

MONTHLY REVIEW

REPORT OF DEPOSITS AND REQUIRED RESERVES **WORKSHEET FOR COMPUTING RESERVE POSITION^(a)**

Weekly reserve period ending Wednesday July 27 1966

PERIOD: PLEASE REPORT NEAREST THOUSANDS AS OF OPENING OF BUSINESS EACH DAY

From To	DEMAND DEPOSITS			Deductions from Demand Deposits		NET DEMAND DEPOSITS		SAVINGS DEPOSITS	OTHER TIME DEPOSITS	CURRENCY AND COIN (including currency and coin on deposit with F. R. Bank)	REQUIRED RESERVES		RESERVE TO BE MAINTAINED WITH F. R. BANK	BALANCE AT FEDERAL RESERVE AT THE CLOSE OF BUSINESS	EXCESS (A) OR DEFICIENCY (—)	CUMULATIVE RESERVE POSITION EXCESS (A) OR DEFICIENCY (—)													
	DEMAND DEPOSITS OF BANKS	U. S. GOV'T. DEMAND DEPOSITS	OTHER DEMAND DEPOSITS	CASH ITEMS IN PROCESS OF COLLECTION	DEMAND BALANCES DUE FROM BANKS	Column 1, 2, 3 Minus 4 & 5	Column 6				10 - 5, Col. 6 - 9, Col. 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 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Fri	22	21	610	8	680	95	058	22	050	1	101	102	197	32	761	15	256	4	870	18	893	14	003	14	203	+	200	+	111
Sat	23	24	341	8	971	95	123	23	212	880	104	343	33	056	15	840	4	562	19	281	14	719	14	700	-	19	+	92	
Sun	24	24	341	8	971	95	123	23	212	880	104	343	33	056	15	840	4	562	19	281	14	719	14	700	-	19	+	92	
Mon	25	24	341	8	971	95	123	23	212	880	104	343	33	056	15	840	4	562	19	281	14	719	14	700	-	19	+	54	
Tues	26	26	011	9	193	96	326	25	656	1	063	104	511	34	006	15	906	5	281	19	379	14	118	14	150	+	32	+	86
Wed	27	23	585	10	003	95	110	24	970	955	102	710	33	617	15	572	4	947	19	021	14	024	14	000	-	74	+	12	
Total		166	257	64	993	662	476	166	518	6	747	720	461	232	995	110	215	33	916	133	657	99	441	99	453	+	12	+	12

FIRST NATIONAL BANK
STATE STREET AT CIRCLE
SOMEWHERE, U. S. A.

Please mail to the
FEDERAL RESERVE BANK OF RICHMOND
RICHMOND, VIRGINIA 23213

on Thursday after the close of the reserve period.

(a) This worksheet is to assist you in avoiding unnecessary excess or deficient reserves. It may be detached, retained in your files, and verified against the Reserve Bank's Reserve Status Computation.

(b) Use an estimated balance for that day or days for which you have not received the daily statement from the Federal Reserve. For other days use the balance from the daily statement, correcting any previous estimates as necessary.

Repeat for Saturday and Sunday Friday's balance on F. R. Statement.

The trend is toward more careful reserve management at Fifth District Banks.

Reserve Management at Fifth District

Banks, like other businesses, strive to make profits. In basic terms, banking consists of attracting funds and allocating them, subject to various constraints, among a wide variety of assets. How successful a banker is in selecting a proper distribution of assets determines in large part the level of his institution's profits.

One aspect of asset selection is reserve management, which involves, among other things, keeping reserves at a minimum necessary to satisfy legal requirements. Failure to achieve this objective results in unnecessary costs. Banks are charged for deficiencies in excess of 2% of required reserves at a rate 2 percentage points above the discount rate. Excess reserves, on the other hand, are nonearning assets, the implicit cost of which is the income which could have been earned on an interest-bearing asset.

Reserve Requirements Congress has defined legal reserves for member banks and has empowered the Board of Governors of the Federal Reserve System to set reserve requirements within prescribed limits. Since 1960 legal reserves have been defined to include both vault cash and deposits with the Federal Reserve. Presently, reserve requirements against net demand deposits are 12% for Country banks and 16½% for Reserve City banks. Net demand deposits are total demand deposits minus cash items in process of collection and balances due from domestic commercial banks. Reserve requirements on time and savings deposits are the same for both classes of banks. The requirement is 4% on all savings deposits and on all time deposits up to \$5 million. According to a recent ruling by the Board of Governors, time deposits in excess of \$5 million in any bank are subject to a reserve requirement of 6%.

While many banks find it advantageous to try to maintain reserves at the required level on a daily basis, daily reserve balancing is not required. Present regulations permit Reserve City banks to average reserves over a one-week period and Country banks to average over a two-week period. This arrangement gives banks considerable flexibility in meeting reserve requirements, since deficits early in the reserve period can be made up later. Reserve averaging periods begin on Thursday and end the next Wednesday for Reserve City banks, and end on the second Wednesday for Country banks. Thus, settlement dates for Reserve City and Country banks coincide every other week.

