

# Liquidity ratios weakened at district banks in 1977

*Elijah Brewer*

Operations of member banks in the Seventh Federal Reserve District last year showed credit conditions had a far-reaching effect on bank liquidity. Response of member banks to strong loan demand resulted in declines in liquidity for banks in all sizes.

Liquidity—the ability of a bank to meet claims presented for immediate payment—reflects the distribution of assets among loans and securities. Because claims on a bank's cash can often exceed expected money inflows, prudent banks must keep a cushion either of cash and securities that can be readily converted into cash or of adequate borrowing capacity.

There has to be enough cushion to cover not only expected withdrawals and adverse clearings but also unpredictable deposit drains. It is also important for the bank, as a going concern, to keep a cushion that will cover withdrawals and clearings arising from deposits to be put on the books later, especially deposits created by new loans that are not accompanied by increases in cash inflows. This includes provision for takedowns that result from both the implementation of current loan commitments and the servicing of any additional loan demand that the bank decides to meet.

Just what the liquidity cushion should be, however, seems related to bank asset size.

## **Both sides of the balance sheet**

The liquidity position of a bank, like that of any business, has two dimensions—the amount of cash it can raise and the amount it might have to raise. Liquidity, then, encom-

passes both sides of a bank's balance sheet, the liabilities that represent claims on assets and the assets themselves. This is the rationale underlying such basic measures of bank liquidity as the ratio of loans to deposits and the ratio of cash plus Treasury securities and obligations of U.S. agencies to deposits.

The ratio of loans to deposits indicates the extent to which banks have already used up their available resources to accommodate the credit demand of their customers—the presumption being that the higher the ratio the less able a bank will be to make more loans. The ratio of loans to deposits, however, shows nothing about a bank's other assets that might be converted into funds, either to meet deposit withdrawals or to make more loans. The ratio of cash plus Treasury and agency securities to deposits is a more accurate indicator of the amount of funds still readily available.

The inclusion of cash in the numerator does not mean these funds are an unencumbered source of liquidity. Rather, the far greater part of a bank's cash represents reserves required to support deposits. To satisfy reserve requirements and provide a working balance, member banks must have vault cash or deposits with the Federal Reserve. When its legal reserves have been used, a bank must replace them almost immediately, the only exception being any reserves freed by reduction in deposits.

In the absence of offsetting credits, a bank must look to other sources of liquidity that will restore its reserves to the required amount within the settlement period. The reserve settlement period for member banks

runs from Thursday through the next Wednesday. During the settlement week, banks have to hold average daily reserve balances as large as average daily required reserves. Because of this, the ratio of Treasury and agency securities to deposits is conceptually better than the ratio that includes cash in the numerator.

All such ratios, however, are inadequate measures of the actual state of bank liquidity. Actual liquidity depends on several factors:

- Composition of the loan portfolio.
- Composition and maturity distribution of the security portfolio.
- Secondary markets (or the lack of secondary markets) for various types of assets.
- Structure and relative volatility of deposits.
- Composition and maturity of liabilities other than deposits.
- Any seasonality in loan demands and deposit flows.
- Access to money market funds.

The ratio of loans to deposits is deficient as a measure of bank liquidity. Implicit in the ratio is the assumption that loans are not liquid assets. This assumption, that loans cannot be quickly converted into cash with little or no risk of capital loss, is not right. There is considerable liquidity in the loan portfolio of most banks.

On the one hand, some assets classed as loans, such as bankers' acceptances and FHA and VA-guaranteed mortgages, are readily marketable. Development of active secondary markets for some types of assets has changed the significance of an aggregate ratio of loans to deposits. Because some types of loans can be sold with little risk of capital loss, they provide an additional source of liquidity.

On the other hand, maturing loans can provide large cash inflows—and amortized loans are accounting for more of the total loans outstanding. Liquidity in the loan portfolio depends, then, on the overall composition of loans—their maturity, marketability, and degree of diversification.

Security portfolios also provide a source of liquidity—how much depending on the

composition of the portfolios. With the broad market for both Treasury securities and obligations of U.S. agencies, all these government issues can be easily converted to cash with little risk of capital loss. There is no risk if the securities are short-term.

Markets for state and local obligations, on the other hand, are much more limited, and the credit ratings of borrowers are lower. Because the quality of municipal issues varies and considerable information is required for investment decisions, these securities may not be a dependable source of liquidity.

The pledging of securities against some types of deposits reduces liquidity in ways that are not reflected in either the ratio of loans to deposits or the ratio of government obligations to deposits. Pledged to secure government deposits, even short-term Treasury securities are not available to meet liquidity needs.

The change in the composition of deposits in recent years has had an important bearing on the need for liquidity. Despite secular swings, time deposits have usually shown more stability over the short run than demand deposits. As a result, with the growth in time and savings deposits, some banks may feel comfortable with fairly small holdings of liquid assets. Whether total deposits are actually more stable, however, given the large volume of time and savings deposits and the greater importance of fixed maturity certificates as a component of deposits, is not entirely clear. In a time characterized by growing sensitivity to differences in interest rates, some types of time deposits can be highly volatile, especially large negotiable CDs. The shift in the composition of deposits has made some banks more watchful of fluctuations in financial markets. It has also made their liquidity dependent on the composition of their deposits, and especially the maturity distribution of time deposits.

Seasonal fluctuations in loans and deposits, or either of them, create problems of both asset and liability management that some banks, especially small and medium-sized banks, seem unable to accommodate without impairing their liquidity positions.

