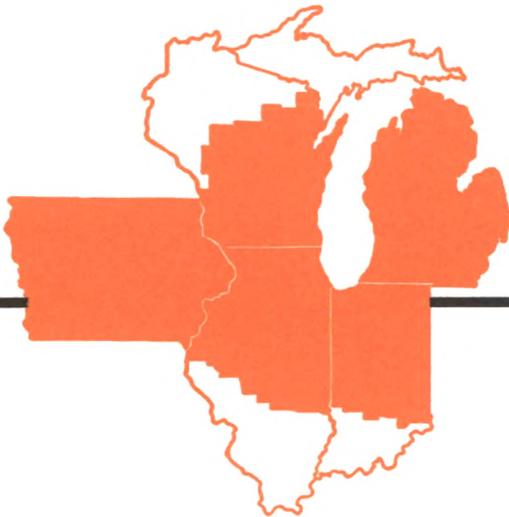


A review by the **Federal Reserve Bank of Chicago**

Business Conditions

1966 July



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Corporate cash—20-year decline

Nonfinancial corporations held a record 66.5 billion dollars of liquid assets at the start of 1966, including currency, demand deposits, time deposits, Government securities and commercial paper of other corporations. Although at a new high in dollar amount, corporate liquid assets were at a postwar low relative to both liabilities and sales.

During World War II many corporations reduced their debts and acquired an unprecedented volume of cash and Governments. Corporate liquid assets at the end of 1945 equaled 54 percent of total liabilities. In subsequent years liquid assets rose, but not nearly as fast as liabilities. This ratio had declined to 31 percent by the end of 1955. Then and since, some observers suggested that liquid asset holdings had reached a practical minimum for the efficient performance of the corporate sector. Nevertheless, the slide continued—to 23 percent in 1960 and less than 19 percent last year.

During June of this year, corporations made accelerated payments of income and withholding taxes. They continue to finance

record capital outlays and large increases in inventories and receivables. Increased borrowing from banks and in the capital markets reflect the need to supplement internally generated funds with outside financing. As in other times of money stringency, many corporations also have reduced bank balances and sold short-term liquid assets to meet bills that came due.

Measuring liquidity

Liquidity is an elusive concept. In one sense, it is a state of mind—"the degree of confidence a firm has that it will be able to pay maturing bills." In this view, liquidity is not measurable but reflects a qualitative judgment of future flows of cash and bills payable.

In another sense, liquidity is measured at a point in time in terms of dollars or as ratios of the amount of cash and certain other liquid assets to other financial data. While ratios of liquid assets to current liabilities, total liabilities or sales can be calculated for particular firms or industries or nonfinancial business as a whole, these cannot tell the full story.

The bulk of the funds paid out by corpo-

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rations are obtained from customers in payment for goods and services. Payments tend to outrun receipts in times of business expansion as the volume of inventories, receivables and other assets increases. If this gap is not offset by growth in trade debt or reductions in liquid assets, firms must make up the difference by borrowing or selling stock. In still another sense, then, liquidity reflects a firm's ability and willingness to incur debt or sell additional equity shares.

With a recession brewing, a corporation's management might feel illiquid and unwilling to undertake new commitments, despite a relatively high level of liquid assets. Under conditions of recent years, on the other hand, the same management might embark readily on new ventures with relatively lower balance sheet liquidity ratios because of confidence in rising orders, shipments and profits.

Many corporations improved their liquidity ratios in the first half of 1966 by selling

bonds or borrowing from banks in excess of immediate needs and investing surplus funds in money market instruments. In some cases borrowings were anticipatory, as corporations attempted to hedge against possible further increases in interest rates or a reduction in the availability of credit. As these funds are paid out, ratios of liquid assets to liabilities can be expected to decline in these firms.

Relatively few corporations are using their credit to the fullest extent possible. Well-situated firms typically have lines of credit, more or less firmly established, with commercial banks. Sometimes fees are paid on unused lines to assure the availability of funds when needed. Lines of credit might be added to liquid assets to obtain a broader measure of corporate liquidity, but unfortunately data are not available.

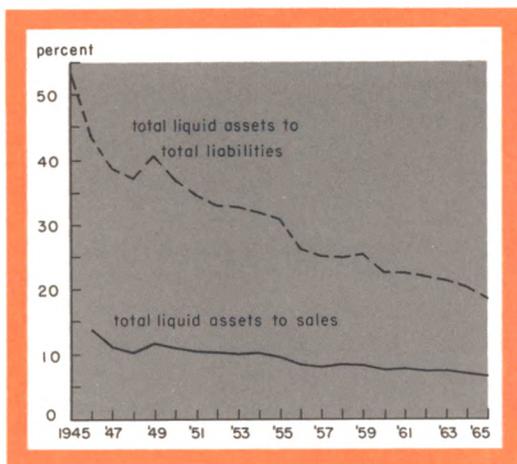
Corporate liquidity preference

In common parlance *cash* normally denotes currency and demand deposits that can be used to make money payments. But to corporate executives, cash includes all assets held as temporary liquid investments, as well as currency and demand deposits.