The Process of Reserve Adjustment The process of reserve adjustment involves three essential activities: (1) keeping close tab on the timing and magnitude of various entries affecting the reserve account, (2) projecting movements in loans and deposits with reasonable accuracy, and (3) acquiring additional reserves or disposing of excess reserves as the situation demands.

Keeping close track of the entries affecting the reserve account requires a thorough understanding of reserve accounting and a systematized accounting procedure. If a bank frequently has large deficits or persistently runs large excess reserves, it is *prima facie* evidence that a re-examination of reserve accounting procedures is in order.

To help banks develop more efficient reserve accounting techniques, the Federal Reserve Bank of Richmond is preparing a manual which should be very useful to banks not already using an effective system. Designed especially for the use of Country banks, the manual will contain, among other things, a guide to reserve computation and a year's supply of a form entitled "Report of Deposits and Required Reserves." To each copy of this report a worksheet has been attached for the bank's use in computing its reserve position. Effective use of this worksheet should enable a bank to know each day its cumulative reserve excess or deficiency with reasonable accuracy. The manual should be available for distribution in September.

In order to match reserves as closely as possible with legal requirements, it is necessary to know not only the current reserve position of the bank but what it is likely to be a few days hence. For this reason, some banks make fairly elaborate projections of deposit flows and loan demand. These estimates are normally based on knowledge of seasonal fluctuations and general economic conditions and on analysis of such special factors as Treasury calls on tax and loan accounts, spending patterns of large corporate customers and state and local governments, securities transactions, and anticipated extensions and retirements of large loans.

While the Federal Reserve Bank of Richmond does not make projections for individual banks, it does offer a service which may be useful in recognizing patterns of some of the variables that determine seasonal reserve needs. This Bank will make available to any member bank a computer printout and a

Member Banks

chart of monthly data on its loans, time deposits, and "other" demand deposits which are defined as total demand deposits minus Government and interbank deposits. These data, which are presented as cumulative absolute changes from the beginning of the three most recent years, provide a good picture of the bank's seasonal pattern of loans and deposits. This is useful in that it gives some idea of the timing and magnitude of seasonal reserve needs and permits the bank to make advance preparations.

In addition to knowledge of the bank's current reserve position and what it is likely to be in the near future, effective reserve management also requires skill in disposing of excess reserves and in acquiring additional reserves on advantageous terms. This in turn necessitates an understanding of money market processes and the various alternative means of reserve adjustment.

Instruments of Reserve Adjustment While the number of alternatives tends to vary directly with size of bank, each bank, even the smallest, has several choices open to it. Actually, any manipulation of assets or liabilities which is designed to affect the reserve position of the bank on a short-term basis can be thought of as a means of reserve adjustment. The most common methods are trading in Federal funds, trading in Government securities, making repurchase agreements with Government securities dealers, making outright loans to dealers, and borrowing from the Federal Reserve and from correspondents. Trading in short-term municipal bonds has apparently assumed increased importance as a means of reserve adjustment in recent years.

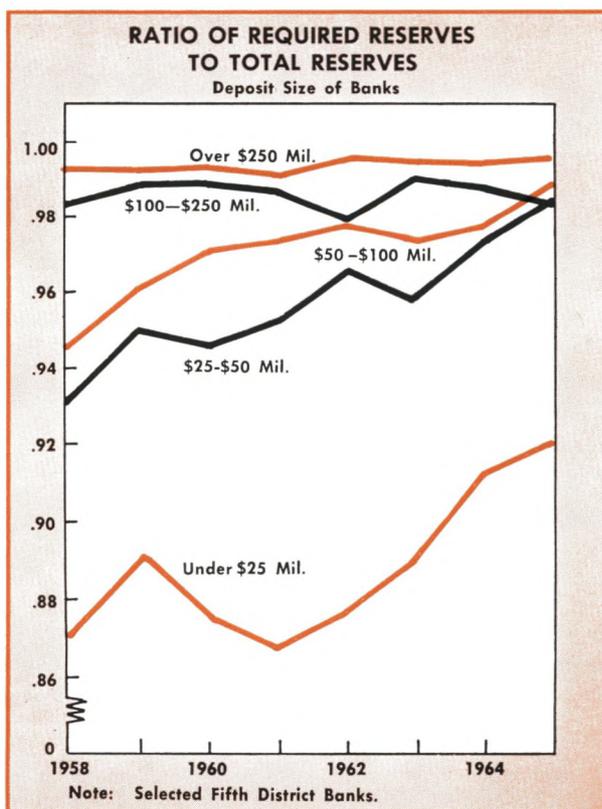
Selection of the appropriate alternative hinges on a number of considerations, but certainly relative cost is one of the most important. Presumably, a banker will choose the method which is least costly, but this involves more than a simple comparison of rates. How long the reserves are likely to be in excess or deficit is an important factor bearing on relative cost because in some cases it is expensive to reverse transactions quickly.

On the basis of past experience a banker can sometimes judge whether or not a given reserve situation is likely to continue or to be quickly reversed. If past experience indicates that a bank is entering a period of seasonal deposit losses or strong loan demand, there is reason to believe that reserve pressures will continue for some time to come. In such a situation,

the banker may take action which will provide reserves on a more permanent basis.

