

december



Bank Liability Management:
For Better or for Worse?

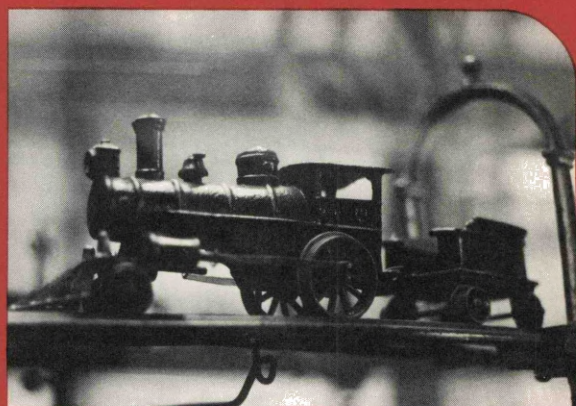
Monetary Restraint, Regulation Q,
And Bank Liability Management

Banking on Debt for Capital Needs

The Fed in Print

FEDERAL RESERVE BANK of PHILADELPHIA

business review



IN THIS ISSUE . . .

Bank Liability Management: For Better or for Worse?

. . . Bank liability management has considerably increased financial market competition; however, some critics argue that it has brought reduced monetary policy effectiveness and greater bank riskiness.

Monetary Restraint, Regulation Q, And Bank Liability Management

. . . In the '60s, when the Fed maintained interest rate ceilings on negotiable CDs, large banks began issuing other money market instruments to compete for loanable funds.

Banking on Debt for Capital Needs

. . . Debt may be a useful source of funds for banks and a reserve cushion for the FDIC, but its usefulness as capital may be limited.

On our cover: A thousand toys and banks in the Perelman Antique Toy Museum provide a distinctive walk through America's childhood. Located at 270 South Second Street in Philadelphia, the museum boasts a wide assortment of mechanical penny banks that were patented in 1865 and are sought today by collectors. Fire engines, roller skates, trains, dolls, blocks, hansom cabs, and other types of toys on display tell the toy history of our nation. (Photographs by Sandy Sholder.)

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Bank Liability Management: For Better Or For Worse?

By Stuart A. Schweitzer

With the financial collapse of 1933 almost forgotten, today's byword for banks is competition. Banks no longer stand back from the financial fray, waiting for the public to come to them. A rising aggressiveness propels them into the financial markets where they are scrapping for business like everyone else. As an example, bank assets at one time consisted largely of cash items and U. S. Government securities, and bank lending activities were limited. Now, however, banks vie among themselves and with other lenders to extend credit to businesses and households. Similarly, while they once relied for their loan funds upon people's willingness to keep large balances in interest-free checking accounts, banks today offer double-digit interest rates to attract funds from diverse sources.

In a nation whose economic system is based upon the principle that competition is the best way to achieve efficiency, word of banks' new

competitiveness should be good news to the public. But some observers think otherwise. They argue that banks' enterprising behavior makes the banking and financial system less secure, and monetary policy less effective, than if banks were more conservative in their behavior. Bank regulators have a duty to preserve the basic soundness of the financial system, but they must carefully avoid stifling the competition that breeds efficiency and service for bank customers.

BANKERS JOIN THE FRAY

Bankers have always faced a basic cash management problem. On the one hand, they must be ready at all times to make good on the checks written by their depositors. To succeed at this they either need to hold an abundance of cash or must be able to raise cash quickly. As bankers would say, they need to have liquidity. On the

other hand, bankers also want to earn as large a profit as possible. And to do that they have to make interest-bearing loans and investments which can be hard to turn into cash on short notice.

The last three decades have produced a major shift in bankers' willingness to trade off liquidity for earnings. Banks entered the post-World War II period with large holdings of Government securities that they had acquired as a part of the war financing effort.¹ They also held fresh memories of the loan losses and bank failures of the 1930s. As the postwar years went on, however, the strengthened national economy and the avowed U. S. Government commitment to full employment made another depression seem increasingly unlikely. That made loans a more attractive alternative to Government securities. At the same time, as the pace of economic activity accelerated, so did the volume of business requests for bank loans. Most bankers chose to accommodate their customers' loan demands—accepting reduced liquidity in exchange for higher profits.

A "Shortage" of Funds. The growth in bank loans to business in the 1940s and 1950s was facilitated by stored-up liquidity—that is, banks' cash assets and U. S. Government securities, which represented roughly three-fourths of their assets in 1946. By the end of the '50s, however, bank lending capacity was largely depleted. Although deposits had grown by about 50 percent in the postwar period, total bank loan volume had tripled. The loan-liquidity gap was widened further in the early '60s, when corporations began paring their demand deposit balances. Whereas corporate treasurers had formerly held large sums of idle money in interest-free checking accounts, they were now withdrawing these funds to purchase interest-bearing assets such as Treasury bills and commercial paper.

Tapping New Markets. Faced with further

¹In 1940, even before the United States' involvement in World War II, over 60 percent of member banks' assets were in cash items and U. S. Government securities.

loan growth and a shortage of funds, banks sought new sources of liquidity. Money market banks in New York, as well as large banks in other cities, began issuing negotiable certificates of deposit (CDs) at competitive interest rates. These CDs were time deposits, and hence carried fixed maturity dates. They were made particularly attractive, however, by the development of a secondary market for CDs \$100,000 and larger, which meant these instruments could be sold before maturity if an investor needed his funds.

The CD innovation was successful, and banks learned that liquidity could be found on both sides of the balance sheet. A bank needing funds could choose to go to the money market either with its assets or with its liabilities for sale. Banks choosing to practice "liability management"—that is, issuing liabilities at competitive rates to fulfill cash needs—could combine asset liquidity with liability liquidity to support further loan growth.

Along with CDs, banks in the 1960s began issuing a multitude of other manageable liabilities. Federal funds trading, which had previously occurred in limited volume, grew rapidly. Banks borrowed Euro-dollars from their foreign branches, and bank holding companies sold commercial paper and loaned the proceeds to their bank subsidiaries. The effect is that, while virtually none of the funds at large banks were derived from liability management in 1960, nearly 30 percent originate with this source today. Banks are now vigorous competitors in the market for loanable funds. However, the increasing reliance on liability management as a source of bank liquidity is raising concern as to whether the practice is in the public interest.

AGGRESSIVE BANKING: TOO MUCH OF A GOOD THING?

Critics of bank liability management contend that, while the practice may offer some benefits to society, it may also have some costs that outweigh the public's gains. Competition may make the public better off, but opponents charge that the potential for reduced monetary policy effec-

tiveness and greater bank riskiness offset these gains.

Competition and Public Gains. The chief benefit to society at large from bank liability management is that the practice has brought stiffer competition to financial markets. Compared to the period before 1960, when banks avoided competitively bidding for loanable funds, the public now has additional financial options. Savers with funds to invest in short-term assets can now buy not only Treasury bills and commercial paper but also bank CDs. Borrowers whose loan needs might not have been accommodated at the banks can, because of liability management, choose between bank loans and other types of credit. With public use of these added options high, it is safe to conclude that the banks' terms are attractive and that the public has gained from their availability (see Box). However, if liability management creates significant offsetting costs to society, the public could wind up worse off despite the benefits liability management creates.

Monetary Policy and Any Losses? Critics of bank liability management argue that it allows banks to circumvent a restrictive monetary policy. In the past when monetary policy tightened and market interest rates moved up, rates on CDs and other bank deposits lagged behind because of restrictions on the rate bankers were permitted to pay. Since banks were less able to compete for funds because of these restrictions, bank credit shrank. During the 1960s, however, banks began to issue unregulated obligations on which they paid market interest rates. They borrowed from Euro-dollar, Federal funds, and commercial paper lenders. Aggressive liability management kept funds flowing into the banks for relending (see accompanying Chart Article).

This process clearly permitted banks to use liability management to insulate themselves from some of the impacts of tight monetary policy. Indeed, the process continues to work today, especially since all interest rate ceilings on large CDs have been suspended. But a more important issue is whether liability management lessens the impact of monetary policy on the economy.

Many believe that liability management merely allows banks to get a bigger share of the credit pie without influencing total credit in the economy. Without liability management, they argue, funds would simply by-pass banks, going through other financial firms or directly from ultimate lender to ultimate borrower. With liability management, the argument goes, banks are in a better competitive position to attract and re-lend funds, but the volume of the total credit flow is, for the most part, unchanged. If so, the effectiveness of restrictive monetary policies probably is not impaired by the bank credit growth that liability management permits.

In addition, many claim that liability management does not affect the impact of tight policy on the economy because Fed policy works through changes in the money stock and not through changes in credit. An important ingredient of the money stock is, of course, demand deposits—a particular kind of bank liability.² This raises the question of whether bank liability management makes control of money more difficult. Doesn't liability management allow banks to obtain more funds which they can then use to support more demand deposits?

