

Navigating the Brave New World of

BANK LIQUIDITY

By Julie L. Stackhouse and Mark D. Vaughan

The third week of April 2003 offered a rare sight—an old-time bank run. The target was Abacus Federal Savings Bank, a thrift institution with assets of \$282 million spread across operations in New York, New Jersey and Pennsylvania. Abacus Federal saw \$30 million, or 13 percent, of deposits walk out the door in a four-day run on branches in New York City and Philadelphia. The run followed an announcement that Carol Lim, a branch manager, had been fired on suspicion of embezzlement.¹ In the end, Abacus Federal—from all accounts safe and sound—weathered the run, though there were a few tense moments as the thrift faced the possibility that a short-term funding squeeze could escalate into a solvency problem.

Although runs have been rare since the 1930s, the balancing of sources and uses of funds is an important daily challenge for bankers. A large, sudden need for liquidity—as Abacus Federal faced in the extreme—can force an institution to sell choice assets at fire-sale prices or pay hefty interest charges in the short-term funding market. Scrambling for funds matters because it can seriously impair a bank's earnings and capital.

By some traditional balance-sheet measures, U.S. commercial banks face more liquidity risk now than 10 years ago.² What accounts for recent trends in these liquidity measures? Do they point to deterioration in bank liquidity? Finally, what steps have supervisors taken to foster bank safety and soundness in this brave new world of bank liquidity?

A Liquidity Tempest?

Once upon a time, bankers and examiners leaned on the core-deposit-to-total-loan ratio to assess liquidity. The logic was simple: Core deposits—such as checking accounts, passbook savings accounts and small time deposits (under \$100,000)—stay put,

exhibiting little sensitivity to changes in market rates or bank condition. Other things equal, the higher a bank's stock of core deposits—or, put another way, the lower its loan-to-core-deposit ratio—the lower the liquidity risk.

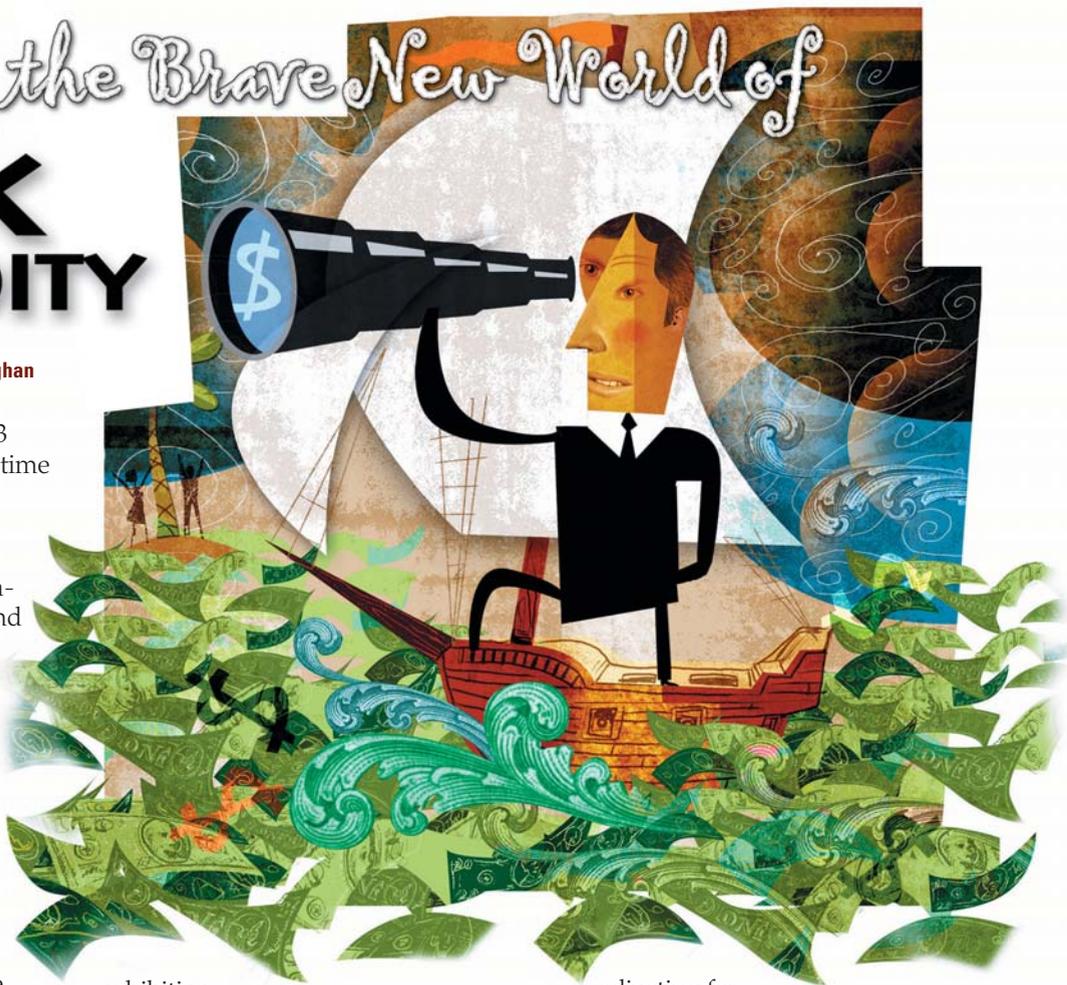
Over the past 10 years, the aggregate loan-to-core-deposit ratio has "deteriorated" markedly. At year-end 1992, the ratio for U.S. banks stood at 92.9 percent, meaning that there was 92.9 cents in loans for every \$1 in core deposits. By year-end 2002, the ratio was up to 121.2, meaning there was \$1.21 in loans for every \$1 in core deposits.³ Both cyclical and structural factors account for this trend. On the cyclical side, between 1992 and 1999 annual loan growth at U.S. commercial banks averaged 7.9 percent, compared with average annual growth of 5.4 percent between 1984 and 1990. The pickup reflected the record length and strength of the 1990s economic expansion. On the structural side, between 1992 and 1999 core deposits grew at an average annual rate of 3.1 percent, down sharply from the average annual growth of 6.5 percent between 1984 and 1990. The slowdown reflected heightened consumer interest in non-deposit investment alternatives. For example, stock and bond mutual funds grew at an average annual rate of 10.7 percent between 1992 and 1999—even after