As a rule, very short-term reserve needs are likely to be covered in the Federal funds market, by borrowing, or, in the case of large banks, by raising dealer loan rates. Transactions in marketable securities to meet very short-term needs are quite expensive because dealers in these instruments must be compensated for their role in providing a market. As a rule, the longer the maturity or the less readily marketable the paper the more significant this cost becomes. But even with Treasury bills, the most readily marketable of the liquid assets held by banks, the cost is by no means a minor consideration.

As an illustration, consider the cost of a one-day turnaround (sell one day, repurchase the next), using three-month Treasury bills at the rates which prevailed on July 29. To gain reserves for one day, the bank would have been required to sell bills at \$98.8075 per \$100 of face amount and buy them back the following day at a price of \$98.8175, a loss of \$.01 per \$100. Expressed in percentage terms this amounts to 3.65% per year which, in making cost comparisons with other means of reserve adjustment, must be added to the interest which could have been earned on the bill had it been held. As the span of time between sale and repurchase lengthens,



the cost of the turnaround in percentage terms declines sharply as the constant cost of \$.01 per \$100 is spread over more days. At the rates used in this example, the cost of a one-week turnaround would amount to only .52% at an annual rate.

Another important factor bearing on choices among alternatives is Federal Reserve administration of the discount window. Since borrowing from the Federal Reserve is a privilege and not a right, relative cost cannot be a principal determinant. Evidence that it has not been is the fact that banks have been buying Federal funds at rates in excess of the discount rate for many months. Recently, this premium over the discount rate has risen as high as 1½ percentage points, proving beyond doubt that relative cost has not been a controlling factor. This is as it should be. Regulation A, which governs discounting, makes it very clear that borrowing is to be relied upon only as a temporary source of funds and that borrowing to profit from rate differentials is inappropriate use of the discount window. The regulation reads in part as follows: "Under ordinary circumstances, the continuous use of Federal Reserve credit by a member bank over a considerable period of time is not regarded as appropriate. In considering a request for credit accommodation, each Federal Reserve Bank . . . considers whether the bank is borrowing principally for the purpose of obtaining a tax advantage or profiting from rate differentials. . . ." This regulation has been in effect since February 1955, and on the whole, banks have come to understand rather well the distinction between appropriate and inappropriate borrowing.

Success of Reserve Management One measure of good reserve management is the extent to which banks succeed in keeping their total reserves equal to their required reserves. This, of course, is not a perfect measure. One limitation is the fact that while two banks may have identical ratios, one may have been more skillful in its choice of alternative means of reserve adjustment or may have been more successful in keeping balances with correspondents at minimum working levels. Still, it is a good measure because banks which are successful in one aspect of reserve management are likely to be successful in the others also.

The chart on page 3 shows the ratio of required reserves to total reserves by deposit size of selected Fifth District banks. Use of ratios improves the meaningfulness of comparisons from one size class to another. The magnitude of the ratio indicates the degree of success in minimizing excess reserves.

A ratio of 1, for example, indicates zero excess reserves.

The chart illustrates vividly a number of interesting facts. (1) The degree of success of reserve management tends to vary directly with bank size. (2) Large banks have been consistently successful over a prolonged period. (3) Banks under \$100 million in deposits have become increasingly successful over time with smaller banks showing the most improvement. (4) The ratio of required reserves to total reserves at small banks tends to fluctuate with the business cycle.

Greater success in reserve management at the larger banks has been due to a number of factors. In the first place, amounts involved are large in absolute terms and management readily recognizes the earnings potential of efficient reserve use. For example, with Federal funds trading at 5½%, \$1 million left uninvested for a single day costs the bank \$150.68. Secondly, large banks can generally afford to hire a specialist whose principal function is to look after the bank's money position. It is not surprising that such a person can do a more efficient job than the executive officer of the typical small bank who must of necessity devote his attention to the whole range of management problems. Finally, as already mentioned, large banks tend to have a wider array of reserve adjustment media open to them. Until the past few years, the Federal funds market was confined almost exclusively to large banks which could trade in denominations of \$500,000 or more. Banks in the two largest size classifications have shown no trend toward increased efficiency since 1958, partly because the effect of the above factors on large banks has been unchanged over the period in question.

A number of developments account for the increase in the ratio of required reserves to total reserves at banks under \$100 million. One is the higher cost of letting funds lie idle. While interest rates have fluctuated over the course of the business cycle, the general trend has been upward, and during most of this year the three-month bill rate has been about 25 basis points higher than at the peak yields in early 1960. As rates rose over the period, bankers felt constrained to put their excess reserves to work.

Bankers have also been induced to strive for greater efficiency in an effort to compensate for rising costs. Costs as a fraction of current operating income have risen rather steadily at Fifth District banks, from 70.5% in 1958 to 73.9% in 1965. This has been due in large part to rapidly rising interest costs on time and savings deposits. These deposits as a fraction of total deposits rose from 27.3% in

1958 to 39.1% in 1965. This changing deposit mix combined with rising rates resulted in sharply rising total interest payments. As a per cent of current operating income, these payments rose from 21.1% in 1958 to 28.6% in 1965. To help cover these added costs, banks have instituted various economizing measures, including better reserve management.