In our economy, the ultimate restriction on the banking system's ability to create demand deposits is the availability of reserves. Because member banks are required to hold reserves equal to a fraction (designated by the Fed) of outstanding deposits, the amount of these deposits they create is limited by the availability of reserves. So using an oversimplified illustration, if the reserve ratio is 20 percent and reserves amount to \$30 billion, deposits cannot exceed \$150 billion (20 percent of \$150 billion is \$30 billion). If the Fed increases reserves to \$31 billion, demand deposits could rise to \$155 billion. The world is more complicated than this simple example suggests because the reserve ratio fluctuates. First, the required reserve ratio is different

²Authorities differ on what ought to be counted as money. A popular view is that money consists of the public's demand deposits and currency holdings. Many believe, however, that savings deposits at commercial banks should be included in money as well.

FOR LARGE AND SMALL ALIKE?

It's a truism that anyone who voluntarily conducts his business with a bank, when he could conduct that business with some other borrower or lender, is glad to have that bank around. Liability management is one device that banks have used to make themselves available for borrowing and lending. But does the little fellow gain as much from this availability as the big one? Let's look at savers and investors separately.

Savers. The small saver has not reaped many benefits from liability management. After all, it is the corporations, wealthy individuals, and governmental units that can come up with the funds to buy a \$100,000 CD, not the little guy. Large CDs paved the way for the savings certificates available to the small saver, but those certificates carry lower rates than do large CDs.

A key element of liability management is the payment of competitive rates on savers' funds. Now, liability management has not produced the same sorts of gains for small savers as for large savers, not because banks are unwilling to compete for small savers' funds, but rather because of Federal Reserve and FDIC ceilings on the rates banks can pay on small deposits.

These regulations serve a purpose which the nation values highly, protecting thrift institutions (mutual savings banks and savings and loan associations) from a wholesale loss of funds. But the regulations, and not discriminatory bank behavior, are what stand between liability management and enlargement of small savers' financial options.

Borrowers. What would borrowers' options be if there were no liability management and, in particular, no CDs? It seems plausible to assume that savers who now buy CDs would instead buy commercial paper. The funds now available to borrowers through bank loans would then be available through the commercial paper market. Very large businesses could borrow directly in that market. Other businesses and individuals could not issue commercial paper, but could borrow from finance companies, which can. As above, those who actually borrow at banks when they have the choice of these other methods reveal themselves to be better off than they would be if banks couldn't loan to them.

Another issue is whether loan customers of small banks suffer indirectly because of the liability management practices of large banks. The problem is that small banks are net lenders of Federal funds to large banks. Federal funds are excess reserves loaned for short periods by one bank to another. Many large banks, as part of their liability management activities, bid aggressively for Federal funds on a continuing basis. When large banks bid these funds away from small banks, the effect is for loanable funds to flow from the rest of the country to the major financial centers in the nation's large cities. Individuals and small firms that are borrowers from the small lending banks may well suffer in such cases.

It might be suggested that this could all be prevented by appropriately regulating the Federal funds market. The Federal funds market occupies so special a place in the transmission of Federal Reserve monetary policy, however, that this would be impractical. Besides, any restrictions on the flow of Federal funds would probably be circumvented somehow. Banks are very innovative, and if it were profitable for the funds to flow to the big cities, the banks would find a way to get them there. Furthermore, the effect of inhibiting the funds flow would be to subsidize rural area firms and individuals whose borrowing opportunities are affected. If society wants to subsidize these firms and individuals, it can probably find a more efficient way.

for different banks. Second, actual reserves held exceed required reserves on demand deposits by varying amounts.³ But the example does point out how the Fed can control demand deposits generally. As long as the demand deposit/reserve ratio is fairly predictable over time the Fed can control demand deposits through reserves. Banks' use of liability management techniques will not impair the Fed's ability to manage the nation's money stock, unless it makes the demand deposit/reserve ratio more erratic. There is no evidence that this has happened to date.

Overall, therefore, the impact of liability management on monetary policy effectiveness doesn't seem substantial. Bank credit growth is facilitated by aggressive bank competition for loanable funds. But total credit is probably unaffected. Moreover, the Fed's ability to control the nation's money stock does not appear to be unduly hampered by the advent of liability management.

Bank Riskiness and Public Losses. The principal argument offered today, however, by those who oppose liability management is that it has reduced the soundness of numerous individual banks and therefore threatens the stability of the entire banking system. Most critics do not question the industry's use of liability management *per se*, but contend that many banks have grown too reliant on the practice and do not maintain sufficient liquid assets to meet unforeseen cash needs. They claim that these banks are "illiquid."

The danger in being illiquid is clear—an otherwise solvent bank can be pushed into failure if it can't meet its cash needs. For even though a bank's assets might appear to exceed its liabilities, those assets might not hold their value if the bank had to sell them hurriedly to meet impending cash needs. If a forced sale made asset values decline by an amount greater than

the level of bank capital,⁴ the bank would become insolvent and then fail.

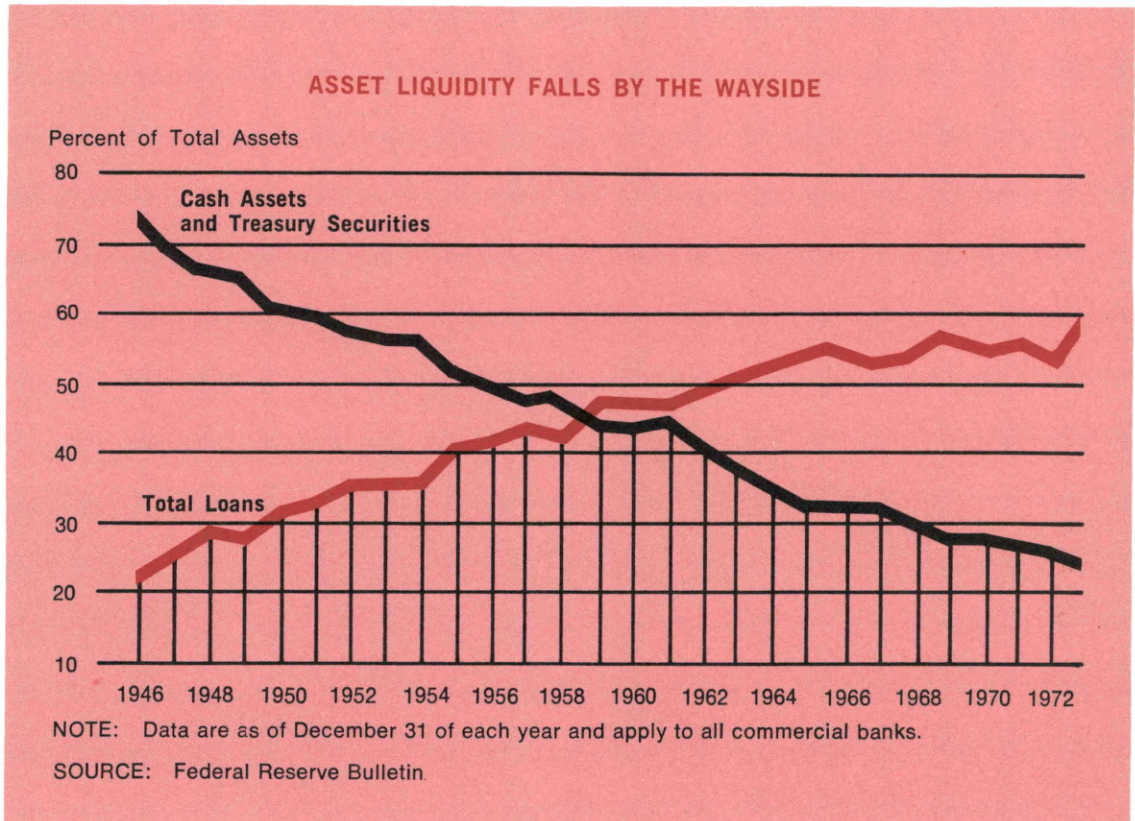
The evidence on *asset liquidity* at the nation's banks is consistent with the critics' position. Throughout the postwar years, the proportion of bank funds invested in cash and other liquid assets has gradually declined. At the same time, loans—which are of lesser liquidity—have been a growing component of bank portfolios (see Chart). A large proportion of the liquid assets that banks still have is already committed to meet reserve requirements and requirements to hold collateral against government deposits. They are, therefore, largely unavailable to meet other cash needs.

The evidence on *liability liquidity* is less clear. The fact that banks already have substantial volumes of manageable liabilities on their books tells us nothing about how much liability liquidity they have left. It does, of course, tell us of their need to turn regularly to lenders to "roll over"—or refinance—maturing liabilities. What we need to know, however, is whether banks can count on being able to roll over existing liabilities and sell new obligations when cash needs arise.

A bank's ability to sell its liabilities depends in part on market conditions and on its willingness to pay market interest rates. The most important factor, however, is whether lenders think the bank is sound. Lenders have recently become particularly sensitive to the issue of bank safety. The high interest rates banks were paying for funds and the financial difficulties of the Franklin National Bank combined to make investors wonder whether other banks that use liability management for liquidity were still sound. Whereas in the past lenders often accepted bank soundness on faith, many became anxious about the creditworthiness of the banks whose CDs they bought. Some of these lenders responded by shifting their funds into larger banks. As a result,

³This results partly because banks hold reserves in excess of requirements and in part because reserves are required against other bank liabilities.

