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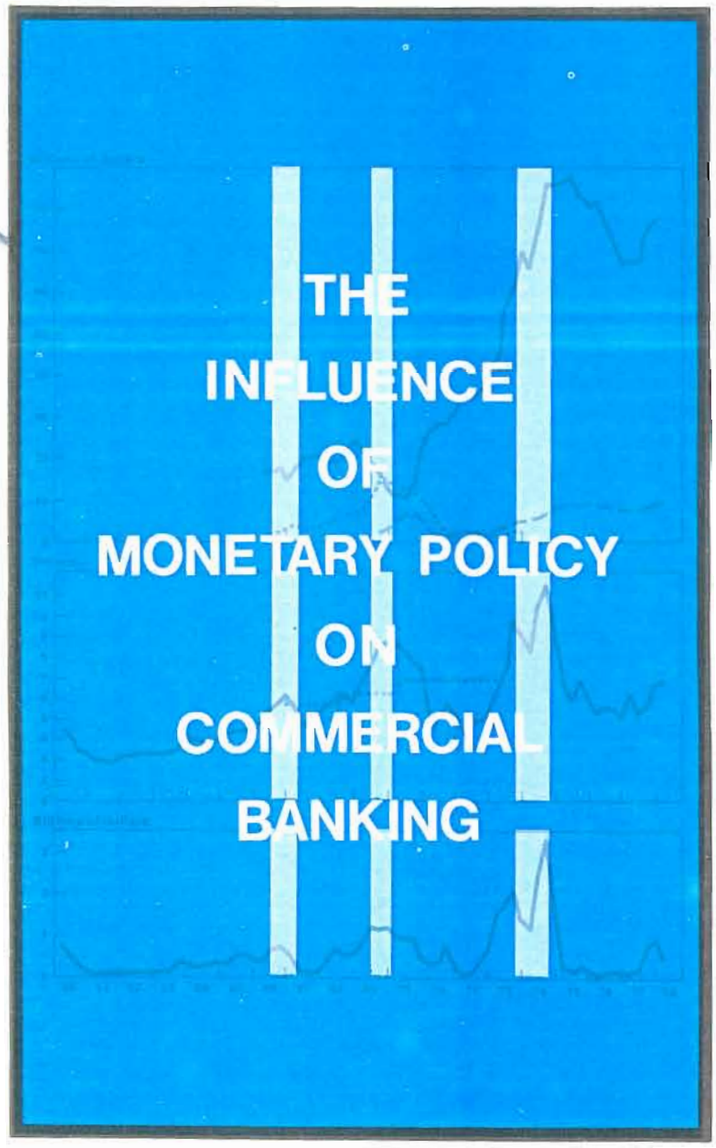

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The Influence of Monetary Policy on Commercial Banking*

By David P. Eastburn and W. Lee Hoskins†

Commercial banks are the front-line troops when it comes to implementing monetary policy. Because of this connection, they as a group are influenced heavily by the actions of the nation's monetary policymakers. This influence is reflected not only in the volume of commercial bank activity but also in the composition of bank assets and liabilities.

Changes in monetary policy affect both sides of the banker's balance sheet, but commercial bankers must consider more than monetary policy as they pursue their goals of solvency and increased earnings. At times, bankers and policymakers may seem to be working at cross purposes. But in fact, over the long haul, their interests are compatible and even complementary, for a strong economy provides the kind of environment needed for commercial banking's growth.

*Reprinted with revisions and additions from William H. Baughn and Charls E. Walker, eds., *The Bankers' Handbook*, Revised Edition (Homewood: Dow Jones-Irwin, 1978), pp. 1116-1135, by permission of the publisher.

†The authors are respectively President and Vice President at the Federal Reserve Bank of Philadelphia. The views expressed are those of the authors and do not necessarily reflect those of the Federal Reserve Bank of Philadelphia or the Federal Reserve System.

MONETARY POLICY: WHAT, WHY, AND HOW?

Keeping an economy on track with respect to growth, employment, and price stability is a complicated business. Decisions of business leaders, labor leaders, and government officials, as well as the whims of nature and chance, all impact on the stability and efficiency of U. S. economic activity. Monetary policy is only one of the planks in the structure that houses our economic system, but it's an important one. The job of any economy is to transform available resources into products that are in demand, and a well-managed money supply plays a key role in making sure that this job is done smoothly.

Policymaking. Responsibility for monetary policy lies primarily with the Federal Reserve System—the U.S. central bank. Policymakers at the Fed are charged with managing the nation's money supply so as to produce stable prices, high employment, and stability in the external value of the dollar. Their objective is to foster a monetary environment that will further these economic goals.

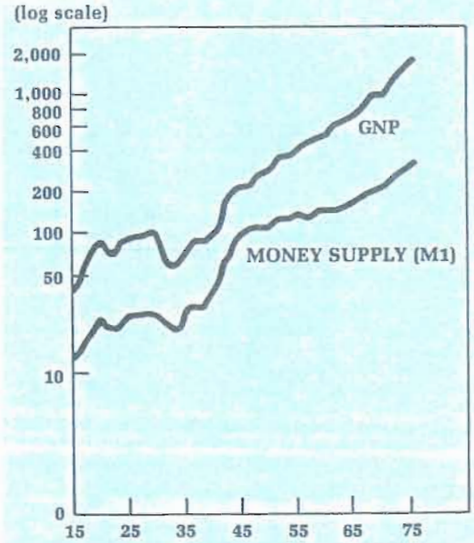
The main tools available to the Fed for implementing policy are open market operations (buying and selling government securi-

ties), raising or lowering the discount rate (the interest rate on loans to member banks), and altering reserve requirements (the assets member banks have to keep on hand). These tools don't achieve the Fed's policy goals directly. At first they affect just the financial markets, and only over time is their influence transmitted to the rest of the economy. So policymakers at the Fed must have a method of linking their policy tools to their economic goals. What the policymaker is looking for is a method that is not only effective but also relatively easy to control.