adjusting for the run-up in the stock market. Over the same interval, money-market mutual funds grew at a 15.2 percent annual clip.

Or a Tempest in a Teapot?

Though stark, these balance-sheet trends really point to a "difference" in bank liquidity rather than a "deterioration." In the past 10 years, U.S. banks have tapped an impressive array of funding sources to operate with fewer core deposits. At the same time, maintaining safety and soundness with fewer core deposits requires a more sophisticated approach to measuring and managing liquidity. More sophistication means greater emphasis on overall systems for managing risk and less emphasis on static liquidity ratios drawn from balance sheet data.

For example, to plug the gap between loan and deposit growth, U.S. banks have turned in part to jumbo certificates of deposit—that is, time deposits with balances above the \$100,000 deposit-insurance ceiling. At year-end 2002, commercial banks on average funded 12.7 percent of assets with jumbo CDs, up from 7.5 percent at year-end 1992. At one time, most jumbo CDs were purchased in the local community by depositors with strong ties to the



bank; in other words, they behaved much like core deposits. Then, the same factors that produced the slowdown in core-deposit growth reshaped the jumbo-CD market.⁴ Now, banks sell a large portion of their jumbo CDs in national markets to depositors who will move their funds at the slightest prospect of a better yield or the slightest hint of a solvency problem. Relying heavily on jumbo-CD funding requires careful contingency planning: What will the bank do if market concerns about safety and soundness cause funds to vanish? It also requires careful thought about attendant risks like interest-rate risk: What will the bank do if holding onto funds means offering a much higher yield?⁵

Banks have also turned to the Federal Home Loan Bank (FHLB) System, another funding source that dictates sophisticated liquidity management. This system is a government-sponsored enterprise (GSE)—a government-chartered but privately owned entity charged with promoting home ownership.⁶ It advances funds to member institutions, taking mortgage and other real-estate-backed loans as collateral. The borrowing bank can then use the advanced funds to make new loans and investments. Originally, Home Loan Banks were a funding source for thrift institutions, but Congress opened membership to commercial banks in 1989. Between year-end 1992 and year-end 2002, the number of commercial banks in the FHLB System grew from 1,284 to 5,886, and advances climbed from 0.1 percent of banking assets to 3.3 percent. Now, at any given time, about 50 percent of commercial banks have advances outstanding. To obtain advances, bankers must enter explicit contracts with the FHLB. Because of these contracts, advances can be more stable than core deposits. But there is a trade-off—getting out of the contracts can involve significant pre-payment penalties. Successfully managing this trade-off requires careful liquidity planning.

Liquidity challenges can also come from “off” the balance sheet—as with loan commitments, for example. A loan commitment is a promise to lend up to a pre-specified sum at pre-specified terms over a pre-specified time period; a commitment is considered off balance sheet because it does not show up on the balance sheet until funds are drawn—or “taken down,” in banker jargon. The liquidity risk is clear in the difference between a spot loan of \$1 million and a 60-day loan commitment for \$1 million. With a spot loan, the customer takes all of the money now; the bank knows it needs exactly \$1 million in funding. With a loan

commitment, the bank could be forced to come up with any or all of the unused line any time before the agreement expires.