⁴An issue closely related to whether banks have ample liquidity is whether they have enough capital. See Ronald D. Watson, "Insuring Some Progress in the Bank Capital Haste," *Business Review of the Federal Reserve Bank of Philadelphia*, July–August 1974, pp. 3–17.



the nation's largest banks now pay an interest rate below that paid by other liability-managing banks. Indeed, some lenders will now lend only to the largest banks, regardless of interest rate.

Moreover, tight-credit periods make it particularly difficult for banks to expand their use of liability management. Lenders might interpret a rapid build-up of a bank's manageable liabilities as a sign of stress at the bank, limiting the usefulness of liability management as a source of additional liquidity. Furthermore, it could even be counterproductive in such an environment for a bank to offer more than the rate paid by banks of similar size to attract new funds. Lenders might read the higher rate as an admission of great risk and scramble to get their funds out before the worst had a chance to happen.

Thus, while it can't be proved that bank liquidity on average is now too low, there is certainly justifiable concern about its adequacy. Reliance upon liability management as a principal source of liquidity could at some point leave some banks unable to cope with liquidity pressures. Society's losses from bank failures that might then occur could indeed offset the gains from the competition that liability management has generated.

BALANCING COMPETING INTERESTS: THE PROBLEM

As might be expected, a close appraisal of liability management reveals both public benefits and public costs from the practice. The pub-

lic gains from having access to financial markets that are more competitive than they would be without bank liability management. But the public also loses from the increased potential for bank failures and from the possibility of a reduction in the effectiveness of monetary policy.

Everyone has a stake in a stable and secure financial system—one that facilitates rather than impedes productive activity. Only if banks kept 100 percent reserves against their liabilities, however, would there be absolutely no risk of bank failure from illiquidity. But if banks did that, there would be less competition to issue loans, which would impose costs on the public in other ways. Most would agree that 100 percent reserves are not needed, and that with a bit less liquidity, banks could start competing in loan markets without becoming unsound. The problem is to identify the best amount of liquidity for a bank.

Ideally, from society's standpoint, the right amount of bank liquidity is that which produces the greatest net benefits for society—that is, which maximizes the difference between the public's benefits and its costs. Identifying that amount is a tricky business, since the public's costs and benefits are not readily measured. Attaining it is even trickier, however, since the costs that banks respond to are the ones that affect their stockholders' profits, and these amounts may not include all the costs which are important to society at large.⁵ That is where bank regulators—the Federal Reserve, the Comptroller of the Currency, the FDIC, and the 50 state banking departments—come in. An important part of their job is to balance the interests of society and the banks, insuring that banks respond to social as well as private considerations.

BALANCING COMPETING INTERESTS: METHODS

Many argue that, although liability manage-

ment has been profitable for the banks, its heavy use has reduced liquidity below where the public's net benefits are greatest. Indeed, many banks have already begun reducing their reliance on liability management, in response to signals from the market and from regulators that they ought to do so. But whether banks will end up acquiring enough liquidity to reach the socially "right" position depends on the framework regulators establish to promote that end.

The Framework Today. Market forces and regulatory pressures currently play a role in limiting bank reliance on liability management. The role of market forces, on the one hand, is limited by the fact that investors know relatively little about the soundness of individual banks. They cannot efficiently respond, therefore, to changes in the creditworthiness of borrowing banks. Bank regulators, on the other hand, conduct periodic examinations of all insured banks. Armed with hard facts about a bank's condition, a regulatory agency can press for changes which it deems advisable. However, regulators have proceeded cautiously in this area because they don't have clear standards against which an individual bank's liability management activities can be judged.

At present, the limits on bank liability management are not at all firm. Bankers get some signals about how far they should go, but those signals may not always be strong enough to curb their behavior. It is possible, therefore, for *individual banks* to get into a liquidity bind even though the *banking system as a whole* is sound. To protect confidence in the banking system from the possible excesses of a few banks, the Federal Reserve stands ready to meet its responsibility as "lender of last resort."⁶ A founding purpose of the Fed was to prevent general liquidity crises, and it has traditionally stood ready to lend to solvent but illiquid banks when no one

⁵When a bank fails, its stockholders lose whatever they have invested. But the public may lose the uninsured portion of its deposits and other bank debt, and the failure may undermine confidence in other banks as well.

⁶See, for example, "Maintaining the Soundness of Our Banking System," an address by Arthur F. Burns, Chairman, Board of Governors of the Federal Reserve System, at the annual convention of the American Bankers' Association, Honolulu, Hawaii, October 21, 1974.

else would do so. At the same time, however, "lender of last resort" loans from the Fed's discount window are intended to protect banks from illiquidity *only while* they make appropriate asset and liability adjustments. Discount window loans are not designed to insulate banks from the need to make those adjustments.⁷ The window's function is to insure bank safety for the public's benefit, not to provide a subsidy to bank stockholders.

Therefore, while the "lender of last resort" function is a valuable safety valve, it is not a substitute for regulatory and internal bank management policies that insure adequate liquidity for banks. The problem is to build into the banking system measures that will bring these policies about and to balance the benefits properly against any reduction of financial market competition. There's no quick way to do so, however, for the regulators' short-run options are few. It will take new approaches to achieve these kinds of results.

Should the Banks Stand Alone? One approach that is frequently suggested, but which seems seriously flawed, is to let failing banks fail. In such a world, if a bank assumed too much risk and couldn't meet its obligations, the Fed wouldn't extend it credit. Advocates say that banks, knowing there would be no one around to bail them out, would plan accordingly. The discipline of the market would then be all that was needed to produce the "right" mix of conservatism and risk-taking in banking.

There is some merit in the notion that banks should either stand on their own or fail. That would encourage greater efficiency in banking, since inefficient and poorly managed banks wouldn't have much chance of survival. The problem with this approach, however, is that it might be difficult to isolate bank failures and

⁷The discount window also extends credit to member banks to help with significant seasonal outflows of funds, and to provide long-term help to overcome some "emergency" situations—such as those occurring from natural disasters that affect the communities they serve—as well as for short-term "adjustment" credit.

keep them from spreading. One bank's failure could easily beget deposit outflows at other banks. That might well cause those other banks to fail and seriously undermine confidence in the entire banking system.

Should the Regulators Set the Standards?

Another way for bank regulators to insure that banks maintain an ideal reliance on liability management is for them to impose their standards on banks directly. Once those standards were met, banks would be able to meet cash needs with less strain, which would do much to reduce the pressure of deposit runoffs. The regulators may not have the means to enforce their standards, however. The record of bank innovation in response to regulatory actions is that traditionally banks have found loopholes faster than regulators could plug them. If regulators were to limit bank reliance on one or more kinds of liabilities, banks would probably devise a new method of attracting funds.

But even if regulatory standards could be enforced, it's not clear what those standards should be. What is the *ideal* liquidity ratio for a bank? To what extent should banks be allowed to trade off liquidity for earnings? Until light is shed on these issues, the regulators could easily adopt improper standards. The public could incur significant costs if the standards were wrong, without the regulators ever knowing it. It would seem preferable to seek solutions which protect the public by allowing the interplay of economic forces to reflect changing preferences.

Closing the Information Gap. Still another approach, which employs the discipline of the market, would be to give the investing public better information than it now gets about banks' financial health. As matters stand now, the information lenders have on the banks they deal with is typically quite sketchy. Thus, they often proceed on intuition, rules of thumb, and, worst of all, rumor.

There's no more effective way to prevent rumor than to present the facts. If the public knew key elements of an up-to-date examiner's

report on every bank, it could make an informed selection among borrowing banks. But the key is that the facts would have to be current. National banks are now examined roughly every eight months, and state-chartered banks approximately once a year. That sort of timetable leaves plenty of opportunity for major changes in a bank's condition to occur between examinations. If bank examinations were updated at, say, quarterly intervals, this could not happen.⁸ Then, if the examiner's quarterly summary of each bank's capital, asset, and management quality were available to the public, rumor might not readily sweep the financial market.⁹

An important advantage of this plan is that bank soundness would have the profit motive on its side. Investors wouldn't lend to banks that had anything less than a clean bill of health, unless they were paid premium interest rates. That would add an extra incentive for banks to curb their risk exposures and to maintain greater liquidity. Furthermore, while this idea may be new in banking it is applied every day in the bond market. Bond market investors are able to rely on the published ratings of bond issues, which are based on extensive information collected by private agencies. The proposed release of examiners' ratings would afford that same benefit to investors in short-term bank debt. The only difference would be that risk information would come from public regulatory agencies instead of private firms.

Such an approach could not be implemented overnight, of course. For one thing, the release of examiner's ratings is now illegal. It would take an

act of Congress to change that. What's more, the regulators would need time to gear up for more frequent examinations.¹⁰ The banks would also need time to prepare for their new environment. Those banks which now have less than the best possible examiner's report, and which may now be working with the regulators to correct their problems, should be given time to get their houses in shape for public scrutiny. If it were announced, say, that banks have two years to get ready, that might do the trick. The banks would have time to correct any adverse situations, and conditions would start improving immediately.