The most appropriate method has been a matter of much debate, both in academic circles and in the Federal Reserve System itself. Prior to the mid-1960s, the Fed emphasized money market conditions—principally movements in interest rates and in the levels of member bank reserves. Since then, the growth rate of the money stock[1] and related measures of economic health also have been employed by policymakers.

Growth in the money stock is believed to be related to overall economic activity. Over the past 60 years, trends in money growth have run almost parallel to trends in GNP (see Figure 1). But more important from the policymaker's view is the notion that *changes* in money growth influence changes in GNP. Two explanations of this process have been around for some time. One explanation, often associated with the Keynesian school of thought, is that if people find they are holding more money than they desire, they purchase *financial assets*. These purchases lead to declines in *interest rates* which tend to stimulate investment spending. And an increase in spending results in economic expansion. Money affects the economy *in-*

FIGURE 1
GROSS NATIONAL PRODUCT AND MONEY SUPPLY, 1915-1977



SOURCES: *Historical Statistics of the United States; Colonial Times to 1970*, U. S. Department of Commerce, Bureau of the Census; and Federal Reserve *Bulletin*.

directly through interest rates, according to this view. The other view, which is more closely associated with the Monetarist school of thought (popularized by Nobel prize-winning economist Milton Friedman), does not rely so heavily on the interest rate link between money growth and spending. According to this explanation, both individual consumers and corporate businesses spend or lend money when they find that they are holding more of it than they want. They purchase *real assets* (goods) as well as financial assets. Increased spending and lending stimulate production and thus the economy. In this view, money *directly* affects economic activity and interest rates play a less crucial role.

[1]Money can be defined in several ways. Monetary policymakers are concerned mainly with M1 and M2 but also look at several other measures. M1 is currency in the hands of the nonbank public plus demand deposits at commercial banks. M2 consists of M1 plus consumer time and savings accounts at commercial banks.

No matter which of these explanations, or which blend of the two, ultimately is accepted, both suggest that changes in money growth have a substantial impact on the economy. Thus policymakers can use money growth and associated interest rate changes as a means of nudging the economy into line with their employment, price, and output objectives. For example, if economic activity is straining capacity and putting upward pressures on prices, Fed policymakers can act to slow money growth and raise interest rates. And, if the economy is growing too slowly to employ all resources fully, policymakers may take actions to encourage more rapid money growth and lower interest rates.

Yet the policymaker's task is not as simple as it appears. It can take a long time before any change in money growth has its full impact on the economy (some estimates run as high as five years). And as world events unfold, yesterday's prescription for monetary growth may not fit today's economy. Moreover, concern over financial markets and interest rate movements often dominates the short-run picture in the policymaking process. During these periods the Fed may be shooting for a particular interest rate target, leaving its longer run target of money growth to play a secondary role. Finally, the impact of any given policy initiative on prices or employment may not conform to our expectations. Speeding up or slowing down monetary growth by a certain percentage at a particular point in the business cycle may not have the expected impact on employment. And the same is true for policy-induced interest rate changes. Deciding how much money to pump into the economy, and when, and whether to pay more attention to interest rates or to money growth, is a tricky business. Nevertheless, policymakers must select a stance, and considerations of money growth and interest rates are the key elements of this selection process.

Transmitting Policy Through the Banking System. Commercial banks have the power to create and destroy money. That's why the Fed works through commercial banks to control the money stock. The largest component of the money stock is in demand deposits (checking accounts) at commercial banks. Banks create demand deposits when they lend. A borrower is credited with a demand deposit for the amount of his or her loan, so the bank gains an asset (the loan) when it issues a liability (the deposit). The banking system as a whole is limited in this deposit expansion by the funds it must keep on hand to cover checks presented for payment and by the funds it is required to hold by law. Member banks of the Federal Reserve System must hold reserves equal to a prescribed percentage of deposits, and most state laws require nonmember banks to hold reserves.

The Fed can induce the banking system to increase or decrease the nation's money stock by buying or selling government securities in the open market, thereby increasing or decreasing bank reserves. For example, if the Fed's goal is to stimulate a sluggish economy, it can inject reserves into the banking system simply by purchasing government securities in the open market. The Fed gives its check (no paper actually changes hands; the transaction is accomplished simply by the Fed's making a book entry) to the seller, and the seller deposits the check at a commercial bank. When the check is presented to the Fed for payment, the commercial bank's reserve account is credited. With increased reserve balances, the bank can make additional loans by issuing deposits to borrowers. And borrowers will want more loans if this money creation process leads to a drop in loan rates. Since commercial banks keep less than a dollar in reserve for every dollar of deposits issued, a one-dollar increase in reserves results in an even larger increase in deposits and hence in the money stock.[2] The Fed can speed money stock growth by accelerating

[2]Member banks currently issue about $5.00 in demand

the process and slow it by decelerating the process.

In short, monetary policy attempts to affect employment, prices, and economic growth by influencing money expansion and interest rates. And commercial bank reserves are the key to this control. By injecting or withdrawing reserves, the Fed induces banks to make more or less money available. When the Fed goes about altering bank reserves, both the direct effects on financial markets and the indirect effects on the economy overall will influence the kinds of adjustments bankers make in their balance sheets.

MONETARY ACTION AND BANKER REACTION

The policymaker looks at the economy as a whole, but the banker must focus on his or her own corporation's profitability, liquidity, and solvency. Monetary policy is just one more item to cope with in addition to customer loan demand, deposit flows, and market interest rates.

