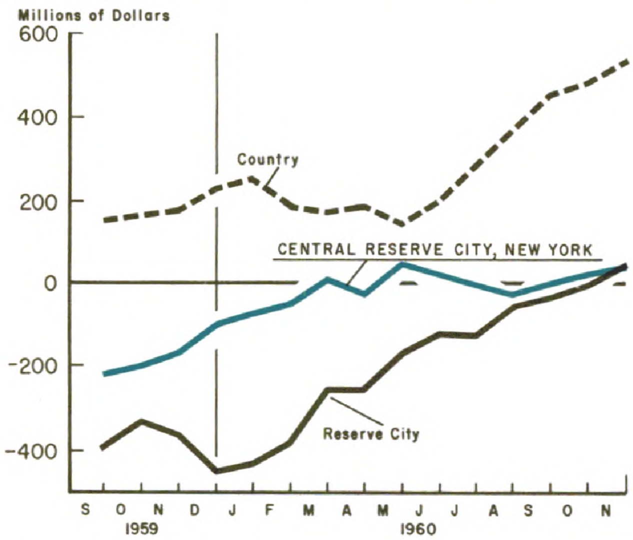
However, in the period from March to November 1960, both the yield on 3-month bills and the effective Federal funds rate were typically well below the discount rate; for the last four months, the yield on 3-month bills averaged about one half of 1 percent below the discount rate. The discount rate was lowered from 4 percent to 3½ percent in June and again lowered to 3 percent in August, where it remained for the rest of the period.

In the second half of the September 1959-November 1960 period, the reserve position of the reserve city banks and the central reserve city banks eased considerably. Reserve city banks had net borrowed reserves (that is, their borrowings from Reserve Banks exceeded their excess reserves) of $500 million at the beginning of January 1960, but by the end of the period, their average net reserve position had shifted to zero (borrowings from Reserve Banks equaled their excess reserves). At the beginning of the 15-month period, the central reserve city banks in New York City had net borrowed reserves of about $200 million; however, from March to November 1960, their position fluctuated in a narrow range between net borrowed and net free reserves (Chart D).

The reserve position of the reserve city banks in the San Francisco District, once past

CHART D

Net reserve positions of banks eased over the 15-month period



Source: Board of Governors of the Federal Reserve System.

the exceptionally high borrowings in the January-February 1960 period caused by factors cited earlier relating to savings withdrawals, was characterized by small net free reserves in the March to November period (Chart 2).

Chart 3 shows the relationship between changing monetary and credit conditions and the volume of Federal funds transactions for the nation over the 15-month period; individual curves show the trends of free reserves of the New York City central reserve city banks, total national purchases of Federal funds, and the effective Federal funds rate.

Under these changing national monetary and credit conditions, Chart 4 shows the analogous trends in the net reserves of San Francisco District reserve city banks, in the total volume of Twelfth District Federal funds transactions, and in the volume of District transactions at the discount rate.

Trend in volume of Twelfth District transactions

The total volume of purchases followed an irregular upward trend during the September 1959-November 1960 period; the trend of the sales volume was very irregular and rose in early 1960 sharply to a high plateau lasting most of the remainder of the period. The combined purchases and sales produced a trend for total transactions which was irregular, but rising, over the 15-month period (Chart E). The overall rising trend of total transactions fits the theory that the volume of Federal funds transactions increases as monetary conditions ease.

The volume of purchases from individual Federal Reserve Districts is presented in percentages for the following Districts: San Francisco, New York City only, Chicago, and Dallas (Chart 5).

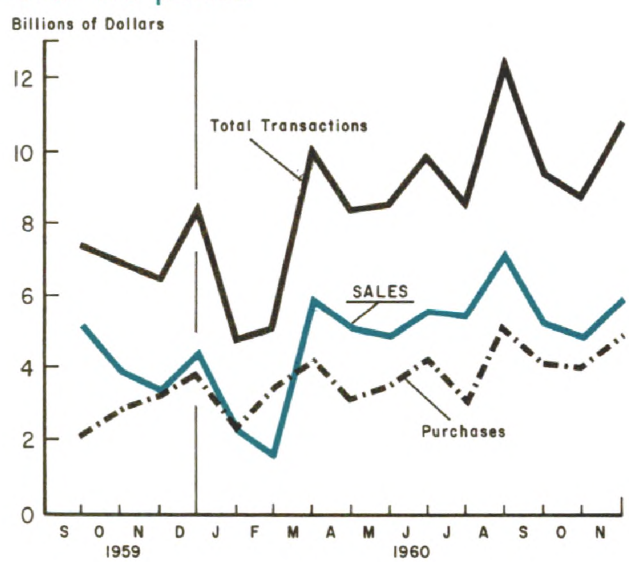
The volume of sales from individual Federal Reserve Districts is likewise presented in percentages for the same Districts (Chart 6).

Federal funds rate falls as monetary conditions ease

With the change toward monetary ease, the proportion of Federal funds purchases and sales made at the discount rate followed

CHART E

Generally rising trend in Twelfth District Federal funds transactions over the period



Source: Federal Reserve Bank of San Francisco.

an irregular downward trend beginning in November 1959. The decline in the percentage of transactions made at the discount rate is illustrated by the following figures:

	November 1959	November 1960
Purchases:	96	40
Sales:	96	43

However, even under easy monetary conditions, a considerable proportion of purchases and sales was made at the discount rate. The proportion of sales made at rates above the discount rate was relatively small although a peak of 13 percent was reached in June, and the proportion fell markedly in later months. Sales made at rates above the discount rate were usually made to Government security dealers. Few purchases were made at rates above the discount rate.

As the proportion of purchases and sales at the discount rate fell during the 15-month period, there was an increasing proportion of transactions in the range of lower rates, divided into ½ percent intervals down to 1 percent below the discount rate as well as an increase in the volume of transactions made at rates more than 1 percent below the discount rate. The changing trends in dollar amounts and percentages of purchases and sales made above, at, and below the discount rate are shown in Charts 9 and 10.