LIABILITY MANAGEMENT: IT'S HERE TO STAY

In comparison to ordinary deposit banking, liability management is a more aggressive way to run a bank. That aggressiveness has meant added options for the public, but many feel that heavy use of the technique has also harmed the public by making the achievement of monetary policy objectives more difficult. They also say that it has made the banking system less liquid and therefore potentially less stable than it should be. True, liability management can provide banks with liquidity beyond that available in their assets, but liability liquidity is found in a bank's ability to issue and sell new liabilities. Those obligations that are already on a bank's books only increase its needs for liquidity, not its supply of liquidity.


The banks are aware of their greater vulnerability to shifts of financial market sentiment when they rely on liabilities for liquidity. They are unlikely to curtail their operations, however, unless market forces or regulatory actions compel them to do so. As long as reduced liquidity and expanded liability management are profitable for the banks, they will continue to pursue these practices. The market currently provides some incentives for banks to stay liquid, and many

⁸On November 12, 1974, Comptroller of the Currency James E. Smith announced new procedures to update periodically his office's information on national bank loan quality and liquidity. Henceforth, he announced, all national banks will be required to provide the Comptroller with regular reports of past-due loans. The 200 largest national banks, furthermore, will be required to supply quarterly reports on asset and liability maturities.

⁹It would also help if the number of rating categories used were large enough and their definitions narrow enough to reveal small changes in a bank's circumstances. That way, the user of an examiner's report could readily distinguish major and minor changes in bank condition.

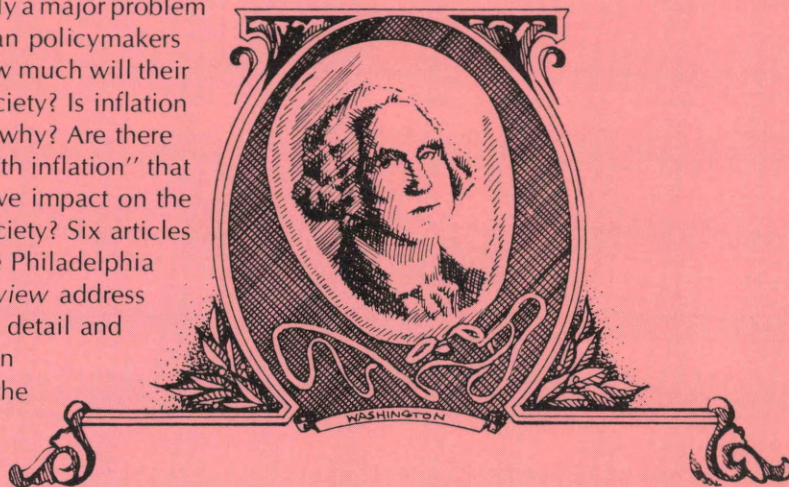
¹⁰In part, this time would be needed to take on and train the additional examiners required to meet the more frequent examinations timetables. The regulators would also need time, however, to coordinate their examination activities in order to insure comparability of their examination reports.

bankers have recently begun to take account of these incentives. However, it is largely up to the regulators to promote greater bank liquidity. The regulators can try to do this administratively by telling the banks what liquidity ratios they must attain. Or they can tell the public what they

know about each bank's health and let investors and the banks work things out between themselves. That way, there is a substantial chance that the competitive benefits of liability management can be preserved, while the threat of bank failures can be reduced. 

ECONOMICS of INFLATION

Inflation is currently a major problem facing the U.S. Can policymakers curtail it? If so, how much will their actions "cost" society? Is inflation "bad," and if so, why? Are there ways of "living with inflation" that cushion its negative impact on the individual and society? Six articles reprinted from the Philadelphia Fed's *Business Review* address these questions in detail and seek to promote an understanding of the problem for both policymakers and the general public.

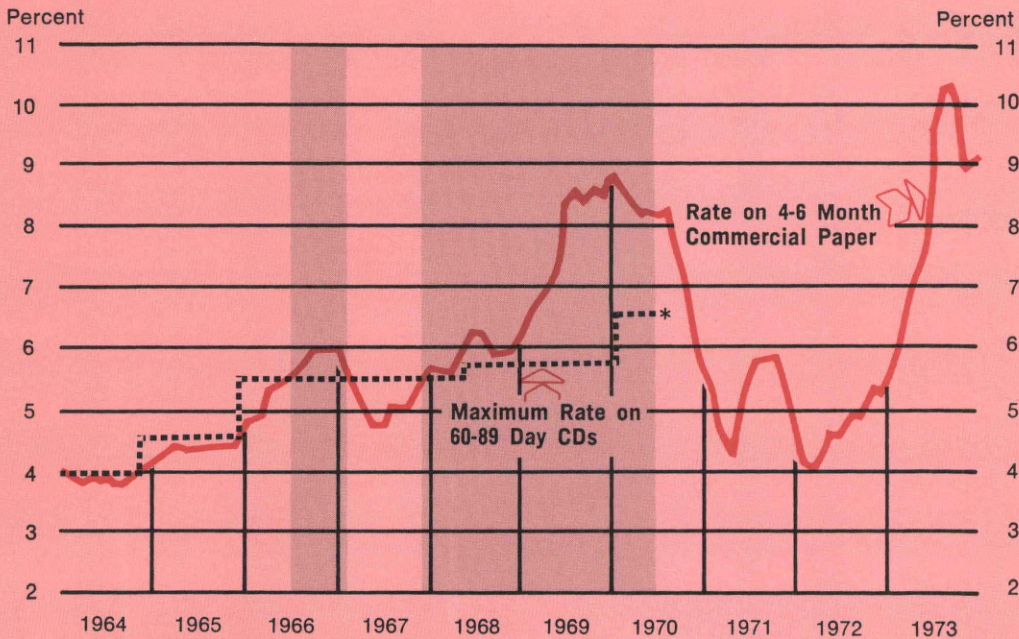


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Monetary Restraint, Regulation Q, and Bank Liability Management

CHART 1

IN 1970 THE FEDERAL RESERVE REMOVED THE INTEREST RATE CEILING APPLICABLE TO CERTAIN NEGOTIABLE CERTIFICATES OF DEPOSIT OF COMMERCIAL BANKS.* PRIOR TO THAT TIME IT HAD ATTEMPTED TO USE THIS CEILING AS AN INSTRUMENT OF MONETARY RESTRAINT BY REFUSING TO INCREASE IT AS RAPIDLY AS MONEY MARKET RATES HAD RISEN.



* Maximum rates on all 30-89 day, single-maturity CDs in denominations of \$100,000 or more were suspended on June 24, 1970. Maximum rates on certificates of longer maturity were removed on May 16, 1973.

NOTE: Shaded areas in all charts represent periods when commercial paper rates were above maximum rates on CDs.

SOURCE: Federal Reserve Bulletin

CHART 2

CONSISTENT WITH THE FED'S INTENT, INVESTORS SWITCHED OUT OF LARGE CDs, AND CD VOLUME AT LARGE BANKS DIPPED, EACH TIME THE RATE CEILINGS WERE EXCEEDED.

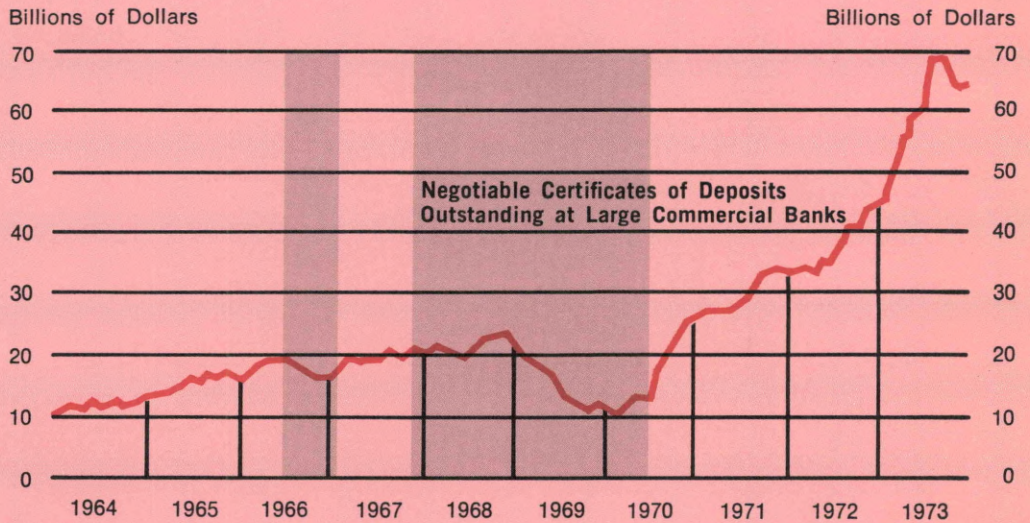


CHART 3

HOWEVER, BANKS COMPENSATED FOR THE LOSS OF CD FUNDS BY TURNING TO OTHER MONEY MARKET LIABILITIES DURING THESE PERIODS.