In today's competitive financial world, the banker who is insensitive to profits attracts the wrath of the stockholders and faces the possibility of early retirement. So it's not surprising that commercial banks try to structure their asset and liability portfolios for the greatest possible returns consistent with continued solvency. Commercial banks cannot always accurately predict future loan demand, interest rates, and deposit flows. Consequently, they hold liquid assets as a buffer against the unexpected. Some of this buffer may be held in earning assets such as Treasury bills and some may be held in nonearning assets such as cash reserves. This liquidity gives them flexibility in taking advantage of new profit opportunities as they arise or in meeting unexpected cash or deposit drains.

When Federal Reserve initiatives alter the cost and revenue picture, banks change the makeup of their holdings to reflect the new or anticipated conditions. For example, if total reserves are increased by a Fed purchase of government securities, banks may find that they no longer hold the most profitable distribution of assets and liabilities. With a higher ratio of nonearning to earning assets, there is an incentive to expand loans and investments. Fed actions can affect the liability side of the balance sheet too. A withdrawal of reserves from the banking system can lead to a change in the distribution of liabilities as bankers go to money market sources or the Fed for funds to satisfy customer loan demand.

Moreover, bankers watch carefully for signs of a change in the Fed's policy stance in order to take into account its consequent impact on market interest rates. Expected changes in interest rates can influence bank portfolio strategy for they can generate capital gains and losses. A capital gain on a bond portfolio occurs when bond rates fall, and a loss occurs when rates rise. Thus bank investment managers try to anticipate changes in market rates in order to position their portfolios so as to reduce expected capital losses or to increase potential gains.

For example, suppose bank portfolio managers believe that several months down the road the Fed will tighten monetary policy and market interest rates will shift upward. Such managers may begin to alter their portfolios by shortening maturity structures and keeping more liquid positions. By doing so, they hope to reduce capital losses when bond rates rise and take advantage of invest-

deposits for each dollar of reserves. Total demand deposits are about one-third higher than member bank demand deposits, so for each $5.00 in member bank deposits we can expect $6.65 in total demand deposits ($5.00 x 1.33 = $6.65). The public keeps about thirty-five cents in currency for every dollar of demand deposits. Thus, $6.65 of demand deposits translates into about $9.00 worth of money ($6.65 x 1.35 = $8.98). So if the Fed increases reserves by $1 billion, the money stock increases some $9 billion if all these links hold tight. Although the Fed most commonly uses open market operations to influence bank reserves, it can get similar results by changing reserve requirements or by lending to member banks through the discount window.

ing at higher rates later. If bond rates are expected to fall, portfolio managers would reverse the process in hopes of achieving capital gains and locking in investments at the higher rate.

Thus bankers, in attempting to peer into the future and plan their portfolio strategy, often take anticipated policy actions by the Fed into account. And by so doing, they may alter their investment holdings.

How the distribution of bank assets and liabilities finally turns out also will be influenced by restrictions in financial markets. The Fed can slow money growth by holding reserves back from the banking system and letting money market interest rates rise as banks bid for funds. When this happens, restrictions in financial markets put certain assets and liabilities at a disadvantage. Take the case of mortgage ceiling rates that exist in some states. As market interest rates rise and the gap between them and mortgage ceilings narrows, banks find that it pays them to shift their efforts to other kinds of lending, and mortgage money disappears. Moreover, the Fed uses Regulation Q to set ceilings on the interest rates that commercial banks can pay on time and savings deposits. When market interest rates rise significantly above the ceilings, some bank deposits will be attracted to higher yields available in the market. In situations of this kind, banks seek alternative sources of funds which can substantially alter the distribution of their liabilities.[3]

[3]To alleviate this problem, Regulation Q was amended on June 1, 1978 to permit commercial banks, mutual savings banks, and savings and loan associations to issue two new instruments. The first is a money market certificate that must be issued in minimum denominations of $10,000 with a 26-week maturity. The maximum permissible rate of interest that may be paid will be tied to the average (auction) yield for the six-month Treasury bill in the most recent weekly auction. The second is a long-term certificate that may be issued in minimum denominations of $1,000 at maturities of eight years or more at a maximum rate of 7 3/4 percent for commercial banks and 8 percent for savings and loan associations and mutual savings banks.

Thus the actions that the Fed takes affect both costs and revenues at commercial banks. Initiatives that change money growth or interest rates can induce banks to alter their lending and investing activities. And restrictions on financial markets that close off traditional sources of funds and borrowers bring on further restructuring of bank balance sheets.

IMPACT OF MONETARY POLICY ON COMMERCIAL BANKING: THE RECORD

As the Fed swings into action, bankers make adjustments in their balance sheets in the interest of earning profits. But what kinds of changes do they make and what is the impact on profits? A look at past trends in banks assets and liabilities in comparison with tight and easy monetary policies gives a pretty good indication.

There are several ways to define tight money. Many people identify it with high interest rates. But interest rates can be a poor indicator of tight money. If interest rates sufficed to characterize monetary policy, then, in comparison with most of the 1950s, the last ten years might qualify as a tight money period. Yet much of the rise in interest rates over this period was caused by high inflation. Lenders have to build expected inflation into their loan charges if they are to recover the value of loans in terms of purchasing power. The result is high interest rates during periods of anticipated inflation.