Finally, there are various institutional changes which help account for the trend toward more efficient reserve utilization. Probably the most important of these is the growth and development of the Federal funds market. Because of the increasing willingness of large banks to buy and sell Federal funds in small blocks, sometimes as small as \$25,000, the Federal funds market has become available to small banks as an alternative means of reserve adjustment for the first time. A second institutional change, already alluded to, has been the growth of time deposits which are generally less volatile than demand deposits.

The drop in the ratio of required to total reserves in 1960-61 at banks under \$25 million in deposits was probably due in large part to the 1960-61 recession. As the demand for funds declined with the decline in business activity, the Federal Reserve injected reserves into the banking system and market rates of interest fell. Some bankers probably decided that at the lower rates of interest close reserve management was not worth the trouble. For the most part, however, the decline was probably unintentional and resulted from a failure to respond quickly to changing conditions. Excess reserves simply piled up as bankers failed to take on investments in sufficient volume to compensate for the decline in loan demand and the injection of new reserves by the Federal Reserve.

Variation in Reserve Management Practices Reserve management practices vary considerably from bank to bank. This is due in part to the fact that different banks face different situations which call for tailor-made reserve policies. More important is the fact that bankers have different attitudes toward the importance and techniques of reserve management. Some insist that their institutions stay on top of reserve developments and scrutinize carefully the relative cost of alternatives. Others take a more relaxed attitude, and rely on custom and habit instead of rigorous cost comparisons.

The average ratios of required reserves to total reserves presented in the chart do not tell the whole story by any means. Deviations from the average ratios can be quite large, especially at the smaller banks. Some banks in the under \$25 million de-

posit category operated in some years with ratios around the 50% level. At the opposite extreme, a number of the small banks operated consistently with ratios which compared favorably with banks in the largest size class. This suggests that efficient reserve management need not be the exclusive preserve of large institutions.

The range of variation in the ratios at the large banks was very small, suggesting that such banks uniformly attached considerable importance to reserve management. The actual means of reserve adjustment varied widely from bank to bank, however, proving once again the old adage that a cat can be skinned in more than one way.

This was evident from an examination of 1965 data at large Fifth District banks on loans, deposits, Federal funds transactions, borrowings from the Federal Reserve, and holdings of short-term Governments. Some banks apparently relied primarily on one or two methods while others used all of the conventional methods more or less continuously. Some banks never borrowed from the Federal Reserve while other banks borrowed intermittently. Some banks maintained their holdings of short-term Governments at fairly constant levels. At other banks these holdings fluctuated with the longer term movements of loans and deposits. Some banks apparently used the Federal funds market as a permanent source of funds as well as a means of reserve adjustment. These banks were rather consistent net buyers of Federal funds throughout the year. Other banks, however, remained rather consistently on the selling side, their net sales fluctuating with the degree of pressure on their reserve positions. Other banks operated on both sides of the Federal funds market, switching from a position of net buyer to net seller several times during the course of the year. The analysis of the data did not indicate which approach was best, but it did show that a number of different approaches can be utilized to accomplish the objective of operating with minimal excess reserves.

One other conclusion emerges from the examination of individual bank data. They indicate that reserve management is a problem which lends itself to the scientific approach. Those banks which operated with high ratios of required to total reserves in one year tended to do so in all the others, and those which operated with a low ratio in one year tended to have low ratios throughout the period. This was even true of the largest banks where the range of variation from bank to bank was quite small. This suggests very strongly that successful reserve management is a matter of design and not of chance.

RICHMOND

SELECTED STATISTICS WITH RECENT AVERAGE ANNUAL GROWTH RATES

	Annual Growth Rates 1960-1965		Richmond SMSA 1965
	Richmond	U. S.	
Population	2.2	1.6	486,800
Civilian Labor Force	4.9	2.1	231,600
Nonagricultural Employment	3.4	2.9	196,800
Estimated Total Personal Income	8.4	5.9	\$1,452,000,000
Value of Retail Sales	5.1	6.7	\$ 756,000,000
Value of Wholesale Trade	5.2	4.7	\$1,798,000,000
Total Construction	15.5	6.8	\$ 134,427,000
Total Deposits of Commercial Banks	11.1	10.9	\$1,337,465,000
Savings and Loan Shares	14.6	12.2	\$ 253,924,000