Although all assets have some degree of liquidity (since given sufficient time, they can be converted into cash), only those assets which normally can be converted into demand deposits quickly at prices near their full value qualify as liquid assets. Ninety-day Treasury bills are the most liquid of the near-money assets. But negotiable certificates of deposit (CDs) and other short-term Governments, including those held on the basis of repurchase agreements with security dealers, are ranked close to bills (see table on page 4).

Corporations also hold sizable quantities of commercial paper, short-term notes of finance companies and certain other corporations. Commercial paper, or open market

Liquid asset holdings of corporations have declined relative to sales and liabilities



paper as it is often called, is not readily traded to other investors. But issuing firms which are often finance companies commonly are prepared to repurchase their own commercial paper before maturity upon the request of holders.

Some firms during the past several years have purchased a growing variety of money market instruments as temporary investments. Included in some portfolios are: foreign government bills, usually British or Canadian; state and local government securities; bankers' acceptances; Government Agency obligations; savings and loan shares; Eurodollars, and a variety of other instruments. Only rarely are these assets reported separately on published corporate balance sheets. Available measures of corporate liquid assets omit some of these miscellaneous money market instruments, but taken

in the aggregate it is unlikely that the omission is large relative to the total of currency, bank deposits, Governments and commercial paper.

Harder working money

Throughout most of the postwar period, corporate holdings of cash and demand deposits (money) have declined relative to liabilities and sales as did holdings of total liquid assets. Until 1962 there was no clear tendency for cash and demand deposits to decline as a *proportion* of total liquid assets.

Currency and demand deposits at the end of 1961 were 56 percent of total liquid assets, down from 60 percent in 1958, but about the same as 10 years earlier. This ratio has declined sharply each year since 1961, however. Currency and demand deposits had

Time deposits and commercial paper holdings of nonfinancial corporations have risen in recent years while demand deposits and Government securities have declined

Year-end	Total liquid assets		Currency and demand deposits		Time deposits		U. S. Government securities		Commercial paper	
	Billion dollars	Percent	Billion dollars	Percent	Billion dollars	Percent	Billion dollars	Percent	Billion dollars	Percent
1945	42.1	100	20.1	48	0.9	2	21.1	50	*	
1950	47.3	100	26.2	56	0.9	2	19.6	41	0.6	1
1955	57.5	100	31.9	56	1.0	2	23.3	40	1.3	2
1960	57.2	100	32.0	56	2.8	5	19.5	34	2.8	5
1961	60.5	100	33.7	56	4.6	7	19.3	32	2.9	5
1962	62.9	100	31.4	50	8.4	13	19.5	31	3.7	6
1963	65.9	100	29.4	45	12.2	18	19.8	30	4.4	7
1964	66.2	100	26.6	40	15.4	23	18.3	28	5.9	9
1965	66.5	100	23.3	35	20.3	31	16.2	24	6.6	10

*Less than 500 million dollars.

SOURCE: *Flow of Funds*, Board of Governors of the Federal Reserve System.

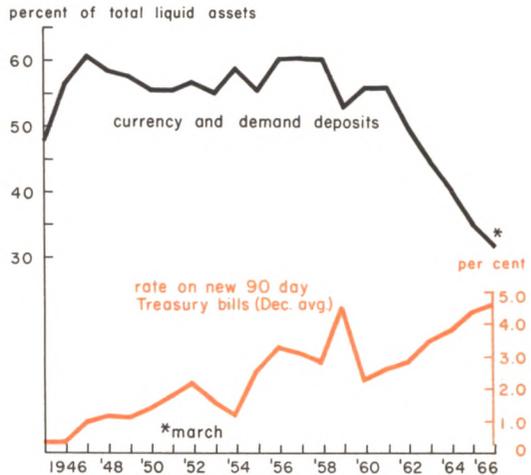
been at a postwar peak of 33.7 billion dollars at the end of 1961. The next four years saw a decline of 10 billion dollars. Because total liquid assets rose during this period, the proportion in the form of currency and demand deposits dropped to 35 percent at the end of 1966.

The absolute decline in corporate transactions cash was associated with the aggressive promotion of CDs by commercial banks. From 1961 through 1965, time deposits held by corporations rose by almost 16 billion dollars. Partly, this increase reflected a reduction in corporate holdings of Government securities, but the largest share represented transfers from demand accounts.

When short-term money market rates were very low in the early postwar years, many corporations were more or less indifferent to holding demand deposits in an amount well in excess of that needed to be certain that all checks would be honored when presented. Substantial balances were maintained as a relatively safe and convenient way of holding liquid wealth. This picture began to change during the Fifties as short-term interest rates rose to levels that made it well worthwhile to put all surplus funds to work at interest, even for relatively short periods.