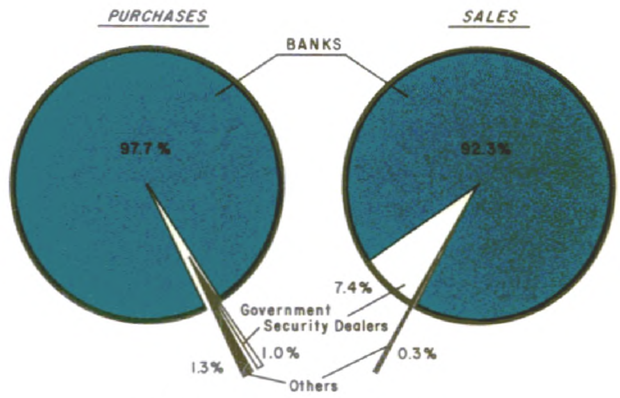
One-day, unsecured transactions predominate

Despite fluctuations in the volume of purchases and sales, one-day transactions remained at a high, relatively stable level and accounted for about 95 percent of all purchases and sales. One-day unsecured transactions accounted for about 80 percent of all sales and about 70 percent of all purchases (Charts 7 and 8).

Unsecured transactions, of course, have the advantage of ease in handling; however, one-day secured transactions rose to over 40 percent of total purchases during the second

CHART F

Banks account for bulk of Twelfth District transactions in Federal funds



Source: Federal Reserve Bank of San Francisco.

half of the 15-month period, while the proportion of one-day unsecured purchases fell proportionately. The increase in secured transactions mainly reflected increased purchases from the Dallas, Atlanta, Kansas City, and St. Louis Districts; a high proportion of purchases from these Districts are typically secured purchases.

Repurchase agreements and "over one-day" transactions remained a relatively small share of total transactions. However, repurchase agreements averaged about 10 percent of sales; these sales were primarily in New York City and often with Government security dealers.

Transactions with banks, Government security dealers, and others

The percentage distribution of District purchases and sales with banks, Government security dealers, and "others" is shown in Chart F. Banks dominated District transactions, accounting for 98 percent of purchases and 92 percent of sales. Government security dealers accounted for about 1 percent of purchases and 7 percent of sales; 1 percent of purchases was also made to "others," but less than one half of 1 percent of sales was made to "others." All sales to Government security dealers were made in New York City except for relatively small sales in Chicago in the months of August, October, and November 1960.

THE INTRADISTRICT PICTURE

Data on transactions where both the buyer and the seller of funds are located within the San Francisco District have been summarized for only four reserve weeks covering the period December 15, 1960 to January 11, 1961. While this period is too short to permit definite conclusions concerning the pattern of intradistrict trading in Federal funds, it does give some indication concerning these internal flows. However, the indicated pattern of intradistrict trading is somewhat distorted because branch banking systems report all transactions as originating in the head office, even though the transaction may reflect the reserve positions of offices located elsewhere.

The intradistrict trading pattern

San Francisco banks were the major factor in the intradistrict market during the period surveyed, accounting for about two-fifths of purchases and about two-thirds of sales. Hence, the San Francisco banks were the major net sellers to the District. Reported transactions of the Los Angeles banks accounted for about one-tenth of purchases and about two-fifths of sales; the Los Angeles banks, therefore, were also important net sellers to other banks in the District. Other cities accounted for less than 5 percent of sales, in each case. During this period, the largest net purchasers were Portland, Seattle, Phoenix, and Honolulu.

Flow of transactions among major District cities

Purchases made by banks in San Francisco were more widely and evenly distributed than purchases made by banks in other District cities. San Francisco banks made about two-fifths of their purchases locally, and purchases in Portland and Seattle accounted for almost another two-fifths. Los Angeles banks brought more than two-fifths of their intradistrict Federal funds from San Francisco and another one-third locally.

On the other hand, Salt Lake City and Phoenix banks made all of their purchases from San Francisco. Seattle banks made one-quarter of their purchases from San Francisco and one-tenth locally; these banks reported large purchases of Federal funds from nonbank sources.

In the sales category, San Francisco banks sold almost three-fifths of their intradistrict Federal funds locally and another one-quarter in Los Angeles. Los Angeles banks made more than three-fifths of their sales locally and about one-seventh of their sales to San Francisco.

Reporting banks in Portland, Salt Lake City, and Phoenix made all of their sales to San Francisco. Seattle made over three-quarters of its sales to San Francisco but made about one-seventh locally. San Diego bank purchases and sales of Federal funds during this period were confined entirely to Los Angeles.

Higher proportion of one-day, secured transactions in intradistrict trading

One-day transactions were even more predominant in the District than in the national market and accounted for virtually all intradistrict purchases and sales. The proportion of one-day unsecured purchases was about equal to that of one-day secured purchases other than repurchase agreements, and these two categories together accounted for more than nine-tenths of total purchases. On the other hand, one-day unsecured sales accounted for two-thirds of total sales.

One-day repurchase agreements accounted for slightly less than one-tenth of total purchases and slightly more than one-tenth of total sales. Only reporting banks in San Francisco, Los Angeles, and Salt Lake City made purchases in the form of one-day repurchase agreements; however, sales of this type were made by reporting banks in these three cities and also in Seattle, Phoenix, and San Diego.

Transactions with banks, Government security dealers, and others

As expected, transactions with banks dominated the intradistrict market and accounted for virtually all purchases and for all sales. There were no intradistrict transactions with Government security dealers, and transactions with "others" accounted for only a very small percentage of total purchases although there was a considerable range in the proportion reported for individual cities.

Intradistrict Federal funds rate matches national rate

For the brief period for which intradistrict transactions were analyzed, there did not appear to be any marked discrepancy between the rates at which purchases and sales of Federal funds were made within the District and the rates at which transactions were executed by the reporting banks with buyers and sellers in other Districts.