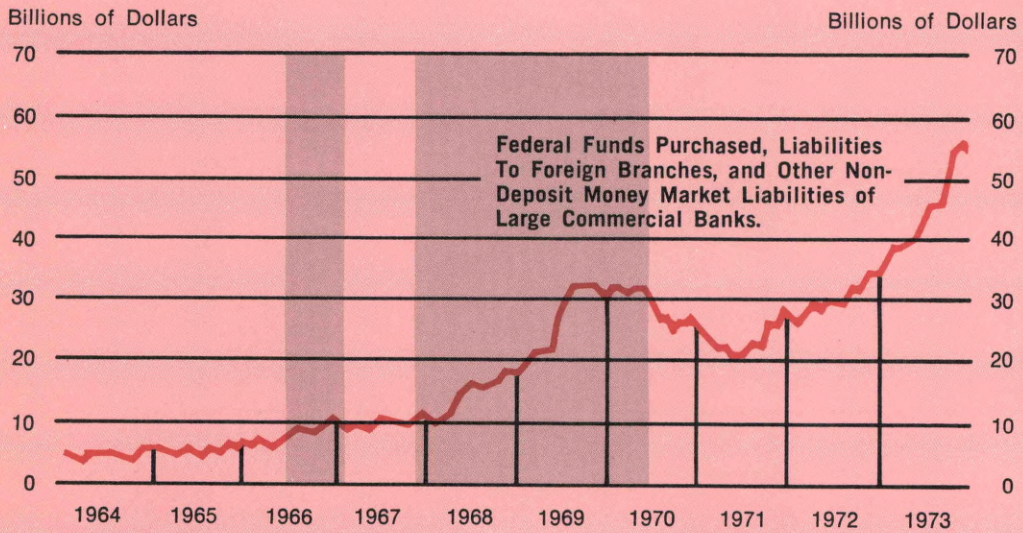
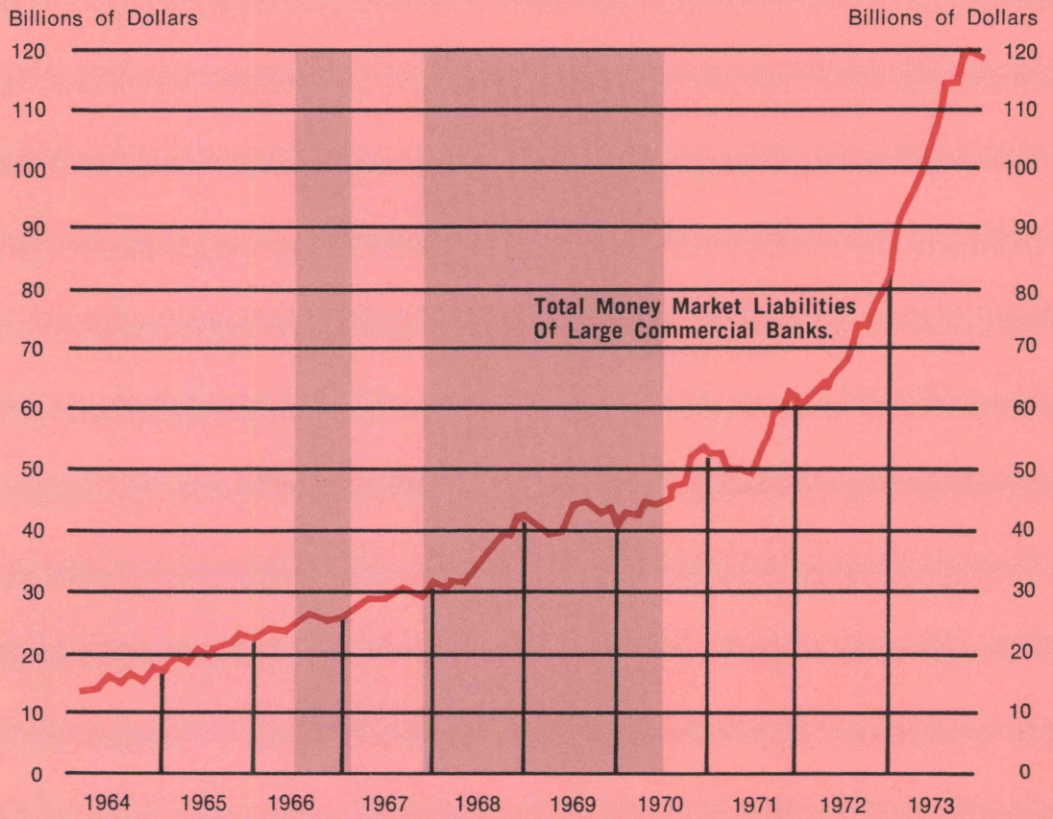


CHART 4

THIS HELPED TO OFFSET CD RUNOFFS AND SUSTAIN THE GROWTH OF MONEY MARKET LIABILITIES AT LARGE COMMERCIAL BANKS.



Banking On Debt for Capital Needs

By Ronald D. Watson

Ninth National Bank is under fire from the bank supervisors. Convinced that the bank is undercapitalized, the regulators are demanding an additional \$1,000,000 of capital stock. However, the bank's management knows that with stock prices depressed there will be severe dilution of the current stockholders' earnings and ownership control if new stock is sold. Instead, it counters with an offer to add \$1,000,000 of long-term debt to the bank's capital structure, arguing that the debt will protect the depositors just as much as a new stock issue.

This alternative puts the regulators in an uncomfortable spot. Long-term debt has *some* of the characteristics of equity capital, but it's an imperfect substitute. Should they compromise and take whatever depositor protection is offered by long-term debt or insist that new stock be sold? The choice isn't easy, and the precedents that bank supervisors are now setting will greatly influence the profitability and solvency of the

banking industry in years ahead. Debt may be a useful source of funds to the banks and a reserve cushion for the Federal Deposit Insurance Corporation, but its value in protecting society from bank failures is very limited. Bank supervisors may someday regret it if they sacrifice equity capital standards in the mistaken belief that debt is just as good.

IS DEBT CAPITAL?

Suppose a bank wants to use debt as a substitute for equity in raising new capital—why should society care? If debt has characteristics that make it similar to common stock in the way it protects depositors from the bank's losses, the regulators have little cause for objecting to its use. But, if debt is substantially less effective than stock in protecting both the individual bank and the banking system, there is good reason for bank supervisors to prevent banks from treating it like equity capital.

Common Stock as Bank Capital. For the functions that capital must perform in a commercial bank—protecting depositors and allowing the bank to absorb losses without failing—common stock has long been regarded as the best form of capital. It has no maturity date, so the bank need never worry about paying it off. In addition, dividend payments are not a legal obligation, so failure to pay them will not bring the bank's operations to a halt. Finally, as long as the equity capital accounts exceed any losses suffered, the bank is considered solvent. This last point is of critical importance.

Capital must be available to absorb both operating losses—the result of current expenses exceeding current revenues—and capital losses on investments—whether they result from falling bond prices, loan defaults, broken leases, or anything else. As long as losses can be fully offset against capital invested by the bank's owners, the legal claims of depositors or other creditors are not compromised, and the bank can continue to function. Charging losses against the bank's equity capital accounts is a normal business practice. It's only when losses are so great that they wipe out these capital accounts and impair the bank's ability to pay its liabilities in full, that the institution will be forced to close.¹

Mild losses on investments and temporary operating deficits are sufficiently common in banking that it is in the best interests of the depositors, investors, and the economy for banks to have a cushion of equity capital. With capital to absorb losses, most banks can operate without interrupting their operations, forcing the FDIC to cover their depositors' claims or disrupting the public's confidence in its banking institutions. The key question that regulators must confront is

“can the amount of capital needed to protect depositors differ from the amount of equity needed to keep the bank going?”

Debt as Bank Capital. Long-term debt has characteristics quite different from common stock, and these differences are important to deciding whether it is a good capital substitute (see Box 1). First, the maturity of debt is fixed. Any bank debt issue of seven or more years to maturity can be classified as a capital note and listed on the balance sheet as a capital account item. Many debt issues have much longer maturities, but 25 years is normally an upper limit. Maturities of that length certainly differentiate these bonds from ordinary deposits which may be withdrawn on very short notice. A long-term issue must eventually be repaid, but the banker knows exactly when that payment obligation must be met and can plan ahead. In all probability the debt issue will be refinanced by the sale of new debt rather than repaid from internally generated funds.

However, the fact that the bank must be able to refinance the bonds sometime near the maturity date creates a risk that equity capital will never pose. The chance that credit markets would refuse to provide a bank with the volume of new money that it needs to refinance outstanding debt is small, but the possibility still exists. Inability to roll this debt over could put the bank in default on the obligation and lead to a failure.

Another key difference between long-term debt and common stock is the bank's legal obligation to pay interest when it becomes due. Distributing a dividend to stockholders regularly and punctually is very important to a bank that wants its stock to perform well in the markets, but in an emergency, dividends can be omitted. Interest cannot.

Surprisingly, the cash costs of servicing debt capital that carries no sinking fund provision² are

¹Whenever the losses charged against a bank's capital are sufficient to offset its entire reserves, retained earnings, and surplus accounts and would partially impair its common stock account, regulators step in to reorganize, merge, or close the bank. As a practical matter, a bank must have a significant equity cushion to function for any extended period of time. If any bank realizes losses that wipe out most of its equity cushion, it would be obliged to raise new capital very quickly, if it intends to stay in business.