A better indicator of Fed-induced tight or easy money is the monetary growth rate. From this point of view, tight money or restrictive policy can be defined as a condition in which the rate of money growth falls significantly below an established trend—a trend to which economic activity has become adjusted. A significant deceleration below this trend makes money tight in the sense that it makes planned expenditures more difficult to finance and boosts borrowing costs relative to expected money returns on investment. Using a procedure developed by

William Poole to define significant decelerations in money growth, we can identify three periods of tight money or restrictive monetary policy in the years since 1960.[4] One problem with this procedure is that it does not separate the impact on bank portfolio behavior of a general economic slowdown from the impact of restrictive monetary policy. However, to the extent that policy actions induce a decline in economic activity, the consequences on bank behavior can be attributed directly to monetary policy.

Liability Adjustments: Large Banks. Monetary policy actions have brought about significant adjustments in the liability side of bank balance sheets. However, they affect the liability picture for large and small banks somewhat differently. Large banks (over $100 million in deposits) comprised only six percent of the 14,633 commercial banks in the United States in 1975, but they accounted for more than 85 percent of the total bank deposits. A key innovation for large banks since 1960 was issuing of liabilities at competitive interest rates to generate funds for investment or liquidity.[5] This practice, known as liability management, helped large banks raise funds outside the normal deposit channels by selling liabilities. While monetary actions cannot take sole credit for this development, they probably played some role in the expanded use of liability management.

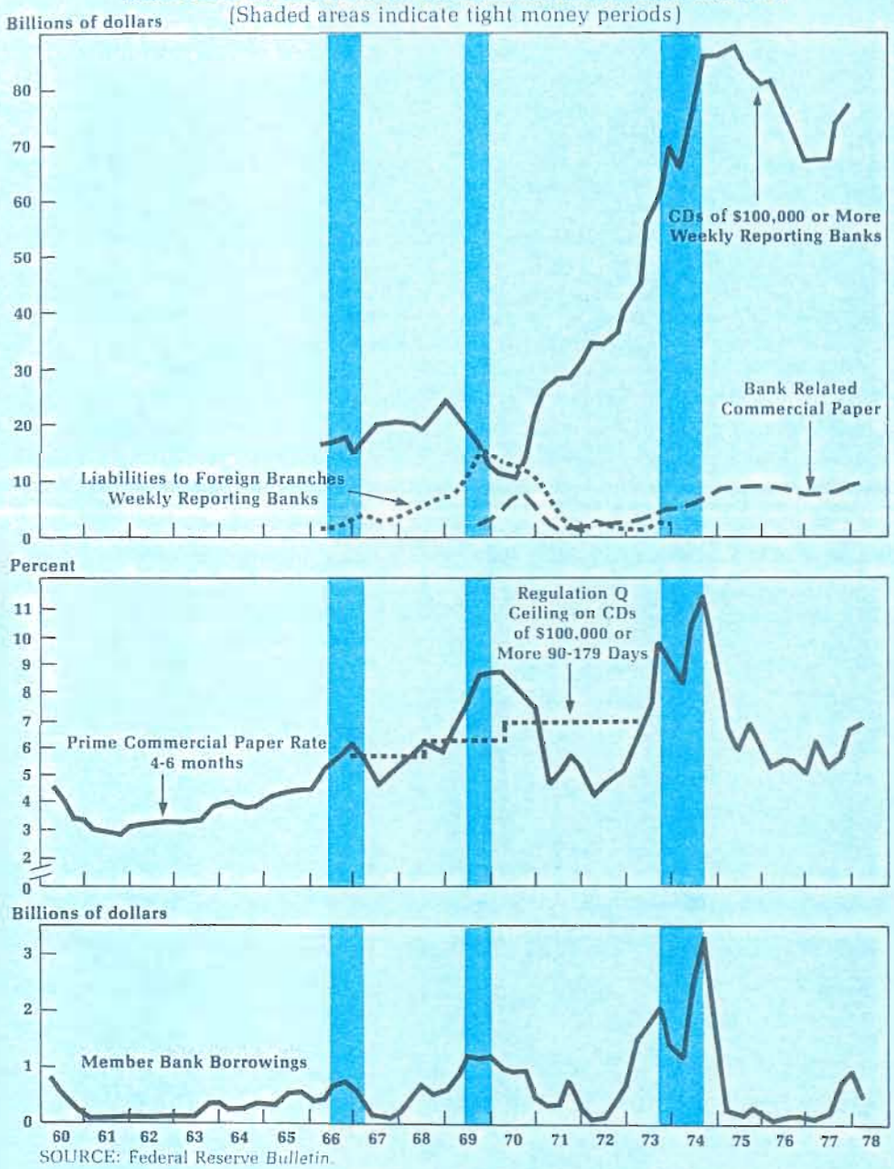
Prior to the 1960s, bankers sold assets (usually Treasury securities), borrowed from the Fed, or tapped the Federal funds market when they needed money to satisfy customer credit demand during tight money periods. But by the mid-1960s, many had begun to sell measurable amounts of liabilities in the form of large certificates of deposits. During the first tight money period of the decade, large CDs ($100,000 or more) were of little help to bankers in raising funds because money market interest rates exceeded the ceiling rates that the Fed permitted them to pay. Bankers were unable to roll over maturing CDs at a time of strong customer demand for credit (see Figure 2). Some bankers adjusted the liability side of their balance sheets by seeking dollars from abroad. Larger banks moved aggressively to draw in funds from the Eurodollar market. This source of funds appealed to bankers because they could use all the borrowings for lending without holding a portion in reserve at the Fed. Bankers also increased their borrowing from the Fed. These adjustments helped large banks weather the rigors of a tight money period in which the availability of funds in the CD market was curtailed.