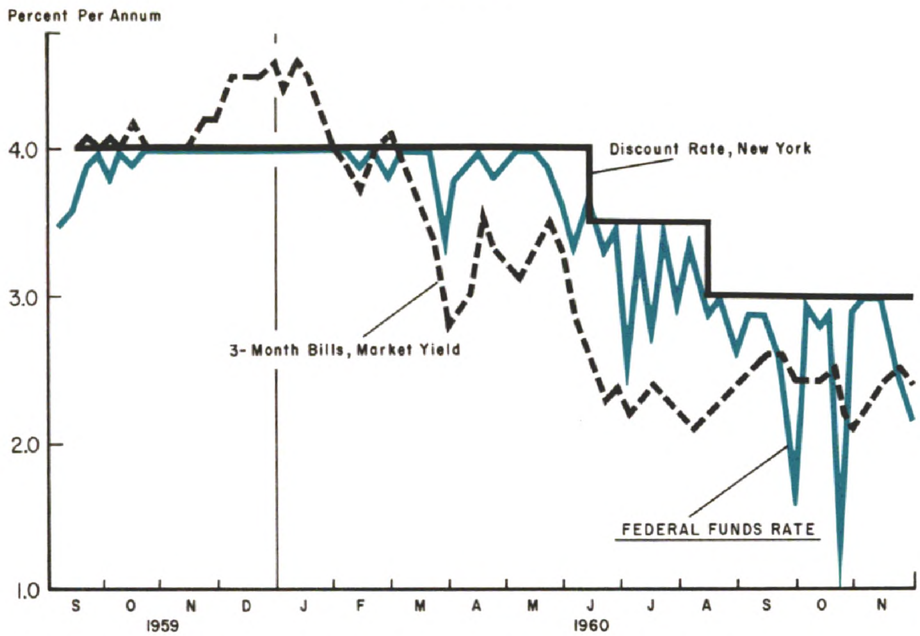
Summary

Federal funds are deposit balances with the Federal Reserve Banks, and the Federal funds market refers to the borrowing and lending of these balances at a stated rate of interest. Federal funds have become a major money market instrument only within the last decade, and they now constitute a still evolving and fast-growing component of the American money market. Idle short-term funds from all over the country are drawn into the Federal funds market through the nationwide network of contacts of the large banks and of the Government securities dealers. Thus the Federal funds market serves to link the regional money markets with each other and with the New York money market to form one unified national money market and, in so doing, diffuses the pressures on the New York money market, thereby making the nation as a whole more sensitive to the monetary policy of the Federal Reserve System.

Banks—primarily the large money market banks—dominate the Federal funds market in terms of dollar volume of transactions, and Twelfth District banks now account for a greater share of Federal funds transactions than banks in any other Federal Reserve District except New York.

CHART 1

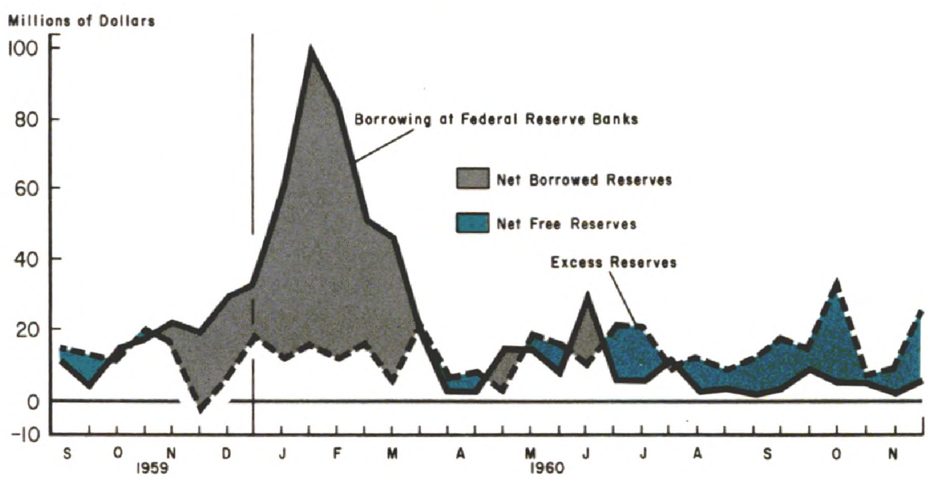
In the September 1959 - November 1960 period, monetary conditions shifted from tightness to ease. As the discount rate was lowered, the Federal funds rate and Treasury bill yields fell relatively further.



Note: Discount rate shown is that of the Federal Reserve Bank of New York.
Source: Board of Governors of the Federal Reserve System.