²Sinking funds are provisions found in bond contracts which require the bank to make periodic repayments to reduce the principal amount of the debt. Most bank debt being sold currently makes explicit provision for some repayment of principal prior to the issue's final maturity date.

BOX 1

WHY DEBT?

Aggressive bank management finds long-term debt a very *appealing* way to raise new money. It has characteristics which make it ideal for simultaneously supporting new growth of assets, raising the return on common stock, and preserving existing shareholders' control of the business. The key advantages offered by long-term debt are . . .

Relatively Low Cost. Interest payments on debt are classified as a tax-deductible expense for the bank. Therefore, if its marginal tax rate is 48 percent, each \$1 of interest expense will cut the bank's tax bill by 48 cents (giving the debt an effective after-tax cost of only 52 cents per dollar spent). A dollar distributed as common stock or preferred stock dividends is not tax-deductible, and, therefore, has an after-tax cost of \$1.

The tax-deductibility of interest charges would be irrelevant if bankers were forced to pay twice as much for new debt as they pay for new common stock. However, they don't pay twice as much. Debt is normally a much less expensive form of new funding for a bank than new equity. Common stock issues normally pay a current dividend yield of only 4 to 7 percent compared to the market interest yield on debt of 8 to 10 percent. Yet, few investors would be willing to buy the stock if increases in those dividends were not probable. The after-tax *cash* costs of new bond and common stock issues may be comparable in the first year or two, but dividend hikes on the common stock will soon make the long-run costs of equity capital far higher than those of debt.

Another factor affecting the cost of new capital is flotation costs. Debt has the upper hand here also. While there are exceptions to any rule, the cost of raising debt capital by selling capital notes or debentures is usually lower than the cost of a common stock issue of the same size. It may also be easier to privately place debt issues than new stock issues—especially when current stockholders have preemptive rights to acquire proportionate shares of any new stock created.

Long-term debt may be cheap for other reasons as well. As long as the debt is not classified as a deposit, the bank is under no obligation to hold reserves against those funds. In addition, while Federal Reserve member banks are required to invest a portion of their equity capital funds in Federal Reserve Bank stock, this requirement doesn't apply to debt capital. Nor do banks have to pay a deposit insurance fee on these funds.

Leverage. The fixed and relatively low cost of long-term debt makes it ideal for leveraging a bank's earnings. As long as the return earned on the funds raised through a new debt issue exceeds the cost of borrowing those funds, these "excess" revenues can be distributed among the stockholders—amplifying their return (see Appendix). However, each dollar of debt issued by the bank represents a claim to earnings and assets that takes precedence over that of the shareholders. Those obligations are also legally binding. If the bank should fail to meet an interest or principal repayment, those creditors can ask the regulatory authorities to close it down. The *risk* that leverage entails may make debt unattractive when its proportion becomes sufficiently high.

BOX 1 (Continued)

Control. A bank's present ownership may also be attracted to debt because it represents a new source of long-term funds which will *not* have a voice in the management of the institution. If new common stock were issued to augment the bank's capital, the new shareholders would have the right to vote for the board of directors. Bondholders have no such privilege. Therefore, if the current stockholders are willing to bear the risk of added debt, they can expand their bank without relinquishing any control of the organization.

Soothing the Regulators. Many banks having capital adequacy problems with the supervisory authorities have turned to long-term debt as a source of new capital. Debt might be sufficiently attractive to some banks that it would be raised as a source of new funds regardless of whether it could be used as capital. The fact that regulators have been willing to accept modest amounts of it as a substitute for equity capital makes it all the more appealing.

no greater than the costs of most common stock. Bank stocks normally pay dividends of 3 to 6 percent of their current selling price, while debt issues must carry interest payments in the 7 to 10 percent range. However, interest expenses are tax deductible to the bank, so the after-tax cost of long-term debt is reduced to the 3½ to 5 percent level—roughly the same as the cash flows for dividends on a common stock issue. This means that debt is no more difficult for a bank to service than common stock *under normal conditions*. The difference is in servicing the two forms of financing during an emergency when interest payments are obligatory and dividends are not.

It is also possible for a bank which issues large amounts of long-term debt when interest rates are high to be stuck with very expensive funds if rates subsequently drop. Banks operate with very thin spreads between the return on their assets and the cost of the money they borrow. If the interest income on their loans and investments falls more rapidly than the cost of their funds, profit margins can turn into loss margins. The use of a "call provision," through which the bank can redeem its debt at a penalty price, is one way to control this risk. However, exercising this call privilege may take time, and the bank must continue to pay both the high interest and the penalty before it can rid itself of these costly funds.

A third characteristic of long-term debt that is important to the analysis is its claim to payment *vis-à-vis* depositors. Like equity capital, virtually all long-term debt is subordinated—it receives

payment of principal and interest only after the claims of depositors have been discharged fully. Debt outranks common stock in claiming whatever funds are left after depositors have been paid, but both serve to protect the interests of the depositor. Subordinated debt should increase public confidence in the safety of an uninsured bank deposit. It is this feature of bank debt that proponents hold out as its primary benefit and the reason that regulators should allow freer use of debt as a capital substitute.

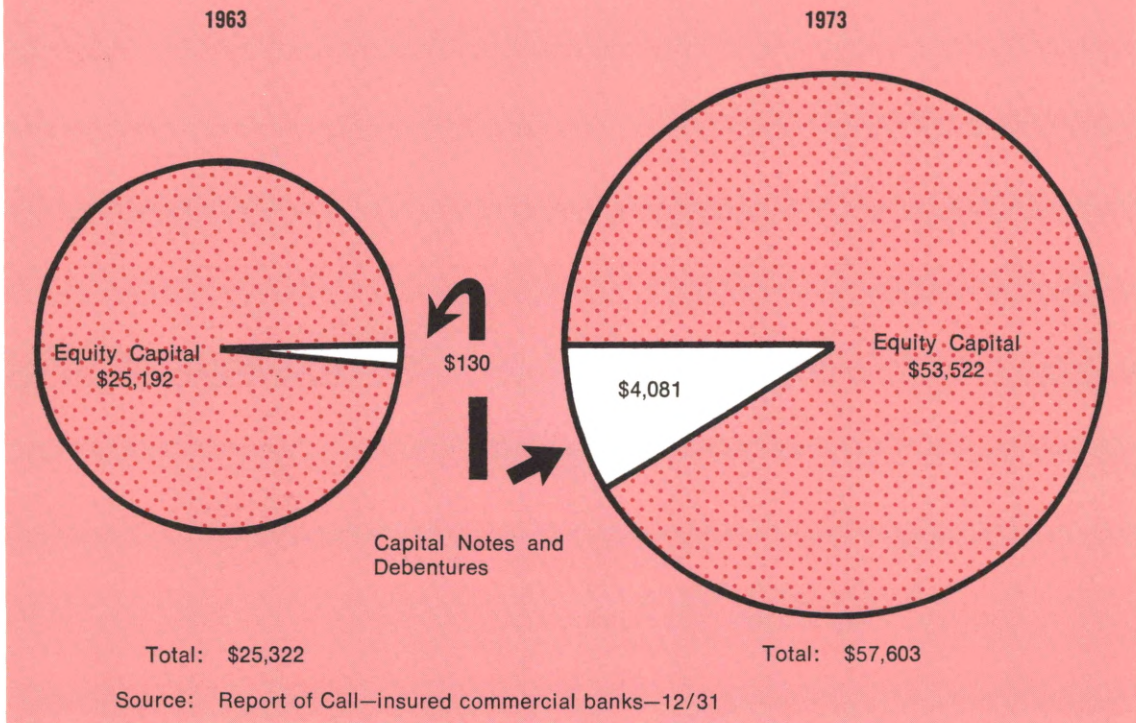
Bankers Opt for More Debt. Arguing that long maturities and subordination of debtholders' claims to those of depositors make long-term debt a good substitute for equity, bankers are now eagerly adopting it as the cheapest and easiest way to raise new capital. While some banks used debt prior to the Great Depression, most of the emergency Government financing of the industry that took place during the 1930s was in the form of debt capital. Following this period, banks tried to rid themselves of this debt as quickly as possible because it was commonly interpreted as a sign of weakness. In 1962 the Comptroller of the Currency reestablished debt as an acceptable form of financing for national banks, and its use has been expanding rapidly ever since.

Between 1963 and 1973 the total capital of insured commercial banks more than doubled,³

³However, during the same period, the total assets of commercial banks expanded even more rapidly (from \$311

CHANGES IN THE CAPITAL STRUCTURE OF INSURED COMMERCIAL BANKS

(in millions)



but the debt portion of “long-term capital” expanded to more than 30 times its original size—from \$130 million to over \$4 billion (see Chart). Long-term debt now constitutes nearly 8 percent of all bank capital.