As late as 1949, 90-day Treasury bills yielded only slightly more than 1 percent and other money market rates were commensurately low. At the end of that year, currency and demand deposits held by nonfinancial corporations amounted to 6.7 percent of annual sales. (Although sales represent receipts or potential receipts rather than outlays, sales provide a useful proxy of the volume of payments by business firms.) With bill rates over 3 percent at the end of 1957, the ratio of money to sales was 4.8 percent. In December 1965 the bill rate averaged 4.4

Money holdings of corporations have declined sharply in recent years as interest rates rose



percent and money holdings of corporations were only 2.3 percent of sales. Subsequent bill issues have been at even higher yields.

Currency and demand deposits of corporations declined further in the first half of 1966, apparently at a rapid rate. Can these holdings be reduced still further? The answer is: yes if conditions are favorable.

A corporation whose receipts and payments were perfectly synchronized presumably would not need to maintain any transactions cash. Cash management aims at approaching this unattainable goal by adjusting receipts, including maturities on temporary investments, to expected payments.

Not all of the demand deposits held by corporations are for transactions purposes. Firms requiring bank credit or substantial amounts of other services customarily keep "compensating balances" with one or more commercial banks. Loans often are granted on the understanding that a balance equal to

perhaps 20 percent of the outstanding credit will be kept on deposit (usually figured as an average over a period).

What proportion of corporate demand deposits are held for the purpose of reimbursing banks for services or because of a loan covenant, rather than for transactions purposes? There are no accurate estimates, but many corporate treasurers insist that the total is substantial. To the extent this is the case, demand deposits of corporations could be reduced if a different means of paying for banking services were utilized.

One result of the financial stringencies and high money market rates of recent years has been to bring bankers and corporate financial executives to more precise determinations of the adequacy of compensating balances. Some firms have preferred to pay for bank services directly through a fee. Reductions in demand deposits have permitted corporations to reduce borrowings or increase investments in earning assets.

Differences among firms

Analysis of data for groups of industries and the statements of individual firms show great differences both in relative holdings of liquid assets and in the extent to which their capacity to incur debt has been utilized.

While currency, bank deposits and Governments of all nonfinancial corporations equaled 16.6 percent of total liabilities at the end of 1965, the ratio for manufacturing corporations was 22.2. (For most trade firms and regulated utilities and railroads, it was much less.) Among industry categories the ratio ranged from less than 8 percent for aircraft manufacturers to 47 percent for drug firms. Ratios for tobacco, lumber and rubber firms were relatively low compared to total manufacturing, while liquid asset holdings of producers of motor vehicles, steel and bakery

products were relatively high. Liquidity ratios for all industry groups, except tobacco, were down sharply from five or ten years ago.

The reasons for the differences in liquidity ratios between industries and the relative shifts during the past decade are not completely clear. To some extent the more cyclical industries have the higher degree of liquidity, but this is not always the case.

Liquidity ratios of manufacturers have dropped in the past decade, but variations exist among industries

Industry	Cash and governments to total liabilities*		
	1955	1960	1965
	(percent)		
Drugs	—	63	47
Iron and steel	70	41	38
Bakery products	—	—	35
Motor vehicles	67	58	31
Furniture and fixtures	46	37	29
Nonferrous metals	56	23	25
Petroleum	46	36	23
All manufacturing	46	31	22
Other machinery	43	30	22
Textiles	35	29	19
Leather	33	23	18
Electrical machinery	31	24	18
Chemicals	52	28	18
Paper	59	29	17
Apparel	28	17	16
Lumber and wood products	52	23	14
Rubber	32	25	14
Tobacco	11	10	11
Aircraft	—	10	8

*Year-end

SOURCE: Quarterly Financial Report for Manufacturing Corporations, Federal Trade Commission—Securities and Exchange Commission.

Three-quarters of Government securities held by nonfinancial corporations mature in one year

Distribution, April 30, 1966	Percent
By maturity	
Within 1 year	75
1 to 5 years	21
5 to 20 years	4
Total	100
By type of issue	
Treasury bills (regular)	37
Treasury notes	22
Treasury bonds	21
Tax-anticipation bills	19
Certificates of indebtedness	1
Total	100

SOURCE: *Treasury Survey of Ownership.*

Differences in liquidity ratios among firms, even within industry groups, are often striking. In the farm machinery industry, ratios of liquid assets to total liabilities of major firms range from less than 5 percent to more than 24 percent. Among airlines the range is from 10 to 28 percent; steel firms from 19 to 58 percent; motor vehicles 19 to 57 percent, and aluminum 5 to 11 percent. Some individual firms are much more liquid than any of these. For example, a copper refiner has a liquid asset to total liability ratio of 200 percent, a producer of cameras 110 percent and a manufacturer of household appliances 300 percent.