Because of this funding uncertainty, the bank must anticipate all likely scenarios to ensure that the necessary cash will be available. The bank must also have a contingency plan in case of an unlikely scenario. The importance of planning for take-down risk is more important than ever. In December 1992, loan commitments averaged 36.5 percent of U.S. banking assets; by December 2002, that number had reached 73.9 percent.

Liquidity Bedfellows

Assessing liquidity risk is a challenge for bank supervisors as well as bank managers. Just like bank managers, federal and state supervisors have begun putting more emphasis on the integrity of risk-management systems and less emphasis on traditional financial-statement analysis when evaluating bank liquidity. At the Federal Reserve, tools have been developed to help examiners assess liquidity dynamically—that is, to look comprehensively at a bank’s asset growth, funding diversification and contingency planning, rather than focusing on the core-deposit ratio. The Fed has also introduced explicit training in advanced liquidity-risk measurement and management into the examiner-training curriculum. This training is designed to help examiners determine whether a bank’s liquidity-risk management is in sync with its liquidity-risk exposure. Finally, several Reserve banks, including the Federal Reserve Bank of St. Louis, are experimenting with new statistical models for flagging banks headed for liquidity problems between scheduled examinations.

What’s Past Is Prologue

In short, U.S. commercial banks are not facing a liquidity crisis, just a brave new world of liquidity. This new world offers more funding options than ever before but requires more sophisticated risk-management than ever before. The record-high earnings and record-low failures of the 1990s suggest that bank managers and supervisors have partnered successfully to meet the challenge—at least to date. Continued success is important to ensure that stories of Abacus Federal-type bank runs appear only in history books and not in the daily press.

Julie L. Stackhouse is the senior vice president and Mark D. Vaughan is the supervisory policy officer in the Banking Supervision, Statistics, Credit and Payment Risk Management Division of the Federal Reserve Bank of St. Louis.

ENDNOTES

- Some Abacus depositors were alarmed by the announcement’s suggestion that funds entrusted to Lim did not end up in accounts and, therefore, might not be insured. Others, particularly recent immigrants from China, feared losses because they did not understand the workings of the U.S. deposit-insurance system. For more on the run, see Blackwell in the *American Banker*.
- Formally, liquidity risk is the risk that an institution will prove unable to meet its funding needs in a timely manner at a reasonable cost. For an excellent discussion of the modern approach to measuring and managing liquidity risk at financial institutions, see Chapter 17 of Saunders and Cornett.
- With one exception, all data come from the reports of income and condition for U.S. commercial banks. Historical data on Federal Home Loan Bank (FHLB) advances come from the Federal Housing Finance Board—the safety and soundness regulator of the FHLB System. For several data comparisons, 1999 is used as the endpoint to eliminate the impact of the break in equity markets, which has temporarily eased bank liquidity positions.
- After the break in equity markets in 2000, banks experienced a substantial deposit inflow as households sought a safe haven for their investment dollars. Most economists and bank supervisors expect these dollars to flow back into mutual funds when economic conditions improve.
- Formally, interest-rate risk is the risk that a change in rates will impair a bank’s earnings and capital. For an excellent discussion of the modern approach to measuring and managing interest-rate risk at financial institutions, see Chapters 8 and 9 of Saunders and Cornett.
- Congress created the FHLB System in 1934 to address a perceived defect in the nation’s capital markets. At the time, no secondary market was available for mortgages; so, any thrift making a home loan had to hold it until maturity. Because thrifts were often “loaned up,” some good borrowers were denied mortgages. The FHLB System encouraged mortgage lending—and thus home ownership—by enabling thrifts to separate the “loan-making” decision from the “loan-holding” decision. For more on the FHLB System, see Stojanovic, Vaughan and Yeager.

REFERENCES

- Blackwell, Rob. “What Caused a Thrift Run? Maybe an Announcement.” *American Banker*, April 24, 2003, p. 4.
- Blackwell, Rob. “CEO: Run on Abacus Almost a Blessing.” *American Banker*, May 1, 2003, p. 1.
- Saunders, Anthony and Cornett, Marcia Millon. *Financial Institutions Management: A Modern Perspective*, 4th edition. Boston: Irwin McGraw-Hill, 2002.
- Stojanovic, Dusan; Vaughan, Mark D.; and Yeager, Timothy J. “Is FHLB Funding a Risky Business for the FDIC?” Federal Reserve Bank of St. Louis *The Regional Economist*, October 2000, pp. 4-9.