BANK REGULATORS AREN'T CONVINCED

While bank regulators have sanctioned the use of some debt, they are apprehensive about both the degree to which it is a substitute for equity and the amount of debt a bank can safely carry. The proportion of equity capital to risky assets in banks has declined markedly in the last 15 years, and supervisors fear that this has increased the risk of bank failures. Substituting

billion to \$827 billion) so the relative capitalization (including both debt and equity) of the industry was shrinking.

debt for equity just magnifies the potential risks because it increases a bank's legal payment obligations. In addition, the development of bank holding companies has heightened the uncertainty since their capital positions may be quite complex and even harder to evaluate than those of the affiliate banks (Box 2).

Limits to Debt Use. As a result of these risks, regulators are quite reluctant to allow banks to acquire more than modest amounts of long-term debt. Regulatory agencies normally maintain a basic standard which limits long-term debt to a third of the bank's total capital funds. Banks which might have difficulty managing this much debt are often limited to less. This is not an inconsequential proportion, but some banks would try to raise more if there were no supervisory restraint.

BOX 2

HOLDING COMPANIES COMPOUND THE DEBT PROBLEM

If defining debt limits for a commercial bank seems a tangled problem, assessing the impact of a leveraged holding company owning a leveraged bank creates a "Gordian knot" for the supervisor. The evolution of bank holding companies (BHCs) has raised some very important regulatory questions, but so far no supervisory "Alexander" has discovered the sword which will allow him to carve out a solution to this analytical nightmare. There are three elements which make this problem particularly sticky, both for the regulator and the capital market which provides this debt.

Joint Operating Risks. Little information exists to help analysts determine the extent to which BHCs are either more or less risky than their component parts. Part of the theory behind forming BHCs is the complementarity of the related financial activities. The entrepreneurs who form these financial conglomerates argue that each affiliate in the BHC could help to backstop the others since periods of tight credit or recession would impact differently on each. Accordingly, many BHCs have been capitalized at less than the sum of the capital required to operate each business separately and have relied more heavily on borrowed funds to finance their activities. Whether this practice will create inordinate risks is difficult for either the market or the regulators to determine.

Who Backs the Holding Companies' Debt? A second point of great confusion is the extent to which the BHC can rely on its banking affiliate to guarantee loans to the parent corporation. Regulators are doing everything in their power to insulate the bank from the holding company, because they do not want the bank's soundness sacrificed to the aims and needs of the BHC.

Supervisory authorities have set firm guidelines on the extent to which banks can be tapped for support of the parent organization but those limits are not presently clear to the investing public. Recently a financial problem experienced by the parent holding company of the Beverly Hills National Bank in California caused a "run" by depositors on the subsidiary bank which was, at the time, quite sound. This run created such severe liquidity problems for the bank that it eventually failed. Until the public and the investing community become fully aware of the limitations on bank support of a BHC, the market may be prone to underestimate the risk of BHCs. This is important to society because underassessment of risk will lead to artificially low capital costs and overextension by the BHCs.

Double Leverage. The term sounds sinister and appropriately so. Double leverage is the practice of using debt money raised by the BHC parent to make equity investments in subsidiaries. It is an especially useful way to get around regulatory requirements concerning the capital adequacy of subsidiaries. If bank supervisors insist that the bank subsidiary increase its equity capital, the holding company parent may borrow money to make such an investment. On the surface the bank is now safer because it does have more equity capital. But the larger BHC organization isn't any more safe. It will need the affiliate bank's dividends to pay the debt service on these new borrowings.

BOX 2 (Continued)

As long as the bank is fully insulated from the BHC, financial risk is being transferred from the bank to the parent corporation. There is nothing inherently wrong with this if the market for BHC securities is sensitive to these risks, can evaluate them correctly, and charges the parent a risk premium which accounts for the actual risk of the organization. However, imperfections in this evaluation process may cause problems like the Beverly Hills National Bank failure and wind up imposing a heavy cost on society.

EXAMPLE

Suppose, for example, a bank and its BHC are capitalized in the following way:

BHC					
		Banks stock \$ 10	\$ 0 Debt		
		Other stock 10	20 BHC common stock		
BANK SUBSIDIARY			COMBINED OTHER SUBSIDIARIES		
Assets	\$100	\$90 Deposits	Assets \$50	\$40 Liabilities	
		10 Common stock		10 Common stock	

If the bank regulators were to request another \$10 of bank equity capital because they felt the bank was too risky, they would be saying that society's best interests require that this system have additional capital . . . as follows:

BHC					
		Banks stock \$20	\$ 0 Debt		
		Other stock 10	30 Common stock		
BANK			COMBINED OTHER SUBSIDIARIES		
Assets	\$110	\$90 Deposits	Assets \$50	\$40 Liabilities	
		20 Common stock		10 Common stock	

If the BHC were to resort to double leverage to satisfy the capital request, it would raise the needed \$10 from debt sources rather than new stock . . .

BHC					
		Bank stock \$ 20	\$10 Debt		
		Other stock 10	20 Common stock		
BANK			COMBINED OTHER SUBSIDIARIES		
Assets	\$110	\$90 Deposits	Assets \$50	\$40 Liabilities	
		20 Common stock		10 Common stock	

Box 2 (Continued)

The bank would have additional equity capital but the holding company system would not. Presumably the capital market will discipline BHCs' use of double leverage, but any imperfections in its collective analysis or in depositors' ability to differentiate financial problems of holding companies from those of the banking subsidiaries may generate great social costs not borne entirely by the investing community.

In principle, the capital markets themselves should also limit a bank's use of debt in its capital structure. As the proportion of debt financing grows, the risk inherent in the financial leverage it produces also grows. (Leverage is the use of funding whose cost is fixed to try to increase the profits of the shareholders. See Appendix) While replacing costly common stock with less expensive debt funds may be profitable when leverage is moderate, increasing leverage risk will eventually prompt investors to demand a higher yield from both the debt and equity securities of the bank. Eventually the average costs of the bank's long-term funds will begin to rise, and the institution will be discouraged from any further attempt to substitute debt for equity. However, there is little evidence to date that investors find the level of bank debt disturbing enough to make them demand substantially higher yields to cover this risk.

However, bank leverage creates risks for society at large beyond those borne by investors. As is common for regulated industries, investors can't be counted on to discipline borrowing banks because those investors don't bear all of the costs of the institution becoming overextended. In the case of a bank that receives assistance from the regulators to stay in business, the bond and stockholders are given a partial reprieve and may not pay any "Social Darwinist" piper for the risks taken by the bank. This regulatory backstopping hardly discourages the substitution of debt for equity and may enable the investors to make a higher return from the added leverage.

In the event that a bank fails, the security holders may lose everything they've invested, but the public may also incur costs as a result of the failure. A bank closing may undermine confi-

dence in other banks or the financial system as a whole, and it may deprive the local community of needed services and competition. These "external" costs of the failure make it inappropriate for bank supervisory authorities to let the banks (interacting with the capital markets) have a free hand in setting debt capital standards.

Real Protection? Differences of opinion on bank debt as capital, therefore, boil down to the function assigned to capital. If capital's sole task is thought to be the protection of bank's depositors—the stance taken by many bankers—then debt is a proper form of capital. In the event of a failure, the bank's losses would be offset against debt capital as well as equity capital before the FDIC or the depositors were required to absorb any losses.

However, if the function of *preventing failures* by absorbing losses is also assigned to bank capital, debt is less useful. Losses cannot be charged against debt capital in an operating bank, so debt capital will not reduce the risk of failure. To the extent that long-term debt is *substituted* for equity capital, the risk of bank failures is heightened and the attendant costs to society also increased. Since it is the job of the supervisory authorities to worry about the social costs of bank failures, most regulators are far less enthusiastic than the rest of the banking community about the growth of debt capital.

DEFINING A THEORETICAL LIMIT

Any ideal solution to the problem of setting limits on bank debt capital must come to grips with the fundamental economic factors just developed. First, bankers find leverage profitable, but only because capital markets do not consider

most banks overleveraged. In addition, the inflexibility of a bank's obligation to pay interest and repay principal makes debt a riskier form of financing than equity capital. Investors in bank securities understand and accept this risk, but they don't bear all of the costs associated with a bank failure. Finally, long-term subordinated debt may serve one of the regulator's goals—protecting depositors—but it is of no use in absorbing the losses that *cause* banks to fail. Accordingly, it is of little use to the regulator who expects capital to prevent failures.

Even in principle, setting debt capacity rules which accommodate these factors is a difficult task. While regulators find debt riskier than equity, the only defensible reason for bank supervisors limiting its use is to make society better off. If debt, in fact, magnifies the likelihood of bank failures—and their resultant social costs—limiting it is reasonable. However, if debt allows banks to achieve greater profitability or to provide services at a lower cost without seriously jeopardizing society's interests, there are costs to restricting its use.⁴ Any regulatory restriction placed on bank capital is apt to make the bank less efficient in using money. The institution may be forced to use more long-term capital or less debt than investors feel it needs. The result may be higher prices for bank services or less expansion of banking activity than would otherwise be the case.