In 1969, monetary policymakers again moved to slow monetary growth because of inflationary pressures building in the economy. Money market rates were already above the permissible rate on large CDs, and a

[4] These periods are May 1966-February 1967, April-November 1969, and September 1973-September 1974. The procedure used to identify tight money is to define an established trend of money growth. The trend is based on two-year averages. A significant deceleration occurs when money growth drops below the projected established trends by an amount that normally would induce a recession. The tight money period is terminated at the point where the business expansion peaked. This is done because a recession itself can induce changes in bank portfolio behavior. Thus, terminating tight money periods at the peak avoids the problem posed by trying to disentangle the effects of recession and slow monetary growth on bank portfolio behavior. In addition, monetary policy usually takes a less restrictive stance, or turns easy, during recessions. (The 1974 peak was chosen because two of the major indicators of business cycles—employment and the industrial production index—peaked in the fall of 1974.) For a full discussion of the development of this criterion, see William Poole, "The Relationship of Monetary Decelerations to Business Cycle Peaks: Another Look at the Evidence," *Journal of Finance* 30 (1974), p. 697.

[5] For a detailed description of this practice see Donald M. DePamphilis, "The Short-Term Commercial Bank Adjustment Process and Federal Reserve Regulations," *New England Economic Review*, May/June 1974, pp. 14-23.

FIGURE 2
SELECTED LIABILITIES OF COMMERCIAL BANKS, 1960-1978
(Shaded areas indicate tight money periods)



SOURCE: Federal Reserve *Bulletin*.

substantial runoff of CD money was underway. Banks continued to tap the Eurodollar market along with increased borrowings from the Fed. In the fall of 1969, however, the Fed put a crimp in borrowing from the Eurodollar market by imposing a marginal reserve requirement on funds borrowed abroad by U.S. banks. This move effectively raised the cost of funds from the Eurodollar market.

Bankers, in attempts to maintain profitability and liquidity, discovered a new source of funds—bank-related commercial paper. Bank holding companies and their affiliates began raising funds by issuing and selling commercial paper and then purchasing existing loans from affiliated banks. In the fall of 1970, however, the Fed altered its regulations to make funds raised through bank-related commercial paper subject to reserve requirements—a move that made funds from this source more costly to banks and thus less attractive. Bankers moved back into large CDs as money market rates dipped below the ceiling rate on large CDs. The now relatively more costly Eurodollar and bank-related commercial paper markets withered as a source of funds.

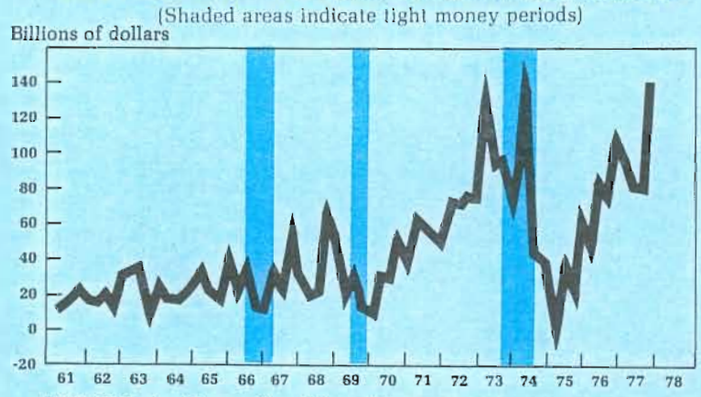
By late 1973, inflationary pressures again prompted monetary policymakers to slow the growth of money in the economy. From September 1973 to September 1974, the Fed retained a restrictive grip on bank reserves and monetary expansion. But this time the Fed removed the ceiling rate on large CDs as money market rates climbed above the ceiling rate. This action kept banks from being forced out of the CD market as they had been in past tight money periods, providing they were willing to pay the price for funds. The CD market flourished during this tight money period. And banks whose customers were willing to pay the price could get the funds they wanted.

Responding to the removal of ceilings on large CDs, weekly reporting banks raised more than three times what they had raised through CDs in previous periods of monetary restraint. In addition, member banks relied to a much greater extent on borrowings from the Fed. Banks largely ignored nondeposit sources of funds and the Eurodollar market.

In sum, monetary policy action had a strong influence on the adjustments large banks made to the liability side of their portfolios. Tight money substantially reduced the volume of bank liabilities (see Figure 3)

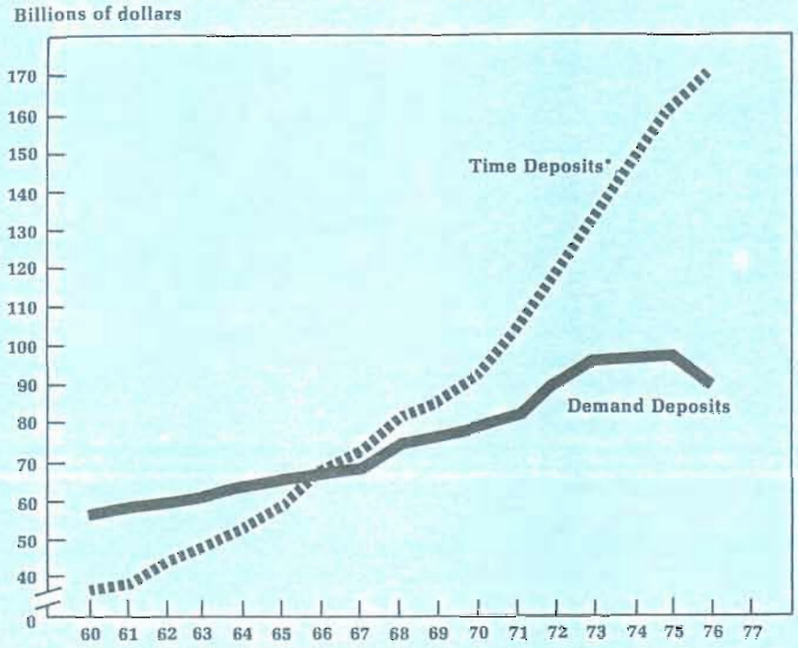
FIGURE 3
NET INCREASE IN LIABILITIES OF COMMERCIAL BANKS AND THEIR AFFILIATES DURING TIGHT MONEY PERIODS*

(Shaded areas indicate tight money periods)



SOURCE: Federal Reserve Board, Flow of Funds Accounts.