Special needs and circumstances may be reflected by differences in liquidity positions between firms, but in most cases they mirror the attitudes and traditions of management. Fixed investments and other assets of these

firms have increased in recent years but not as fast as cash has been thrown off by earnings and depreciation. Reluctant to increase dividends sharply, managements of these firms are content to hold a strong cash position and await long-term investment opportunities in their own field of operation. These firms have not acquired firms in other lines of activity that might profit from an infusion of cash.

Most corporations with relatively high liquidity have relatively small outside borrowings or none at all. Others, however, have outstanding bond issues paying rates as low as 3.5 percent. With ample short-term investments yielding 4.5 to 5 percent available, there is little incentive to retire outstanding debt.

Some firms have changed from positions of very high liquidity to relatively low liquidity in recent years as policies changed or new, more aggressive managements took charge. Obviously, relatively high levels of liquidity still exist in many business firms. Since most managements hope to earn a minimum of 15 to 20 percent a year on new industrial investments, it is clear that a substantial further reduction in aggregate liquidity ratios for United States corporations can occur as additional firms with surplus cash find ways to invest in productive assets.

The essential ingredient

No particular proportion of liquid assets to liabilities or sales for nonfinancial corporations can be taken as a permanent floor. Many individual corporations remain in a highly liquid position and have little or no outstanding debt. Others are developing new ways of managing cash and expenditures and are working out arrangements with banks and other lenders that permit them to operate confidently with smaller holdings of cash.

The concept of a floor on liquidity has doubtful validity at best; it certainly cannot be determined by examining past relationships. Rather, such analyses reveal the flexibility of corporate financial policy.

It is sometimes suggested that the large well-financed firms with unused lines of bank credit have no liquidity problem and, therefore, the burden of tighter credit falls on the small and the weak. But needs of most smaller firms have been accommodated. Moreover, in periods of financial stringency, large firms have extended trade credit to customers in large volume, thus spreading available credit to points of stringency.

Liquidity considerations are most significant in times of recession when cash resources are guarded against the "hour of greatest need" and at times of boom when total supply of credit necessarily is restrained by policy. During a business slump, liquidity ratios rise for many firms but subjective liquidity sinks to a low ebb. In years of high-level prosperity (such as 1966), liquidity ratios decline for most firms but subjective liquidity remains ample. The essence of liquidity then is confident expectations of future profits, order trends, the salability of inventories and the continued receipt of payments on receivables.

Bank liquidity reexamined

Liquidity is of unusual importance to banks. Compared with nonfinancial businesses', their cash flows, both in and out, are large in relation to their capital base. Also, their cash outflows are to a much larger extent unpredictable. Moreover, bank liabilities constitute the major portion of the nation's money supply and a bank's ability to meet the claims of its depositors is thus a matter critical to the public and to supervisory authorities.

As for any business, "liquidity" may be defined as the ability to meet claims presented for immediate payment. The ultimate source of liquidity for the banking system as a whole, of course, is the Federal Reserve, which stands ready to supply funds adequate to satisfy any demand by depositors to ex-

change deposits for currency and provides the reserve base for an appropriate growth of the aggregate volume of credit and deposits to serve the economy's needs. It is not bank liquidity in this sense, but rather the ability of individual banks to meet cash demands on them, with which this article is concerned.

Cash demands on individual banks arise mainly from adverse clearings. A cash outflow from one bank, it is important to note, has its counterpart in an inflow to another. Checks presented for collection must be paid in cash and a most important challenge to bank management is to provide for the satisfaction of these claims at the lowest cost. The relevant costs include both the earnings foregone on cash that might have been invested

and the sale of assets at a loss in order to acquire cash.

Hard to measure

There is no single statistic that can adequately measure bank liquidity nor is it possible to develop one. Holdings of cash or assets readily convertible into cash in relation to deposits and the ratio of loans (assumed to be non-liquid assets) to deposits are often used as rough indicators. Any such ratio can indicate only a relative degree of liquidity. Differences in ratios are not adequate to compare liquidity differences between banks since the need for liquid assets varies, depending upon the behavior of a bank's deposits. Moreover, the loan ratio one bank considers "comfortable" is in part dependent on the overall composition of its assets—their maturity, marketability and degree of diversification. Variation in loan or liquid asset ratios among banks thus reflects differences in risk factors as well as differences in liquidity needs. Changes in the overall average of these ratios nevertheless may provide broad indications of whether it is easier or harder for most banks to make adjustments necessary to meet potential deposit drains.

The combined effects of strong loan expansion, shrinking portfolios of Government securities and Federal Reserve restraint on deposit expansion over the past year have given rise to expressions of concern about the adequacy of bank liquidity. For all commercial banks, aggregate loan volume now exceeds 65 percent of total deposits while holdings of short-term U. S. Government securities have dropped to less than 6 percent of deposits. These measures suggest that bank liquidity is at a new low in postwar experience. The loan-deposit ratio is well above the level reached in the 1959-60 period

of monetary restraint while the short-term Governments ratio is very near the low reached at that time.