Traditional measures of liquidity do not accurately reflect the impact of such recurring pressures on the liquidity positions of individual banks. In planning for seasonal changes in their liquidity needs, some banks can rely on money market sources for funds. Others, however, with few alternative sources, tend to rely mainly on government securities.

Some banks have turned to liability sources of liquidity in recent years both to meet deposit withdrawals and to satisfy loan demands. The implications of liabilities used as sources of liquidity are complex. The liabilities banks manage allow them to make loans and investments without selling other assets or, depending on deposit inflows, to provide the funds needed for liquidity purposes. As a result, traditional liquidity ratios have become less accurate measures of bank liquidity. Changes in the overall averages of the ratios may, nevertheless, provide broad implications of whether it is easier or harder for most banks to make the adjustments needed to meet potential deposit drains and loan demands.

#### Shifts in composition of assets

The increase in credit demands last year at banks in the Seventh District was accompanied by shifts in the composition of bank loans and securities. As a proportion of total deposits, bank holdings of all types of securities declined. The average ratio of loans to deposits increased. Although consumer loans also increased, real estate loans accounted for most of the gain in gross loans.

Reflecting stronger growth in loan demand, holdings of government securities declined as a proportion of total deposits at the average district member bank. Bank holdings of government issues usually follow a contracyclical pattern, declining when loan demands increase. On the basis of the ratio of federal government securities to deposits, the liquidity of the average member bank in the district declined from 22.8 percent in 1976 to 19.9 percent in 1977.

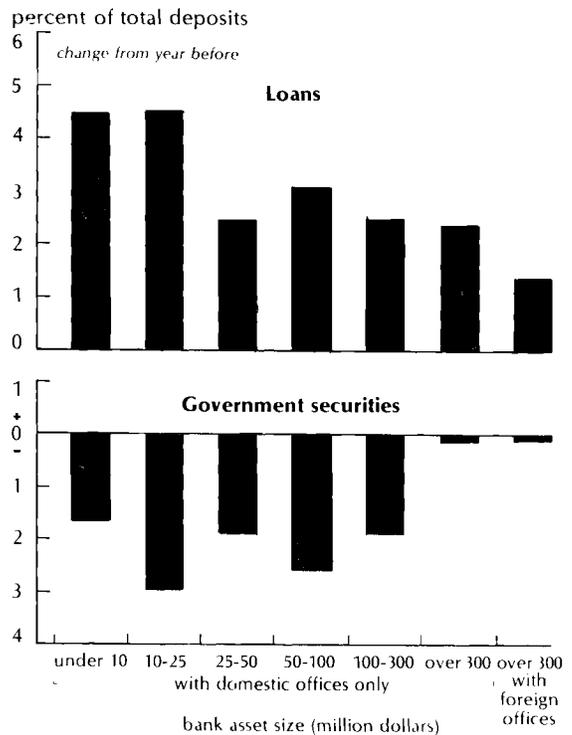
Contrasting with the declining propor-

tion of government securities in bank assets, then, was the growing importance of bank loans. For the average member bank in the district, loans increased from 56.0 percent of total deposits in 1976 to 59.6 percent in 1977. As loans to private borrowers cannot be turned into cash quickly, this shift in the structure of bank assets represented a drift away from liquid, low-risk assets.

Within loan portfolios, structural changes exemplified by the rising importance of long-term mortgage loans also marked a loss of liquidity at banks in the district. As a percentage of total loans, real estate loans rose about a point, to 36.2 percent. At the same time, federal funds sold—an important source of liquidity for some banks—declined from 7.6 percent of total loans in 1976 to 6.2 percent in 1977.

The biggest shifts in the structure of loans and securities was at small and medium-sized

#### Banks' liquidity ratios weakened in the Seventh District in 1977, but change was less at large banks



banks. The average ratios at the largest banks in the district were essentially unchanged from 1976.

### **Pressures on smaller banks**

There was deterioration last year in the ratio of government securities to deposits at banks of all asset sizes in the district. However, the most notable change was at small and medium-sized banks. While large banks felt the effect of the light loan demand from large businesses, smaller banks faced heavy loan demand and tight liquidity positions.

The deterioration was most pronounced at the banks with total assets between \$10 million and \$25 million. At these banks, the ratio of government securities to deposits declined from 25.0 percent in 1976 to 22.1 percent in 1977. By contrast, the liquidity ratio at large banks with foreign branches and subsidiaries declined by less than 1 percentage point, to 15.4 percent.

Similarly, the ratio of loans to deposits showed a comparatively small loss of liquidity at large banks with foreign branches and subsidiaries. With loans growing less relative to deposits than loans at other banks, the average ratio of loans to deposits at the largest banks in the district rose only about 2 per-

centage points, to 77.1 percent. That was compared with a 9 percentage point increase, to 54.5 percent, at banks on the other end of the scale, those with total assets of less than \$10 million.

Loans to deposits showed a high degree of consistency in their implications for liquidity of all sizes of banks. The declines in the relative importance of government securities in bank portfolios was general throughout the district. This decline, however, was greater where loan volumes were low. Since banks with low loan-to-deposit ratios—the small and medium-sized banks—are also banks least able to meet their liquidity needs in other ways, the shift in the structure of bank assets greatly increased the vulnerability of smaller banks to a liquidity squeeze.

Large banks can substitute liquidity on the liability side of the balance sheet for liquidity on the asset side. On the liability side, they can trade day to day in, for example, CDs or federal funds. On the asset side, they can trade, again daily if need be, in government securities, especially Treasury issues. Smaller banks, being less able to substitute money market funds for liquid assets, are probably affected more by sudden deposit withdrawals, especially if they have already had a substantial expansion of loans.