Ideally, society's interests would be served best by limiting debt to the level where the added social costs associated with preventing banks from selecting the exact amount and composition of their capital structure are just offset by the additional social benefits of a lower bank failure rate.⁵ It makes sense to use regulatory power to

promote social goals, but it makes no sense to create a set of debt prohibitions which cost society more in the long run than the benefits produced are worth. Unfortunately, implementing the theoretical solution is far more difficult than simply stating it. Defining the actual dollar values of the costs and benefits described above would be a formidable undertaking.

SOME PRACTICAL SOLUTIONS?

Regulatory agencies have a number of possible options available to them for "solving" this problem of bank debt use. The first is simply to *prohibit* its use. This approach would prevent any possibility of a bank substituting debt for equity capital when, in fact, it needs the equity. However, this alternative is hardly sensible. It in no way solves the problem of assuring capital adequacy, and it deprives banks whose capital is "adequate" of a very useful source of additional funding.

The other extreme in the spectrum of options is to adopt a *market rule* for limiting debt. This would be the easiest road for bank supervisors to follow in the short run, but the existence of social costs to bank failure that are not borne by the investors make this an imperfect approach. Relying on the capital markets to discipline banks' use of debt capital would probably lead to greater use of debt than would be ideal from society's standpoint. A long-run solution probably lies in a middle-of-the-road approach.

Change the Terms on the Debt. A third possibility might be to require that banks using long-term debt as a capital supplement *alter the form of the debt securities* to offer additional protection against failure. There are three properties of long-term debt securities that regulators find bothersome: (1) losses cannot be charged against debt capital without liquidating the bank; (2) interest must be paid whether the bank is profitable or not; and (3) the debt must eventu-

⁴Since the most important reason for a business to prefer debt to equity is the tax-deductibility of interest payments, it isn't at all clear that society as a whole reaps any benefits from the alleged efficiencies of debt "capital". However, reassessing the logic of our corporate tax structure is beyond the scope of this article.

⁵The benefits of debt ceiling regulations could be defined as the total cost to society of bank failures if there are *no limits* on debt *minus* the cost of failures when debt ceiling regulations are in effect. The tighter the debt limit, the greater the

benefits from reduced bank failure. However, each tightening of the debt ceiling may force banks further from the capital structure they would most like, thus making them less efficient from the point of view of the private economy.

ally be repaid or refunded. Nothing can be done about the first problem, but the second and third could be mitigated by using different kinds of debt securities.

The risk of a fixed interest commitment might be overcome if banks were to issue debt on which interest was paid only if earned (these are called income bonds or revenue bonds). Normally securities such as these are issued by corporations only when they are in financial trouble, so bankers would strongly argue that investors would not accept the bonds and the banks should not be required to use this kind of security. True perhaps, but 15 years ago issuing long-term debt or preferred stock was also considered a sign of weakness for a bank. Investors might need time to become accustomed to the idea, but if the bank is sound the additional risk to the debtholder (and the resultant risk premium in the interest rate) should be modest.

Requirements that sinking funds be established by banks to guarantee periodic repayments of debt principal are another possibility, although these provisions are already a common feature of new issues. This would not prevent banks from refinancing rather than retiring their bonds, but it would reduce the likelihood that very large quantities of debt capital would have to be refinanced all at once.

Endless variations in the terms of debt issues are possible—witness the recent floating rate capital notes—but any alteration attempted must meet the IRS guidelines which distinguish bonds from preferred stock. Once the bond issue begins to look like a preferred stock, the interest expense loses its tax-deductible status and its effective cost to the bank doubles.⁶

Of greater importance, however, is the fact that the modifications which change the surface details of long-term debt instruments don't eliminate the basic characteristics that make it a risky substitute for equity capital. Some risks can

be reduced—and these might justify requiring banks to issue only income bonds or to use sinking funds with their debt—but they are the lesser ones from the standpoint of society. The debt must still be repaid at some future date, and the bank must be able to absorb losses out of capital accounts other than its long-term debt.

Variable Rate Deposit Insurance. Proposals to alter the terms of bank debt are aimed at reducing the social costs of failure by making it less likely to occur. A somewhat different tack might be to shift some of the social costs of insuring society against more bank failures back to the banks and their shareholders. If the FDIC varied the cost of its deposit insurance according to the risk of each bank it insures, the effect would be to raise the implicit cost of funds for banks that adopted particularly risky asset or liability portfolios. If a bank wished to substitute debt capital for equity capital, it would be free to do so but would be obliged to pay for the added costs its action imposed on society. Estimating these costs and setting deposit insurance fees based on risk would be extremely difficult, but it should be possible to construct a rational rate schedule. Despite potential imprecision, confronting the problem would still be preferred to the current practice of making no explicit attempt to calculate either the costs or benefits of bank regulation. This proposal was recently offered in the context of setting overall capital adequacy standards, but it also covers the problem of selecting a proper debt/equity mix of capital.⁷

SHORT-TERM REGULATION

Controlling social costs through variable deposit insurance rates might be the simplest and most flexible solution to this controversy. However, it is not a widely accepted solution and implementing it would take time even if it were adopted. In the meantime regulators still seek

⁶On October 8, 1974 President Gerald R. Ford proposed allowing corporations to deduct the fixed dividend costs of preferred stock issues from taxable income. If this suggestion were enacted, preferred stock should become a very attractive alternative to long-term debt.

⁷For a more complete discussion of this point, see Ronald D. Watson, "Insuring Some Progress in the Bank Capital Hassle," *Business Review of the Federal Reserve Bank of Philadelphia*, July–August 1974, pp. 3–18.

guidelines for restricting debt capital use to a level close to the theoretical ideal.

Unfortunately, no magical thumbrule exists. Each bank is different, and debt capacities vary widely. The “ideal” limit to a bank’s use of long-term debt as a capital supplement depends on the risk that debt creates. The ability to utilize debt successfully depends on the quality and maturity structure of the bank’s assets, the composition of its liabilities, the skill of its management, the stability of its competitive environment, and its access to money markets, among other factors.

The regulators’ only guideline is the basic requirement that equity be sufficient to allow a bank to charge any reasonably predictable losses against capital without jeopardizing its basic

existence. Beyond that, any debt supplement to capital that isn’t potentially destabilizing because of excessive debt service requirements would be a plus, because it would provide additional protection for the claims of depositors in case of a general banking emergency.

What the industry needs is some objective quantitative analysis of the real risks of long-term debt and the real social costs of bank failures. In the meantime, assessing the proper mix of debt and equity capital must remain a subjective judgment—a decision based on the regulators’ concern not only for protecting the economy from a financial panic but also for minimizing the costs to the financial community of operating with less debt capital than it can successfully manage.

APPENDIX THE PURPOSE OF LEVERAGE

The potential advantages of long-term debt capital in a bank’s capital structure can best be seen from a numerical example. Suppose your bank starts with a capital structure of \$500,000 composed simply of 10,000 shares of common stock issued and selling for \$50 each. If the bank were to realize net operating revenues of \$100,000 per year before taxes the shareholder’s return could be computed as follows:

	Net Revenue	\$100,000	
	–Income Tax (50 percent)	50,000	
	Earnings After Taxes	50,000	
10,000 shares	÷ 10,000 shares		
	Earnings per share	5.00	
	Return per share	5.00	= 10 percent
		50.00	

Now suppose that the bank could change its capital structure by replacing some of its equity with long-term debt. If the bank could sell \$250,000 of debt at an interest cost of 10 percent and could use the proceeds of this sale to repurchase its own common stock in the market, it would shift from an all-equity capital structure to one that is half equity and half debt. Even though the cost of the debt is 10 percent—the same as the return earned for the common shareholders—the remaining stockholders would see their earnings rise.* The increase in profits for the stockholders occurs because the interests costs are treated as tax-deductible expenses.

*Some increase in the return per share would be necessary to compensate stockholders for the higher risk they now bear.

Net Revenue	\$100,000	
– Interest	25,000	
Earnings Before Taxes	75,000	
– Taxes (50 percent)	37,500	
Earnings After Taxes	37,500	
÷ 5,000 shares		
Earnings per share	7.50	
Return per share	7.50	= 15 percent
	50.00	

The long-term debt will also lever earnings if the bank's net revenues can be increased without additional capital. Suppose operating earnings were to rise 10 percent.

Net Revenue	\$110,000	
– Interest	25,000	
Earnings Before Taxes	85,000	
– Taxes	42,500	
Earnings After Taxes	42,500	
÷ 5,000 shares		
Earnings per share	8.50	
Return per share	8.50	= 17 percent
	50.00	

Without the leverage provided by the fixed cost of long-term debt a 10-percent jump in earnings would result in only a 10-percent increase in earnings per share (to \$8.25). However, with the debt capital, earnings per share advance by more than 10 percent when there was a 10-percent increase in operating income.

A caveat: The sword of leveraged earnings cuts two ways. Just as a 10-percent increase in operating earnings will cause earnings per share to jump more than 10 percent, a *drop* in corporate earnings of 10 percent will result in a disproportionate erosion of earnings per share. Leverage can be a highly risky practice—especially in large doses—since a substantial drop in earnings may make it impossible for a firm to meet its debt repayment obligations. This is normally grounds for starting bankruptcy proceedings.



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BANK CAPITAL

Insuring some progress in the bank capital hassle—
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