CHART 2

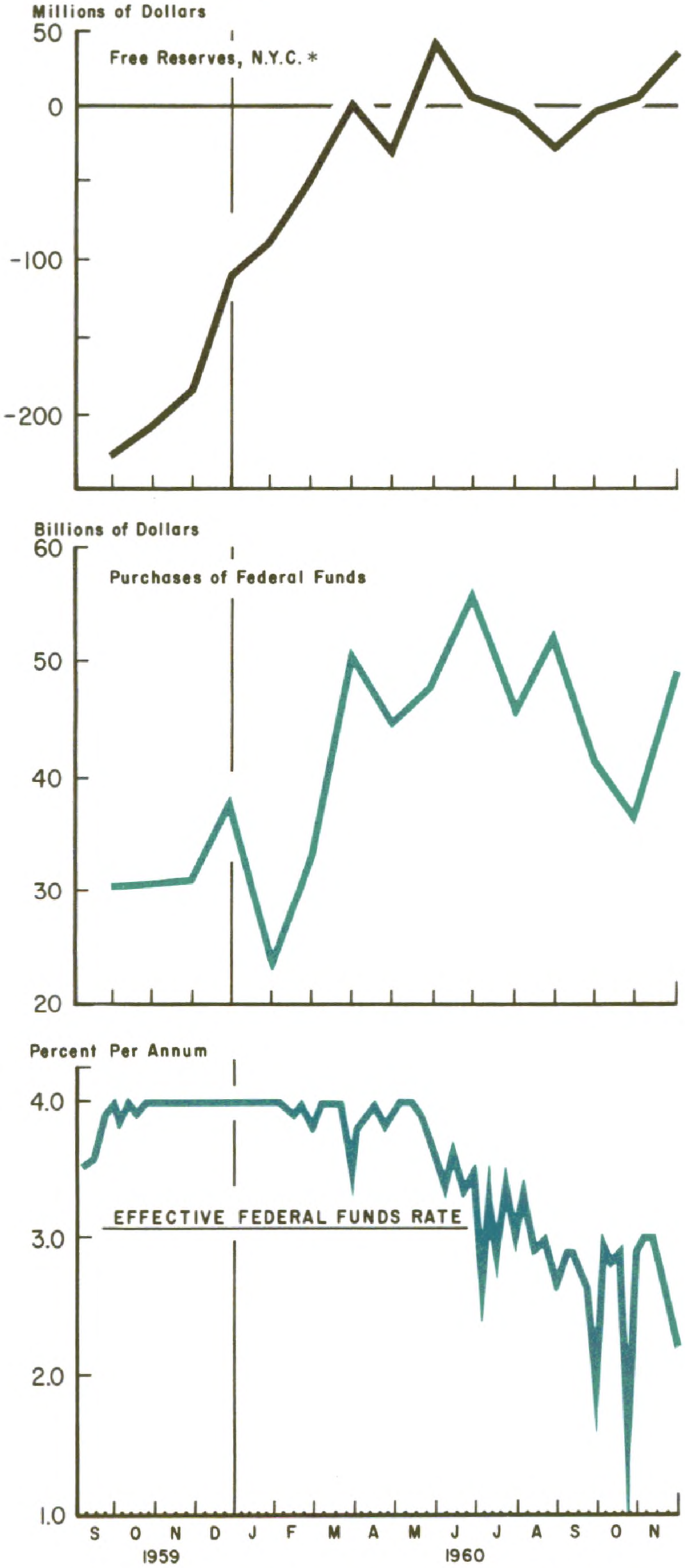
Twelfth District reserve city banks, which had borrowed heavily in January and February 1960 owing to deposit withdrawals, held net free reserves in the later months of the 15-month period.



Note: 1959 data are plotted on a bimonthly basis; 1960 data, on a biweekly basis.
Source: Federal Reserve Bank of San Francisco.

CHART 3

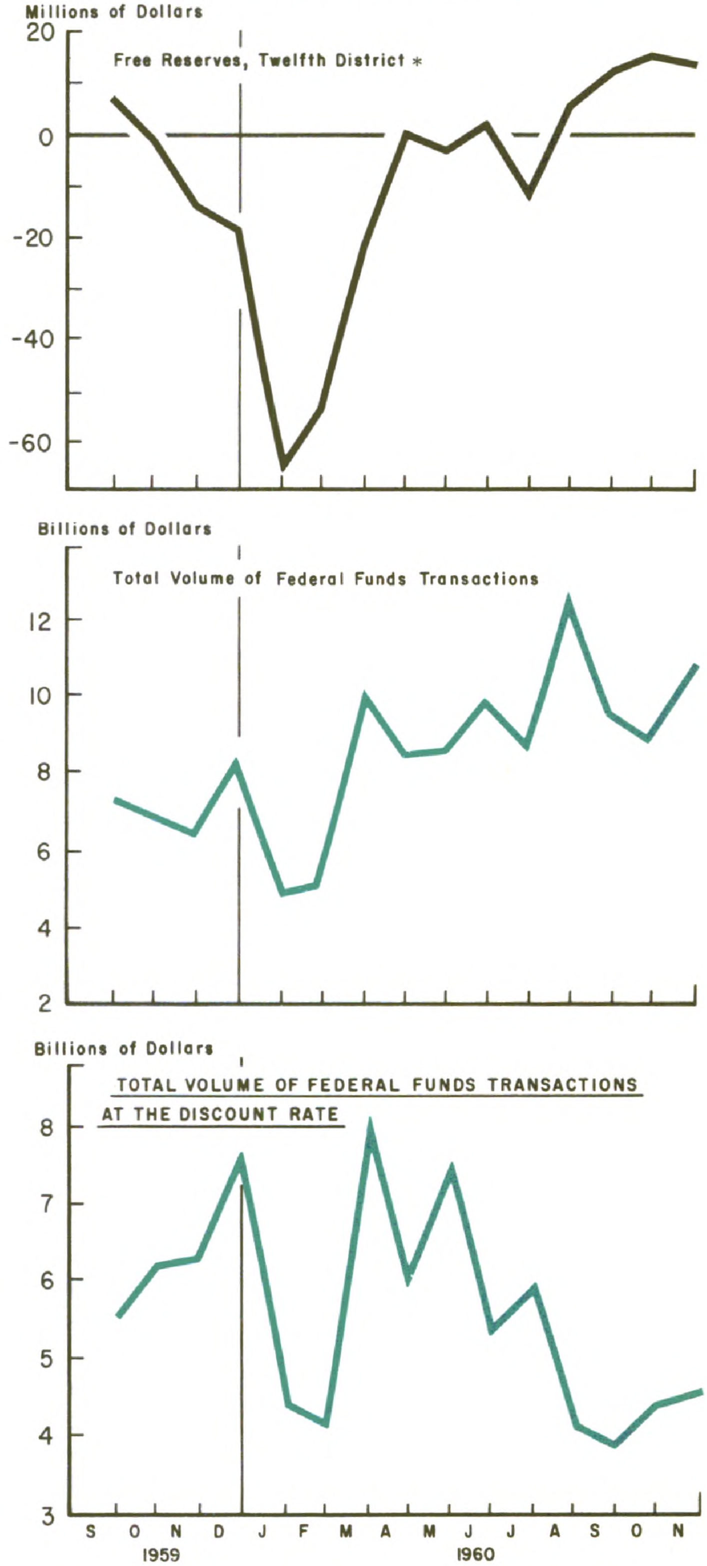
In the nation, as bank reserve positions eased, the Federal funds rate fell, and the volume of transactions (as indicated by the volume of purchases) rose.