Although higher loan ratios may make banks more cautious about increasing their risk assets—at least at a faster pace than their deposits rise—such ratios do not necessarily indicate impairment of their ability to meet cash demands without suffering capital losses. The adequacy of liquidity is a function of both needs, as related to deposit fluctuations, and potential sources of funds. The volume of liquid assets a bank holds is an important but not an exclusive element in its ability to raise cash. Alternatives to the holding of liquid assets, however, are not equally available to all banks or at all times.

Interpretation of the loan-deposit and liquid asset ratios as indicators of the liquidity situation requires consideration of three related questions: 1) Do these ratios accurately reflect the relevant asset-deposit relationships, that is, have changes in the composition of loans, investments and deposits affected liquidity in a direction which either modifies or intensifies the trend shown by these measures? 2) To what extent have other developments modified the importance of holding a stock of short-term Governments for liquidity purposes? and 3) Do banks show differing declines in their liquidity ratios and are those most affected best able to meet their liquidity needs in other ways? Some of the available evidence on these questions is reviewed below.

Liquidity in loans

Although the "liquidity ratios" normally exclude loans from liquid assets, there is a large element of liquidity in the loan portfolio of most banks. This is of two types. First, certain assets classed as loans, including bankers acceptances, CCC certificates of

indebtedness and FHA- and VA-guaranteed mortgages, are readily marketable. Second, there is a very large cash inflow from maturing loans, and amortized loans are an increasing proportion of total outstandings. Also important at some banks is the large volume of one-day or demand loans made to other banks and to securities dealers.

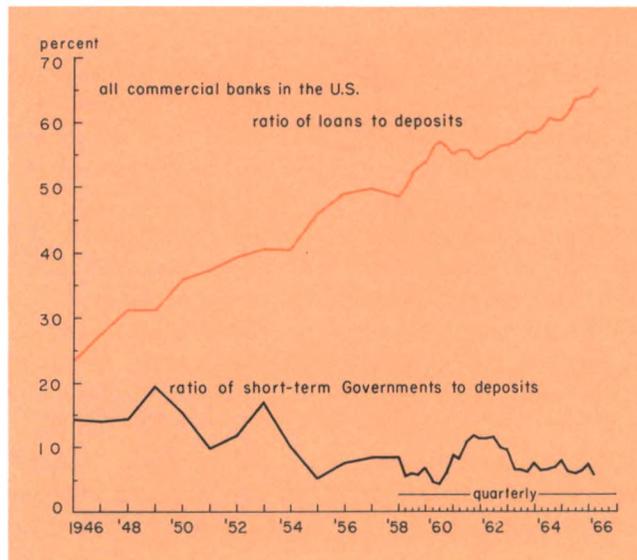
Cash inflow from loan repayment is, of course, largely dependent on the average maturity of the loan portfolio. To the extent that the proportion of mortgages, consumer loans and term loans to business has increased, liquidity may have declined. In the past five years, mortgage and consumer loans have risen only slightly in relation to total loans. The average maturity of consumer and mortgage loans at banks is less than 15 months and 5 years, respectively.

Available data on loans of the larger banks

in the New York and Cleveland Federal Reserve Districts at the end of March show that business loans with maturities longer than a year amounted to 62 percent and 46 percent, respectively, of all business loans in these banks and that the proportion has tended to rise over the past five years. These data, however, include loans made under revolving credit agreements. Although such agreements normally are for two to three years, the individual loans made under them are often for 90 days or less.

Term loans do not necessarily imply reduced cash inflow since they are usually amortized whereas many short-term business loans are renewed at maturity. Reports by large Seventh District banks on new loans made during a 15 calendar-day period each quarter indicate that at these banks term loans as a proportion of the total dollar vol-

Bank "liquidity ratios" tighter



NOTE: Loans exclude loans to banks; Government securities include issues maturing within one year; deposits are adjusted to exclude cash items in process of collection.

ume of extensions in the largest loan size category dropped in December 1965 and March 1966 to about 10 percent after having reached a peak of nearly 17 percent late in 1964. Revolving credits appear to have shrunk somewhat in importance, but this is offset to some extent by a shortening in the average maturity of ordinary term loans to 48 months in December 1965 from 65 months in the same period of 1959.

Investments also provide varying degrees of liquidity. Because of the broad market for both direct U. S. Government securities and for obligations of U. S. Agencies, all of these issues can be easily converted to cash and with little or no loss, especially if they are short term. Markets for state and local obligations, on the other hand, are much more limited. Even short-term Governments, insofar as they are pledged to secure deposits of governmental units, are not available to meet cash needs. Public deposits vary within the year roughly between 6 and 12 percent of the aggregate deposits of all member banks. Although public deposits tend to be the most volatile of the major deposit categories, the pledging of securities against particular types of deposits unquestionably impairs the general liquidity of the banks holding them.