FIGURE 4
TOTAL DEPOSITS OF ALL BANKS
WITH LESS THAN $100 MILLION IN DEPOSITS



*Time and savings deposits and certificates of deposit.

SOURCE: Federal Deposit Insurance Corporation.

as large banks altered the makeup of liability portfolios. While these banks already were toying with more aggressive management of their liabilities during the early 1960s, the ensuing periods of monetary restraint probably served as a catalyst to the practice. Large banks demonstrated flexibility and initiative as they shifted from one source of funds to another in response to rate differentials and restrictions in credit markets.

Liability Side Developments: Small Banks. Small banks (less than $100 million in deposits) did not have the range of alternative sources of funds available to their larger counterparts. When monetary policy turned restrictive, small banks had to rely on their primary source of funds—deposits.

A major development on the liability side of the balance sheet of all banks is the shift to time deposits as the largest source of funds. Figure 4 shows this trend for small banks. In 1960 demand deposits accounted for the lion's share of deposits in small banks. By 1966 time deposits had grown to equal the level of demand deposit balances. And by the end of 1976 time deposits clearly dominated the deposit picture of small banks.

The three periods of restrictive monetary policy appear to have had only a temporary

impact on the changing distribution of deposits in small banks. And restrictions in credit markets played a role in these temporary changes. When market interest rates rose substantially above the rate banks were legally permitted to pay during tight money periods, time deposit growth began to shrink as some small savers shifted funds into higher yielding alternatives such as treasury bills. This process—disintermediation—occurred, at least briefly, in each of the tight money periods since 1960 but had no lasting impact on the long-term trends.

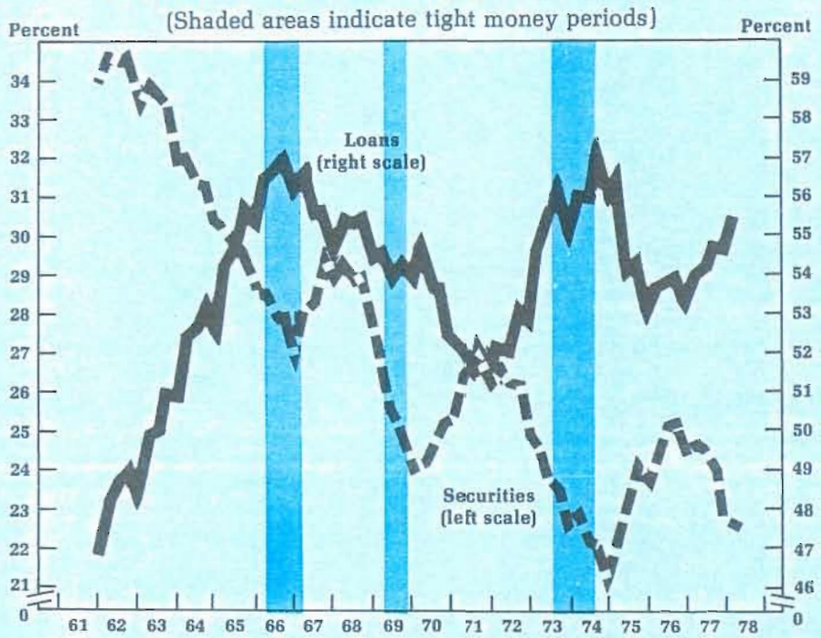
Some economists have argued that small banks in nonmetropolitan markets feel less of an impact on their deposit liabilities during tight money periods than do large money market banks. Most policy actions, in their view, affect large banks first and then spread slowly throughout the banking system. Thus, according to this argument, the more isolated small banks are from their big city competitors, the less likely they are to feel the full impact of shifts in monetary policy. However, the existence of a widespread and sophisticated Federal funds market does link small rural banks to major money markets. Thus if monetary policy turns restrictive and large banks find their reserves pinched, they may turn to the Federal funds market. In doing so they bid up the price and induce small banks to continue to supply funds, and these funds are transferred immediately. In the past, small banks have been net sellers of such funds, and hence they have been linked directly to major money markets and changes in monetary policy.

In sum, small banks did not have the flexibility on the liability side of the balance sheet that large banks had. Nor did small banks appear to be as insulated from monetary policy actions as some believed. While temporary shifts in the composition of deposits at small banks occurred as monetary policy changed gears, these shifts were overshadowed by the long-term trend towards greater reliance on time deposits as a source of funds.

Asset Adjustments: Large and Small Banks. The asset side of the balance sheet also changed as monetary policy shifted its stance during the last 18 years. But because commercial banking for the most part remains a business of borrowing short and lending long, the impact of monetary policy on the liability side of the balance sheet often receives more attention than its impact on the asset side. The fact that a hefty portion of bank liabilities shows up in the policymakers' money targets also increases emphasis on the liability side. The influence of monetary policy on the availability and cost of funds has a direct impact on bankers seeking funds to lend. But when lending and investing, bankers at both large and small banks have a host of things to take into account besides the current cost of funds if they are to earn a profit over the long haul. Creditworthiness of the borrower, long-term prospects for the customer's industry, and the establishment of a continuing bank-customer relationship are important considerations for bank profitability. And relative profitability of loans and securities has a strong influence on which assets bankers add to their portfolios. This is true for large banks as well as small ones.