*Net reserve position of New York City central reserve city banks.
Source: Board of Governors of the Federal Reserve System.

CHART 4

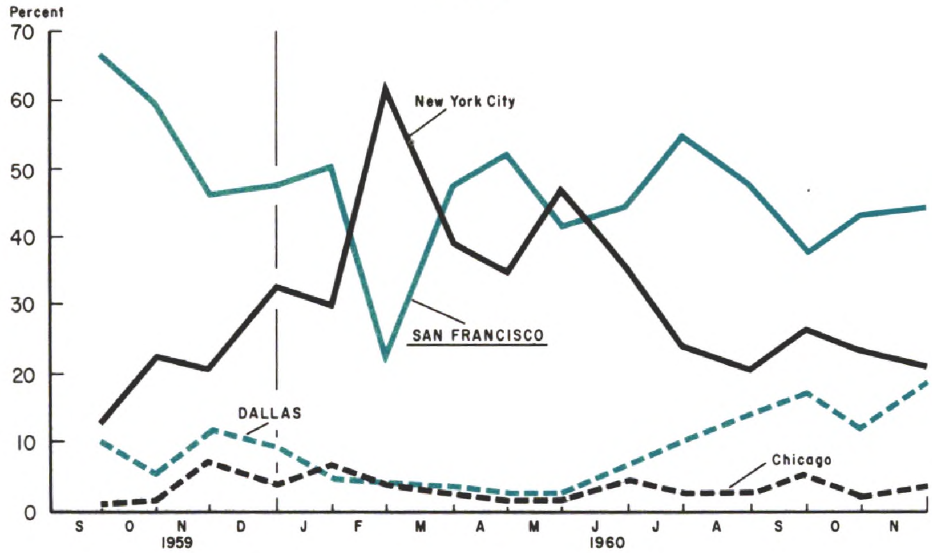
In the Twelfth District, as bank reserve positions eased, the volume of Federal funds transactions executed at the discount rate declined, while the total volume of transactions rose.



*Net reserve position of Twelfth District reserve city banks.
Source: Federal Reserve Bank of San Francisco.

Most District purchases of Federal funds were made intradistrict or from New York; the Chicago and Dallas Districts ranked next in importance. When intradistrict purchases declined, there was a compensating rise in purchases from New York.

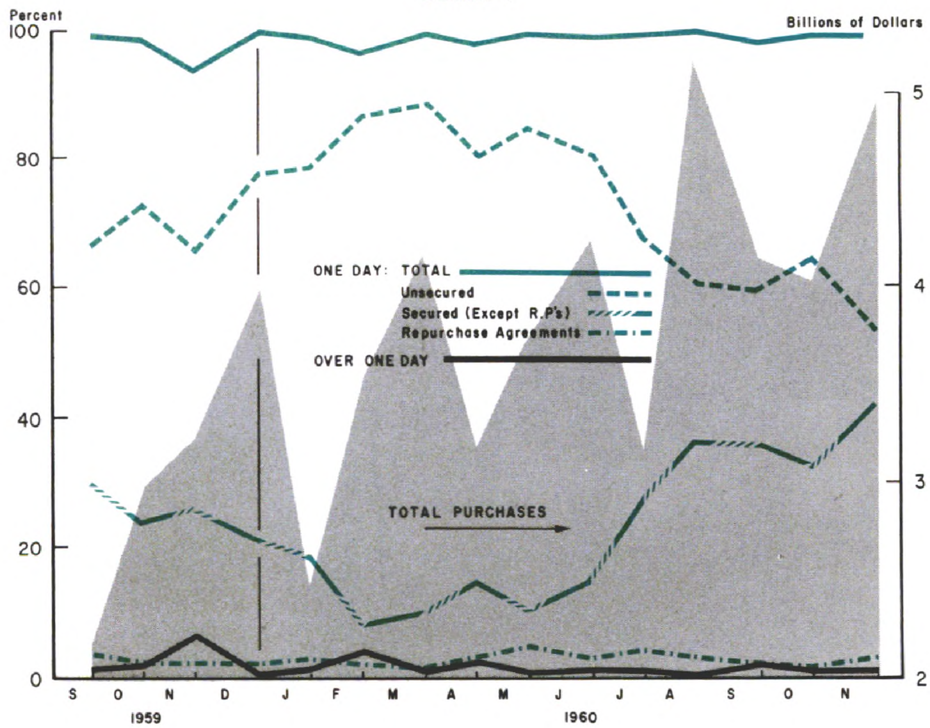
CHART 5



Source: Federal Reserve Bank of San Francisco.