The very substantial change that has occurred in the composition of deposits in recent years also has an important bearing on the need for liquidity. Historically, time deposits have shown much greater stability over short periods (although they have undergone very wide swings secularly) than have demand deposits. Because of the rapid growth in time and savings balances during the past six years, many banks may feel comfortable with relatively small holdings of liquid assets. Whether total deposits are actually more stable, given the large volume of time and savings deposits and the greater importance of

fixed maturity certificates as a component of such deposits is not entirely clear.

Average week-to-week percentage changes in total deposits, less uncollected items, computed for 14 weekly reporting banks in seven Midwest cities were not significantly different in 1961 and 1965 although there was some evidence of reduced overall volatility at banks where fluctuations were relatively high in the earlier year. The average percentage decline in those weeks when deposits dropped was slightly larger in 1965 at the majority of these banks. Greater predictability of potential deposit declines associated with the certificates, however, may more than offset the tendency for withdrawals to be somewhat larger when they occur.

Money mobility

At any given time some banks find themselves in need of cash while others are seeking profitable outlets for funds. Liquidity for individual banks, then, is to a large extent a matter of the redistribution of funds among banks. Anything that increases a bank's ability to tap the money market for funds contributes to its liquidity. One way banks can do this is through the sale of assets. Another way that has become increasingly important in recent years is by the acquisition of liabilities—borrowed funds or deposits. To the extent a bank possesses the ability to offset cash drains due to withdrawals by some depositors by the acquisition of new deposits or by borrowing, its need to hold a stock of liquid assets is correspondingly less.

There is abundant evidence that many banks have gained increasing control over the amount of their liabilities. While this has been true especially at the large banks which can affect the inflow of their time deposits by varying the rates they offer on negotiable certificates of deposit, many small banks have

Liquidity-related ratios of Seventh District member banks

Averages of individual bank ratios, December 31, 1965

Number of banks	To gross deposits:		To net deposits: ²				
	Loans ¹	U.S. Govts. and Agencies	Real estate loans and municipals ³	Liquid assets ⁴	Time deposits	Saving deposit	
(percent)							
By size and loan-deposit ratio, December 31, 1965							
Small banks (total deposits under 15 million dollars)							
Total	599	48	36	24	45	48	27
0-39%	153	32	50	19	60	42	23
40-49	183	45	37	24	47	48	28
50-59	180	55	30	28	39	52	29
60-69	67	64	23	25	31	53	29
70-100	16	74	20	23	26	26	34
Medium banks (total deposits 15-50 million dollars)							
Total	223	49	31	30	40	53	39
0-39%	45	34	43	26	53	52	43
40-49	65	45	34	29	43	52	37
50-59	81	55	26	31	36	55	37
60-69	24	63	21	32	29	56	38
70-100	8	73	15	35	24	55	35
Large banks (total deposits over 50 million dollars)							
Total	121	55	24	29	35	53	40
0-39%	6	31	41	26	53	54	49
40-49	21	46	31	30	41	53	43
50-59	59	55	24	30	34	52	38
60-69	28	63	17	29	29	52	36
70-100	7	74	16	19	30	64	47
By area							
Metropolitan area banks							
Chicago							
Major ⁶	19	58	19	23	26	52	41
Other	119	45	36	28	44	56	47
Indianapolis							
Major ⁶	3	62	18	24	32	40	21
Other	13	49	35	20	46	45	26
Des Moines	9	51	21	25	39	42	31
Detroit							
Major ⁶	8	62	17	28	34	63	52
Other	22	54	31	31	44	69	53
Milwaukee							
Major ⁶	3	64	12	26	21	41	24
Other	13	51	34	28	45	54	41
Other metropolitan area banks							
Illinois	72	47	34	22	44	46	30
Indiana	31	43	36	27	49	45	31
Iowa	16	53	28	21	40	42	26
Michigan	52	57	26	36	34	64	45
Wisconsin	10	57	24	36	34	53	31
Rural area banks							
Illinois	150	45	38	21	46	39	23
Indiana	107	45	39	24	49	47	27
Iowa	129	51	32	19	44	41	17
Michigan	79	56	28	37	34	63	39
Wisconsin	88	49	34	31	43	59	31

¹Loans, less loans to banks and valuation reserves to gross deposits.

²Deposits net of cash items in process of collection.

³Excludes VA- and FHA-guaranteed loans.

⁴Includes U.S. Government and agency securities, VA- and FHA-

Change in averages of ratios from December 31, 1959 to December 31, 1965

To gross deposits:		To net deposits: ²			
Loans ¹	U.S. Govts. and Agencies	Real estate loans and municipals ³	Liquid assets ⁴	Time deposits	Savings deposits ⁵
		(percent)			