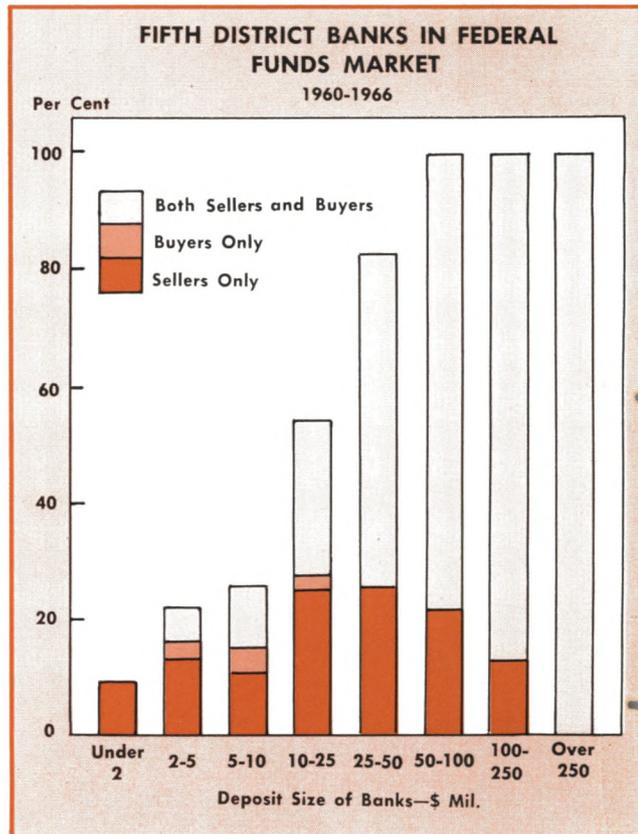
Sources: Board of Governors of the Federal Reserve System; Federal Savings and Loan Insurance Corp.; Richmond Chamber of Commerce; U. S. Department of Commerce, Bureau of the Census; U. S. Department of Labor, Bureau of Labor Statistics.

■ The Richmond Standard Metropolitan Statistical Area includes the independent city of Richmond and the counties of Henrico, Chesterfield, and Hanover. In April of 1737 Colonel William Byrd selected a site on the fall line of James River as an ideal location for a tobacco market. Warehouses sprang up almost immediately, and five years later Richmond was incorporated as a town. Today it is the home of many leading brands of cigarettes and pipe tobacco. If the cigarettes made in Richmond last year were placed end-to-end, they would encircle the world 200 times. Two of the most important and fastest growing of the many industries in this burgeoning area are chemicals and metal products. ■ Richmond is one of 12 cities in the nation having a Federal Reserve Bank and is a major financial center. The metropolitan area has 12 banks or branches for a total of 81 banking offices. Several of Virginia's largest commercial banks and insurance companies have their headquarters here. Total assets of banks headquartered in the Richmond area exceed \$1.5 billion. Bank deposits to total demand deposits, an indicator of business activity, totaled \$10.8 billion for the first half of 1966. This is over 2½ times greater than for any other city in Virginia. Purchases of savings and loan shares have grown at an average annual rate of 14.6 per cent over the past five years to a total of \$253.9 million in 1965. ■ Richmond's civilian labor force is growing rapidly. In June work force numbered approximately 238,000, up 3.4% from last year. At midyear, the unemployed as a per cent of the labor force unadjusted for seasonal variation in the Richmond SMSA stood at 2.3%. This compares to 3.4% for the state of Virginia and 4.9% for the nation.

"The Federal funds market is a market for immediate balances in or claims on a Federal Reserve Bank. . . . Loans are generally made . . . in units of one million dollars. . . . The daily volume often runs as high as a billion dollars . . . the upper limit of the interest rate on Federal funds is generally the Federal Reserve discount rate . . ."

When the book quoted above was published in 1959 its description of the Federal funds market was entirely accurate, but changes have occurred rapidly and only the first statement is descriptive of the market today. The market is still the mechanism through which member banks in need of additional reserves borrow the excess reserves of other member banks on a short-term basis, but Federal funds transactions now take place in amounts much smaller than one million dollars and daily volume sometimes exceeds \$5 billion in the New York market alone. Interest rates on Federal funds have exceeded the discount rate by wide margins in recent months—as much as $1\frac{3}{8}\%$ on several occasions. Recent studies by several Federal Reserve Banks indicate that the Federal funds market has changed over the past few years from a rather small, highly specialized portion of the New York money market to a nationwide market in which banks of all sizes participate.

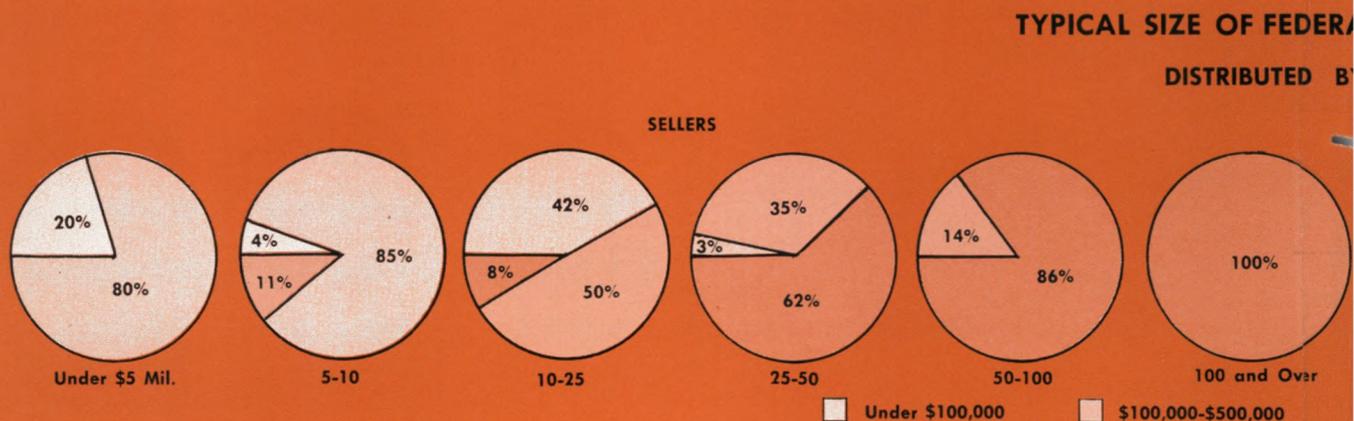
Extent of Participation The Federal Reserve Bank of Richmond recently completed a survey of all member banks in the Fifth Federal Reserve District. The survey revealed that 168 of the 405 banks responding to the questionnaire were active traders in Federal funds. Of the 168 traders, 61 were sellers only, 11 were buyers only, and 96 traded from time to time on both sides of the market. Of course many of the transactions were with other banks outside the Fifth District, and so