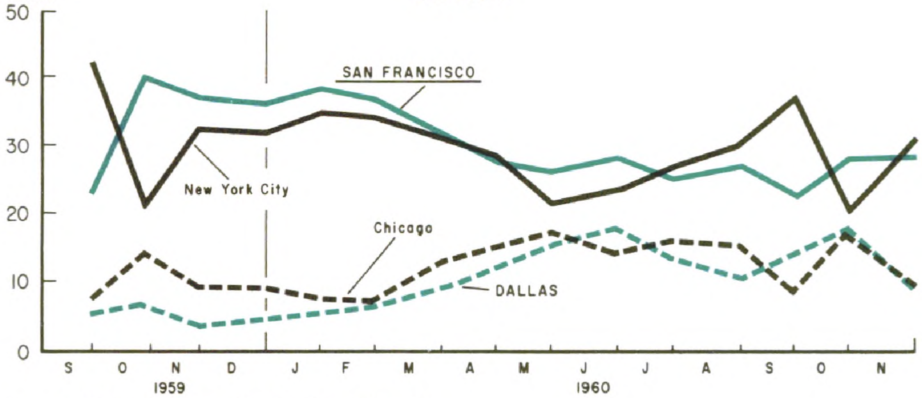
One-day unsecured purchases predominated throughout the 15-month period, although as monetary conditions eased, there was a decline in the proportion of this category and a corresponding rise in the proportion of one-day secured purchases. Purchases made for over one day remained a small proportion of the total.

CHART 7



Source: Federal Reserve Bank of San Francisco.

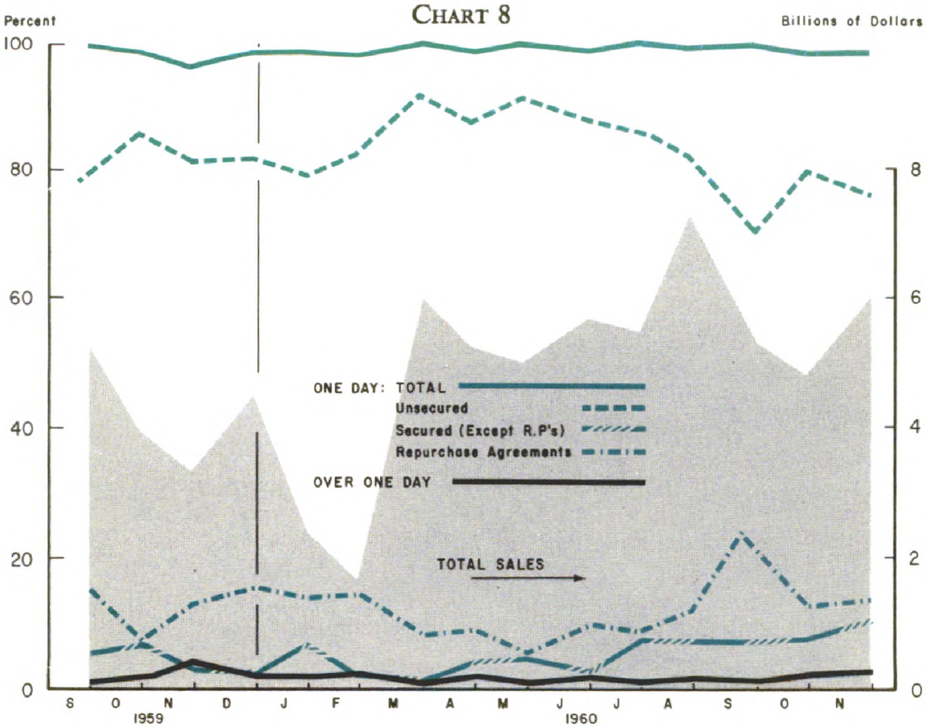
CHART 6



Source: Federal Reserve Bank of San Francisco.

As in the case of purchases, most District sales of Federal funds were made intradistrict or to New York, with the Chicago and Dallas Districts forming a tier second in importance.

CHART 8

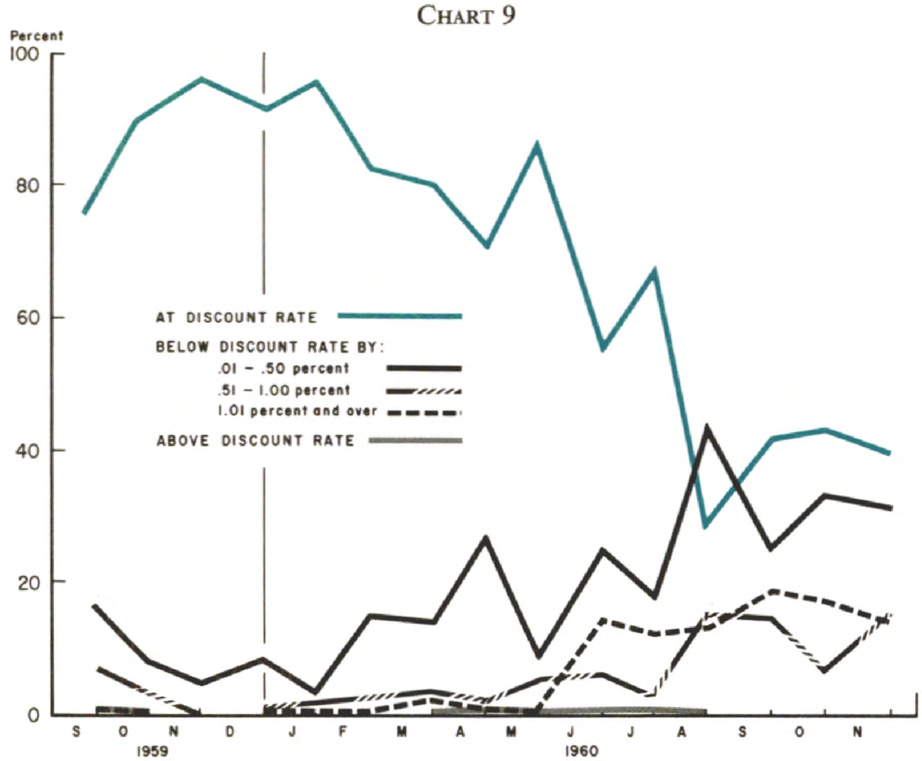


Source: Federal Reserve Bank of San Francisco.

As in the case of purchases, one-day unsecured sales were predominant and formed a higher and more stable proportion of sales than of purchases, although the total dollar volume of sales fluctuated more markedly than the total dollar volume of purchases. Over the period, sales made for over one day constituted a small proportion of total sales.