Figure 5 shows a clear long-term trend in bank asset distribution toward loans and away from securities in the period since 1960. Yet three times during this period, a restrictive monetary policy and a faltering economy have disrupted the trend. During each of the tight money periods, the loan share of bank assets slowed its upward trend and then declined during the subsequent business slowdowns. Also, the trend in the share of bank assets invested in securities was reversed during or immediately following each of the restrictive policy periods. This asset adjustment occurred even though the spread between loan rates and security yields tended to narrow up to the peaks of the business expansions (which are the end points of the tight money periods). A closing of the spread should make securities more attractive

FIGURE 5
HOLDINGS OF LOANS AND SECURITIES AS SHARE OF TOTAL ASSETS, COMMERCIAL BANKS, 1961-1978



SOURCE: Federal Reserve *Bulletin*.

buys to bankers relative to loans. But bankers continue to make loans even if securities must be sold at a capital loss. Why?

The answer is that bankers apparently have their eyes on long-term profits rather than short-term gains. They do not shift into securities because they want to retain their established customers. Satisfying customer loan demand when funds are scarce means that customers are more likely to stick around the rest of the time, supplying deposit balances and requesting loans. Thus bankers, because they look at profitability over the long haul, try to meet the credit demand of customers who have a continuing relationship with them even if doing so might mean sacrificing some short-term gain.[6]

Some large banks have begun to tie changes in the prime rate to changes in money market rates, and this may keep the spread between loan rates and security yields from narrowing in the future. But the *effective* loan charges still may be held down by reducing compensatory balance requirements. If so, the same kind of asset adjustment will continue to take place.

Immediately after tight money periods, the

[6]For a detailed analysis of this phenomenon see J. H. Wood, *Commercial Bank Loan and Investment Behavior* (New York: John Wiley and Sons, Inc., 1975).

share of bank assets in loans drops off sharply while the share in securities rises. This adjustment runs counter to the long-term trend and probably reflects a drop in loan demand that's part of an overall slump. It is difficult to separate the impact of a general economic slowdown from the impact of tight money. But to the extent that monetary policy induces a drop in GNP, the consequences on bank behavior can be attributed directly to the policy action.

In short, commercial bank asset distribution, while dominated by the long-term trend of loan growth and a declining role for securities, is affected by shifts in monetary policy. What these aggregated figures may mask is the differential impact of policy on banks of different sizes and business orientations—for example, wholesale and retail banks. Consequently, the schematic picture of asset distribution may not be applicable to the behavior of this or that individual bank.

The Bottom Line. It's hard to get a grip on just how monetary policy affects profitability and induces bankers to adjust their liability and asset holdings. Matching profit data with tight money periods poses a problem because profit data usually are generated on a calendar year basis while tight money periods often encompass only a part of a year or parts of two calendar years. Further, during one of the three recent tight money periods (1969), accounting changes were made that affected the calculation of profitability measures.

To get a more accurate appraisal of the impact, we have brought together in Figure 6 the return-on-capital figures of all six tight money periods since World War II. For large banks, the average rate of return on capital during tight money years (9.08 percent) was slightly lower than the average rate for all other years since 1946 (9.16 percent). Thus, despite the major asset and liability adjustments that large banks made during both tight money and easy money periods, their average rate of return to capital remained relatively stable. Small banks generated about the same profit rate as large banks.

FIGURE 6

AVERAGE RATE OF RETURN ON CAPITAL, 1946-1977

(Net Profit per $100 of Total Capital Accounts)

	Small Banks	Large Banks
During Tight Money Years*	9.04	9.08
During Other Years	9.44	9.16

*Tight money years are those years in which conditions of tight money have existed for at least one month. There are 12 years in which this occurred. In 1969, changes in tax treatment and accounting definition resulted in an upward shift in subsequent net profit figures.

Above figures are arithmetic means of annual data for designated tight and easy money years. The annual data are weighted means of figures given for banks in various deposit size categories.

Small banks are those with less than $100,000,000 in deposits, and large banks are those with more than $100,000,000 in deposits.

SOURCE: Federal Deposit Insurance Corporation, *Annual Reports*.

However, they did suffer a larger drop in performance during tight money years. Unfortunately, these figures are not able to show what rate of return banks might have earned if restrictive monetary policy and the following business slowdowns had not occurred. Finally, these judgments should be taken with a word of caution, since they're based on limited and unrefined data.[7]

POLICYMAKER AND BANKER: CROSS PURPOSES?

At first glance, it may appear that the adjustments bankers make often are at odds with monetary policy objectives. The Fed took action in 1973 to slow an inflation-prone economy at the same time bankers were trying to make loans that would stimulate economic growth. Nor was there any obvious appearance of harmony when the Fed tried to speed up economic recovery during the 1974-75 recession. It appeared that some bankers, concerned about solvency and liquidity after suffering large loan losses, were being extremely cautious in lending. Even as the Fed injected reserves to stimulate money growth, bankers seemed to be building liquidity rather than lending, thereby holding back the recovery. The best current evidence is that business leaders found nonbank sources of funds rather than that bankers gave up their goal of making profitable loans.[8]

As so often happens, first appearances are deceiving. There is no incompatibility of goals, for it is the banker's quest for profitability that ultimately permits the policymaker to pursue his or her goals for the economy. As the Fed tightens up on bank reserves, bankers continue to seek funds for lending to their customers. The price of funds rises and bankers pass much of the increase along to customers. Marginal borrowers, facing higher loan charges, drop out of the loan market. These borrowers may postpone planned spending—which can help slow the economy. If bankers decide not to pursue profitability and solvency, they can continue to lend temporarily by paying a higher price for lendable funds and lending at lower rates. But such a practice can lead to a loss in profits and ultimately to insolvency.