Federal Funds in

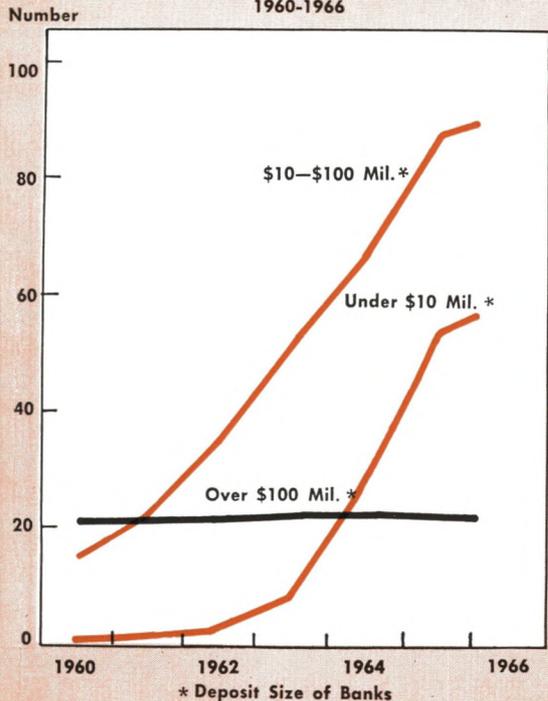
no match between purchases and sales by District banks is to be expected.

Participation in the market was related directly to bank size, with the proportion of banks that trade Federal funds increasing with each size classification up to the \$50 million level. All banks with deposits



FIFTH DISTRICT BANKS DEALING IN FEDERAL FUNDS

1960-1966



Note: 1966 figures are only through February.

temporary reserve deficiencies, 142 of the 298 non-purchasers said yes. Those answering yes included 46 of 61 traders in Federal funds which have been sellers only and 96 of 237 banks which do not trade in the market.

Number of Fifth District Banks in Federal Funds Market February 1966

Deposit Size (\$ mil.)	Number of Member Banks ¹	Number of Traders		
		Total	Sellers Only	Buyers Only & Sellers & Buyers
Under 2	21	2	2	0
2-5	100	22	13	3
5-10	129	33	13	5
10-25	83	45	20	3
25-50	36	30	9	0
50-100	14	14	3	0
100-250	8	8	1	0
Over 250	14	14	0	0
Total	405	168	61	11

¹ Excludes four nonrespondents.

Growth of the Market Although many small and medium size banks now trade in Federal funds, most of them have entered the market within the past five years. The larger banks which developed the market have been buying and selling reserve balances for a considerably longer period. Of the 22 trading banks with deposits over \$100 million, 19 were in the market prior to 1960, and two began trading Federal funds in 1960. Only nine of the 89 banks in the \$10-\$100 million range were trading Federal funds before 1960, and most of the smaller banks entered the market much later. Only one bank under \$10 million was in the market before 1962, when it was joined by a second. But in the next three years, the total jumped to 54, and at the time of the survey, 57 of the under \$10 million banks

the Fifth District

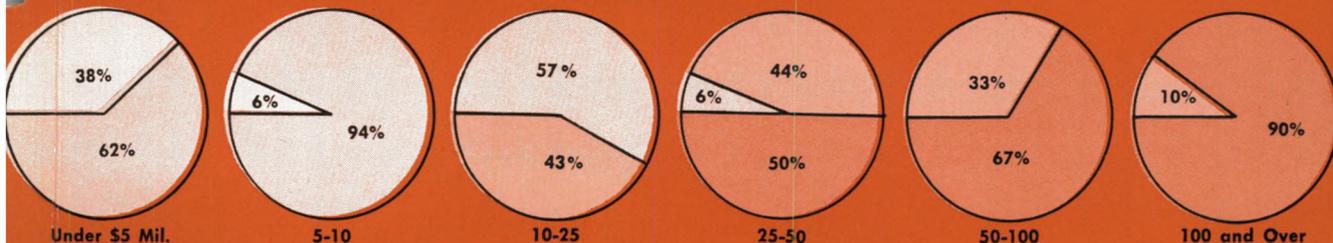
of \$50 million or over were either sellers or buyers of Federal funds, and all those over \$250 million were active on both sides of the market.