The proportion of Twelfth District Federal funds purchases made at the discount rate fell off markedly as monetary conditions eased but remained substantial even in the latter months of relative ease in the money market. The greatest compensating rise occurred in the purchases made at rates within one-half percent below the discount rate.

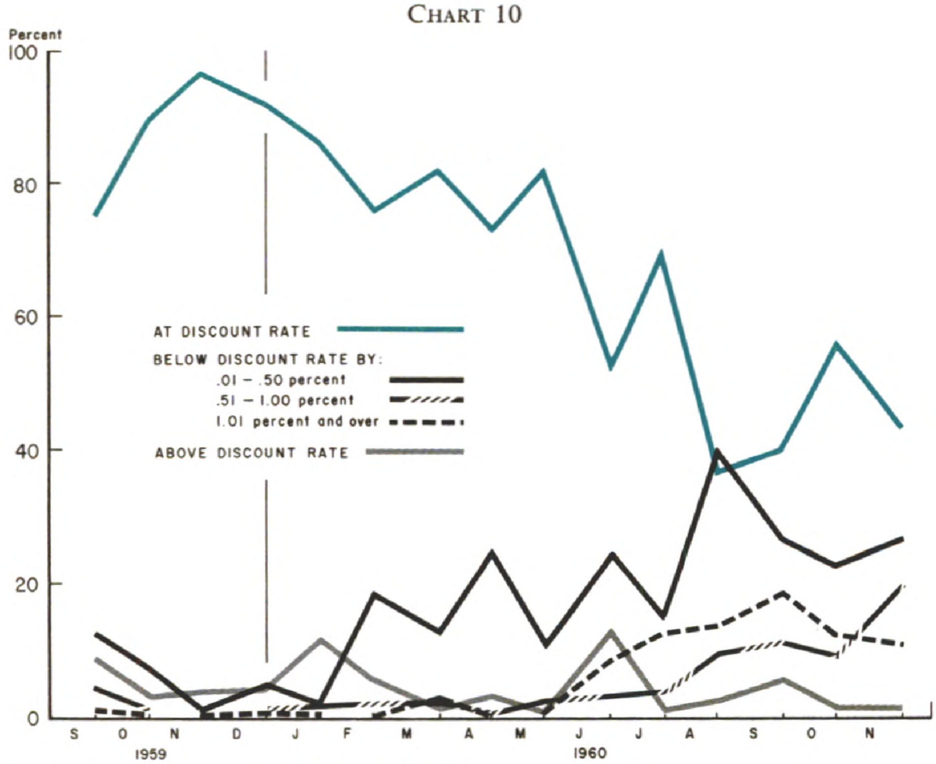
CHART 9



Source: Federal Reserve Bank of San Francisco

The rate pattern of Twelfth District sales of Federal funds was similar to that for purchases. The proportion of sales made at the discount rate diminished significantly, yet remained appreciable, as bank free reserves increased and money market rates fell. Also, the greatest growth occurred in the proportion of sales executed at rates within one-half percent below the discount rate.

CHART 10



Source: Federal Reserve Bank of San Francisco.

REVISION IN WEEKLY REPORTING MEMBER BANK SERIES

The statistical series for weekly reporting member banks in the Twelfth District[1] and in the nation, beginning with data for April 26, 1961, has been revised to reflect a change in the classification of certain deposit items and an increase in the coverage of the series.

The format of the revised published report includes certain additional detail now available on deposit holdings of foreign institutions and central banks. Other changes include a new concept of demand deposits adjusted. Demand deposits adjusted, as it appears on the revised published report, includes deposits due to mutual savings banks and to foreign banks, both previously excluded. Thus, it is the sum of all demand deposit items except those of the United States Government and domestic commercial banks, less cash items in process of collection. Reflecting this change in the definition of demand deposits adjusted, deposits of mutual savings banks are excluded from the published item, "Demand deposits of commercial banks in the United States," and deposits of foreign banks are no longer published as a separate item.

Time deposits of states and political subdivisions, the second largest category of time deposits in the Twelfth District, are now published as a separate item. Time deposits of official foreign holders and of foreign central banks, which were formerly included in other categories, are combined as one item on the revised report. "Savings deposits" as shown on the revised report exclude most Christmas Club, Vacation Club and similar accounts which were formerly included in the memorandum item published on savings.

Changes in coverage in the weekly reporting member bank series eliminate the adjustments that had been made in the series since July 1, 1959. These adjustments had been made to prevent distortions that would otherwise have resulted when nonreporting banks were merged with reporting banks. In the Twelfth District the change in coverage resulted in an increase of approximately $1 billion in total assets shown in the series. Revisions in data reflecting the increased coverage have been carried back to July 1, 1959. Revisions reflecting changes in deposit items have not been carried back, although for certain items comparable year-ago data or estimates are being published on a current basis.

[1] F.R. 416x, "Principal Resource and Liability Items of Reporting Member Banks in Leading Cities in the Twelfth Federal Reserve District."

BANKING AND CREDIT STATISTICS AND BUSINESS INDEXES—TWELFTH DISTRICT[1]

(Indexes: 1947-1949=100. Dollar amounts in millions of dollars)