The banker's quest for profits also aids the monetary policymaker in stimulating economic recovery. As the Fed injects reserves into the banking system during a recession, bankers find themselves holding added excess reserves that are earning no return. In the interest of profitability, they seek to invest and lend a portion of the excess reserves. Competition by bankers for loans and investments tends to lower market interest rates and attract borrowers. As borrowing and spending increase, they stimulate economic expansion. Because bankers are interested in profits, policymakers again are able to pursue their objectives in the economy.

The goals of bankers and policymakers are compatible also from a longer run perspective. If policymakers are successful at evening out jarring fluctuations in the economy, bankers and their customers gain. A boom-bust cycle for the economy can create uncertainty, produce costly mistakes, and result in an inefficient use of economic resources. In a smoothly growing economy, bankers spend their energies on evaluating loans and allocating credit to its most profitable uses. They spend less of their resources on guessing where the economy as a whole is going next.

Moreover, if monetary policy helps keep economic resources fully employed, then economic growth can be sustained. Sustained growth generates more lending opportunities

[7] Economic literature offers surprisingly little empirical evidence on the relation of monetary policy to bank profitability. The available evidence is tentative and inconclusive. See, for example, Stuart I. Greenbaum, Mukhtor M. Ali, and Ronald C. Morris, "Monetary Policy and Banking Profits," *Journal of Finance* 31 (1976), pp. 89-101; and William J. Brown, *Tight Money and Bank Profits* (American Bankers Association, 1967), pp. 1-19.

[8] See Alton Gilbert, "Bank Financing of the Recovery." *Review*, Federal Reserve Bank of St. Louis, July 1976, p.2.

for bankers and more output for society. Thus success for policymakers at smoothing out economic disturbances *is* compatible with bankers' desires for profitability and solvency.

THE FUTURE

During the past decade and a half, commercial banking and monetary policy have undergone substantial change. Bankers have established liability management firmly as a tool for adjusting the liability side of the balance sheet while shifting their assets more into loans and away from security investments. Moreover, the commercial banker has become more sophisticated with respect to monetary policy actions. He watches carefully for signs of a change in policy stance and attempts to take into account its consequent impact on economic activity when planning portfolio strategy.

Monetary policy has aided this growing sophistication by shedding much of its mystique during the period. While money market conditions are still an important ingredient in the formation of policy decisions, there has been a shift in emphasis towards the importance of money growth. Many observers feel that this shift in emphasis makes it easier to interpret and identify changes in Federal Reserve policy. Moreover, the Fed now is announcing its money growth targets each quarter for the ensuing twelve months. The result is that money growth and its relation to the economy are discussed widely and are analyzed in a host of financial reports and publications. While these developments have not changed the basic link between policymaking and commercial banking, they have brought it into sharper focus.

In the future, the commercial banking environment will be shaped, in part, by developments in technology, governmental attitudes towards credit allocation, and increasing competition. The major development in technology is already with us—electronic fund transfer systems (EFTS). These systems range from point-of-sale terminals to automated clearing houses, and they are likely to have a large impact on the day-to-day operations of commercial banks as well as on those of the Fed as they gain wider acceptance. It is likely that EFTS will permit individuals and corporations to get more mileage out of their existing money balances as the transfer of funds becomes faster. One implication of a faster transfer system is that the economy as a whole can get by with a smaller money stock. This development does not have to lessen the Fed's control over money, however, because the basic link of reserve growth to money growth will remain intact.

In addition to facing the challenge of adjusting to an automated payments mechanism, bankers also could face a host of new regulations aimed at allocating credit selectively. Selective allocation of credit is not a new issue, but it's one that's likely to receive its day in court as Congress seeks new methods for dealing with social and economic problems. The idea behind selective credit controls is to direct credit into particular sectors of the economy that Congress deems to be high on the list of social priorities. The small business and housing sectors often are cited as high priority items deserving governmental aid. An expansion of credit policies in these areas could have an impact on both banking and monetary policy actions. Commercial banks could be influenced to alter their distribution of assets and liabilities substantially to reflect these goals. The impact on bank growth and profitability would depend on the type of controls employed and on how efficiently bankers adjust to them. And the Fed, in conducting monetary policy, would have to be even more sensitive to the impact of its actions on particular credit markets. Unfortunately, attempts to assess the impact of credit controls are hampered because so little is known about the links between credit flows and their impact on the production of goods deemed to be socially desirable.

These changes are likely to occur at the same time bankers will be facing increasing competition from thrift institutions. Full demand-deposit powers and greater lending latitude for thrift institutions are distinct possibilities in the coming decade. The problem for commercial banks is to develop or maintain the flexibility and initiative to meet the competitive challenge by improving the efficiency of their operations. The problem for monetary policy is one of retaining control over money growth while treating different classes of financial institutions equitably. One possible solution is to require all financial institutions issuing liabilities that become a means of payment to be members of the Federal Reserve System. An alternative is to impose uniform reserve requirements on all such institutions. Another option is for the Fed to pay interest on reserves. Any of these alternatives would preserve Federal Reserve control over money growth and, ultimately, over employment and inflation.

In sum, the next decade, like the last one, will pose new challenges for the commercial banker and the monetary policymaker. While the environment in which they operate will be different from today's, it will be subject to the same fundamental relationship that currently binds commercial banking to monetary policymaking. And if both bankers and policymakers have learned from past failures and successes, they will be well armed to cope with the coming change.