Many banks have not yet entered the market only because the need has not arisen. When asked if they would buy Federal funds in the future to meet

FEDERAL FUNDS TRANSACTIONS

BY DEPOSIT SIZE OF BANK—1965

PURCHASERS



Legend: \$500,000-\$1,000,000 Over \$1,000,000

had begun to buy and sell Federal funds. The chart on page 9 illustrates the dramatic increase in the number of \$10-\$100 million banks in the market after 1960, and the sharp upturn among those under \$10 million beginning in 1962.

Most of the smaller banks have entered the Federal funds market through their larger correspondents. The city correspondents have facilitated small bank entry by soliciting funds in units as small as \$25,000 at some banks, and to some extent, by making relatively small advances to their country bank correspondents. Rising interest rates and heavy loan demand have provided a strong incentive for many banks to borrow from their correspondents.

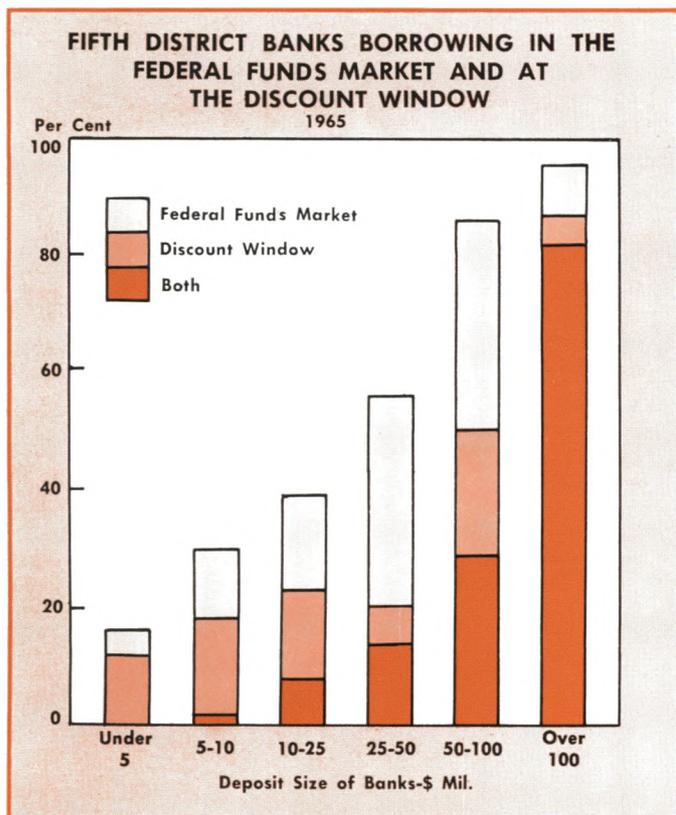
Size of Transactions The pie charts across the bottom of the two previous pages show the relationship between bank size and the size of Federal funds transactions. The smallest banks naturally bought and sold funds only in relatively small quantities, and the statistics indicate that the largest banks typically confine their operations to large transactions. The close correlation between size of bank and size of transaction suggests that most Federal funds transactions take place between banks of the same size or those near the same size. Apparently the largest banks usually do not deal with the smallest banks

unless there is a direct correspondent relationship.

All of the sales at banks under \$5 million and nearly nine tenths of those at \$5-\$10 million banks were in amounts under \$500,000, but no bank larger than \$50 million typically made such small purchases. Transactions of less than half a million dollars accounted for only 6% of all purchases by banks in the \$25-\$50 million class. Many of the larger banks occasionally bought or sold Federal funds in units of less than \$100,000, but banks of \$25 million or over concentrated their buying in units of \$1,000,000 or more. The smaller banks may have sold Federal funds in small amounts to large banks outside the Fifth District, but it seems likely that most of their transactions were with banks of their own size or slightly larger, typically their correspondents.

Agents for Transactions The recent entry of large numbers of relatively small banks into the Federal funds market has had a significant effect on the structure of the market and the ways in which purchases and sales are made. Before 1960, almost all transactions were handled through brokers. Today, many banks, especially the larger ones, still rely on brokers but by far the largest number of Fifth District banks in the market buy and sell primarily through correspondent banks. Of the 157 sellers of Federal funds replying to the survey, 145 typically sold through correspondent banks, seven through other commercial banks, and only five through brokers. Of the 107 purchasers, 96 usually bought funds through correspondents, six through other commercial banks, and five through brokers.

Frequency of Transactions The survey revealed that, as might be expected, large banks were much more active in the Federal funds market than small banks in 1965. The average number of sales per month did not exceed 4.5 for banks under \$25 million, but for the \$25-\$50 million size class, the average jumped sharply to 10. Banks in the \$50-



Average Number of Federal Funds Transactions per Month By Deposit Size of Bank 1965

Deposit Size (\$ millions)	Sales	Purchases
Under 5	4	1.5
5-10	4	*
10-25	4.5	3
25-50	10	1.5
50-100	8	2
Over 100	11	17
Total	6.5	2

* Less than one.