Year and Month	Condition items of all member banks[2, 7]				Bank debits index 31 cities[4, 5]	Bank rates on short-term business loans[6, 7]	Total nonagri-cultural employ-ment	Total mf'g employ-ment	Car-loadings (number)[5]	Dep't store sales (value)[5]	Retail food prices [7, 8]
	Loans and discounts	U.S. Gov't securities	Demand deposits adjusted[3]	Total time deposits							
1929	2,239	495	1,234	1,790	42	....	...	...	102	30	64
1933	1,486	720	951	1,609	18	....	...	...	52	18	42
1939	1,967	1,450	1,983	2,267	30	....	60	57	77	31	47
1951	7,866	6,463	9,937	6,777	132	3.66	112	121	100	112	113
1952	8,839	6,619	10,520	7,502	140	3.95	118	130	100	120	115
1953	9,220	6,639	10,515	7,997	150	4.14	121	137	100	122	113
1954	9,418	7,942	11,196	8,699	153	4.09	120	134	96	122	113
1955	11,124	7,239	11,864	9,120	173	4.10	127	143	104	132	112
1956	12,613	6,452	12,169	9,424	190	4.50	134	154	104	141	114
1957	13,178	6,619	11,870	10,679	204	4.97	139	160	96	140	118
1958	13,812	8,003	12,729	12,077	209	4.88	138	155	89	143	123
1959	16,537	6,673	13,375	12,452	237	5.36	146	166	93	157	123
1960	17,139	6,964	13,060	13,034	253	5.62	151	167	89	156	125
1960											
May	17,104	5,813	12,290	12,142	255	....	150	167	95	153	125
June	17,131	5,738	12,298	12,277	255	5.73	150	166	85	153	125
July	16,895	5,967	12,608	12,253	260	....	151	165	81	159	126
August	17,142	6,303	12,579	12,454	249	....	151	166	85	155	125
September	16,923	6,339	12,575	12,547	253	5.53	151	166	83	155	126
October	16,958	6,626	12,848	12,628	263	....	152	166	78	160	126
November	16,898	6,697	12,907	12,616	248	....	152	166	83	152	126
December	17,139	6,964	13,060	13,034	258	5.50	152	166	93	159	127
1961											
January	16,751	6,984	13,010	13,121	255	....	152	165	89	154	127
February	17,525	6,991	12,750	13,639	257	....	152	165	82	164	127
March	17,517	6,916	12,860	13,754	274	5.48	152	165	86	160	127
April	17,637	7,436	13,222	13,999	267	....	152	163	90	164	127
May	17,632*p*	7,393*p*	12,865*p*	14,289*p*	265	....	...	...	...	...	...

Year and month	Industrial production (physical volume)[5]							Waterborne Foreign Trade Index[7, 9, 10]					
	Lumber	Petroleum[7]		Cement	Steel[7]	Copper[7]	Electric power	Exports			Imports		
		Crude	Refined					Total	Dry Cargo	Tanker	Total	Dry Cargo	Tanker
1929	95	87	78	55	...	103	29	190	150	247	124	128	7
1933	40	52	50	27	...	17	26	110	...	...	72	...	...
1939	71	67	63	56	24	80	40	163	107	243	95	97	57
1950	114	98	103	112	125	115	120	92	80	108	144	145	103
1951	113	106	112	128	146	116	136	186	194	175	162	140	733
1952	115	107	116	124	139	115	145	171	201	130	204	141	1,836
1953	116	109	122	131	158	113	162	141	138	145	314	163	4,239
1954	115	106	119	133	128	103	172	133	141	123	268	166	2,912
1955	122	106	124	145	154	120	192	166	178	149	314	187	3,614
1956	120	105	129	156	163	131	209	201	261	117	459	201	7,180
1957	106	101	132	149	172	130	224	231	308	123	582	216	10,109
1958	107	94	124	158	142	116	229	176	212	123	564	221	9,504
1959	116	92	130	174	138	99	252	188	223	138	686	263	11,699
1960	110	91	134	161	154	129	271	241*p*	305*p*	149*p*	808*p*	269*p*	14,209*p*
1960													
April	118	91	137	182	162	141	265	240	287	172	811	286	14,484
May	115	91	136	167	164	144	271	251	330	139	771	289	13,341
June	110	91	132	170	158	142	270	243	288	180	872	294	15,944
July	108	91	138	149	134	123	270	193	257	102	681	263	11,565
August	109	90	138	164	125	121	275	227	280	153	1,025	261	20,948
September	106	90	136	143	131	141	279	250	347	113	885	284	16,550
October	103	91	131	159	127	144	275	244	347	97	779	238	9,240
November	100	91	135	155	129	141	276	220	306	97	826	254	15,744
December	99	91	137	151	133	137	274	271	338	175	1,046	245	21,919
1961													
January	101*r*	91	134	159	111	139	...	235	318	118	779	218	15,394
February	101*r*	91	134	176	152	134*r*	...	...	...	...	...	...	...
March	103	92	131	178	162	137	...	...	...	...	...	...	...
April	...	...	...	168	172*p*	137*p*	...	...	...	...	...	...	...

[1] Adjusted for seasonal variation, except where indicated. Except for banking and credit and department store statistics, all indexes are based upon data from outside sources, as follows: lumber, National Lumber Manufacturers' Association, West Coast Lumberman's Association, and Western Pine Association; petroleum, cement, and copper, U.S. Bureau of Mines; steel, U.S. Department of Commerce and American Iron and Steel Institute; electric power, Federal Power Commission; nonagricultural and manufacturing employment, U.S. Bureau of Labor Statistics and cooperating state agencies; retail food prices, U.S. Bureau of Labor Statistics; carloadings, various railroads and railroad associations; and foreign trade, U.S. Department of Commerce. [2] Annual figures are as of end of year, monthly figures as of last Wednesday in month. [3] Demand deposits, excluding interbank and U.S. Government deposits, less cash items in process of collection. Monthly data partly estimated. [4] Debits to total deposits except interbank prior to 1942. Debits to demand deposits except U.S. Government and interbank deposits from 1942. [5] Daily average. [6] Average rates on loans made in five major cities, weighted by loan size category. [7] Not adjusted for seasonal variation. [8] Los Angeles, San Francisco, and Seattle indexes combined. [9] Commercial cargo only, in physical volume, for the Pacific Coast customs districts plus Alaska and Hawaii; starting with July 1950, "special category" exports are excluded because of security reasons. [10] Alaska and Hawaii are included in indexes beginning in 1950. *p*—Preliminary. *r*—Revised.