By size and loan-deposit ratio

						Small banks
13	-11	16	-10	26	-13	Total
- 2	2	5	1	24	-13	0-39%
11	- 9	14	- 7	30	-11	40-49
18	-19	22	-18	26	-13	50-59
20	-28	22	-24	26	-14	60-69
40	-45	5	-44	16	-13	70-100
						Medium banks
26	-25	31	-22	24	- 3	Total
13	-13	35	-13	22	6	0-39%
27	-21	31	-20	28	- 1	40-49
25	-30	29	-26	23	- 8	50-59
29	-36	30	-33	21	- 7	60-69
55	-45	29	-39	22	- 2	70-100
						Large banks
26	-33		-28	29	4	Total
16	-16	68	-16	9	3	0-39%
30	-27	47	-24	29	7	40-49
25	-31	49	-28	32	5	50-59
26	-42	43	-33	33	- 1	60-69
35	-54	56	-40	19	- 3	70-100

By area

Metropolitan area banks

						Chicago
29	-37	65	-37	52	24	Major ⁶
36	-24	36	-22	19	4	Other
						Indianapolis
38	-41	99	-30	72	- 8	Major ⁶
28	-19	1	-13	46	- 9	Other
3	-19	42	-20	46	16	Des Moines
						Detroit
28	-43	45	-27	23	13	Major ⁶
24	-19	- 3	- 9	11	- 6	Other
						Milwaukee
27	-49	112	-45	51	- 4	Major ⁶
31	-23	40	-23	13	1	Other
						Other metropolitan area banks
19	-19	30	-17	40	1	Illinois
9	-11	24	- 9	98	- 8	Indiana
22	-17	4	-13	23	1	Iowa
16	-21	21	-21	17	- 6	Michigan
47	-40	57	-38	15	-24	Wisconsin

Rural area banks

19	-15	24	-13	45	- 5	Illinois
15	-12	20	-12	27	-15	Indiana
1	4	9	1	39	-12	Iowa
15	-19	16	-18	14	-19	Michigan
26	-23	30	-23	14	-24	Wisconsin

guaranteed loans, CCC certificates, loans to banks, loans to dealers and brokers in securities and balances with domestic banks.

⁵Change from 1961.

⁶Gross deposits over 100 million dollars.

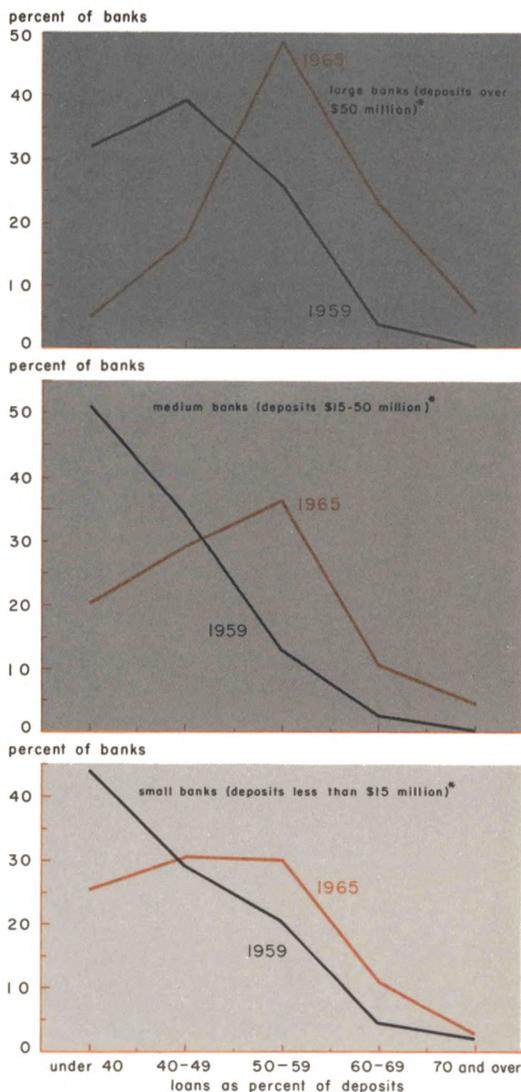
also found that they are able to attract a larger share of local savings and short-term public funds by issuing time and savings certificates.

The growing practice of overnight inter-bank loans is a second factor of great importance in facilitating the redistribution of funds to banks with short-term needs. The ability to “buy” Federal funds is an important source of liquidity for the borrower while the “sale” of Federal funds is an extremely liquid investment for the lender. With the Federal funds rate now fully competitive with other money market yields, many banks rely heavily on this market to meet their short-term cash needs. In the past the Federal funds market has been a source of funds mainly for large banks where daily fluctuations in cash needs can be counted in millions of dollars. But more and more relatively small banks are participating in this market by buying and selling funds through their correspondents.

Finally, the discount facilities of the Federal Reserve Banks are available to carry member banks over temporary periods of cash drains. Advances to member banks tend to rise in periods when the overall availability of credit is restricted. The increase in the total volume of borrowing—to a 600-800 million dollar range in recent months—has been accounted for largely by country banks. But this may reflect not so much their inability to obtain accommodation from other banks or in the money market as their reluctance to pay rates substantially above the cost of borrowing at the discount window. There is little doubt that the larger amount of country bank borrowing is due in part to some shrinkage in their stocks of short-term liquid securities. At the same time, the ability of these banks to obtain advances is evident

14 that they still hold a sufficient volume of

Proportion of banks with high loan-deposit ratios sharply higher than in 1959



*Seventh District member banks by size of gross deposits.