\$100 million range averaged eight sales per month and those over \$100 million averaged 11. Purchases were concentrated in the large banks to an even greater extent than sales. At the banks with less than \$100 million of deposits, the largest average number of purchases per month for any size category was three. The average jumped to 17 per month for those banks over \$100 million, and these were the only ones for which purchases exceeded sales.

Federal Funds vs. Discounting Most banks meet reserve deficiencies in the short run primarily by buying Federal funds or borrowing from the Federal Reserve. Large banks tend to incur reserve deficiencies more frequently than small banks, and therefore rely more heavily on both sources of funds. This is illustrated by the chart on page 10. Of the 120 banks in the survey with deposits of less than \$5 million, 4% bought Federal funds and 12% borrowed at the discount window in 1965, but less than 1% tapped both sources. In the next size classification, \$5-\$10 million, only 2% of the 129 banks used both sources, while 13% bought Federal funds and 17% borrowed from the Federal Reserve. The proportion using both sources rose rapidly to 8% in the \$10-\$25 million range, 14% in the \$25-\$50 million range, 29% of the \$50-\$100 million banks, and 82% of the banks with deposits over \$100 million.

The proportion of banks buying Federal funds but not borrowing at the discount window also rose with bank size up to the \$100 million level, then dropped sharply from 43% to 9%. Borrowing through the discount window only was heaviest in the \$50-\$100 million class and in the three smallest classes.

The correlation between borrowing and bank size is much closer for both sources of funds when all of the banks borrowing from each source are considered. The total of banks borrowing at the discount window only plus those utilizing both sources grew steadily

Deposit Size (\$ mil.)	Percentage of all banks discounting	Percentage of all banks buying Federal funds
Under 5	12	5
5-10	19	15
10-25	23	28
25-50	19	50
50-100	50	71
Over 100	86	91

from 12% of the smallest banks to 86% of the largest. The combination of those buying funds only and those utilizing both sources also grew steadily with bank size, ranging from 5% to 91%. Thus, the larger the bank, the stronger the tendency to borrow. Presumably this is because larger banks, with a wider array of loan opportunities, operate with a smaller margin of excess reserves and are more likely to incur deficits requiring some adjustment.

Since the larger banks deal in larger transactions, and since they are also more active in the market, it is to be expected that they account for the largest dollar volume of Federal funds traded. The Report of Condition of 408 Fifth District Banks for December 31, 1965, indicates that on that day, at least, such was the case. Total transactions at the smallest banks were only \$1.6 million, while banks in the largest size classification purchased \$24.8 million and sold \$49.1 million of Federal funds. A continuation of the trend of recent years would change that relationship significantly, however, with increased small bank participation in the market. Trading in Federal funds by small banks has been stimulated by strong loan demand pressures, and in recent months, by a restrictive monetary policy. But entry into the market is not solely the result of a scarcity of reserves. Federal funds sales, and to some extent, purchases, also represent for many banks more careful reserve management.

Federal Funds Sold and Purchased
By Fifth District Banks
On December 31, 1965

Deposit Size (\$ mil.)	Total number of banks	Sold		Purchased	
		Banks (Number)	Amount (\$ mil.)	Banks (Number)	Amount (\$ mil.)
Under 5	120	7	1.6	0	0
5-10	131	14	8.9	0	0
10-25	85	19	11.6	1	0.6
25-50	36	10	15.6	2	2.7
50-100	14	3	3.8	1	0.7
100-250	8	1	0.4	0	0
Over 250	14	7	49.1	6	24.8
Total	408	61	91.0	10	28.8

Note: Four banks in the over \$250 million deposit class both sold (\$30.6 million) and purchased (\$17.0 million). These amounts are included in the above table. The remaining banks were either on the selling or on the purchasing side.



THE FIFTH DISTRICT

BANKING DEVELOPMENTS

The rate of total credit expansion at Fifth District member banks has been slower this year than in 1965, and the pattern of growth shows the effects of the Federal Reserve's policy of monetary restraint in the face of intense loan demand. Total loans have grown less rapidly so far this year than in the same months of the past two years, but growth of different types of loans has varied widely. Business loans have expanded at an unprecedented pace, especially in June and July, while consumer, real estate, agricultural, and other loans have moved up at a slower rate than in other recent years.

Fifth District banks have acquired a part of their funds for loan expansion by liquidating investments—U. S. Government securities in particular. The dollar volume of Governments held by District member banks declined over 13% in the first half of 1966. In spite of higher interest rates on time

and savings deposits, deposit expansion provided a smaller portion of reserve growth this year than in other recent years. District member banks turned to the discount window of the Federal Reserve Bank for a larger amount of reserves than in any of the past five years. Borrowing was concentrated primarily at reserve city banks in the first quarter, but in the second quarter country bank borrowing increased rapidly and reached record levels in some periods. Total bank reserves have continued to grow in the District, rising from \$1.11 billion on July 28, 1965 to \$1.20 billion on July 26, 1966, but record-smashing increases in interest rates indicate that the demand for credit has risen much more rapidly than the supply. Many District banks are now finding it necessary to ration credit and are denying loans for speculative purposes, inventory expansion, and some types of construction.