NOTE: Loans exclude loans to banks.

securities eligible to collateralize this borrowing.

Variation among banks

How widespread is the apparent liquidity squeeze? Which banks have been most affected? What kinds of changes in the composition of assets and deposits have accompanied the shrinkage in the liquidity ratios? Changes in loan-deposit and related ratios of individual Seventh District member banks from December 1959 to December 1965 were examined to provide some additional insight into these questions.¹

In each of the three size groups analyzed, the percentage of banks with relatively high loan-deposit ratios increased over the six-year period, but the shift was greater at the larger banks (see chart). The number of banks in the large size category is, of course, relatively small, accounting for about 12 percent of all District member banks. Only 31 out of almost 950 member banks examined had ratios of 70 percent or more at the end of last year. At more than 200 banks, on the other hand, loans amounted to less than 40 percent of deposits. Many banks have seen these ratios move higher since last December. In mid-June, loan-deposit ratios for the 41 banks that report weekly ranged from 39 to 83 percent but averaged only one percentage point higher than at year-end.

The table on pages 12 and 13 shows averages of several liquidity-related ratios for banks in various size and area groupings as of the end of 1965 and the percent change in these ratios compared with six years earlier. In addition to the loan ratio, the table includes average ratios to deposits of selected combi-

nations of asset items—based on their relative liquidity—and of deposit components for the banks in these groups. Within the small, medium and large bank size groups, averages of these ratios are also shown for banks within certain loan-deposit ratio ranges. “Liquid assets” shown in the table are those identifiable from condition statements; besides U.S. Government and Agency securities, they include loans to other commercial banks, loans to brokers and dealers in securities, FHA and VA mortgages, CCC certificates and demand balances with other banks.

Because an average of ratios of individual banks gives equal weight to each bank included regardless of size, this type of measure tends to yield loan-deposit ratios that appear low and liquid asset ratios that appear high compared with the more commonly used ratio of the aggregate asset items of all banks in a group to their aggregate deposits. Furthermore, levels vary seasonally (end of year figures are usually low due to peak deposit volume at that time) and according to the deposit concept chosen (exclusion of uncollected items results in higher ratios). The levels shown as averages of ratios in the table are less significant than the comparison of these averages among various bank groups and over time.

At the end of last year, the average of all individual bank loan-deposit ratios was 49 percent compared with an aggregate ratio of 60 percent. For the 344 medium and large banks—those with total deposits of 15 million dollars or more at the end of 1965—the average loan-deposit ratio was 26 percent above the end of 1959, exactly twice the relative increase in the average ratio of the small banks.

In general, the various asset to deposit ratios show a high degree of consistency in

¹The loan-deposit ratio as used in this article is total loans after deductions of valuation reserves divided by gross deposits. Loan figures do not include sales of Federal funds.

their implications with respect to liquidity. For example, banks whose average loan-deposit ratios were highest also tended to have relatively low average liquid asset ratios whether broadly or narrowly defined. The more inclusive ratio dropped somewhat less sharply over the six-year period, however, especially at the large banks. On the other hand, banks with the highest loan-deposit ratios also had the highest share of total time deposits and a relatively high, but shrinking, proportion of savings deposits. The average ratio of real estate loans and municipal securities to deposits increased sharply for almost every bank group with the biggest gains at the largest banks. These are the banks where these assets were relatively small in earlier years.

The average ratios for the area groups show a rather sharp contrast between the largest banks (over 100 million dollars in total deposits) in the major District cities and other banks. Wisconsin banks in both urban and rural areas showed the most severe decline in liquidity by these measures. The average ratio of passbook savings to total deposits showed significant gains from 1961 only for the large banks in Chicago, Detroit and Des Moines and declined in most metropolitan and rural area banks. With higher rates offered on individual certificates in recent months mainly at the major banks, it

seems probable that these inter-area divergences in savings trends have now been substantially reduced.

On balance, it appears that the decline in liquid assets relative to deposits has been general but much greater where loan volume was already high. High-ratio banks are to a large extent banks with the ability to compete in the money market for short-term funds offered by other banks, corporations and large individual savers. This source is an effective, although perhaps somewhat uncomfortable, substitute for liquid assets for these banks. The problem may be greater for those few smaller banks with high loan-deposit ratios.

Probably the most important element in assuring liquidity to individual banks is the mobility of funds within the banking system in response to peak needs in different areas at different times. With today's adjustment practices, anything that tends to restrict these flows would cause problems. Rate flexibility is a major factor and, so far, adjustments in ceilings on rates paid on time deposits have permitted large banks to bid for funds as needed. Other measures, such as broadening eligibility rules for collateral against Federal Reserve advances and elimination of the pledge of securities against public deposits, would contribute additional flexibility to the adjustment process.